

**ASIAN CRISIS:  
DISTILLING CRITICAL LESSONS**

*Dilip K. Das*

No. 152

December 2000

The author would like to thank two anonymous referees for their useful comments.

The opinions expressed in this paper are those of the author and do not necessarily reflect the views of UNCTAD. The designations and terminology employed are also those of the author.

*UNCTAD Discussion Papers* are read anonymously by at least one referee, whose comments are taken into account before publication.

Comments on this paper are invited and may be addressed to the author, c/o Editorial Assistant\*, Macroeconomic and Development Policies, GDS, United Nations Conference on Trade and Development (UNCTAD), Palais des Nations, CH-1211 Geneva 10, Switzerland. Copies of *Discussion Papers* and *Reprint Series* may also be obtained from this address. New *Discussion Papers* are available on the website at: <http://www.unctad.org/en/pub/pubframe.htm>

---

\* Tel. 022-907.5733; Fax 907.0274; E.mail: [nicole.winch@unctad.org](mailto:nicole.winch@unctad.org)

## CONTENTS

<b>Chapter</b>	<b>Page</b>
I. Introduction	2
II. Capital inflows	3
III. Short-term capital flows	5
IV. Vulnerability to financial crisis	7
V. Capital account liberalization	9
VI. Banking and financial sector	11
VII. Key feature of a sound banking system	13
VIII. Containing insolvency and financial restructuring	15
IX. Project appraisals and risk assessment versus crony capitalism	16
X. Flexibility in exchange rate regimes	17
XI. Orthodox remedies of IMF	19
XII. Lender of last resort	22
XIII. What precisely could the policy makers learn?	25
References	28

## ASIAN CRISIS: DISTILLING CRITICAL LESSONS

*Dilip K. Das*\*

*Economic Analysis and Research Division  
Asian Development Bank, Manila*

*The virulent crisis that struck five Asian economies in mid-1997 and 1998 raised concern about the stability of the global financial system. The financial crisis and market turbulence caused a steep fall in output, and thus had high economic and social costs. The crisis-stricken economies made concerted endeavours to restructure, and by early 2000 we could justly say that these economies were on the recovery path. This development is well captured in the quarterly GDP movements of the five crisis-affected economies: Indonesia, Malaysia, the Philippines, the Republic of Korea and Thailand. One of the silver linings of adversity is that it teaches valuable lessons. In this Discussion Paper we take stock of the policy lessons of the Asian crisis. These lessons could help policy makers, inter alia, to cope with the increasingly integrated capital markets and heightened capital movements. Indeed, the lessons enumerated in this paper will not prevent future crises from occurring, but may reduce their probability and limit their effects when they do. The lessons that the Asian crisis has provided cover several policy areas including macroeconomics, microeconomics, banking and finance, prudential regulations, and global financial architecture. An attempt has been made to cover a wide canvas and focus on several, certainly not all, important areas.*

“Panics do not destroy capital; they merely reveal the extent to which it has been previously destroyed by its betrayal into hopelessly unproductive works.”

John Stuart Mill (1867)

“I do not dare state that they are simple; there isn't anywhere on earth a single page or simple word that is, since each thing implies the universe, whose most obvious trait is complexity.”

Jorge Luis Borges

“But now, ah now, to learn from crises.”

Walt Whitman, in *Long, Too Long America*

---

\* Dr. Dilip K. Das was educated at the Graduate Institute of International Studies, University of Geneva, Switzerland. He is presently with the Economic Analysis and Research Division of the Asian Development Bank, Manila. A former professor, Dr. Das's past affiliations include: the Australian National University; Graduate School of Business, University of Sydney; ESSEC, Paris; INSEAD, Fontainebleau, France; and Webster College, Geneva. Dr. Das has worked for the USAID and the World Bank as a consultant. He has contributed this article in his personal capacity. The views expressed in this paper do not reflect those of the Asian Development Bank or its Executive Directors.

## I. INTRODUCTION

Crises are inevitable. They appear to be an intrinsic feature of market-oriented credit and financial systems. As long as there are financial markets, there will be boom and bust cycles. The last two decades of the twentieth century saw several financial crises in different parts of the globe. These crises became increasingly virulent, caused widespread disruption to other emerging market economies, and even had repercussions on industrial economies. In some instances these crises were totally unexpected and affected countries which had enjoyed a strong economic performance up to that point in time. This was so much so that the economies which were part of the so-called Asian “miracle” and were able to eradicate a good deal of poverty in a short span of time went abruptly into severe contraction modes. The crises that struck these miracle Asian economies during mid-1997 and the contagion they set in motion have raised worries about the stability of the global financial system.

