Coping with crises: is there a "silver bullet"?

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Introduction: Globalisation challenged

Rome was not built in a day: nor can global capital markets be created overnight. The smooth functioning of a market economy needs more than freedom to buy and sell: institutions matter too, and creating them can take time. Accounting, banking and legal practices developed in Renaissance Italy, for example, played a central role in expanding trade from Venice and its sister states to the world at large (Jardine, 1996). The institutional framework is even more important when the items traded are promises to pay -- as the history of financial crises testifies. Nineteenth century London capital markets were plagued by recurrent liquidity crises until the Bank of England learned to act as a lender of the last resort: and it was the catastrophic bank runs of the early 1930s that led the fledgling Fed to implement a policy of Deposit Insurance.

Now, at the end of the twentieth century, the need for institutions to underpin emerging markets has been dramatically demonstrated yet again. First in the traumatic experience of economies in transition from communism, where the lack of adequate legal and accounting systems, and the pervasive presence of corruption and crime (-- to say nothing of political failure), has so threatened enterprise and stunted development in Russia, for example, that some no longer consider it an emerging market. Second in the financial crises that have racked the newly liberalised capital markets in East Asia and drained the funds of the institutions set up after World War Two to manage the international financial system. Why is it that rapid liberalisation of financial markets seems to court crisis? What can be done about it? This is what we study here.

Even today, in many countries capital markets operate without adequate supervision and regulation; and at the global level there is, for sovereign debtors, no proper lender of last resort in a liquidity crisis; nor is there any mechanism to offer them bankruptcy protection. For George Soros (1998, pp.xxviii-xix) global capitalism is in crisis because global financial markets have outgrown the regulatory framework needed to stabilise them: “financial markets are inherently unstable”, he says, yet “there are practically no institutions for rule making on an international scale. We have a global economy without a global society.” His is by no means a lone voice. In speculating on whether financial crises need be this frequent and this painful, Joseph Stiglitz (1998b, reprinted in this volume) expresses much the same sentiments elsewhere in this volume: and the reform of global financial institutions was a key item of debate at the Fund/Bank meetings in 1998 and at Davos in 1999.

Some observers, following a 'top down' approach, have proposed the creation of a troika to replace the IMF: a global financial regulator to ensure banking standards; a lender of the last resort to supply liquidity when appropriate; and a global bankruptcy court to oversee debt restructuring (see Edwards, 1998). Others, dismissing such plans as politically impossible, recommend incremental solutions. Eichengreen (1999), for example, looks to improved financial regulation and the redesign of private debt contracts as the key elements. Cline (1998), on the other hand, expresses broad agreement with the strategies used to handle the East Asian crises, but stresses the need for prompter action with more adequate funding to maintain creditor confidence. Incentive effects can pose problems for this piecemeal approach, however. Simply enlarging funding for bailouts will have adverse incentive effects (‘moral hazard’), for example; and it may take threats of something worse to persuade creditors to offer new contracts. Where should one begin?

We start with the observation that it is those emerging market economies which have rapidly liberalised their capital markets that have suffered the worst crises, in 1994/5, 1997 and 1998. One does not have to subscribe to the Polanyi-like perspective that the domain of political control must march in step with market size to concede that capital inflows can have undesirable welfare consequences in the presence of domestic distortions. Generous capital flows to emerging markets can greatly increase the vulnerability of poorly regulated financial systems, and the down-side risks they face. (With unregulated but insured institutions attracting funds from global markets, Krugman (1998a) shows how asset prices can be driven to untenably high levels, "Pangloss values", with widespread insolvency inevitable in all but the best of all possible worlds.)

History has shown that financial institutions involved in liquidity transformation are particularly vulnerable to creditor panic, which is why domestic distortions matter. At the very least this implies that capital market integration is an exercise in the economics of 'second best', with the losses of increased distortions being set against the gains of increased market access. After surveying the Asian crisis, indeed, Morris Goldstein (1998, p. 66) concludes bluntly "Efforts to promote financial and capital account liberalisation without first strengthening the prudential framework are a recipe for disaster". The added prospect of financial contagion means that premature liberalisation may involve globalising market failure .

If not laissez faire, then what? We start in Section 1 with a tour d'horizon encompassing six principal ideas for reform that have been put forward as panaceas for the problems of globalisation -- each promising in its own way. In the next section we review key features of the recent East Asian crisis which need to be taken into account in redesigning the system. Designing a 'second best' system is complicated by the role of expectations as crisis measures implemented ex post can change things ex ante (if you are fully insured, why take precautions?). These issues are taken up in the Section 3 which presents the "time consistency" problem facing the current system and puts the strategic case for changing the rules of the game. In Section 4 we spell out the elements of an integrated approach, considering both measures of crisis prevention and those for crisis resolution.
Section 5 concludes.

Section 1 **Six Key Ideas in the Debate**

Is there a "silver bullet" that can rid the system of crisis? Maybe not. But even so, it is well worth examining those that have been proposed to see what to include in a more integrated approach[1].

1.1) More transparency and disclosure

Many have found fault with the lack of auditing and disclosure in East Asian banks, and have blamed it for creditor panic: hence the cry for greater monitoring and transparency. With the UK holding the Chairmanship of the G7, it was reported that Chancellor Gordon Brown was pushing for "the establishment of a new global regulator... which would bring together central bankers, stock market authorities and the IMF in an effort to co-ordinate action and prevent the spread of global financial contagion. Among the other proposals he has tabled are codes of

[1] This section draws on Chapter 5 "What won't work" of Eichengreen (1999), as we are happy to acknowledge.

conduct imposing new rules on accountability and transparency, which will force individual nations to open their books to IMF scrutiny" *Guardian* (Jan 7, 1999, p.21)

It is difficult to reject the call for more accurate information; and greater transparency is surely part of the solution. It will, in particular, help to identify those debtor countries for whom ready official liquidity may be available in a crisis; as opposed to those with potential problems calling for a debt workout.

But the notion that more transparency can be relied on to avert crisis flies in the face of theory and practical experience. The incidence of bank runs and boom bust cycles involving property prices in banking systems all over the world (including, of late, both the USA and Scandinavia, for example) is a sobering, practical challenge to the idea. More fundamentally, as Eichengreen (1999) points out, it "underestimates the extent to which information asymmetries are intrinsic to financial markets … It is unavoidable that borrowers should know more than lenders about how they plan to use borrowed funds. This reality is a key reason why banks exist in market economies. [And] if asymmetric information is why most economies continue to rely on banks for intermediation services, bank fragility is inevitable. The advocates of information-related initiatives mislead when they assume the problem away."

1.2) More money -- and more quickly

The proximate cause of all financial crises is the inability of the debtor to provide creditors with the cash they demand. Bagehot's (1873) solution to this liquidity problem is for the central bank to act as lender of the last resort. (Another is for a bankruptcy court to authorise a standstill, as discussed below.)

The IMF has tried to act as an international lender of last resort -- to act as the central banker for central banks. But it has been criticised, on the one hand, for not providing money quickly enough -- nor in sufficient quantity -- to give confidence to private investors, Radelet and Sachs(1998); and, on the other, for creating moral hazard by lending without the regulatory authority that usually accompanies domestic liquidity provision.

