OECD DEVELOPMENT CENTRE

POLICY BRIEF No. 16

AFTER THE GREAT ASIAN SLUMP: TOWARDS A COHERENT APPROACH TO GLOBAL CAPITAL FLOWS

by

Helmut Reisen

- The unprecedented withdrawal of foreign private capital from Asia, more than 10 per cent of GDP in the crisis countries, confronts them with a transfer problem. Creditor governments should induce their home banks into financial rescue operations to reduce moral hazard in private-sector lending, and to encourage Asia's recovery.

- The resolution of Asia's domestic debt overhang must be the overriding policy concern for Asia's governments; paying the inevitable fiscal cost in Asia's restructuring process requires tax-base broadening, supported by easy monetary policy.

- Progress towards a less crisis-prone international financial system will hinge on how to correct the excessive risk taking by banks. Regulatory distortions through the Basle Accord which bias bank lending towards the short term should be corrected.

- Developing countries should strengthen bank and non-bank balance sheets and raise the quality of inflows; Chile-type regulatory measures, however, will only be effective in an appropriate policy context.

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DEVELOPMENT CENTRE POLICY BRIEFS

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The current Asian crisis ranks already among the most notable of the many crises in financial history, affecting many key emerging markets beyond the region. The resulting policy challenges have given urgency to the debate on a coherent approach to financial globalisation. This Policy Brief aims at informing that debate. It documents the extreme costs of the ongoing crisis and evaluates several suggestions for crisis resolution and crisis prevention, both on a global scale and with respect to host-country policies.

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Table of Contents

The Gains from Global Capital Mobility: Myth or Reality? 6

The Damage Done by the Sudden Stop: The Asian Slump 9

Crisis Management: Global Approaches 12

How (Not) to Recover from the Domestic Debt Overhang 17

Global Approaches to Crisis Prevention 23

Crisis Prevention: What Host Countries Can Do 29

Notes 35

Bibliography 36

Table 1 Net Private Flows to Asian Countries in Crisis 10

Table 2 Current Account Balance and Real GDP 11

Table 3 Exchange Rates, Stock Markets and Yield Spreads in Asian Countries in Crisis 11

Table 4 The Foreign Private Debt Overhang in Asian Countries in Crisis, 1998 11

Table 5 The Domestic Private Debt Overhang in Asian Countries in Crisis, 1998 12

Table 6 Possible Debtor-Creditor Relationships 15

Table 7 Cost of Debt, Credit Growth and Trade 18

Table 8 Bank Crisis Resolution in Asia, 1998 19

Table 9 The Fiscal Impact of Banking and Currency Crises, 1990s 20

Table 10 Basle Capital Accord: Risk Weights by Selected Category of On-Balance-Sheet Assets 25

Table 11 Maturity Structure of Foreign Debt in Selected Countries 34

Box 1. Banco Central de Chile Studies on the Effectiveness of the Country's Measures to Regulate Capital Flows 32

The 21st century is expected to see a growing share of global output move from the rapidly ageing OECD economies to the younger developing world (OECD, 1997). This will benefit both regions. With labour forces stagnating or shrinking in the OECD area and with pension assets increasingly decumulated, returns on capital will be depressed. All the world's labour force growth will take place in the developing countries, promising higher returns on capital there (MacKellar and Reisen, 1998). This promise is reinforced by the observation that poor countries have a higher potential to grow than rich countries. These expectations, though, would not materialise without substantial global capital flows, efficiently allocated to their highest *sustainable* social rate of return. This *proviso* brings us back to the very end of the 20th century.

In 1998, the world has witnessed the strongest financial panic since the Great Depression. Private capital flows, surging into the developing countries with unprecedented size in the years before, have made a sudden stop. What started as the Thai baht crisis in July 1997, quickly spread to other East Asian countries — Indonesia, Korea, Malaysia and to some extent the Philippines. In these worst-hit economies, income and more so consumption levels have since fallen at an alarming rate; the social costs (and political repercussions) are beginning to make themselves felt. By autumn 1998, crisis contagion had assumed global proportions, spreading to virtually all emerging markets, as investors returned to core OECD safe-haven paper. Before the "New Global Age" can materialise, therefore, this period of historic policy challenges has given urgency to the debate on and the design of a coherent approach to financial globalisation.

This Policy Brief aims at informing that debate. *First,* it sets out the importance of a coherent approach to globalising capital flows, and the potential benefits. While these benefits have been at times oversold and certainly under-documented, a reversal from financial globalisation would harm the industrial and developing countries alike. *Second,* the Policy Brief documents the extreme economic cost of the ongoing financial crisis, and hence underlines the need for improved crisis management and crisis prevention. The following sections evaluate several suggestions to improve the management of a crisis, once it has erupted, both by global regulation and by the countries affected. The final sections are devoted to crisis prevention, evaluating what can be done, both by global and by recipient-country regulation, to reduce the frequency and severity of financial and currency crises.

The Gains from Global Capital Mobility: Myth or Reality?

With virtually all emerging-market assets on fire sale, these are very hard times to "sell" the gains from global capital mobility. While these gains do certainly exist, the quantitative evidence is surprisingly sketchy. In principle, the benefits of global capital mobility should apply particularly in the interaction between the capital-rich, moderately-growing and fast-ageing OECD economies and the capital-poor, fast-growing and slowly-ageing emerging economies. The gains would result from a better allocation of world savings to the most productive investment opportunities, and the possibility of maintaining consumption levels in the event of adverse shocks and of demographic trends. Moreover, it is often held that open capital markets impose higher standards of economic policy on capital-recipient countries. Even with net capital flows between the OECD and non-OECD economies balanced, open capital markets can be presumed to offer sizeable diversification benefits and spillovers in the form of technology, managerial know-how, market access and competition dynamics. Differences between the two areas with respect to the exposure to country-specific shocks as well as the stage of economic and demographic maturity suggest that the diversification benefits of financial globalisation will not disappear quickly.

Three major currency and financial crises in the 1990s, however, in countries with broadly sound macroeconomic fundamentals (Scandinavia 1991-93, Mexico 1994-95, now Asia), have alerted economists to the magnitude of the potential costs of open capital markets. In view of the deep economic, social and political disruptions of these crises, some countries have started to retreat towards financial autarky by imposing capital outflow controls or by unilaterally defaulting on their foreign liabilities. The events fully confirmed earlier warnings that the macroeconomic adjustment to a sudden reversal of foreign capital flows can be extremely painful. Governments and central banks had been advised (e.g., in a series of OECD Development Centre studies, originating with Fischer and Reisen, 1992) to beware of the sustainability of capital inflows. In an address to Asian monetary authorities in the autumn of 1995, the following reasons for caution about capital flow reversals were spelled out (Reisen, 1996, p. 73):

> "*First*, it is increasingly acknowledged that global capital markets suffer from three major distortions: the problem of asymmetric information causes herd behaviour among investors and, in good times, congestion problems; the fact that some market participants are too big to fail causes excessive risk taking. It is questionable, therefore, whether the financial markets will discipline governments into better policies; even if they were to do so, the social and economic costs may be excessive.

Second, any shortfall in capital inflows will require immediate cutbacks in domestic absorption to restore external balance. The savings-investment balance is more likely to be achieved through cuts in investment than through higher savings in the short term, compromising future output levels. Current output levels fall to the extent that rigidities prevent resource reallocation, so that contractionary disabsorption effects outweigh expansionary substitution effects.

Third, the expansion of domestic credit connected with unsterilised capital inflows may not be sound enough to stand the rise in domestic interest rates and the fall in domestic asset prices that go with a reversal of these inflows. The resulting breakdown of domestic financial institutions provides incentives for monetary expansion and fiscal deficits incurred by the public bail-out of ailing banks."

The burden of proof of the gains from free capital flows has shifted to the proponents of open capital markets who are being criticised for having offered more "banner-waving" than hard quantitative evidence on the benefits of financial globalisation (Bhagwati, 1998). A look at the numbers seems to suggest that most of the gains that developing countries could reap from financial openness were obtained by *foreign direct investment* inflows:

— *First,* if foreign savings permit an acceleration of investment by augmenting (rather than crowding out) domestic savings, they typically have a positive temporary GDP growth effect of half a percentage point (Reisen, 1996). This assumes typical capital shares and capital output ratios as well as a net inflow of 3 to 4 per cent of GDP; furthermore, any externalities arising from openness are ignored.