One of the silver linings of adversity is that it teaches valuable lessons. Learning these will not eliminate information asymmetries or financial crises. Yet, it is good to learn them well because, first, these crises have an increasingly high fiscal cost and the lessons minimize the vulnerability to crises; and, second, policy makers need to realize that, notwithstanding the macroeconomic instability associated with financial liberalization and short-term flows, financial globalization is here to stay. Financial globalization entails economic and financial management based on openness to, and increasing integration with, the global economy. None of the crisis-stricken Asian economies adopted policy measures delinking them from the global economy. Malaysia did adopt capital controls, but they were short-term defensive measures, and were relaxed according to a pre-announced schedule. For the Asian economies, coping with financial globalization will necessarily be a part of the policy framework for the future.

In what follows, we enumerate the major lessons of the Asian crisis for policy makers. An attempt has been made to cover several important, certainly not all, crisis-related areas. This paper essentially deals with the five crisis-stricken Asian economies, namely Indonesia, Malaysia, the Philippines, the Republic of Korea and Thailand. Therefore, in terms of structure the paper has multiple foci and is comprehensive. Section II dwells on the 1990–1996 boom in financial flows to Asian economies, while section III focuses on the short-term financial flows which were decried by many as one of “the principal causal factors” behind the Asian crisis. Section IV explores the causes behind vulnerability to crisis, and section V deals with the prickly issue of capital account liberalization. Section VI focuses on the idiosyncrasies of the banking and financial sector that lead to a crisis situation, and in section VII we try to see what are the principal policy measures needed to improve the performance of this sector. The Asian crisis spawned a large number of corporate, banking and financial sector insolvencies. Section VIII attempts to suggest policy measures to contain them. Poor credit-rating and risk-assessment services and inadequate commitment to proper project appraisal created the so-called “crony capitalism” in Asian economies. Section IX attempts to chalk a way out of it. The inflexibility of the exchange rate regime was another thorny issue for the Asian economies, which is discussed in section X. A great deal of debate has been generated on the role of the International Monetary

Fund (IMF) in the crisis economies. There are strong views supporting, as well as opposing, IMF remedies. Sections XI presents a balanced view on the role of IMF. The need for an international lender of last resort generated a similar debate, which is focused on in section XII. Section XIII is devoted to a summary of the policy lessons. The social issues associated with the crisis are the subject of another parallel paper, so they are not dealt with in this paper.

## **II. CAPITAL INFLOWS**

The 1990–1996 period is known as a boom period for capital market financial flows to the emerging market economies. All the economic and financial crises of the 1990s were preceded by large capital inflows into those economies. A confluence of liberalization advances in information technology and networking leading to reduced transaction costs and greater capital market integration caused this boom; together these factors spawned financial globalization. Many emerging market economies were transformed from near financial autarkies to globally integrated ones. In addition, institutional investors in the industrial economies, in an attempt to diversify their portfolios and increase the rate of return grew, became increasingly inclined to invest in the emerging market economies. These developments in the global capital markets substantially improved access of the emerging market Asian economies to the pool of global savings. However, the flip side of the coin is that a spurt in capital inflows during the 1990s has been identified by some as one of the causal factors behind the recent woes of the Asian economies (IMF, 1998). In the five crisis-stricken Asian economies – Indonesia, Malaysia, the Philippines, the Republic of Korea and Thailand – the rise in capital inflows resulted in historically large external deficits, which reflected the excess of investment spending over domestic savings. These deficits were \$41 billion in 1995 and \$55 billion in 1996. As a proportion of the GDP of the five crisis-affected economies, the levels of deficits were respectively 4.0 per cent for 1995 and 4.9 per cent for 1996, which is high by international standards. As foreign investors reassessed their financial exposure to Asia in 1997, they began to withdraw, and the current account deficits of the same set of five economies fell to \$27 billion (or 2.6 per cent of GDP) in 1997. Financial flows recorded a reversal in 1998 and the deficit turned into a surplus (IIF, 1998). Microeconomic distortions inter alia exacerbated the pernicious impact of capital outflows in these five economies.