One response is to strengthen the Fund's capacity to act as lender of last resort, so that more money could be disbursed more quickly. This is the approach taken by Stanley Fischer (1999) in his address at the AEA Meetings where he pointed out that “At the end of 1997, the IMF introduced the Supplemental Reserve Facility (SRF), which can make short-term loans in large amounts at penalty rates to countries in crisis.” He also noted that “the Executive Board of the IMF is considering the possibility of introducing a contingency or precautionary facility, to supplement the reserves of countries threatened be a crisis but not yet in one, (p.11)”. This would doubtless find favor among creditors: but routine rescues without regulatory control could be a recipe for escalating bail-outs and moral hazard (as is argued in more detail in Section 3).

One way of limiting moral hazard might be to restrict the list of countries to whom the support is available by severe preconditions in terms of domestic financial regulation. This is the route taken by Charles Calomiris (1998). It has been compared to the "narrow banking" solution for containing moral hazard at the domestic level -- and faulted for the same reason: that the restriction of support to the selected group is not credible given the systemic risks posed by the collapse of those outside it, Eichengreen (1999).

In his address, Stanley Fischer (1999, p12) emphasised the role of transparency and bail-ins for reducing moral hazard. He argued that "improvements in transparency and the provision of information by the public sector and improved regulation, together with bail-in procedures that set the right incentives, would encourage better monitoring and self-regulation by the private sector. The charging of a penalty rate would discourage borrower moral hazard and the new procedures to bail in the private sector would greatly reduce investor moral hazard." Likewise, the recent proposals of George Soros(1999) , are a mix of *ex ante* conditionality for countries known to possess strong fundamentals who can be promised financial support; and the prospect of standstills and workouts -- creditor bail-ins instead of bailouts -- for the others. It is to these we now turn.

1.3) More "haircuts": strategic standstills and bankruptcy protection

If solvent debtors in a liquidity sqeeze cannot find cash, they can nevertheless seek legal protection against creditors' demands. These facets of life in the "economic emergency room" were eloquently described by Jeffrey Sachs in his famous contrast of the options available to Macy's department store and to the Russian economy.

"Consider the case of an overly indebted corporation in the United States that is unable to service its debt in the short run. Under Chapter 11 of the US Bankruptcy Code, the debtor enterprise can file for bankruptcy to obtain a "standstill" on debt servicing. Under a standstill, creditors must refrain from attempting to collect the debt, pending a collective solution to the indebtedness problem. Moreover, the law provides for the enterprise to borrow new working-capital funds even after filing for bankruptcy, in order to ensure the continued efficient operation of the firm.

"No such procedures operate with heavily indebted countries in the grip of a balance of payments crisis. A country cannot file for an immediate standstill in an international bankruptcy court. Perhaps it can achieve one, following months of laborious negotiations with creditors, but usually only after tremendous damage has been done by capital flight, a withdrawal of trade credits, and other hostile creditor actions. Moreover, there is no routine way to obtain the working capital vitally needed to keep the economy functioning. It is literally the case that Macy's had an easier time raising $600 million in emergency working capital loans after filing for bankruptcy than did Russia (trying to raise the same amount) in 1992." Sachs (1993, p. 511)

Such considerations have led several observers to propose that there should be an International Bankruptcy Agency to afford sovereign debtors some protection from short term lenders and bondholders. (Longer term intergovernmental lending can already be restructured by the Paris Club: and the London Club covers bank lending). Williamson (1985) for example proposed that such an agency " might be able to act as arbiter on past loans... and suggested that criteria for determining whether and to what extent forgiveness was appropriate would incorporate some broad assessment of insolvency versus liquidity, as well as other factors", quoted in Cline(1995, p. 484). In fact, for Latin American bank debt in the 1980's, the Brady Plan acted as the mechanism for financial reconstruction and debt-write-downs: but that solution took several years to emerge. Governments can always declare a unilateral moratorium, of course, with the dire consequences we can see in Russia today.

Is there any other feasible mechanism? Both Soros and Fischer are looking for private sector bail-ins. The IMF can provide "debtor-in -possession" finance by lending into arrears, as it did in Latin America in respect of arrears to banks in the 1980s, for example; and the IMF could choose to authorise a 90-day standstill on all cross-border and cross-currency debt contracts[2]. These would provide a breathing space for the borrower and an incentive for the lender to come to the bargaining table to discuss financial reconstruction. Miller and Zhang (1998) suggest that such procedures might be developed into those of a Washington Club to act as a forum for workouts.

1.4) Better state contingent contracts

There is no International Bankruptcy Court for sovereign debtors in existence , and it may be politically impossible to set one up. Is there a substitute? In theory, there is. As Cornelli and Felli (1995, p.71) put it : "In a world in which contracting parties are fully rational and can forecast every future contingency and specify them without any significant cost in a comprehensive contract, no purpose is served by bankruptcy law... In general, provided the contract is enforceable and binding, there is no need for a law to tell the parties what to do, but simply an authority which guarantees the enforcement of their preferred contract."

It is true that, because of the many practical problems of writing and enforcing such contracts, bankruptcy is a superior option at the domestic level. But if this option is not available at the global level, would state contingent contracts not make a good "second best"? That is the thinking behind proposals by Eichengreen and Portes (1995) for changing the contractual provisions governing sovereign debt so as to allow for (i) collective representation of bondholders, (ii) qualified majority voting on changing the terms and conditions of the debt contract, and (iii) sharing of proceeds among creditors.

Despite strong endorsement of such ideas in both the G10 (1996) and G22 (1998) Reports, however, no such bondholders Committee has been established; nor are the recommended clauses included in sovereign debt instruments. Eichengreen (1999) explains this is because of signalling problems: who wants to be the first to say they may write down their obligations? But it may be that there are incentive problems too. Why would creditors want to take the risk of write downs if the option of bailouts is available? But creditors threatened with rough justice in a some broad negotiation might prefer the outcomes of prepositioned contracts. (i.e., the threat of "haircuts" may induce improved contracts.)

1.5) More insurance

The Brady Plan involved a considerable write-down of bank loans to Latin American debtors and its replacement with sovereign bonds, so it was widely assumed that the next crisis would be in the bond market. So as to widen market participation and improve prudential discretion in this market, observers such as William Cline (1995, p.482-3) proposed the creation of an International Bondholders Corporation (IBC) "to provide insurance of international bonds issued by developing countries, in return for premiums paid by bond purchasers. ... [and] to do for bonds what the Multilateral Investment Guarantee Agency does for direct investment. “The corporation would monitor potential borrowers and its terms of access would send a

[2] As recently proposed by the Canadian Department of Finance, (1998). Radelet and Sachs (1998) also discuss the idea that the IMF could officially approve such a moratorium.

powerful signal about the creditworthiness of a country. "The IBC would provide an alternative opinion to the private rating agencies. This function could be important, as there is always some risk that the rating agencies become influenced by the rated countries that pay their fees," Cline(1995, p. 483).