— *Second,* foreign direct investment adds both to domestic investment and to long-term growth if the host-county is largely undistorted[1]. Borensztein, De Gregorio and Lee (1995) find that for each percentage point increase in the FDI-GDP ratio, the rate of growth in the host economy increases by 0.8 percentage points. The contribution to long-term growth results from two effects. First, foreign direct investment adds to domestic investment, as both are complementary in production and through positive spillover effects. Second, foreign direct investment stimulates growth through the embodied transfer of technology and efficiency, provided the host country has a minimum threshold stock of human capital.

Third, there is little evidence in the data that countries without capital controls have grown faster than countries with capital controls, after controlling for growth determinants such as income and education levels (Grilli and Milesi-Ferretti, 1995; Rodrik, 1998). These studies, however, do not allow for varying degrees of intensity of capital account restrictions, nor for the different growth impact of various capital-account items (Eichengreen, Mussa *et al*., 1998). Except for foreign direct investment, the time series for private capital flows are not yet long enough to draw strong policy conclusions. In particular, there is no cross-country study that would investigate the impact of capital account liberalisation, while controlling for the strength of the domestic financial system. It has been noted that none of the *developed* OECD countries maintain general capital controls, even on short-term capital (Poret, 1998). This may indicate that with mature financial systems, the benefits of free capital mobility largely outweigh any costs. It may also indicate that mature OECD economies are subject to less violent shocks in investor sentiment, and hence less disruption, than are developing countries.

The virulence of the 1997-98 contagion also reflected new financial technologies and highly leveraged assets, giving speculative currency attacks unprecedented speed and force (Summers, 1998; IMF, 1998*a*). Private cross-border flows have become volatile for several reasons on the supply side, notably:

— A growing proportion of long asset positions has become leveraged, most notably in the case of hedge funds; leverage (investing with borrowed funds worth a multiple of own funds) implies abrupt portfolio changes when the banks (who lend money to the hedge funds) make "margin calls" (call in the credits as the price of the collateral drops below a specified level). OECD-based banks not only lent to hedge funds, but engaged increasingly in proprietary trading activities directed at exploiting short-term trading opportunities in the emerging markets, shorting low-coupon currencies such as the yen and taking long positions in high-coupon emerging-market paper. The technique, dubbed yen or dollar "carry trade", relies on low interest rates in OECD markets and stable emerging-market currencies (for detailed description, see IMF, 1998*a*).

— The increased availability and variety of financial derivatives in the world financial centres facilitate the evasion of emerging-market prudential regulation and supervision as well as of taxes and capital controls; and they obscure the meaning of capital account data from standard balance of payments accounts

(Garber, 1998). The unwinding of the underlying positions hastens and intensifies speculative attacks on pegged currencies and exacerbates weaknesses in emerging-market systems.

— Modern risk management systems — endorsed by and imposed by industrial country regulators — have become a prime source for the contagion effects of a crisis (Folkerts-Landau and Garber, 1998; Reisen and von Maltzan, 1998). Risk control systems operating on the basis of international variance-covariance matrices of securities returns, imply that market volatility in one country will automatically generate an upward re-estimate of credit and market risk in a correlated country, triggering automatic margin calls and tightening of credit lines. Risk control systems, and in some industrial countries prudential regulations, also require that institutional and other investors hold only investment grade securities so that a downgrading of a country's credit rating leads to an immediate sell-off of the affected assets and to the closing of new funding.

The Damage Done by the Sudden Stop: The Asian Slump

The five countries most damaged by the Asian crisis — Indonesia, Korea, Malaysia, the Philippines and Thailand — received net private capital inflows worth 6.6 per cent of their combined GDP over the period 1995-96. The excessive optimism among international investors at that time was reflected in very low yield spreads on their debt instruments (less than 100 basis points over Eurobond yields). In the second half of 1997, there was a sudden stop. The reversal of net flows from 1996 to 1997 constituted a swing of 11 per cent of their combined GDP. The biggest swing came from commercial banks who had extended loans well into 1997, despite earlier warnings on overexposure from the Bank for International Settlements (BIS) and the Institute of International Finance (IIF). There was also an important reversal of net portfolio investment. The only capital-account component proving its staying power — just as during Mexico's 1994-95 crisis — was foreign direct investment (Table 1).

A sudden stop in capital inflows must be met by a reduction in aggregate demand. Indeed, if depleted foreign exchange reserves have to be rebuilt, disabsorption (the cut in consumption and investment) must even exceed the reversal in flows. Between 1996 and 1998, the required switch on the current account of the five Asian countries in crisis, i.e. the difference between aggregate demand and output, was nothing less than 14.5 per cent of their GDP. The size and

rapidity of the required adjustment has triggered a major economic growth crisis in the affected countries, exacerbated by weak banking systems. Used to growth rates in the 6-10 per cent range, the five Asian countries in crisis are forecast on average to shrink by 9 per cent in 1998 and a further 4 per cent in 1999 (Table 2). Official unemployment, traditionally lower than in OECD countries as safety nets (and claims) are absent, is expected to jump from low single-digit levels to 15 per cent in Indonesia, 13 per cent in the Philippines and 9 per cent in Thailand, according to ILO estimates (ILO, 1998).

Table 1. **Net Private Flows to Asian Countries in Crisis**[1]
($ billion)

	1995	1996	1997e	1998f	1999f
Private Net Flows	83.8	93.8	-6.0	-24.6	-15.1
Commercial banks	58.0	58.3	-29.0	-30.5	-17.8
Other debt (bonds)	9.9	18.1	23.3	-2.1	-3.8
Portfolio equity	11.0	11.6	-6.8	1.1	-0.9
Direct foreign investment	4.9	5.8	6.5	6.9	7.4

e = estimate, f = forecast

1. Indonesia, Korea, Malaysia, Thailand, and the Philippines.

Source: Institute of International Finance, *Capital Flows to Emerging Market Economies*, Washington, D.C., 29 September 1998.

The sharp withdrawal of private flows was reflected in tumbling exchange rates and falling local stock market prices as well as in the sovereign risk yield spreads' rising to nearly prohibitive levels. The Thai baht and the Korean won lost half of their value against the dollar, the Indonesia rupiah 80 per cent in the first months of the crisis, fanning a strong rise in non-performing loans in the local banking system and wiping out net capital for unhedged corporate borrowers. The reactive approach of the sovereign rating industry (Reisen and von Maltzan, 1999) intensified panic by downgrading Asian borrowers from "investment grade" to "junk" status. The lower country ratings forced institutional investors to offload Asian assets and allowed banks to call in loans.

While there was initially a tendency to blame policy and institutional shortcomings in the Asian crisis countries for the reversal in capital flows, the widespread contagion of the crisis to other emerging markets judged fundamentally sound has strengthened the analysis of those economists who had argued that the reversal in flows, exchange rates and sovereign ratings in such a short period cannot be attributed to changes in the affected countries' fundamentals. Regardless of the ultimate causes for the Asian slump, it has worsened the economic outlook of the countries in crisis for years to come. Not least as a result of tumbling exchange rates and strong GDP contraction, the crisis countries now face a private-sector

Table 2. **Current Account Balance and Real GDP**

	1995	1996	1997e	1998f	1999f
1. Current Account (per cent of GDP)					
Asian Countries in Crisis[1]	-4.1	-5.1	-2.6	9.4	8.5
Emerging Market Economies[2]	-2.0	-1.8	-1.4	-0.9	-0.5
2. Real GDP (per cent change)					
Asian Countries in Crisis[1]	8.4	7.0	4.5	-9.1	-3.8
Emerging Market Economies[2]	4.4	5.0	5.0	1.2	1.4

e = estimate, f = forecast

1. Indonesia, Korea, Malaysia, Thailand, and the Philippines.
2. 29 Major Emerging Market Economies.

Source: Institute of International Finance, *Capital Flows to Emerging Market Economies*, Washington, D.C., 29 September 1998.

Table 3. **Exchange Rates, Stock Markets and Yield Spreads in Asian Countries in Crisis**
(30 September 1998)

	Change since July 1997, percentage		Spreads on Benchmark Eurobonds
	Dollar Exchange Rate	Stock Market Index	(basis points)
Indonesia	-77.4	-62.1	1 397
Korea	-39.3	-59.8	810
Malaysia	-33.7	-69.5	n.a.
Thailand	-34.0	-55.0	679
Philippines	-39.7	-55.3	821

Source: Reuters Online; Deutsche Bank Research, *Global Emerging Markets*, Vol. 1.3, October 1998.