If carefully sequenced policies are adopted, some of the risk associated with large capital inflows can be mitigated. Sterilization of capital flows, at least in the early stage, is one such policy. Little wonder that this is the most frequently adopted policy by central bankers in the capital-importing economies. But in spite of the popularity of sterilization, central bankers cannot resort to it for long periods because of its fiscal cost. Policy makers will soon need to turn to the nominal exchange rate for a defensive strategy. However, if the exchange rate regime they adopt is the de facto pegged exchange rate regime, they cannot use the nominal exchange rate as a defensive instrument. In fact, this is what happened in the five crisis-affected Asian economies.

Corporate borrowers need to realize that large inflows can have a potentially destabilizing impact on the financial system. Policies need to be designed in such a manner that excessive reliance on external debt is avoided. Cautious management of capital inflows is a critical lesson of the Asian crisis. Having large foreign debts makes an economy vulnerable, especially when the currency is convertible and therefore subject to speculation. It was the rapid build-up of external debt that, more than anything else, led to the development of crises in Indonesia, the Republic of Korea and Thailand, and, to a smaller extent, in Malaysia. Emerging market economies should not allow a large build-up of external debts, no matter how successful they are at exporting. Successful exporting economies sometime grow complacent about rapidly rising levels of external capital inflows because policy makers are lulled into thinking that high export levels can cover them. A bitter lesson from the crisis is that high current export earnings alone are insufficient to ensure that debts, particularly short-term ones (see section III), can be serviced. Export growth rate can precipitously decelerate – the growth rate of merchandise exports in Asia decelerated from 18 per cent in 1995 to 3.5 per cent in 1996 (WTO, 1998). There can also be periods of high import growth and a large outflow of funds due to repatriation of foreign-owned profits, or withdrawal of short-term investments.

The ultimate objective of capital inflows is to ensure that the borrowing economy improves its economic fundamentals, while the debt level remains sustainable. Debt sustainability is conventionally determined in the context of the balance of payments and the budget deficit, and more precisely in terms of the current-account deficit and fiscal deficit. The lesson from the recent crises is that policy makers need to shift from these traditional approaches to a “holistic” one. That is, all the various categories of debt, external and domestic, public and private, long-term and short-term, should be taken into account to assess the size of the debt overhang and sustainability. When economies have an open-capital account, the dividing line between domestic and external debt becomes nebulous. Policy makers should try to ensure that there is never a question mark over the timely repayment ability of the government or private-sector borrowers. Some industrial economies (like Australia, Ireland and Sweden) are already managing their debt within this holistic framework.

The lesson that due caution should be exercised while importing capital has not been lost on policy makers and corporate borrowers. There is a growing realization that overinvestment in the past boom years created financial distortions, eroded capital efficiency and made economies vulnerable to shocks. Fewer external bonds will therefore be issued in Asia, especially by corporations. Unlike in the past, regional governments are less likely to borrow, at least in the near future, from the international capital markets. The current-account balances are soon unlikely to slip back into deficits. All over Asia, particularly in the Republic of Korea and in Thailand, governments have already started issuing bonds in their local markets. Although liquidity has continued to be a problem and many institutional features of a well-functioning market – such as market-driven issuance practices, efficient settlement systems, repo and futures markets – are either weak or missing (Eschweiler, 1999).

### III. SHORT-TERM CAPITAL FLOWS

Apart from the macroeconomic instability in the post-1997 period referred to in sections I and II above, there is convincing historical evidence that short-term capital movements contribute to volatility in financial markets, which in turn leads to macroeconomic instability. The new orthodoxy about having a financially open system has crumbled under the weight of the extremely high costs paid by the crisis-stricken Asian economies. This observation is in keeping with the celebrated Brecher-Alejandro (1987) thesis that free capital flows, in the presence of trade distortions, can be immiserizing, or would have less than apparent value. Recently Professor Bhagwati, a noted free trade advocate, has also argued strongly against free capital movements.<sup>1</sup> There may be occasions when short-term capital movements need to be controlled, without being in fundamental disagreement with financial globalization. Such control can be successfully exercised at the source or the entry point. Monetary authorities should keep tabs on and control short-term borrowings denominated in foreign currencies by firms. Corporate managers, who are responsible for the bulk of short-term borrowings, should recognize and assess appropriately the risk of short-term borrowings. It should be factored into their financial calculations.