Contrary to expectations of Cline and others, however, the East Asian crisis once again centred on bank lending and not on bonds. Nevertheless, at the end of 1997, when the crisis was at its peak, George Soros recommended just such an agency as the means of avoiding a breakdown of international finance. His proposal is roundly criticised by Eichengreen (1999, Chapter 5), who specifically focusses on the restrictions that "to ensure that the scheme was actuarially sound , each country's access would be limited to a ceiling set by the IMF on the basis of its assessment of the country's macroeconomic and financial condition. .. Loans in excess of the ceiling would be uninsured. Moreover, the IMF would make clear that it was not prepared to aid countries having difficulty servicing uninsured loans". Using the same logic as in Section 3, Eichengreen suggests that these restrictions are not credible: " to assert that the international community would be able to stand aside in the event of default on uninsured loans, in disregard of the systemic consequences, is to assume a solution to the problem."

(When Soros next proposed a solution for the problems of the system in the Financial Times a year later, it involved two of the other ideas mentioned above -- lender of last resort and "haircuts" for creditors.)

1.6) Capital controls

To discourage short-term, in-and- out capital flows, and increase the autonomy of monetary policy after the breakdown of Bretton Woods, James Tobin (1974, pp. 88-9) proposed an internationally agreed uniform *transactions tax* on all spot conversions of one currency into another. The idea did not attract much attention until after the 1994/5 Mexican crisis, leading Tobin(1996, p. xi) to complain that his critics were missing "the essential property of the transactions tax -- the beauty part -- that this simple, one-parameter tax would automatically penalise short-horizon round trips , while negligibly affecting the incentives for commodity trade and long-term capital investments. A 0.2% tax on a round trip costs 48% a year if transacted every business day, 10% if every week, 2.4% if every month. But this is a trivial charge on commodity trade or long-term foreign investments."

In support of Tobin's position, Jeffrey Frankel (1996) noted that if -- as survey data suggest -- expectations of exchange rate movements over short horizons are extrapolative, but mean-reverting over longer horizons, then such a tax would help to reduce the volatility of exchange rates by driving short-term extrapolative speculators from the market -- reducing the influence of Chartists in favour of Fundamentalists. But even its supporters acknowledge that, in crises such as those engulfing the ERM in 1992/3 and East Asia of late, the exit of investors fearing imminent devaluations of 15% percent or more is unlikely to be deterred by such a tax. Likewise, given the euphoria prevailing before 1997, it would hardly have checked the inflows to East Asia.

A much stronger case can be made for *inflow controls*, not least because they can be implemented unilaterally. Thus, in the 1990s, Chile adopted a battery of policies to discourage short-term inflows while still encouraging FDI. In June 1991 a 20% non-interest-bearing reserve requirement ("encaje") was imposed on external credits, and in May 1992 this was raised to 30%: later this "tax" was extended to time deposits in foreign currency and, in 1995, to foreign financial investments, particularly in the Chilean stock market. With Chilean interest rates of around 10% in 1994 attracting gross portfolio inflows of about 3.5% of GDP, Agosin and Ffrench-Davis (1996, pp.173-4) describe the extension of reserve requirements to these inflows as a pre-emptive strike to deal with an incipient problem (and show that the implicit taxes added 4% to the cost of foreign borrowing on a 12 -month basis and over 16% on a 3-month basis). As a result of these inflow controls, Chile avoided a build-up of short-term debt. Recently, with no problem of excess inflows, the Chilean *encaje* has been reduced to zero: proving not that it has failed but that "variations in the *encaje* can be used as a flexible instrument of short-run macro policy to help insulate a country against the vagaries of boom and bust in the international capital market", Williamson (1999, p.9).

Just how successful the Chilean controls have proved may be a matter of debate; but, as *ex ante* measures to limit vulnerability, the implicit taxation of "excessive" capital inflows has much to commend it. What of the drastic *outflow controls* used by Malaysia, which effectively ban the repatriation of all funds till further notice. Like a tourniquet, this can be used as a crisis measure to stop the haemorrhage of funds when all else fails: and, as Krugman (1998b) pointed out, it gives the country involved the freedom to cut interest rates to promote economic recovery. But measures which unilaterally cut the country off from the capital markets involve a major interference with the conduct of business in an open economy: and are quite likely to spread contagion as investors expect copy-cat controls in neighbouring economies. It is very difficult to recommend them as the "magic bullet" to solve financial crisis. As the last resort of policy makers-trapped by the vagaries of unregulated capital markets, such desperate remedies are incentives to find better solutions.

Section 2 **Elements of the East Asia Crisis**

Three varieties of crisis: Creditor Panic, Asset Bubbles and Sharks

To redesign the system requires diagnosis of the problems that plague it; in particular the roots of the recent crises in East Asia. But different observers see things differently. To some it was reminiscent of a nineteenth century British bank panic, and called for prompt intervention by a lender of last resort. It put others in mind of Japan in 1990, when an asset bubble burst and left most banks broke, calling for wholesale financial reconstruction (with the attendant bill for local taxpayers). To one of those intimately involved, Prime Minister Mahathir of Malaysia, the crisis seemed to be the fiendish creation of large speculators and hedge funds who can profit from disruption ("sharks").

Radelet and Sachs (1998, p.4) have endorsed the first view -- that the crises were essentially "failures of collective action" on the part of creditors. "Our preferred explanation" they say, "turns on the critical distinction between illiquidity and insolvency... A liquidity crisis occurs if a solvent , but illiquid, borrower is unable to borrow fresh funds from the capital market in order to make current debt servicing obligations. The inability of the capital market to provide fresh loans to the illiquid borrower is the nub of the matter." Chang and Velasco (1998) take much the same approach (and add that under fixed exchange rates , a run on banks becomes a run on the currency if the Central Bank attempts to act as lender of last resort). To make their point they use the model of bank runs developed by Diamond and Dybvig (1983), who formally derive the two expectations-dependent equilibria for a bank (in business, or bust) -- and show how deposit insurance can help to coordinate expectations on the good one.

The idea that economies in East Asia were buoyed by a bubble was expressed most persuasively by Michael Dooley (1998) and Paul Krugman (1998a) -- who noted that, without prudential control, deposit guarantees were a recipe for misdirected lending, insolvency and ultimate financial collapse. The combination of weak regulation and implicit deposit guarantees meant local bankers were free to gamble with the money that global capital markets poured into their parlours: they reckoned that they could gain on the upside and leave the government to cover the downside, and that international depositors wouldn't mind so long as the guarantee lasted. This set the scene for a bubble economy, with assets priced on the Panglossian assumption that all would be for the best in the best of all possible worlds.

These interpretations are illustrated diagramatically[3] by the two circles in the Figure 1. On the left is Sachs's view that the problem was like a bank run, with creditor panic leading to financial collapse of illiquid businesses. On the right is Krugman's view --that the problem was one of insolvency, with misdirected investment and mispriced assets, a bubble economy.