Table 4. **The Foreign Private Debt Overhang[1] in Asian Countries in Crisis, 1998**
(30 September 1998)

	Foreign Debt ($ billion)	Discount (percentage)	Debt Overhang ($ billion)	% GDP
Indonesia	79	55	44	40.0
Korea	83	36	30	9.6
Malaysia	39	36	14	18.7
Thailand	79	35	28	17.5
Philippines	24	41	10	15.4

1. The discount is calculated as the change in the market price of the debt since 30 June 1997. The debt refers to estimated market-based debt (total minus estimated official). The debt overhang is estimated by applying the discount to all commercial external debt.

Source : Deutsche Bank Research, *Global Emerging Markets*, Vol. 1.3, October 1998.

Table 5. **The Domestic Private Debt Overhang in Asian Countries in Crisis, 1998**

	Non-performing loans		Loan losses	
	% of loans	% of GDP	$ billion	% of bank capital
Indonesia	70	19.0	20.8	1 088
Korea	35	17.2	53.0	196
Malaysia	35	20.3	15.1	145
Thailand	45	26.5	41.6	347
Philippines	20	6.5	4.1	86

Source: Deutsche Bank Research, *Global Emerging Markets*, Vol. 1.3, October 1998.

debt overhang that is estimated to exceed the 1980s Latin American proportions by far (Armstrong and Spencer, 1998). The resolution of this private debt overhang will inevitably burden government budgets, because it necessitates a large build-up in public sector debt, and it will require foreign investors to write down some of their claims. Non-performing loans, except in the Philippines, exceed bank capital by far, and discounts on external debt signal that at least some of the net present value of the debt is not expected to be repaid. Any delays in bank restructuring will raise the share of non-performing loans; any delays in foreign debt relief will lead to higher secondary market discounts; such delays can only credit-starve profitable activities and postpone the return of investor confidence longer than necessary. For the time being, the unprecedented withdrawal of foreign capital from Asia confronts the Asian countries with a transfer problem, just as it did over the 1980s in Latin America. The lesson was then (Reisen and van Trotsenburg, 1988) that the budgetary problem was "solved" by high inflation as regular tax receipts were insufficient to pay for the transfer and that declining export prices constituted a secondary burden as a result of many countries simultaneously trying to produce trade surpluses.

Crisis Management: Global Approaches

Thorny policy issues arise for global crisis resolution that are difficult to balance. On the one hand, a generalised lack of confidence can only be reversed through an effective lender of last resort who could credibly commit sufficient liquidity in support of any country deemed fundamentally sound but illiquid. On the other hand, a successful rescue operation bails out (at least partly) investors who should have taken losses on their excessive risk exposure and thus is apt to

encourage future excessive risk taking, in other words: moral hazard. The moral hazard argument, though, is easily exaggerated. The evidence from the Asian crisis indicates, as indeed does the evidence from Mexico's 1994-95 crisis, that equity and bond holders have experienced heavy losses. Commercial and investment banks, by contrast, can be perceived as having been bailed out during previous crises and having suffered only limited losses in the Asian crisis so far. While such perception holds for the banks' balance sheet exposure, the level of losses taken from off-balance-sheet exposures and activities (such as securities underwriting) remains to be seen.

It is now understood that the international financial institutions cannot be lenders of last resort in a world of intense capital mobility. In earlier quiet decades when capital mobility was limited, balance-of-payments crises meant imbalance on current account. Then, the phased conditional support from these institutions' resources was effective in helping countries towards payments balance. Today, with balance of payments, exchange rates and interest rates governed by the capital account, the international financial institutions need to frontload their assistance massively to have a market impact, while their involvement may feed further doubts among private investors. Official resources are, and will remain, insufficient in a world where private liquid assets are worth trillions of dollars and are virtually free to move across borders. Moreover, derivatives and leveraged positions have multiplied the market impact that the moving of these assets can exert. To the extent, therefore, that the world's leading central banks are not prepared to assume the task of a lender of last resort, any emerging-market investment will have to reckon more downside risk than they would have had to just a few years ago. This may partly reverse financial globalisation and reduce private flows to developing countries. It may, however, raise the quality of these flows as bail-out induced moral hazard is reduced.

The limited resources of the international financial institutions can be given some leverage, however. In October 1998, the first successful issue of a Thai bond since the crisis erupted was made possible, despite the country's junk credit-rating status, because of a World Bank guarantee that lifted the bond to investment grade. By providing guarantees instead of money, the international financial institutions can use their funds more productively and help selected countries to re-enter capital markets. In order to reduce the risk of default on these bonds, only countries with considerable reform progress should be considered; the guarantee should also be tied to specific projects rather than balance-of-payments finance. This latter proviso clearly, however, limits their scope in the resolution of the current crisis.

The G22 Working Group on International Financial Crises, which published its recommendations for managing future crises in October 1998 (stating explicitly that the recommendations should not be considered as an agenda for the resolution of the 1998 crisis), acknowledges that "...the scale of private capital flows significantly exceeds the resources that can reasonably be provided by the official community". (Summary of Reports, p. 21). With official resources insufficient, this implies that the Asian foreign debt overhang documented in Table 4 will not be resolved without some debt relief. While the G22 report favours voluntary debt reduction, it concedes that "...a purely voluntary approach may be impractical. In particular, it might consume so much time that it would lead to an erosion of confidence that would be contrary to the collective interest of creditors and debtors in a co-operative and equitable workout" (Summary of Reports, p. 22). Indeed, this is precisely what the 1980s debt crisis has taught us and what the rising yield spreads on Asian sovereign bonds are telling us now.

The 1980s Latin American debt crisis showed that debt rescheduling alone provides little relief in the presence of insolvency or severe illiquidity problems. This was finally recognised by the 1989 Brady debt reduction initiative after secondary market discounts on Latin American liabilities had continuously risen to an average of 70 per cent. Likewise, while during the early months of the current Asian crisis fairly stable yield spreads reflected the market perception that the crisis was a temporary liquidity problem, the growing awareness of insolvency and default risk fuelled a rise in secondary market discounts to 40 per cent, on average, for the five Asian countries in crisis (see Table 4). As emphasised by Armstrong and Spencer (1998) of Deutsche Bank Research, there has been very little external debt reduction in Asia so far, as interbank debt rescheduling arrangements resulted in no reduction of the debt stocks and as the Indonesia plan for corporate debt had no voluntary contributors.

Co-ordination failures essentially prevent voluntary debt reductions, as these fail to address the "free-rider problem". By voluntarily writing off a part of its claim, a creditor produces an externality to all other creditors because the price of the remaining outstanding debt will rise. Since the one making the voluntary write-off cannot "internalise" the rise in securities prices, and thus it favours all other creditors (and investors), too little of the "public good" of debt relief will occur on a voluntary basis. Debt reduction, in order to be effective in stimulating Asia's recovery, needs a centrally co-ordinated approach. So far, this is not even on the policy agenda. Leadership is required to avoid the protracted round of negotiations between debtors, creditors and their respective governments that proved so devastating in Latin America during the 1980s.

Table 6. **Possible Debtor-Creditor Relationships**

Debtor	Creditor	
	Private Banks	Private non-banks (Bond markets)
Public Sector	*Case No. 1:* London Club	*Case No. 2:* Mexico 1995
Private Banks	*Case No. 3:* Korea, Thailand	*Case No. 4:* –
Private non-banks	*Case No. 5:* Essentially Indonesia	*Case No. 6:* Partially Indonesia

Note: Creditor-debtor relationships shown for individual countries represent the situation at the start of the crisis.
Source: Regling (1998).

Table 6 explains why co-ordinated debt reduction will be very difficult to organise. The 1980s was characterised by one debtor — the public sector — and a fairly homogenous group of syndicated bank creditors (Case No. 1). International banks used the London Club as a forum for rescheduling and reducing public sector debt. Case No. 2 largely reflects Mexico in 1995 where the public-sector debtor was confronted with a heterogeneous group of bondholders. The co-ordination problem was overcome by a then unprecedented IMF loan and by swift US support, leading to Mexico's quick recovery. Mexico's bail out, however, has been held responsible by some for encouraging moral hazard by international investors in subsequent years and, ultimately, the current global financial crisis (e.g. Regling, 1998). Cases 3, 5 and 6 represent the current situation for the Asian countries in crisis, where essentially private-sector debtors and creditors are involved. With a large number of debtors and creditors on both sides, it is hard to start negotiations and even harder to find agreement among the participants.