A flexible exchange rate also discourages excessive short-term capital inflows by allowing the exchange rate to adjust itself with the inflows and outflows of capital. Short-term investors and borrowers have to factor the exchange rate risk into their calculations before investing or borrowing. Conversely, an exchange rate peg lends inflexibility to an exchange rate regime, providing short-term lenders and borrowers with a guarantee against adverse exchange rate movements. The Asian crisis has demonstrated that lenders and borrowers both perceive an exchange rate peg as a link in the chain of implicit guarantees. Under these circumstances, the high nominal interest rates characteristic of emerging markets can, and did, lead to large short-term capital inflows. This was observed during the 1992–1993 European currency crisis as well as during the Asian crisis (Goldstein and Folkerts-Landau, 1993; Adams et al., 1998; Das, 2000). If the nominal exchange rate is not pegged, the risk associated with the flexible exchange rate can play a useful, albeit limited, role in moderating the volume of short-term capital inflows. When the exchange rate is not pegged, firms hedge their short-term flows to protect themselves from unexpected and large movements in the exchange rate. Monetary authorities need to introduce flexible exchange rates in periods of large capital inflows to strengthen the exchange rate regime, although introducing it well before a crisis situation develops is a far superior strategy (Eichengreen and Masson, 1998). Introducing it at the time of crisis is not the most appropriate measure, as it takes a while to establish a stable regime.

When a crisis is in the making, great instability is created by short-term capital flows coming in through interbank lines of credit. This channel of short-term inflows was the source of a lot of problems in the five

---

<sup>1</sup> Professor Bhagwati (1998) argues in his provocative paper against free capital movement, saying that “destabilizing speculation can, and does, break out where the speculators can emerge unscathed even when they are betting against fundamentals because these fundamentals shift as a result of the speculation. Validating the speculation”.

Asian economies under consideration. To deter a crisis situation, the structure and incentives under which these credit lines operate must be re-examined from the perspective of both the borrowing and the lending banks. When the crisis drums seem to be coming closer, creditor banks make a dash for the exit, making a potentially bad situation immediately worse. A self-reinforcing downward spiral was set in motion by that rush in the Asian economies. Soon the downward spiral attained uncontrollable momentum.

Hindsight reveals that the crisis dynamics in the Asian economies worked as follows. Defensive measures, like a small currency depreciation or widening of the band, led to further currency depreciation, a further rush to hedge previously unhedged foreign exchange positions, further increase in interest rates to protect the currency, further weakening of the balance sheets of banks and financial institutions, a further fall in market sentiments, and a further downward spiral. Most frequently, short-term creditors have led the rush to exit. Sharp credit downgrading of the Asian economies and banks during 1997 and 1998 by the top international credit-rating agencies further aggravated the downward spiral movement. Every time the credit-rating agencies downgraded an Asian economy or bank, currency depreciations and capital outflows accelerated.<sup>2</sup>

There are several ways to deal with interbank lines of credit and short-term creditors. If a financial crisis is seen as impending and if the creditor bank decides to exit, it should be allowed to do so by the borrowing economy, but only at a cost: this could range between forfeiting part of, or all of, the capital invested; this is known as the “mandatory haircut” solution. The central bank of the borrowing country can help in implementing such measures. If this sounds too Draconian, moral suasion could be deployed to induce the banks and creditors to roll over or restructure short-term claims. This was done in the Republic of Korea in December 1997, when the situation had deteriorated to an unsustainable position. If the situation does not stabilize and continues to worsen, this solution can be taken beyond the short-term lines of credit, to medium-term debt. There should be some regulations governing international banking institutions geared to policies which would reduce systemic risk in the global financial markets. For instance, the so-called “bullet repayment clauses” in loan agreements, which allowed investors to call in loans, had dramatic consequences for the emerging market Asian economies – as the Asian experience demonstrates. Regulations limiting these clauses would not only avert a crisis situation, but also work towards increasing international stability. The well-known “bailing-in” argument can be the next stage in this sequence. Unfortunately, the necessary international mechanism to assure an orderly resolution does not exist, and there is a genuine risk of disruptive litigation that could prevent the best efforts of policy makers to restore stability. The international community greatly needs the authority to endorse a stay on short-term payments by a debtor country under

---

<sup>2</sup> See BCBS (1999), in which the Basle Committee on Banking Supervision said that Asian economies were subjected to “credit downgrades of unprecedented severity”. This paper was jointly prepared by regulators from Belgium, France, Germany, Italy, the United Kingdom and the United States. It also stated that “the severity of credit downgrades in Asia after the economic crisis began in July 1997 far exceeded that of Mexico after its 1994 peso devaluation”. The Republic of Korea’s rating from Moody’s, Standard & Poor’s and Fitch IBCA, was downgraded an average of nine notches, while Indonesia’s rating fell by an average of five and that of Thailand by four. The economic health of the five Asian economies was misjudged by the top credit-rating agencies prior to July 1997. Once the error became apparent, these very agencies subjected Asian economies to credit downgrades of unprecedented severity.

certain well-defined circumstances. This would protect the debtor against litigation for a temporary period. During this time the debtor country should renegotiate the short-term obligations with the creditor banks in an orderly manner so as to enable it to tide over the crisis period.