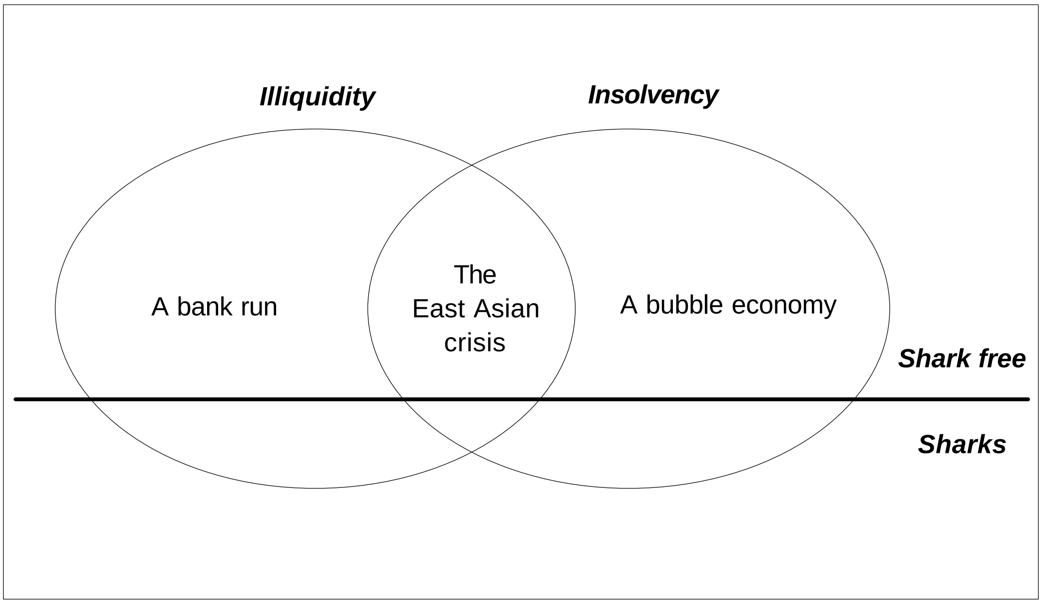

Figure 1: Elements of the East Asian Crisis

To force a choice between them is to pose a false dichotomy, however, as the two views are not incompatible: and the truth probably lies in the interaction of both factors -- domestic distortions and creditor panic, as indicated by the overlap in the Figure.[4] Indeed, recent work on multiple equilibria suggests an interesting interaction between the state of fundamentals and multiple equilibria: if fundamentals are very strong there is a unique good equilibrium, if they are very weak a unique bad equilibrium, but multiple equilibria are possible for intermediate values of fundamentals[5].

[3] As in Miller and Luangaram (1998).
[4] See also Sachs (1998).
[5] The simplest illustration is that of a currency attack, Obstfeld (1996). There are three players, a government selling reserves to defend its exchange rate peg and two holders of domestic currency who can trade it in for

The liberalisation of capital movements undoubtedly amplified the size of the domestic bubble and the severity of the subsequent collapse. Capital surged in when global capital gained unfettered access to new markets, with implicit guarantees on downside risks. But foreign funds were pulled out in panic when creditors suspected that not all was well (that much of the money pouring into Thailand was ending up in empty office blocks, for example, or that funds funnelled through Korean banks were feeding the many-headed hydra of the Chaebol conglomerates) and that were not enough dollar reserves for the guarantee to be credible. Surging inflows could explain how initial bank problems of non-performing loans worth say 5 to 10% of GDP were amplified to say 20 to 25% of GDP; and creditor panic and the collapse of exchange rates could have doubled this figure to the 40 to 50% now seen in Thailand, for example. This underlines the "second best" case for caution in liberalising capital movements, Flemming (1999).

Evidently, in models of multiple equilibria, large traders may play a crucial role in coordinating expectations. But large-scale, short-term investors who can place bets and then make them come true could make even more money catching the markets by surprise: that is where the sharks come in. Where forward rates are set on the basis of the prevailing pegged rate equilibrium, for example, then big players should be able to make money by shorting the currency and pulling out the reserves so the currency collapses. Is there any evidence of this?

In their IMF report on hedge funds Eichengreen and Mathieson (1998, p.24) observe that so-called 'second-generation' models of currency crisis, which emphasise the possibility of multiple equilibria[6], leave a potential role for large traders who "can precipitate a crisis in two ways. First, they can themselves undertake a [sufficient] volume of sales … Second, they can serve as the leaders who other small traders will follow.. In this case it will be unnecessary for large traders to actually take large positions, only to signal their intention of doing so. This mechanism is consistent with models of herding in foreign exchange markets".[7] Reassuringly,

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reserves if they expect devaluation. In this strategic game of speculative attack, fundamentals – in the form of the reserves - do play a role. If there were no reserves the currency would surely collapse, and vice versa for massive reserves. But the interesting case is when it takes two to tango , i.e. when neither trader alone can "run" the government's reserves but together they can. Then there are two equilibria; survival -if neither believes the other will attack; collapse of the peg, if each believes the other will attack. With intermediate levels of reserves the way is open for expectations to play a critical role. Or is it?

The same game, played with many small traders, still has two equilibria -- in that coordinated attacks can succeed in dislodging a peg which is otherwise viable. But if it takes two hundred rather than two to overwhelm the official defenses, a coordinated attack seems a lot less plausible. Indeed, it can -- and-- has been argued that a little uncertainty about the behavior of other traders (technically, "lack of common knowledge") leads to a unique equilibrium (Morris and Shin,1998a, b). The idea is that individual traders, unsure of what other traders are thinking, will use the level of reserves as a guide: and the role reserves then play in coordinating expectations leads to a unique equilibrium : an attack will take place when reserves fall to a critical level, but not before.

[6] See Obstfeld (1996), for example.

[7] In the second, "signalling" case, it is the large traders, not the fundamentals that coordinate expectations, and, as the authors note, there are several theoretical reasons why this might be true, including asymmetric information in financial firms. If this leads firms to evaluate traders by trading out-turns , then "money

there is, according to the IMF report , no evidence that this was the case in East Asia, at least not on the part of hedge funds. "The (Thai) baht was the only currency for which the hedge funds collectively took short positions, in the view of market participants", they report, and in Thailand "hedge funds were at the rear, not the front of the herd, which appears to have been led by domestic corporates, domestic banks, and international commercial and investment banks"(Eichengreen and Mathieson, 1998, p.18).

It was, however, the subsequent attack on Hong Kong dollar[8] -- which, along with the Singapore dollar, had the most pukka fundamentals East of Suez -- that has given credence to the view that big players could be playing a specific role in triggering crises. The possibility that large players could be responsible for deliberately triggering or spreading crisis is indicated by area under the horizontal line in the figure: above the line is 'shark free'.

It is fascinating to observe that there is a close resemblance between recent academic analysis of financial crisis and that espoused by George Soros in his book on *The Crisis in Global Capitalism*. His view that global financial markets have multiple equilibria, for example, is mirrored by the Diamond and Dybvig model of bank runs -- and by the history of the nineteenth century City of London before institutional innovations to stabilise markets. And the concept of "reflexivity" he appeals to corresponds almost exactly with the expectations--induced shifts of equilibria described by Obstfeld and others in the "second generation" models of currency crisis discussed above. (While Soros may agree with Mahathir that the current financial system is badly accident-prone, he would presumably not agree that big players deliberately make mayhem to make money.)