It is encouraging that Group of Ten (1996) recommendations for the resolution of sovereign liquidity crises, spelled out in the aftermath of Mexico's 1994-95 crisis, but not followed by co-ordinated policy actions since then, are now being actively pursued in order to bail foreign creditors in, rather than out (Group of Twenty Two, 1998):

— Debt holders are to be induced to participate actively in the resolution of debt crises through debt contracts that would *i)* provide for the collective representation of debt holders in the event of crises; *ii)* allow for qualified majority voting to alter the terms and conditions of debt contracts; and *iii)* require the sharing of assets received from the debtor.

— The IMF Executive Board has agreed that the Fund should extend the 1989 decision on "lending into arrears" in order to provide support for debtor countries with sovereign arrears to private creditors (including bond holders), and members with non-sovereign arrears to private creditors. The "lending into arrears" could signal confidence in the debtor countries' policies and prospects as well as hasten creditors in concluding debt rescheduling or reduction deals.

These provisions, however, should be more effective in reducing the frequency and severity of future crises than in resolving the current emerging-market crisis.

If unilateral debt moratoria are to be avoided, a partial socialisation of distressed foreign private sector debt by the Asian crisis countries in return for respective concessions by foreign creditors in terms of pricing, maturity and principal of their claims has to be envisaged. Debt socialisation results from granting of government guarantees (as in Korea late 1997) on private sector debt, its legal assumption or its conversion into public debt. This moves the Asian borrowers back to Cases No. 1 and 2 in Regling's table.

The *quid pro quo* must come from foreign lenders. They, however, can afford to wait (with sizeable provisions already made in most cases), in the hope that foreign aid flows and funding from international financial institutions will raise the market value of their claims. Creditor country governments are therefore well advised to induce the private sector, and their home banks in particular, into financial rescue operations, not only to reduce moral hazard in *future* private sector lending but also to encourage Asia's recovery now. A model of how the complex underlying co-ordination and negotiation problems can be solved, was provided by the Brady plan (Reisen, 1994; Dooley, 1994; Cline, 1995). The Brady plan became possible only after debtor and creditor governments forced creditor banks to participate in the deal; in turn, a broad menu of options to creditors, allowing the resulting deals to combine debt reduction, rescheduling and the provision of new money, raised the attractiveness of the plan to creditor participation. The Brady plan also showed that only a part of the debt overhang had to be written off to make the remaining debt sustainable, as the post-relief market price of debt rose.

How (Not) to Recover from the Domestic Debt Overhang

The domestic debt overhang (see Table 5) — primarily bank obligations which can no longer be serviced — in the Asian countries in crisis is larger than both their external debt overhang (except in Indonesia and the Philippines) and than that witnessed in prior financial and currency crises in Latin America and Scandinavia. Whatever the external financial and trade conditions, the resolution of Asia's domestic debt problem must be the overriding policy concern for Asian governments. The write-down of claims on insolvent corporate borrowers crystalises the losses on the banks' balance sheets. Without resolving the non-performing loan problem and recapitalising the domestic financial systems, there will be no sustained recovery. But without economic recovery, Asia's financial systems and corporate sectors will be further impaired, as fiscal imbalances ultimately needed for bank crisis resolution would become unsustainable.

Banking and currency woes are costly. A recent study by the IMF (WEO, 1998), covering 50 crisis episodes over the 1975-97 period, indicates that the cumulative loss in output is severe — on average some 14-15 per cent of GDP. Average recovery came sooner in emerging market economies (2.8 years) than in industrial countries (4.1 years), though the cumulative output loss was larger, on average, for emerging market economies than for industrial countries. Such historical evidence, in view of the size of the domestic debt overhang in the Asian crisis economies, warns against being too relaxed about Asia's potential to grow out of its problems. Basing policy responses on overly optimistic scenarios makes it difficult to develop policies against worse outcomes, thus exacerbating the downturn.

A case in point is Japan's experience over the 1990s. It was hoped that banks would "grow out of" their problems with a magic mix of wider intermediation spreads (imposing rescue costs on borrowers and depositors), relaxation of prudential regulations and lower funding rates. But with low levels of capitalisation, Japanese banks proved unwilling to lend; with declining collateral values, good credit risk evaporated. The failure to address the consolidation of the domestic financial system led to a decade of stagnation (Posen, 1998).

The recent stabilisation of currencies, the recent drop in money market rates and the dramatic turnaround in trade balances in the Asian crisis countries can be, and indeed often has been, interpreted as a first solid sign of "bottoming out"; they have also underpinned optimistic growth projections already for the closing months of 1998. However, the Asian currencies have been supported by official flows (with relatively little more to follow); moreover, having undershot equilibrium levels so drastically at the start of the crisis (Davies, 1998), a gradual real appreciation was widely expected to materialise. Relying on a gradual drop in money market rates to stimulate growth ignores the economics of banking crises. While the drop in money rates may just reflect rising demand for risk-less cash balances, the cost of capital is still higher than domestic private-sector credit growth (except for Indonesia), implying tight rather than easy credit conditions. Finally, the trade adjustment has been achieved through import compression, as export growth has been flat or falling. Unless trade is redirected away from intra-regional orientation (roughly 50 per cent now), unless exporters cease to be credit-starved and unless Asia recovers there will not be much export-led growth (Table 7).

Table 7. **Cost of Debt, Credit Growth and Trade**
annual percentage change

	Cost of Debt[1], %		Private Dom. Credit[2]		Exports, $		Imports, $	
	1997Q2	1998Q2	1997Q2	1998Q2	1997e	1998f	1997e	1998f
Indonesia	15.4	41.0	25.4	104.1	12.2	-1.3	4.5	-31.6
Korea	9.6	18.6	21.3	8.7	6.6	-7.1	-2.1	-36.2
Malaysia	7.8	12.3	n.a.	10.3	0.9	-9.3	1.5	-15.3
Thailand	20.4	23.1	16.2	15.2	4.2	-0.4	-13.8	-28.7
Philippines	12.6	22.6	33.1	12.6	22.9	15.9	14.1	-9.9

e = estimate; f = forecast
1. Six months local interbank rates (Korea, six months implied offshore rates) and corporate spread over local interbank rates.
2. End of period.
Sources: Deutsche Bank Research, *Global Emerging Markets*, Vol. 1.3, October 1998; JP Morgan, *World Financial Markets*, Fourth Quarter 1998.

Tumbling exchange rates and high interest rates have driven corporate balance-sheet losses beyond equity values in a large number of firms in Indonesia, Korea and Thailand. According to this criterion, the World Bank (1998) assesses two out of three listed firms as bankrupt in Indonesia, two out of five in Korea, and one out of four in Thailand. Even very loose fiscal and monetary policies will fail to stimulate a recovery, unless restructuring and debt workouts are carried out upfront. The domestic debt overhang is mirrored in a systemic banking crisis as, with rising default, banks become unwilling to provide new loans and prefer to accumulate risk-less assets in order to regain capital adequacy standards.

As a large share of the financial and corporate sectors have been rendered technically insolvent by the new exchange rate/debt cost combination, governments have to assume a strong leadership role in revitalising the private sector. The OECD (1998) and the World Bank (1998) draw the following core lessons from successful restructuring experiences:

— Early and comprehensive evaluation (distinguishing between viable and bankrupt banks);

— Transfer of non-performing loans from the banks' balance sheets to a separate loan recovery agency;

— Provision of capital only to viable banks during restructuring;

— Enforcement of exit policies for firms (bankruptcy codes, asset sales);

— Requirement for loan workouts to recover part of the fiscal cost of restructuring and to send signals to delinquent borrowers.

Beyond this list, the attraction of foreign banking capital is a further option to recapitalise banks (and improve banking standards). Before the crisis, foreign banks had relatively little penetration of Asia's domestic markets. The IMF (1998*a*) warns, however, that this may further weaken domestic banks (which stay with the "lemons", i.e. bad credit risk). While the Asian crisis countries now have mostly lifted bank entry restrictions, only Thailand has so far attracted new capital (worth roughly 5 per cent of GDP) into the banking system.

Table 8. **Bank Crisis Resolution in Asia, 1998**

	Indonesia	Korea	Malaysia	Thailand
Number of institutions				
Original	240	169	89	132
Closed	23	21	0	56
Nationalised	47	2	0	13
Merged	0	5	61	13
Bought by foreigners	0	0	0	4

Source: JP Morgan, *World Financial Markets*, Fourth Quarter 1998.