Following the Asian financial crisis, a new paradigm has emerged in place of the one that posits, in keeping with the neoclassical economics, financially open economies. The new paradigm takes lessons from the Asian crisis and supports the imposition of capital controls as an instrument for moderating the volume of inflows in developing economies. Although capital controls militate against the neoclassical economic principles, they need not be a complete financial taboo. They do have a place in the policy quiver, but only when the situation specifically warrants that. IMF allows, under a special set of circumstances, capital controls. Article IV, section 3, states that “members may exercise such controls as necessary to regulate international capital movement”. The rationale was to slow short-term capital movements rather than long-term ones. Capital controls had desirable effects in several economies, as they seemed to moderate the volume of inflows and lengthen their maturities in Chile, Columbia and Malaysia. However, their application should be an exception rather than a rule. When the need arises, they should be applied selectively, for a pre-determined period, and in a transparent manner. They should be used pro-actively at an opportune time point to avoid the development of a crisis situation. This is a valuable policy lesson.

#### **IV. VULNERABILITY TO FINANCIAL CRISIS**

There is a burgeoning literature on the empirical evidence concerning the operation and determinants of contagion and the spread of the currency crisis in Asia (Corsetti et al., 1998; Furman and Stiglitz, 1998; Glick and Rose, 1998). The role and determinants of contagion in the earlier (1994–1995) Latin American crisis were also studied in an incisive manner (Eichengreen et al., 1995; Frankel and Rose, 1996). Systematic empirical analyses have concluded that attacks on the currencies of the neighbouring economies raise the possibility of an attack on the domestic currency by 8 per cent (Eichengreen et al., 1996). These studies conclude that countries with important trade links to the country that first experienced a crisis are more likely to experience a crisis themselves than countries that have weak trade links with the crisis country. Contagion effects occur through five channels: (i) trade arrangements and exchange rate pressures; (ii) the “wake up” phenomenon, whereby the collapse of one currency alters the perception of investors about other countries’ fundamentals; (iii) herding behaviour of institutional investors, which induces common outcomes in countries with very heterogeneous fundamentals; (iv) financial links between countries, that is, the pattern of financial holdings can lead to shocks being propagated to other countries; and (v) liquidity management practices of open-end mutual funds, that is, an open-end portfolio manager who needs to raise liquidity in anticipation of future redemption would sell those portfolios that have not collapsed. This causes other asset prices to plummet, and the original disturbance spreads across markets. How the Asian contagion worked has been thoroughly analysed by Harwood et al. (1999) and Krugman (1999).

Having witnessed so many financial crises during the 1990s, it is easy to wonder whether there are some economies that are more (or less) vulnerable to speculative attacks. An analysis of the behaviour of the fund managers and currency traders can provide some indications. Given the significant interest costs involved, fund managers and currency traders are cautious in taking a short position. There is some “tribalism” involved in their decision-making process. Fund managers and currency traders would take such a position only if they believed it likely that they would be joined by their tribe in launching an attack, and if they expected the economy in question to respond with sizeable depreciation. There are several ways for an economy to respond to an attack. First, it might respond by (i) drawing down reserves, (ii) increasing interest rates, or (iii) depreciating. In immediate response, most policy makers think of the first option. However, it is not available to all economies because many of them may have larger liquid liabilities than reserves. A good deal of these liabilities may be short-term. Under these circumstances, policy makers are left with only the other two options to choose from. They can raise interest rates and make speculative attacks more expensive; they tend to choose this option because their objective is to achieve some measure of exchange rate stability in the face of severe loss of confidence. Raising interest rates also reduces absorption in the economy and closes the external gap. However, very high interest rates have a pernicious effect on highly leveraged corporate and banking sectors, and recession is an undesirable by-product of this policy (Tornell, 1999). The robustness of the banking and financial sector is a germane variable here. If it is weak and heavily ridden by impaired assets, a given interest rate increase is more likely to induce a big recession. It can even cause a meltdown of the payments system. Fund managers and currency traders know that if the banking system is weak, the government will be unlikely to respond by attacking with an interest rate hike. The result will be a vulnerable economy. It is clear that if foreign exchange reserves are low and the banking and financial system is weak, policy makers will try and close the external gap by depreciating the currency.