Section 3: The Strategic Case for Changing the Rules of the Game[9]

A salient feature of current financial crises is that in almost all cases the IMF has been forced to provide bailouts and this has effectively guaranteed the creditor's investment in sovereign debt. The recent Russian default is an exception: but the dire state into which this plunged the economy serves to underline the pressures on the IMF to intervene. What can be done to prevent the IMF being manoeuvred into supplying emergency financing in this way? It can

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managers prefer to follow the same strategies as their competitors (or 'hide in the herd') in order not to be easily evaluated", Eichengreen and Mathieson (1998, p.25).

[8] Speculators attacking the Hong Kong dollar used a "double play" where they shorted the stock market before attacking the currency. Because this way they would make money even when the attack failed! (The reason is that, when speculators moved out of the HK dollars, the currency board mechanism means money becomes tight, interest rates go up and the stock market falls). This colourful episode revealed three things. First speculators knew they were big enough for their actions to change interest rates. Second they knew that the market didn't know they were going to attack – otherwise how could they make money on the forward sales. Thirdly, they chose to use their power not push an overvalued currency towards equilibrium, but to try to destroy the fulcrum of currency stability in East Asia. The situation was so alarming that , to bust the double play, the central bank took the highly unusual step of making massive purchases of shares in the Hang Seng index :so prices went up not down and the bets went wrong. They had to use their market power to counter that of the big private sector players.

[9]based on Miller and Zhang(1998)

hardly say that it will not assist members in distress: that is not credible.[10] What is needed, we believe, are rules or procedures that can protect the debtor from litigation, allow for some financial restructuring --- including possibly debt write-down --- and impose some conditionality to ensure appropriate effort on the part of the debtor.

The logic of this situation may be clarified by treating it as a strategic game between two players, namely a creditor and the IMF representing the debtor (as in the second stage of the Latin American debt crisis when the IMF decided to help the debtors on the terms of the Baker Plan). Consider a liquidity crisis where the debtor is solvent (worth 130) but the current capacity to pay is insufficient to service debt (with face value of 100). The actions available to each of these players are as follows: the creditor may either roll over the debt or grab the assets, i.e., withdraw funds or seize collateral; while the IMF can either bail out the debtor or take no action.

These actions and the resulting payoffs are shown in Table 1 and Figure 2. As the arrows indicate, there are two Pareto-efficient Nash equilibria on the diagonal of this normal form game (which resembles the Battle of the Sexes). In the top left (Roll-over, No action), the debtor is in good shape as the roll-over involves some concessionality; the creditor's payoff is only 80, leaving 50 for the debtor. In the bottom right (Grab, Bail-out), the creditor's demand for accelerated payment of face value is met thanks to emergency funding by the IMF, with the remaining net worth of 30 going to debtor --- minus a cost of 5 needed to satisfy tough IMF conditionality! The off-diagonal payoffs for (Grab, No action) at bottom left highlight the losses that may occur when the IMF refuses a bailout --- the creditor gets the collateral, worth 40, but the debtor is `punished' (gets nothing) as trade is strangled because of unilateral default. (As there is no need for bailout when the creditor rolls up debt, the off-diagonal payoffs for (Roll-over, Bail-out) are the same as for (Roll-over, No action.)

		IMF/Debtor's	actions
		No action	Bailout
Creditor's	Roll-over	(80,50)	(80,50)
action	Grab	(40,0)	(100,25)

Table 1 A liquidity crisis: outcomes and payoffs.

As far as the IMF and the debtor are concerned, (Roll-over, No action) is the preferred Nash equilibrium and it might appear that the IMF can secure this outcome by simply refusing all bailouts. Given that the creditor has first mover advantage, however, this is not a credible threat and it is the other equilibrium which is selected. To show this we represent the game in extensive form in Figure 2, letting nature first determine either a good or a bad state[11]. In the good state, the debtor has sufficient resources to service the debt, and there will be no strategic interactions between the creditor and the IMF: so we ignore this branch. In the bad state, the country is in a liquidity crisis, and the creditor can choose either voluntarily to roll up the debt or to attack (accelerate repayment). Only then is it the IMF's turn to move. With

[10] In the language of Kydland and Prescott (1977), such a policy is not `time-consistent': the `time consistent' outcome is that the Fund will intervene.
[11] In fact, the probability of either state is endogenous, as discussed below.

rollups, no action is called for; but asset grabbing by the creditor is so disastrous for both the creditor and the debtor that the IMF will be forced to act (even though this involves a 100% guarantee for the creditor).

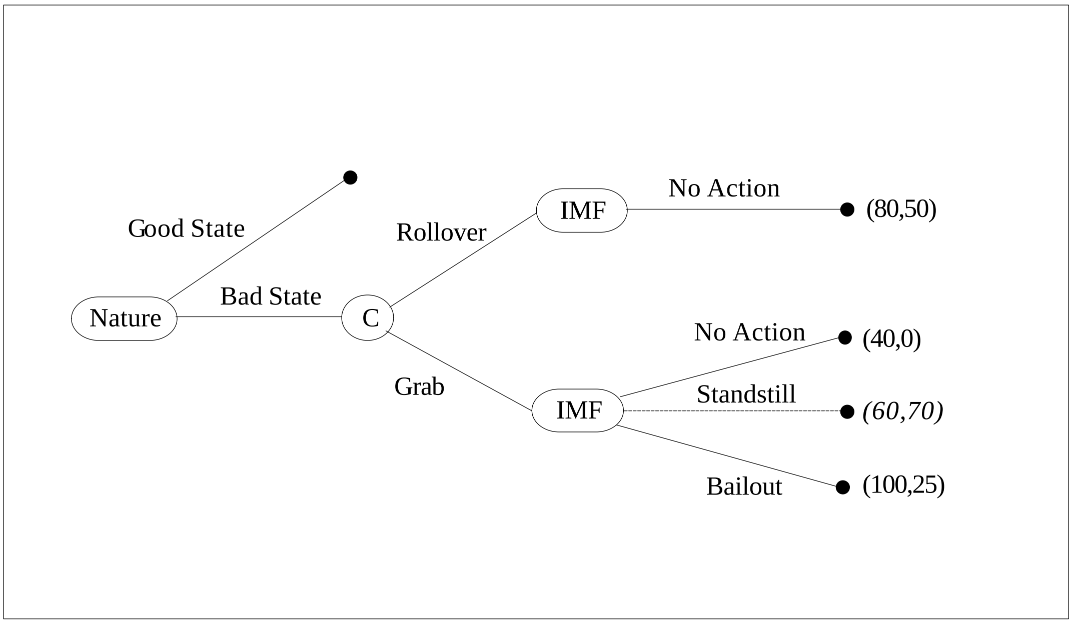

Figure 2: The strategic case for a payments standstill.

When the equilibrium is 'refined' by specifying this realistic move order, there is only one (sub-game perfect) Nash equilibrium -- constant bailouts: using backward induction, the creditor will opt for attack rather than roll-over -- knowing that the IMF responds with a bail out. This is the `time consistency trap' facing the IMF (and its partner institutions who supply emergency funds). To escape, the IMF must be able credibly to threaten not to bail out. How is this achieved? Not, we believe, by further `refinements of equilibrium', but rather by changing the game through institutional reform: specifically by enabling the IMF to act as a bankruptcy court as well as the lender of last resort.