Market observers agree that Korea and Thailand have progressed more on banking sector reform than Malaysia and Indonesia (the Philippines, as shown, does not have a banking crisis as the preceding credit boom started relatively late there). As shown in Table 8, the weakest banks have been closed down and been liquidated in auctions, some banks have been nationalised with the intention of later

privatisation, and mergers have been forced. Moreover, restructuring agencies and bankruptcy laws have been established, and stricter loan provisioning, asset classification and income recognition requirements have been introduced. Despite such progress, the fear of causing further bankruptcies in the corporate sector and the implicit fiscal cost have limited and delayed the solution of banking and non-performing loan problems (see Table 9 below).

Table 9. **The Fiscal Impact of Banking and Currency Crises, 1990s**

	Years	Non-performing loans percentage of total loans at peak	Fiscal and quasi-fiscal cost[1] percentage of GDP	Public revenues percentage of GDP
Finland	1991-93	9	8-10	33
Norway	1991-93	9	4	40
Sweden	1991-93	11	4-5	39
Mexico	1994-95	11	12-15	15
Indonesia	1998	70	17	11
Korea	1998	35	16	20
Malaysia	1998	35	15	23
Thailand	1998	45	18	20

1. Lower estimates include costs of funds, credit, and bonds injected directly into the banking system; higher estimates include other fiscal costs, such as exchange rate subsidies.

Sources: IMF, *World Economic Outlook 1998*; IMF, *International Financial Statistics*, various issues; Deutsche Bank Research, *Global Emerging Markets*, Vol. 1.3, October 1998.

Delay in bank restructuring to ease the fiscal burden involved and to allow continuing expansion of bank credit to unviable borrowers will only raise the ultimate costs of financial system reform; this lesson has been brought home clearly by Latin America's experiences in the 1980s (World Bank, 1998) and Japan's in the 1990s (Posen, 1998). While for speedy recovery it is primordial to restore credit to exporters and to viable investment, delay of reform will provide perverse incentives to under-capitalised or bankrupt banks. Either, to stem the decline in risk-weighted capital ratios, banks will increase their exposure to government liabilities and other zero-risk weighted assets. Or, banks will engage in activities (such as derivatives) with a high risk-return profile in a gamble to earn their way out of difficulties. Good risks, by contrast, are underfinanced and growth prospects undermined as long as the banking crisis is not fully and quickly addressed.

There is a clear trade-off, however, between cleaning up the banking system aggressively to eliminate a major obstacle to growth, and weakening the government's fiscal position. This trade-off has never been stronger than it is for the Asian countries in crisis. Not only are the loan losses in the Asian crisis countries much higher than in earlier episodes of banking and currency crises, but they also imply fiscal costs that must be met from much lower public revenue levels than ever before (Table 9). The fiscal costs stem mostly from the need for the government to take over non-performing assets by issuing a corresponding amount of new debt. In the Asian crisis countries, the interest costs alone on the new government debt represent a very large share of government revenues; further fiscal burdens arise from direct equity stakes.

Given these strong policy dilemmas, there are some tempting but short-sighted and ineffective policy prescriptions for reducing the fiscal cost of cleaning up the debt overhang. Notably, the imposition of controls on capital outflows or unilateral debt default clearly damage other emerging markets.

On 1st September 1998, Malaysia imposed strong controls on outflows. As a crisis measure, its main rationale is to lower the fiscal cost of bank restructuring by lowering the local interest rate without leading to further currency depreciation which would in turn nurture more losses in the banking system and in unhedged corporate balance sheets. The developing-country evidence, however, is not good for outflow controls (Dooley, 1995). They generally help delay reform, allow extending further credit to favoured borrowers and hence are akin to deepen the non-performing loan problem in the local banking system, thus raising the ultimate cost of bank restructuring. There is a danger that Malaysia will closely follow this script. Outflow controls effectively discourage inflows, including foreign direct investment that has helped Malaysia to grow in the past. The absence of inflows in turn lowers the equilibrium exchange rate, and with the nominal exchange rate fixed by decree, raises the black market premium. A rising premium intensifies incentives to evade the outflow controls through overinvoicing of imports or underinvoicing of exports or through stimulating purchases of real commodities such as gold.

Two weeks prior to the Malaysian announcement Russia not only imposed outflow controls but also defaulted by announcing a 90-day moratorium on its private obligations (involving both foreign and domestic creditors). Latin America's 1980s experiences with (often temporary) default have been extremely costly and

thus short-lived (Reisen, 1989). The costs include: loss of market access reflected in skyrocketing sovereign yield spreads; the transfer of official reserves to avoid seizure; support for foreign affiliates of domestic banks that are being precluded from interbank business; private capital flight resulting from lost confidence of domestic and foreign investors; and, last but not least, the cut off from trade-related credit lines. Moreover, as domestic banks are often important (captive) lenders to their government and as default dries up market liquidity, banks will see their capital further depleted.

Other policies to reduce the fiscal cost of bank crisis resolution also have serious side effects (see Reisen, 1989). Chile, for example, recapitalised the banking system in the early 1980s by issuing Central Bank debt rather than government debt. While this leaves public budgets unaffected by the crisis resolution, the quasi-fiscal costs are high. Ultimately, the government had to recapitalise the Central Bank; but, admittedly, breathing space was gained in the meantime. A more transparent way is to follow the Scandinavian practice of establishing independent loan recovery agencies. These were mandated to maximise the recovery value of non-performing assets by either immediate closure and sale of the underlying collateral or by trying to recapitalise illiquid borrowers to improve repayment prospects.

Another option is to tax government bond returns. This raises the tax base by the amount of public interest outlays on government debt; but, if there is perfect foresight and if assets are perfect substitutes, taxing interest payments has no effect on government budgets. Changes in tax rates on any assets bring about an equal change in their equilibrium returns, and hence leave after-tax yields unaltered.

Yet another policy option to be explored is the concept of debt/equity swaps, which were an important element to the solution of Chile's debt overhang (both domestic and foreign) in the early 1980s. A debt/equity swap improves the structure of corporate liabilities by reducing current debt service requirements while allowing creditors (the bank or the government, after the transfer of bad loans) to reap the benefits of foregoing current debt service claims by sharing in future corporate profits. However, swaps are difficult to implement on a large scale, in view of problems in loan valuation, equity pricing and corresponding free-rider problems similar to those discussed above.

More importantly, the inevitable fiscal cost in Asia's restructuring process must — and can — be supported by growth-oriented fiscal adjustment and easy monetary policy. With extremely high domestic interest rates, banks will not start lending again; they rather invest money in high-interest public paper. The private

corporate sector, obviously, can not operate at interest rates that are 30-50 per cent in inflation-adjusted terms. With negative or zero real growth, issuing government debt at these rates will lead to explosive debt dynamics and government insolvency — with default or hyperinflation as ultimate policy alternatives.

The fact that exchange rates have undershot their equilibrium levels by far can be exploited by monetary policy. As shown by Ize and Ortiz (1987) for Mexico's 1980s debt overhang, real interest rates on domestic debt can fall, in an open economy, provided that the exchange rate initially overshoots in reaction to a debt and currency crisis. If the initial depreciation gives rise to expectations of future appreciation, hence creating a wedge between returns in domestic and foreign currencies, this would allow debt servicing on local currency debt to fall. A more accommodating monetary policy can thus be part of continued restructuring in corporate and banking sectors, without compromising exchange rate stability, as confidence is restored.

Fiscal adjustment to cope with the banking woes should not be sought at the cost of output growth, as it is very likely to be disrupted by social and political resistance. Fiscal adjustment also has to contain tax-induced capital flight. This implies that the focus in Asian public finance has to be on tax-base broadening rather than on non-interest spending cuts. Effective tax ratios are low in the Asian debtor countries, and there are non-distortionary ways to increase them. While keeping marginal tax rates low to discourage capital flight and encourage business, tax bases need broadening by eliminating exemptions and special incentives. Low tax rates should raise compliance and enforcement of taxation, helped by high credible penalties on outright avoidance and abolition of discretionary elements in tax legislation. The tax base can also be broadened and the public revenue ratio be raised, through introducing effective withholding schemes on wages, dividends and interest and through strengthening tax administration to cross-check different tax sources.

Global Approaches to Crisis Prevention

The global 1997-98 financial crisis has presented complex and unprecedented regulatory challenges to the international policy community. Attention has increasingly shifted from policy failures in emerging-market economies to the structural weaknesses of the international financial system, "from the follies of borrowers to the follies of lenders" (Laura D'Andrea Tyson, 1998). US Deputy Treasury L.H. Summers (1998) has described the self-fulfilling flight of private

capital out of the emerging-market economies as analogous to bank runs on entire economies. The G22 Report of the Working Group on International Financial Crises has aimed at identifying policies to "prevent" international financial crises (and to facilitate their orderly resolution).