The above exposition enumerates various causal factors behind vulnerability and as well as the determinants of a contagion. The lesson that can be derived is that when a financial and/or currency crisis sets a contagion in motion, it is not likely to affect an economy which (i) has a high level of foreign exchange reserves, (ii) does not have close trade ties with the crisis-stricken economy, and (iii) has a banking and financial sector which is not riddled with impaired assets. As opposed to this, the vulnerability to the contagion is high for those economies that have a low level of foreign exchange reserves, strong trade ties with an economy that is crisis-stricken, and a weak banking and financial sector.

That a high level of foreign exchange reserves helps keep a crisis at bay has been established by Taiwan Province of China, which did have a high level of reserves and escaped the Asian crisis. Therefore, building up and carefully managing foreign exchange reserves has emerged as a high-priority policy objective. However, augmenting and maintaining foreign exchange reserves is by no means an easy task. A myriad of factors impinges upon it; they include movement in merchandise trade, payments of trade in services, debt-servicing payments and repatriation of profits, short-term fund movements, foreign direct investment (FDI) and new foreign loans. These are various components of the balance of payments. The final balance of all

these components will determine whether there is an increase or draw-down in a country's foreign exchange reserves.

Since the Asian crisis, stability in currency valuation has become a more important factor for policy makers to take into consideration. In the past, currency stability was treated as a constant; this is no longer the case. It has now become a major independent factor that both influences other macro factors and is influenced by them. To strengthen the reserves, policy makers should take appropriate measures on both fronts, namely, the current account and capital account. Large deficits in the former for prolonged periods must activate policy makers to take appropriate measures to augment merchandise and services exports. Inaction or a lackadaisical attitude in this regard can have high costs. Policy makers should be proactive in building such conditions as not to allow the capital account to have excessive outflows. Whether they are excessive or not may be decided on the basis of the contemporary level of inflows. Furthermore, on occasion an economy needs inflows of long-term investment and long-term loans to provide liquidity and to build reserves. But they must be so managed that they do not cause large future outflows on account of profit repatriation and debt repayment.

## **V. CAPITAL ACCOUNT LIBERALIZATION**

Financial liberalization, including capital account liberalization, is essential for any economy seeking to benefit from broad participation in the global economy. During the 1980s and 1990s, not only were restrictions on international financial transactions relaxed, but regulations constraining the operation of domestic financial markets were also relaxed or removed. Economy after economy has moved away from repressive financial regimes.<sup>3</sup> Several Asian economies, including the five crisis-stricken ones, promptly liberalized their financial sector. Although a direct link between financial liberalization and financial crisis may not be seen, in a substantive number of cases financial liberalization seems to have pushed the economies towards costly financial crises. Balanced and sequenced liberalization is the only way to ensure maximum protection from financial crisis, because the lifting of controls over capital flows can lead to such alarming results as an economy accumulating a huge amount of foreign debt within a few years, followed by a stampede of foreign-owned and locally owned funds exiting the country within only a few months. This in turn prepares the grounds for systemic disturbances.

Although the neo-classical economic argument is that a liberal financial system is efficient, a negative feature associated with it is that it encourages economic agents to take imprudent risks, thereby raising the potential for systemic disturbances. These dangers, however, can easily be brought under control through a combination of sound macroeconomic and prudential policies. Together they can provide incentive for

---

<sup>3</sup> Financial liberalization can be seen to have occurred across a wide range of countries since 1973. Although many of them were slow starters, most developing economies have now at least partially liberalized their financial sectors. The liberalization process has varied widely in terms of speed and sequencing in developing economies.

sensible risk management. There is a profusion of models in the literature linking recent Mexican or Asian financial and currency crises to newly liberalized capital account. Indeed, crises can also occur when capital accounts are restricted, but the record of the last two decades points to the possibility that the liberalization of capital accounts may heighten an economy's susceptibility to a financial crisis.