How increasing the options available to the IMF way changes the equilibrium is shown by including the standstill in the extensive game, see the dashed line in the figure. In the last stage of the game, it is obvious that the standstill dominates the bailout as the appropriate IMF response to an attack. (As the creditor is forced to accept a debt service reduction this leaves 70 for the debtor.) Consequently, the creditor, faced with burden-sharing under the standstill (i.e., ‘having a haircut’ or ‘taking a hit’), will prefer to roll-over rather than attack. More than that, creditors will now have the incentive to increase coordination to avoid the hit -- changing debt contracts to allow for sharing and for majority-voting as recommended in the Rey Report, for example. (Put differently, such `voluntary' contractual changes -- and the creation of a Bondholders Council proposed by Eichengreen and Portes (1995) -- are unlikely be implemented without the credible threat of a payments standstill.)

In the above account -- and in Figure 2 -- it is ‘nature’ that initially determines whether there is a good or bad state: but this is a crude simplification. In reality, the probability of good or bad outcomes will depend on the nature of the global financial system. If, for example, there is no standstill mechanism and the IMF is gamed into guaranteeing bail-outs for investors, there will be no incentive for the latter to monitor their investments and the probability of failure will go up (unless domestic regulators take firm action to prevent this). A dramatic illustration of this argument is provided in Krugman (1998a), where deposit guarantees generate such inflated asset values (‘Pangloss’ values) that financial collapse will occur in all but the best of all possible worlds! It is to prevent this degradation of the global financial system that guarantees must be limited.

There is yet another reason for deliberate changes in the rules: the risk of something worse. If, for reasons just given, the current system is unsustainable, then change is inevitable, either by deliberate rule changes or in a less desirable fashion. If the system continues to promise bailouts (and encourage carefree lending and callous capital flight), emerging countries will be forced to take things into their own hands and impose outright capital controls (which could also be shown as a change in Figure 2, replacing the dotted line for standstills.) This is what Malaysia has done[12]. It is the threat that more countries will follow the Malaysian example that could give policy-makers the incentive to make the changes suggested below.

Section 4: Improving the Financial Architecture.

4.1) **Key features of the East Asian crisis**

It may be useful to summarise four key features of the East Asian financial crisis, as described earlier in Section 2.

The first feature is **weak fundamentals**. In previous crises, attention focussed on weak macro-fundamentals such as fiscal profligacy or an overvalued exchange rate: and IMF conditionality correspondingly involved fiscal stabilisation and devaluation. Now the Thai baht was doubtless overvalued in early 1997; so macro-fundamentals were not sound. But it was microeconomic distortions that played a much greater role both in Thailand and elsewhere in East Asia, in particular incentives for risk-taking in the financial sector ,where the combination of poor regulation and widespread deposit insurance led to over-lending, excessive investment and asset bubbles.

The second feature is what we may call the **magnification effect** of global capital flows which amplify the impact of domestic distortions. Surging inflows into a poorly regulated banking system can soon generate massive exposure and push asset prices to unrealistic levels from which collapse is the only exit.

The third feature is the presence of **contagion**, with creditor panic spreading from country to country, so a shift from good to bad equilibrium in Thailand, for example, is soon followed by financial crisis and recession in Korea. George Soros's alarming description of global capital flows (quoted below) captures how dramatically the ebbs and flows of finance can transform the fate of the open economies and leads him to conclude that these forces need to be controlled if crises are to be averted.

[12] The fact that countries like mainland China have -- so far -- escaped contagion from the East Asian crisis is commonly attributed to the inconvertibility of their currency on capital account, Miller and Zhang (1998); something other emerging market countries cannot fail to notice.

The fourth feature is the existence of **multiple equilibria**. The presence of low level equilibria in the domestic economy can dramatically increase the downside risk of macroeconomic shocks : in the 1930s, US prosperity came to an end as banks collapsed, dragging industry down with them, and the economy slid into the Great Depression. Paul Masson (1998 and in his contribution to this volume) has argued that multiple equilibria may help to account for contagion. Rather than appealing to common shocks or to spillover effects to account for contagion, Masson suggests that crisis elsewhere can coordinate expectations and shift equilibrium. There are reasons why developing countries may be more exposed to such shifts than are long-standing members of OECD. Their interest rates and exchange rates are more volatile, and the capacity of private sector balance sheets to cope is less and the facilities to deal with work-outs is weaker. Adverse shocks are likely to leave a greater overhang of debt for the banks and businesses and there is a correspondingly greater danger of a shift to a low level equilibrium.

4.2) **Crisis Prevention and Management**

When invited by Congress to comment on the Asian crisis, the famous financier George Soros shocked his listeners by comparing global financial markets to "a wrecking ball, knocking over one economy after another" (Soros, 1998, pp xi-xvii; statement to a U.S. Congressional Committee taking evidence on the origins and course of the East Asian crisis). To many other observers, the elemental forces that have recently swept through emerging market economies seem more like sudden storms at sea, ready to engulf the unwary.[13] Fatalism may be fine for those whom the gods protect: but for lesser mortals, prudence is preferable. This is the subject of this section, looking first at steps for preventing or avoiding a crisis and then at crisis management and resolution, in the light of the key ideas , the various diagnoses and the strategic considerations of previous sections. (We end with a nightmare of sailors caught in storms at sea: the risk that there are sharks in the water.)

4.2.1) **Crisis Prevention**

(a) Strengthening fundamentals

First and most obvious is the need to deal with weak fundamentals that could trigger a crisis: this is common sense, not magic. Incentives may be distorted at the level of <u>macroeconomic policy</u>, with an unsustainable public sector deficit being financed by depleting official foreign currency reserves, for example. Excessive government deficits are what drive so-called first generation models of currency crisis, Krugman (1979): and are what IMF conditionality is typically designed to check. But for East Asian economies the problem lay mainly elsewhere, with distorted incentives in <u>inadequately regulated banking systems</u>. As Stiglitz (1997) puts it, the problem was not that governments did too much but that they did too little! Further to the “Washington Consensus” (Williamson, 1994, p.26-28), there is a broad based agenda to reduce to reduce distortions by greater transparency and disclosure (see Section 1.1 above), by better corporate governance and by closer prudential regulation of banks.

With crises originating in the private sector, the focus of disclosure needs must shift from the macroeconomic reporting covered by the SDSS to information on corporations, banks and International Financial Institutions; and the terms of conditionality also need to change. Has

[13] See, for example, Stiglitz (1998a): “Small open economies are like rowing boats on an open sea... ”

IMF conditionality moved with the times? Not in the eyes of Radelet and Sachs (1998), who attribute the severity of the recessions in East Asia to inappropriate monetary and fiscal programmes. William Cline (1998, p 24), on the other hand, in his assessment of adjustment programmes in the region, concludes that "IMF programs generally do not appear to be out-of-date recipes irrelevant to the East Asian circumstances. Instead, they correctly place great emphasis on structural reform, especially in the financial sector where serious weaknesses were a major reason for the break in confidence of foreign investors.... the fiscal content, especially of the revised packages, has not been extremely restrictive and thus has recognised that the principal origin of the problems in those economies was not fiscal irresponsibility."