History suggests (Kindleberger, 1978) that financial and currency crises will never be prevented altogether. Whatever regulatory changes the authorities might find the vision, determination and leadership to bring forward, these changes can at best reduce the frequency, severity and contagion of financial crises; they cannot preclude them altogether. In the absence of 19th century "gunboat" diplomacy and in the absence of enforceable global bankruptcy legislation, capital flows between private or public entities of sovereign nations will remain prone to moral hazard, adverse selection and changes in investor sentiment. Progress, however, towards a less crisis-prone international financial system has been made since late 1997, as official thinking has rapidly evolved.

Some proposals for a "new global financial architecture" have widespread agreement among policymakers in both industrial and developing countries. The need for more transparency and accountability is generally accepted. The G22 Working Group on Transparency and Accountability has attached particular importance to enhancing the relevance, reliability, comparability and understandability of information disclosed by the private sector; the Group sees also a need for broad, frequent and timely data on international exposures of investment banks, hedge funds and other institutional investors. The public sectors need to provide better information disclosure on foreign exchange reserves, external debt and financial-sector soundness. An increasing number of countries have committed themselves to the IMF's Special Data Dissemination Standard, and BIS recording of the maturity, sectoral and national distribution of interbank lending comes in with broader country and risk coverage and quarterly frequency.

Good accounting standards and complete, accurate and timely information disclosure are not only a necessary precondition for prudential regulation and supervision. They also can help stabilise market expectations. To be sure, better information is a necessary, not a sufficient condition, to prevent crises. "The Asian experience makes this very clear: In spite of the ready availability of BIS data showing the increasing vulnerability of some of these countries to a sudden withdrawal of short-term international bank loans, the volume of these loans simply kept on rising", notes the BIS in its 1998 Annual Report. To stabilise market expectations, points out Alice Rivlin (1998) "...people need to actually want to look — and too often those who are making profits would rather not hear bad news".

It is also widely agreed that cross-border bank lending faces regulatory distortions through the 1988 Basle Accord, the capital adequacy regime imposing different risk weights by category of bank lending. Table 10 provides a selective overview of the current risk-weighting scheme for on-balance-sheet assets. Most importantly, short-term bank credit to non-OECD banks of up to one year carries a low 20 per cent risk weight, while long-term credit to non-OECD banks (over one year) is discouraged by a 100 per cent risk weight. A lower risk weight reduces borrowing costs, as banks have to acquire less capital relative to their risk-weighted assets. Similar distortions are created by the fact that claims on banks carry a 20 per cent risk weight, while claims on the private sector carry a 100 per cent risk weight. This encourages cross-border interbank lending, which has been described as the "Achilles' heel" of the international financial system (Greenspan, 1998). It further implies that there is a greater incentive for banks to lend to unregulated hedge funds (indirectly through interbank lending) than to even the bluest of the world's blue-chip companies. Note also that OECD-based banks and governments receive a more lenient treatment in the Basle Accord, even if they constitute sovereign risks equivalent or inferior to non-OECD emerging markets. Finally, the fixed 8 per cent minimum capital assigned to risk-weighted assets works in a pro-cyclical way: At the peak of the cycle, when asset prices are up, the capital buffer may be insufficient in light of the higher downside price risk of collateralised assets; at the trough of a cycle, by contrast, the Basle Accord may well intensify credit starvation.

Table 10. **Basle Capital Accord: Risk Weights by Selected Category of On-Balance-Sheet Assets**

Risk Weight	Category
0 per cent	• Claims on central governments and central banks denominated and funded in national currency • Other claims on OECD central governments and central banks
20 per cent	• Claims on multilateral development banks • Claims on banks incorporated in the OECD • Claims on banks outside the OECD with a residual maturity of up to one year
100 per cent	• Claims on banks outside the OECD with a residual maturity of over one year • Claims on the private sector • Claims on governments outside the OECD, unless denominated in national currency

Source: IMF, *International Capital Markets*, September 1998.

The Asian crisis has also demonstrated that the recent shift in bank supervision from rules-based to risk-focused methods is unlikely to tame volatile bank lending behaviour. The growing competition from other institutional investors, the globalisation of banking, new technologies (such as the Internet) and the proliferation of new financial instruments have lowered the potential franchise value of banks and pushed them into assuming new market, credit and liquidity risks (BIS, 1998). The regulatory framework, illustrated by the recent amendment to the Basle Capital Accord, has tried to catch up with the increasing complexity of financial markets by permitting the use of internal models for evaluating market risk. The state of the art risk management methodology — the Value at Risk (VAR) approach, an outgrowth of portfolio theory — has been shown to have first encouraged excessive bank lending and then intensified the global contagion of crisis. Bank lending to emerging markets was overly encouraged by VAR models, which establish backward looking variance-covariance matrices on daily asset returns, and hence failed to signal the true extent of losses that certain long or short asset positions could inflict (not surprisingly, the same model was used at the near-bankrupt Long Term Capital Management hedge fund). Contagion was intensified as a volatility event in one country automatically generated an upward re-estimate of credit and market risk in a correlated country. This triggered automatic margin calls and tightening of credit lines, as the VAR method encourages a defined net asset position (through, e.g., limiting net exposure to emerging markets by going long *and* short on highly correlated currencies, bonds or stock markets). The application of internal risk control methods may also explain why Russia's default and Malaysia's controls had such a deep impact on other emerging markets (Folkerts-Landau and Garber, 1998).

Banks have also increasingly engaged in proprietary trading activities directed at exploiting short-term trading opportunities in the emerging markets; moreover, they have increasingly lent to unregulated hedge funds[2] whose lack of transparency masks the banks' ultimate exposure to risk. The winding and unwinding of the underlying positions, often leveraged to high multiples in order to enhance returns, has strongly destabilising effects in the shallow asset markets of developing countries. This not only generates boom-bust cycles in the flow-recipient countries; it also raises counterparty risk so that banks and hedge funds can no longer be closed rapidly by regulators without posing a wider economic threat. It follows that the Basle capital adequacy requirements would have to raise the cost of proprietary trading and of bank lending to hedge funds. It has to be reckoned, however, that the sprawling derivatives facilitate the evasion of prudential regulation and supervision,

unless extremely tight and sophisticated (Garber, 1998). As regulations containing the onshore use of derivatives just makes them move offshore, international co-operation between OECD and developing countries has to be fostered to bring offshore markets under the umbrella of supervision.

The recent emerging market crises have brought the moral hazard of commercial and investment bank lending to developing countries to the forefront. The evidence from the Mexican and the Asian crises indicates that equity, long-term bond and local-currency investors have suffered heavy losses. By contrast, banks have been the main beneficiaries of the Mexican bailout and have so far rarely suffered large losses on their exposure to Asia (IMF, 1998*a*). This may also have distorted the structure of capital flows from equity to debt, from long- to short-term and from local to foreign currency. While precise evidence on such interactions has not and cannot be established, recent events have shown that moral hazard of foreign investors cannot be eliminated cheaply.

The Russian unilateral moratorium, partly triggered by the refusal of the international community to provide further external assistance, was a clear first warning that "governments limit the scope and clarify the design of guarantees that they offer" (G22, 1998, p. 3). In the presence of modern risk-control methods (discussed above), the failure to bail Russia out once again has clearly spread contagion to other emerging markets (and beyond). Regardless of fundamentals, risk premia rose for all emerging markets. The rise may also have reflected investors' perception that the suggestions floated in the policy community on how to bail in creditors may actually raise default risk.

Some policy options to reduce the trade-off between exorcising moral hazard from foreign lending and intensifying crisis contagion exist, however. The G22 suggests a standing, privately funded mechanism to provide new credits in the event of a crisis or payments suspension. A prototype has been provided by Argentina and Mexico, both of which have set up standby credit lines with banks which will lend in times of crisis. How these agreements work out in practice remains to be (stress) tested.

Other suggestions are all based on extending insurance or contingent-loan facilities to countries which prequalify for such support by pursuing "sound" policies or by fulfilling defined banking standards. The attractiveness of such plans lies in the restoration of a genuine lender of last resort for international assistance, since the club of potential beneficiaries and likelihood that they will succumb to

financial crises is reduced. Such pre-defined liquidity support might rapidly establish market confidence in times of panic. The important drawback of such proposals, however, is that they would cement the world into a class society where some can count on support and others cannot. The experience of strings attached to liquidity support , designed to reduce moral hazard in official lending, has amply shown that the definition of eligibility for support becomes easily politicised.