Although it is generally agreed that sequencing helps in liberalizing capital account, there is no unique approach or rule of thumb in this regard, because different countries have widely varying economic and financial situations. They not only vary in economic and financial developments but also in their institutional structures, legal systems, business practices and their capacity to manage change in a host of areas related to capital account liberalization. Also, there are no predetermined policy prescriptions about how long capital account liberalization should take in an economy. The speed of reform has not proved to be a critical element in the success or failure of reform capital account liberalization. For instance, if an economy has a fully liberalized financial sector, it can liberalize its capital account in a short time because all it needs to do is to put the necessary safeguards in place so that the liberalized capital account operates smoothly. Thus, the crucial issue here is the adequacy of supervision and regulatory measures. The emerging market Asian economies did not meet this requirement.

Even if the process of liberalizing capital account is carried out in a carefully calibrated manner, Eichengreen and Musa (1998) believe that the road could be bumpy. However, learning to deal with these bumps is one of the most important steps in reforming the financial system. The most vital lesson in sequencing liberalization is the necessity to ensure that all the major problems in the domestic financial system (such as under-capitalized banks, high levels of non-performing loans, and the like) are addressed before restrictions on capital account transactions are removed. Priority needs to be given to establishing adequate accounting, auditing and disclosure practices in the financial and corporate sectors. The absence of such practices considerably weakens market discipline. If economies where these practices are not adequately established, and where supervision and regulation standards are poor, still choose to liberalize their capital account, they run a grave risk of inviting a financial crisis. The lesson is that their policy makers should liberalize their capital account gradually, while eliminating these distortions. Also, given the fact that short-term capital inflows can cause destabilization, there is a strong case for liberalizing longer-term flows, particularly FDI, well ahead of short-term capital inflows. Much to its benefit, China followed this course.

The most inopportune moment to liberalize is when segments of the financial sector are unhealthy, close to insolvency, or when liberalization can drive them towards it. Before adopting liberalization, non-viable banks and financial institutions must be weeded out of the system. The remaining ones should be restructured and put on a sound managerial and financial footing. This process will be incomplete unless the capital base of banks and other financial institutions is adequately strengthened, in keeping with the international norms. When the domestic banking system is fragile, opening it to competition from abroad can create a domestic crisis; although some trickling in of foreign banking institutions may be beneficial at this stage because they can provide valuable examples and help spread good banking and financial practices in the domestic markets.

External capital that comes in through non-banking institutions, such as portfolio investment in domestic equities and debt instruments, also needs a pre-planned strategy. The necessary financial infrastructure for these assets – that is, clearly laid down bankruptcy laws and procedures, securities laws, and the like – needs to be instituted before inviting external capital through these channels. This is especially true for corporate debt, mortgage instruments and financial obligations relating to subsidiaries. If external finances flow in through non-banking channels, there is an extra benefit to the economy, namely, capital inflows are less heavily dependent on the banking system. An important legacy of the Asian financial crisis will be expansion of the role of stock and bond markets as funding vehicles for corporate fund-raisers. Therefore, it is essential that appropriate measures be taken before fully liberalizing the capital account. If the monetary authorities are remiss in doing so, the cost will be high.

## **VI. BANKING AND FINANCIAL SECTOR**

The banking and financial sector generally plays a critical role in most boom-bust cycles. A *sui generis* feature of the Asian crisis is that it was the first one during the post-war era featuring the combination of banks as the principal international creditors and private sector entities as the principal debtors. One of the major elements underlying the Asian crisis was serious weaknesses in the banking and financial sector of the debtor Asian economies. The Asian crisis – and experiences in its aftermath – has brought to the fore the chaotic conditions generated by bank runs within the context of a domestic financial system. That is not to say that international banks and creditors were flawless and that they did not commit excesses or miscalculations. One of the most important lessons from this crisis is that micro-financial conditions matter as much as macroeconomic ones. The high saving rates in several high-performing Asian economies, where the household sector is responsible for saving around a third of GDP, were essentially on-lent by banks to businesses. The region has exhibited overdependence on the banking sector and under-reliance on capital markets. The size of the bond market in Asia is under 20 per cent of the region's GDP – which is low by comparison with industrial country bond markets. For instance, the US bond market is over 100 per cent of GDP. This in turn was largely responsible for Asia's high-debt and high-risk model of economic development. This is also responsible for high levels of leverage, compared with countries having brisk growth and more balanced financial systems – that is, those that have developed equity and bond markets. This high-leverage financial structure in Asia was inherently risky and vulnerable to internal and external shocks.