It is self-evident that prudential regulation is important for the domestic allocation of financial resources. It is even more important in the context of liberalised capital markets, where capital inflows can greatly magnify the effect of domestic distortions. Poor regulation, together with guaranteed investor bail-outs, may put the viability of the global financial system at risk as the lack of incentives to monitor increases the probability of collapse and the cost of bail-outs. This is how the structure of financial system can "feed back" onto the probability of adverse outcomes in Figure 2 (as discussed at the end of Section 3 above).

(b) Limiting vulnerability

Correcting distorted corporate and financial incentives will, of course, take time, so policy must be designed for a second best world. Because short term funds that flood into emerging markets when profits beckon are liable to rush out again when danger threatens, and because this can lead to substantial -- even disastrous -- devaluation, it is vital for the proper functioning of global capital markets that financial vulnerability be reduced[14]. This is surely the prime lesson to take from the East Asian crisis: and financial and legal regulations in both debtor and creditor countries can be designed accordingly.

Taking debtor countries first: "Banks can be limited in the magnitude of the foreign exchange exposure they incur, and maturity mismatches might also be subjected to discipline by the supervisory authority. On-lending by financial intermediaries in foreign currency could be prohibited ... and the insertion of bullet repayment clauses subject to the discretion of the lender (a widespread practice in Korea's borrowing) might be declared illegal and thereby rendered unenforceable", Williamson (1999, p.9). Rules on improved corporate governance and financial disclosure may reduce vulnerability and avert panic. The enactment of appropriate bankruptcy laws should help, cf. Chapter 11 of the US bankruptcy code which provides protection for debtors against liquidity crisis. (Under this chapter, firms that are judged to be viable can obtain an automatic stay on debt payments; can borrow extra funds despite current arrears; and may arrange debt equity swaps, possibly under new management.) Indeed, it might be appropriate to extend extra protection against extreme, unanticipated exchange rate shocks in a sort of "super" Chapter 11 for emerging market economies, Miller and Stiglitz (1999).

Important steps can also be taken in creditor countries. "What better way to ensure that bankruptcy rules are passed than making access to the NewYork or London markets conditional on having such legislation in place?" as the Economist (1999a, p.22) put it in its

[14] Corbett and Vines earlier in this volume show how financial crisis together with foreign currency exposure can lead to collapse.

recent Survey of Global Finance. Changes in the terms governing investment in emerging markets might also help. Thus the BIS could change the capital adequacy rules which require far greater provisioning for long term lending than for short -- giving every incentive for creditors to lend short. Insurance and pension funds are often restricted to investment grade paper: so downgrades of countries in trouble by credit-rating agencies precipitate an avalanche of selling. These rules might be changed to avoid self-fulfilling creditor runs.

But the virulence of creditor panic in East Asia suggests that, in addition to these improvements to the financial infrastructure, emerging market countries may also need to use inflow controls to limit external vulnerability due to short-term government or corporate foreign currency borrowing. Chile provides a precedent, with rules designed to tax short-term and portfolio flows while exempting FDI, as discussed in Section 1.6 above: the negative externalities characteristic of financial collapse provide a powerful economic case for such taxes.

(c) Improved contracts

The proposal by Eichengreen and Portes (1995) for debt contracts that permit a country to reschedule payments in the event of a crisis has been supported by the reports of the G-10 deputies (after the Mexican crisis), and of G22 deputies (after the East Asian crisis); and more recently by Stanley Fischer in his address to the American Economic Association where he recommended that " clauses on collective representation and majority decisions by creditors could be included in bond and other contracts, to facilitate the reaching of agreements with creditors in times of crisis", (Fischer, 1999).

If revising bond contracts is such a good idea, why has it not been adopted? One reason may be the lack of incentives already mentioned in Section 1.4 above: why volunteer for 'burden-sharing' when you don't have to? But the factor stressed by Eichengreen (1999) is the negative signalling effect that emerging countries might transmit by inserting such clauses in their bonds. To counter this, he argues that, in addition to leadership by OECD countries, "the IMF should urge all its members to adopt majority representation, sharing, no-acceleration, minimum-legal-action threshold, and collective representation clauses... It should recommend that members require that all international bonds include such provisions as a condition for being admitted to domestic markets. And it should telegraph its willingness to lend a more attractive interest rates to countries that issue debt securities featuring these provisions."

There is no denying the attraction of the state-contingent bond contracts for avoiding creditor races by bond holders and for expediting debt write-downs; though it is not clear how much difference the presence of such bond contracts would have made to East Asian crisis where the problems were centred in short-term lending to banks and not in bond markets.

(d) Contingent finance and loan guarantees

What countries need in a time of creditor panic is liquidity -- both in the form of own reserves and in the form of prepositioned credit lines. Pre-arranged 'bail-in' procedures were given general endorsement when the G-7 "adopted the principle of establishing precautionary and multilateral lines of credit to countries that are at risk and pursuing strong IMF-approved policies – to be drawn only in the event of a liquidity need."World Bank (1998, pp.153-4). A specific example is provided by the credit lines taken out by Argentina to limit the 'tequila effect' on its domestic economy -- being run with a strict currency board. In its Survey of Global Finance, *The Economist* (1999, p.22) concluded that "Argentina's contingency-finance arrangement seems to be working well, so the World Bank should be nudged to support similar arrangements elsewhere. If the World Bank or other multilateral organisations were to guarantee a portion of such emergency credit lines, more banks would be prepared to offer them to more countries. This would not solve the question of providing liquidity in a crisis, but it might help at the margin." (Other steps could include setting up regional systems for emergency credit recycling.)

4.2.2) **Crisis Resolution**

(i) Lender of last resort

Is an agency to act as lender of last resort for countries facing a crisis also needed? In a speech at the American Economic Association which echoed the sentiments of Walter Bagehot in an earlier century, Stanley Fischer (1999) of the IMF gave an unequivocal answer: "there is such a need: it arises both because international capital flows are not only extremely volatile but also contagious, exhibiting the classic signs of financial panics, and because an international lender of last resort can help mitigate the effects of this instability, and perhaps the instability itself. This applies particularly to emerging market countries, where the crises of the last five years have been concentrated." He went on to argue "not only that the international system needs a lender of last resort, but also that the IMF is increasingly playing that role, and that changes in the international system now under consideration will make it possible for it to exercise that function more effectively".

In the terminology we have used earlier, he could as well have said that there are multiple equilibria in financial systems and that well designed institutions can help to select the good ones. But two obvious problems need to be faced: the lack of resources available and the risk of moral hazard if bail-outs are guaranteed. Both were tackled with more optimism than realism. As regards the former, Stanley Fischer made a strong case for more resources for the IMF. As for the latter, he expressed the belief that moral hazard could be limited by appropriate international standards, domestic prudential controls and the threat of bankruptcy. But the strategic analysis in the previous section implies that the IMF may be gamed into repeated bail-outs unless either standstill procedures are implemented or the countries concerned take the law into their own hands (and impose outright capital controls).