A lot of attention has been given to the problem of how to correct the underpricing of risk and hence excessive risk taking by banks. Relatively little thought has been devoted to how to prevent crises by inducing a rise in stable flows to developing countries. Long-term contractual savings institutions —pension funds and insurance companies — command a reliable long-term liability structure on their balance sheets and they pool large assets. These institutions have a great capacity to absorb risk, but regulation has often prevented them from investing in higher-risk assets, such as those in below investment-grade emerging markets. The reactive downgrading of Asian sovereign ratings from investment-grade to "junk" status reinforced the region's crisis in many ways, e.g. by forcing institutional investors to offload Asian assets as they were required to maintain portfolios only in investment-grade securities. Rating agencies have also reinforced global crisis contagion in a self-fulfilling way by justifying the downgrading of Latin American assets with risks of contagion rather than fundamentals. The reactive (rather than preventive) approach of rating agencies can be explained by the fact that the information content of sovereign risk ratings and the nature of sovereign risk provide only little room for rating agencies to acquire advance knowledge or superior information on emerging market economies (Reisen and von Maltzan, 1998). Regulators should therefore reconsider the role of sovereign ratings that they stipulate when institutional investors hold emerging market assets. The removal of investment rating requirements might attenuate the boom-bust cycle in emerging-market lending by forcing banks and investors to rely on their own judgement rather than moving like herds on rating signals.

Crisis Prevention: What Host Countries Can Do

Private spending booms, fuelled by overborrowing, have increasingly led to twin banking and currency crises in developing countries, even in countries with a reputation for sound macroeconomic fundamentals (IMF, 1998b). Private capital inflows, attracted by exchange rate pegs and (often "disorderly") financial opening, have repeatedly reinforced such pre-crisis booms. Domestic financial systems have tended to prove too weak as a conduit for heavy capital inflows, resulting in declining credit quality and financial fragility (Reisen, 1998b)[3].

The speculative currency attacks of the 1990s have challenged traditional crisis models that view them as a result of the government's inability to achieve fiscal and monetary discipline. The vulnerability to attacks was driven by private bank and non-bank borrowing, resulting in rising stock imbalances between real cash balances, short-term debt and official reserves (Calvo and Mendoza, 1996), as well as in currency and maturity mismatches. Once short-term foreign debt exceeds official reserves, a run on a country's liquid assets is intensified by the investor knowledge that there are not enough liquid reserves to restore confidence (Radelet and Sachs, 1998). Short-term debt poses special problems for the maintenance of financial stability, as its rapid withdrawal can trigger sovereign default, a systemic banking and payments crisis and large-scale corporate defaults (Eichengreen, Mussa, *et al.,* 1998).

In order to reap the benefits of global capital flows without falling victim to their inherent risks, host countries have two broad policy sets at their disposal, macroeconomic discipline assumed. One set of policies serves to strengthen bank and non-bank balance sheets, so that capital inflows are intermediated and allocated efficiently. The other set aims to raise the quality of these inflows. Neither of these two policy sets, however, can be a substitute for the country's strong determination to maintain stability and to address instability should it arise.

Some of the avenues to strengthen a country's balance sheets are uncontroversial; but they are deceptively hard to implement, in particular in the historical context of developing countries' political, legal and institutional backgrounds. The recommendations of the G22 Working Groups on "Transparency and Accountability" and "Strengthening Financial Systems" point to a long list of ingredients deemed critical for lessening the probability of financial imbalances:

— Good accounting standards and complete, accurate and timely information disclosure are a necessary precondition for prudential regulation and supervision. Moreover, they can stabilise market expectations by improving risk assessment during the boom and by cushioning panic during a downturn, including crisis contagion. Transparency helps to promote accountability — by creating pressure on private and public decisionmakers to explain their acts and to assume responsibility. Public policy can help create the appropriate environment by mandating the proper use of accounting, auditing and reporting rules. Moral hazard in the allocation of capital within countries, particularly relevant in the presence of connected and directed lending, has to be exorcised by abolishing guarantees and through forcing banks and other lenders to assume capital loss for ill-assessed credit risk.

— Only with reliable accounting systems and disclosure requirements to ensure transparency will it be possible to strengthen bank and non-bank balance-sheets and to enforce prudential regulation through serious, independent supervisory arrangements. It is safe to assume that basic ingredients for effective enforcement of prudential regulation will meet resistance from affected interest groups. Nonetheless, the basic requirements are: independent internal oversight of lending decisions by a credit review committee; vesting the supervisory agency with the authority to examine bank operations and balance sheets, close banks and establish entry criteria, define capital adequacy and exposure limits, enforce asset classification, provisioning rules and prudent collateral valuation that fully reflect the volatility of developing-country asset markets.

— The Asian crises, particularly in Indonesia and Korea, have also shown the importance of sound practices in the area of corporate governance (Millstein, 1998). More concerned with raising market share than with maximising profits, and reluctant to issue equity as this would dilute their management control, non-bank firms greatly contributed to overborrowing and currency mismatches by raising offshore short-term debt. This has created systemic risk to entire economies, as large-scale default resulting from currency devaluation threaten the stability of the banking system. Corporate risk management and risk control, notably the management of liquidity and foreign exchange risk, are central to avoiding financial instability arising from access to global markets.

These prescriptions, while largely uncontroversial and emphasised by official thinking in both industrial and emerging countries, will take time to implement and will be hard to maintain. In fact, the Asian crisis countries had tried to strengthen the supervisory and regulatory infrastructure during the 1980s and 1990s, partly in response to costly banking crises (such as in Indonesia and Malaysia) a decade ago. What matters is the enforcement of prudential regulation.

Because the institutional capacity for durably strengthening balance sheets is not built overnight, appropriate policies have to be formulated. Where the required manpower is in short supply, allowing free entry by foreign banks and financial service providers can speed up capacity building. Importing rather than building expertise strengthens accounting practices, disclosure standards and risk management practices as they are shaped by more demanding requirements in the foreign banks' home countries. This, however, requires an orderly exit policy for ailing domestic banks as foreign bank entry squeezes profit margins and encourages ailing domestic banks into high-risk bets for survival. It also requires free entry of financial-sector experts and supervisors, as otherwise scarce supervisory personnel may be drawn to the entrant banks, as happened in Thailand (Montes, 1998).

A second set of policies to dampen the risk from excessive short-term debt, less emphasised by official thinking, aims at raising the quality of capital inflows. Such policies can be grouped under the headings of *a)* appropriate exchange rate management, *b)* prudential and control measures to contain short-term flows into the country, and *c)* promotion of long-term inflows, not least through orderly sequenced capital account liberalisation.

The excessive reliance on short-term borrowing can be discouraged by flexible exchange rates. By contrast, exchange rate pegs, in combination with high interest rates, typical in developing countries for structural reasons, tend to reinforce bank lending and spending booms (Reisen, 1998*a*). They constitute an incentive for leveraged investors to exploit interest differentials as well as for offshore borrowing by creditworthy banks and non-banks to tap seemingly cheap sources of finance. Central bank intervention on the foreign exchange market to peg the currency in the face of net inflows, unless sterilised fully, is intermediated into the domestic banking system. The exchange rate peg provides the incentive to allocate those funds disregarding currency and maturity risks, as these are being implicitly transferred to the central bank (Calvo and Mendoza, 1996). Keeping nominal exchange rates flexible, even introducing "noise" through central bank intervention when it is seen to be on a too-stable, appreciating trend during inflow periods, improves the mix of inflows towards longer maturities and encourages banks and firms to hedge their foreign-currency exposures.

Box 1. **Banco Central de Chile Studies on the Effectiveness of the Country's Measures to Regulate Capital Flows**

The Chilean prudential framework, including capital inflow restrictions, has featured prominently in policy discussion on how best to deal with volatile capital inflows. Chile's authorities followed two main policy targets in view of a surge in capital inflows during the 1990s: First, to maintain a tight monetary policy without hindering export competitiveness resulting from unwarranted exchange rate appreciation. Second, to control the composition of inflows by discouraging short-term capital so as to limit the short-term foreign debt and foreign currency exposure of both bank and non-bank entities. In 1991, the central bank imposed a one-year unremunerated reserve requirement (encaje) on foreign loans. Subsequently, the rate of the encaje was increased to 30 per cent and its coverage extended to cover virtually all foreign inflows except foreign direct investment. The one-year minimum holding period effectively implied a tax on inflows, inversely tied to their maturity. Prudential regulation complemented these curbs on inflows. Except for trade credits, banks cannot lend domestically in foreign currency. And maximum open foreign exchange positions are set at 20 per cent of banks' capital and reserves. As short-term flows dried up in 1998, the encaje was reduced to 0 per cent, but not abolished.