(ii) Standstills and workouts

As an alternative to Malaysian-style capital controls -- and as a supplement to domestic bankruptcy law -- official standstill provisions are an essential strategic threat needed to limit investors' moral hazard: when creditors realise that the authorities may protect borrowers -- instead of simply bailing out lenders -- they will have the incentive to lend with more caution (see Section 3 above, and the comments by Richard Portes at the end of this volume).

While the IMF has not endorsed official standstills, it has, as in the Latin American debt crisis, "agreed that the Fund may lend to countries in arrears to private creditors, provided they are pursuing appropriate policies and making good faith efforts to cooperate with the creditors", (Fischer, 1999). Official lending into arrears is a strong signal that non-payment is being condoned, and that -- at least for large international banks -- roll-overs are in order. (Such roll-overs may well be in the best interest of creditors, as in Korea in December 1997: the problem is that of securing creditor coordination.)

Even for countries needing a debt workout, payment standstills play a crucial role as noted by the World Bank in its recent assessment of the East Asia crisis: it commented that
"The most critical aspect of a debt workout, however, is the temporary suspension of debt payments, which helps stop the decline in the currency and buys time to put in place a credible adjustment program and to organise creditor-debtor negotiations. By allowing an orderly debt restructuring, it could result in better outcomes for both the debtor country and the creditors", World Bank (1998, p.156).

The G-7 Statement of October 1998 supported an active role for the World Bank and other Multilateral Development Banks in responding to the crisis, including the use of loan guarantees and other innovative means to leverage private sector lending for an investment projects in emerging markets (G7, 1998, p.3). Soon after that, in November, 1998, President Clinton and Prime Minister Obuchi announced the Asian Growth and Recovery Plan to finance bank recapitalisation and accelerate bank and corporate restructuring , with the support of the World Bank , the ADB and bilateral contributors. Among other things the $5 billion programme aims to promote mechanisms for dispute settlement and burden sharing between creditors and debtors in the region; and safety nets to mitigate the social effects on the poor and unemployed.

The most appropriate forum for international negotiations on debt restructuring and debt workouts is still a matter of debate: Sebastian Edwards (1998), for example, proposes a new agency. How the write-down of Indonesian debt is be handled is an important case in point, discussed by Corbett and Vines earlier in this volume.

(iii) Suspending convertibility -- and catching sharks?

Chilean style 'capital taxes' to limit short-term inflows have already been discussed as appropriate prudential measures that might be taken to avert crisis. But in a crisis, faute de mieux, countries can resort to further capital controls. Bearing in mind the strictures laid at the door of global financial markets by George Soros, for example, other devices worth considering in a crisis include: (i) more public disclosure of the position taken by hedge funds, as proposed by Malaysia; (ii) banning borrowing in local currency by hedge funds and other foreign banks, see the actions of the Hong Kong Monetary Authorities against speculators, Dieter (1998); (iii) including hedge funds and merchant banks in a target group of creditors whose exit will attract regulatory censure -- by increasing the with-holding penalties in Chilean capital controls, "exit taxes", or by regulatory action in their G7 host countries, for example; (iv) two-tier exchange rates -- with a floating rate on capital account.

The outright suspension of convertibility on capital account, as in Malaysia, is a radical alternative not be taken lightly; it delivers protection against speculative attacks and allows for the lower domestic interest rates but it disrupts the immediate financing of international trade and, as an arbitrary interference with property rights, reduces future access to international finance. But Malaysia has served notice that the costs of going along with unregulated liberalism may, on occasion, exceed the benefits.

5) **Conclusions**

Views on the reform of the international system are bound to be influenced by interpretations of recent financial crises. Inasmuch as the reasons lay in domestic mismanagement, it is incumbent on the economies concerned to “put their house in order”. But the G7 statement of October 1998 acknowledged that many of the outflows were not in fact driven by country specific fundamentals;[15] and Stanley Fischer was quite explicit about the role of creditor panic in spreading contagion. If the crisis in East Asia involved a region-wide ‘bank run’ (where shifts of international confidence transformed a temporary liquidity crisis into a serious crisis of solvency), then systemic reform is surely necessary, with a focus on institutions and regulations which help to coordinate on ‘good equilibria’, see Paul Masson’s paper in this volume and Masson (1999, p.19).

In the absence of distortions, full capital account convertibility is a condition for the efficient allocation of resources: but asymmetric information generates distortions. The bank runs in the model of Diamond and Dybvig (1983), for example, arise because individuals liquidity preference is not observable. The fact that borrowers typically know more about their projects than do lenders is a well-known source of (borrowers’) moral hazard (Stiglitz and Weiss, 1981); and unmonitored deposit insurance engenders lenders’ moral hazard (Krugman, 1998a). Given such asymmetries, to insist on unconditioned capital account liberalisation is inappropriate: financial integration becomes an exercise in second best with the pace of liberalisation determined by the strength of the regulatory framework and the financial institutions.

In this context, there is no “silver bullet” to do the trick: what is needed is a strategy for crisis prevention. Thus a *lender of last resort* may well avoid bank runs but only at the risk of increasing moral hazard. To limit borrowers’ moral hazard, *prudential regulation* in borrowing countries is needed, for example; together with *domestic bankruptcy* and the threat of an *international payments standstill* to check lenders’ moral hazard.

Of course, borrowing countries must do their best to ensure sound fundamentals including, in particular, prudential regulations of banks. But this will take time and in any case is not sufficient; so we have discussed in Section 4 the various other steps that should, in our view, be taken. In the short run, for example, debtor countries must strive to reduce vulnerability due to short-term dollar exposure, which may involve the use of Chilean-style taxation on inflows. Creditors must also play their part -- by incorporating collective action clauses in loan contracts, for example and by offering contingent emergency finance. When crises nevertheless occur, damage limitation involves the provision of lender of last resort facilities, enforced debt roll-overs, exit -taxes and debt write-downs. (How far this will require changes in role of current institutions is not considered here.)

[15] Specifically it expressed “concern about the extent of the general withdrawal of finds from emerging markets that had occured without respect to the diversity of prospects facing those economies or to the significant progress that has been made in many economies in carrying out strong macroeconomic policies and structural reforms that enhance long-term growth prospects”, (G7, 1998, p.3).

Because of capital market imperfections, emerging-market economies emboldened -- or bullied -- into premature liberalisation may face financial disaster. As a last resort, therefore, they may be tempted unilaterally to suspend convertibility. This is what Malaysia has done. But if creditor countries can make the system safe enough for their emerging partners, there should be no need for them to 'get radical' in this way. One objective of reforming global institutions and sequencing liberalisation is to achieve this: to make outright capital controls the path not taken.

Postscript

Meeting in Bonn in February 1999, Finance Ministers from G7 approved a new forum proposed by Hans Tietmeyer, president of Germany's Bundesbank, whose task is "to assess the issues and vulnerability affecting the global financial system and to identify and oversee the actions needed to address them". It will meet twice a year and will be chaired for the first three years by Andrew Crockett, head of the BIS. This new forum, intended to replace the G22, will include G7 central bankers, finance -ministry officials and regulators and representatives from the World Bank and the IMF; but it does not yet include emerging market economies and "its only sanction will be peer pressure", Economist (1999b).

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