As it is difficult to quantify the intensity of inflow restrictions and to control for prudential regulations, macroeconomic policies and other conditions that impact on capital inflows, the effectiveness of Chile's measures is being hotly debated. The Banco Central de Chile has provided the OECD Development Centre with a set of unpublished internal studies on the impact of the encaje[1]. These authoritative studies do show that the encaje has been effective in providing some monetary autonomy and in influencing the mix of capital inflows. Eyzaguirre and Schmidt-Hebbel (1997) set up a model for analysing and estimating the dynamic effects of the encaje on capital inflows. The model predicts an intensification of the encaje to result in higher domestic interest rates, diminished net foreign debt and a depreciation of the exchange rate. These predictions are borne out by calibrating the model with monthly data for the period January 1991 to June 1996. It is also shown that the encaje, with a lag of one year, modifies the composition of inflows by reducing the share of short-term flows in favour of longer maturities. The paper does not explore, however, to what extent the improved mix of inflows represents relabeling in order to escape the implicit tax on short-term flows. Le Fort and Sanhueza (1997) also provide evidence for 1990-96 that Chilean capital controls have been effective in keeping domestic interest rates above international rates, and that the effectiveness has not been eroded over time. Moreover, each time the coverage of the encaje has been extended, the newly taxed inflows have been reduced without a full substitution towards tax-free flow items. However, while the study is empirical, it does not provide an econometric analysis of the degree of effectiveness. Soto (1997) runs a vector autoregression analysis on capital flows, interest rates and the real exchange rate for June 1991 to June 1996. He finds that capital controls have the desired effect of reducing capital inflows, maintaining higher interest rates and a lower real exchange rate, and reducing the share of short-term capital inflows. However, the magnitude of these effects is fairly small. One explanation for the small impact of the encaje on the dependent variable may be that the implicit tax of the inflow controls are smaller than assumed in most studies. Considering the positive option value of closing the investment position or staying invested in Chile once the investment has been done, reduces the implicit tax on a one-year investment from 2.50 to 1.25 per cent (Herrera and Valdés, 1997).

1. The author gratefully acknowledges the co-operation of Klaus Schmidt-Hebbel, Head of Research at the Banco Central de Chile.

Most mutual funds, pension funds and life insurers impose penalties for early withdrawal by investors. Chile, with its one-year unremunerated reserve requirement gradually extended to all inflows except foreign direct investment, has done likewise, as has Colombia (Ffrench-Davis and Reisen, 1998). Such capital inflow restrictions provide policymakers with a policy instrument in the policy trilemma that free capital flows, an independent monetary policy and pegged exchange rates are mutually inconsistent. They also extend the range of prudential regulation measures to limit the upwinding and unwinding of foreign-currency short-term positions, which have devastated emerging-market banking systems and economies in the past, including Chile's in 1982.

It has been argued that Chile's reserve requirements amount to a distortion that does not allow capital to flow to uses that offer the highest rate of return. To the extent, however, that these flows pose an exogenous distortion to returns (e.g., when high flows with multiple leverage drive asset prices up and down) or that the structure of foreign capital supply is distorted (e.g., by the Basle adequacy regimes, discussed above) capital restrictions on short-term inflows can be seen as correcting rather than creating a distortion. Finally, when the short-term debt/ reserves ratio dangerously approaches unity, avoiding a speculative attack implies the need for the central bank to put every dollar of increased debt into official reserves to prevent the vulnerability ratio from growing. For developing countries, this means borrowing at a higher rate of interest than the rate at which funds are reinvested, say, into US Treasury Bills. Such a swap clearly constitutes a negative externality to the country, hence the rational to restrict short-term borrowing at the source.

Are caps on short-term inflows effective in improving the structure of inflows? After all, the high degree of integration in trade, production and financial services opens up many ways of circumventing controls. One reason that capital controls in most OECD countries were abolished in the 1980s was the perception that they were increasingly ineffective. Restrictions on inflows, but also prudential regulations on open foreign currency positions, are difficult to enforce as banks can use offshore subsidiaries or derivatives to evade them (Garber, 1998)[4]. Authoritative studies from Chile's Central Bank do show that Chile's measures to regulate capital flows have been effective in providing a degree of monetary autonomy and in influencing the size and mix of capital inflows (Box 1). But the impact has been weak, and regulatory measures in Chile have been supported by a culture of transparency and enforcement as well as by a set of macroeconomic policies (balanced budgets, wide target zones for exchange rates) consistent with raising the share of long-term inflows (Ffrench-Davis and Reisen, 1998). These conditions have not always been present in other emerging economies.

While Chile's controls were designed to tax short-term inflows without hindering long-term portfolio and direct investment, financial opening in the worst-hit Asian economies was "disorderly" (Poret, 1998; Reisen, 1998*b*). Often the result of discretionary authorisation granted to selected sectors, the opening process implicitly encouraged short-term inflows in the pre-crisis years. While tight quantitative ceilings were maintained on non-resident purchases on the stock market and on foreign direct investment (notably in Korea), financial opening eased access to short-term foreign borrowing. Table 11 may be indicative of the lessons to be drawn: the rise in short-term debt can be contained through "orderly" liberalisation (as in Colombia and Chile); but disorderly liberalisation (as in the Asian crisis countries) encourages financial vulnerability, in particular if a strongly enforced supervisory framework is not yet in place.

Table 11. **Maturity Structure of Foreign Debt in Selected Countries**
per cent of short-term in foreign debt, end-June 1997

Country	Short-term Debt
Colombia	39.4
Chile	43.3
Malaysia	56.4
Philippines	58.8
Indonesia	59.0
Thailand	65.7
Korea	67.9

Source: Bank for International Settlements, *The Maturity, Sectoral and Nationality Distribution of International Bank Lending*, Basle, May 1988.

These observations reinforce the need for a capacity-building sequence of liberalising capital inflows, as has indeed been advocated since the early 1990s (Fischer and Reisen, 1992). Foreign direct investment and trade-related finance, while a necessary ingredient for development even at the earliest stage, are unlikely to cause trouble for macroeconomic management and financial sector stability. They are early candidates for liberalisation, while other capital flows confront the authorities with more complicated issues. In view of the considerable time needed to establish a sound domestic financial system — accounting, auditing, disclosure, regulation and supervision — the required infrastructure should be built without delay and be enhanced by liberalising the entry of financial-market expertise. This requires a clear and durable solution of prior bad-loan problems in the banking sector. The next candidates for liberalisation are portfolio equity and long-term bond investments, which should be fostered in parallel with building the infrastructure for domestic stock, corporate debt and mortgage instruments. This will deepen

domestic money markets, which allow authorities to smooth shocks to domestic liquidity. Deepened domestic financial markets pave the way for dismantling controls on short-term borrowing by banks and non-banks, assuming a tough supervisory regime is in place. Financial opening has the best chance to achieve its ultimate objective, to raise efficiency and growth without compromising stability, when combining a sequential opening process with building the prerequisite institutions.

Notes

1. Capital inflows can be shown to be "immiserising" (Brecher and Diaz-Alejandro, 1997), if they magnify welfare losses due to distorted consumption and production patterns by stimulating capital accumulation in protected sectors and by attracting foreign capital into these sectors.

2. The impact of hedge funds on the Asian crisis is difficult to determine with any precision. Eichengreen and Mathieson (1998) find little evidence that hedge funds led the crisis. The BIS (1998), by contrast, reports strong credit demand from offshore financial centres (where these funds are mostly incorporated). Market participants (Garber, 1998; Howell, 1998) maintain that the absence of data on hedge fund transactions, such as Over-The-Counter (OTC) contracts written by investment banks, clearly leads to underestimation of their impact.

3. To add another narrative to the large literature on the domestic causes of the Asian crisis, is beyond the scope of this Brief. See in particular IMF (1998*a*), Davies (1998), Corsetti *et al.* (1998), Radelet and Sachs (1998) and Reisen (1998*b*).

4. The BIS (1998) suggests in its 1998 annual report that the withdrawal of rights of establishment for banks from jurisdictions with inadequate prudential standards might have to be contemplated.

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