Return on capital employed (ROCE) is considered one of the better indicators of profitability. As it accounts for both operating and non-operating results, it provides comprehensive information about the economic performance of business. ROCE permits a comparison between businesses, without regard to accounting conventions. In addition, ROCE shows its rate for the period, and captures the efficiency in the total use of capital resources. Pomerleano (1999) computed the ROCE for several developing and developed

economies for the period 1992–1996, and inferred that most Asian economies had underdeveloped capital markets because they relied heavily on bank financing. Except for Hong Kong (China), all of them had poor ROCE. Desirable characteristics such as transparency, corporate accountability and governance, as well as proper risk pricing, that contribute to the success of capital markets were lacking in Asia during the pre-crisis years. This plausibly led to deficient corporate performance. The implication of Pomerleano's analysis is that a balanced and competitive financial system, in which capital allocation takes place in a transparent manner and with appropriate consideration of risk, is much needed in Asia. Indeed, increased reliance on capital markets, and the associated benefit in terms of transparency, risk assessment and risk pricing, and dispersion of risk across participants, would certainly have salutary benefits for future corporate discipline and their ROCE.

Having an adequate supervision and prudential standards is necessary but not sufficient for having a sound banking and financial sector. The Asian crisis has demonstrated that financially troubled institutions always exacerbate a crisis situation; they therefore need to be eliminated without delay. While a crisis situation may still develop under a relatively strong financial system – as in Brazil in 1998 – the extent of the crisis is significantly determined by the strength of the financial system. A careful scrutiny of the Asian crisis, as well as others that have occurred over the last two decades, reveals a manifested lack of financial discipline in several Asian economies. Risky financial practices were prevalent in Indonesia, the Republic of Korea and Thailand. As opposed to them, Hong Kong (China), Malaysia and Taiwan Province of China manifested relatively more progressive regulatory and supervisory practices and prudent financial conduct. Consequently, the latter group was less severely “mauled” by the crisis. There is little doubting the fact that improving banking and financial infrastructure, as well as upgrading regulatory and supervision environment, diminishes both the probability and the costliness of a financial crisis.

Enacting and tightening banking and financial regulation is one of the keys to keeping crises at bay. With the help of the statistics published by IMF (1997) and JP Morgan (1997), Caprio (1998) compared bank regulation and supervision for 12 Asian and Latin American economies. The regulatory environment in these economies was assessed for capital position, loan classification, quality of management, liquidity and operating environment. Capital was assessed by the minimum required capital-asset ratio. Asset quality was proxied by the definition of non-performing loans and the provisioning required once a loan becomes non-performing. It is always difficult to compare management quality. An assumption, albeit somewhat arbitrary, made here is that more assets in foreign banks imply better management. Foreign ownership also implies better diversification. The operating environment was proxied by measures of property rights and creditors' rights.

With some caveats, a ranking was prepared by Caprio (1998), with lower numbers indicating a higher ranking. Singapore with a score of 16 showed the strongest regulatory environment, followed by Argentina (21) and Hong Kong (China) (21). Chile (25), Brazil (30) and Peru (35) followed in close succession. The latter half of the rankings comprised Malaysia (41), Colombia (44), the Republic of Korea (45), the Philippines (47), Thailand (52) and Indonesia (52). These rankings are identical and comparable to those

prepared by Ramos (1997) for prudential norms. It is not surprising that those economies which earned lower ranking were struck by the Asian crisis of 1997–1998. Those at the top or the middle of the ranking order may have tighter regulations either because they experienced crises in the 1980s (Argentina, Chile and Hong Kong [China]), or because they are concerned about the vulnerability associated with being small, highly open economies (Hong Kong [China] and Singapore). Merely increasing capital ratios is not sufficient to improve bank performance because the quality of bank capital and that of balance sheets is difficult to monitor (Berger, 1995). The pervasiveness of the information problem in financial activities suggests that the larger the number of highly motivated monitors, the better the chance of guaranteeing the safety and soundness of the banking sector. Therefore, as discussed below, surveillance of the banking and financial sector by “multiple eyes” is a recommended approach. Owners, managers, markets and supervisors all need to have clear incentives to monitor it. Policy makers need to find ways to increase the stakes of managers and owners by assuring them that they can earn better profits from respectable banking than from gambling. Liabilities for imprudent risks by managers should also be increased.

The size and sophistication of the banking and financial system in the developing economies at a higher level of economic growth usually reach a state requiring a strong regulatory and supervisory framework in order to handle the increasing risk that goes with financial globalization. Rossi (1999) estimated a logit model with the help of data for 15 Asian and Latin American economies, at a higher level of economic growth, for the 1990–1997 period. Rossi concludes that financial fragility is exacerbated by lenient prudential practices.

In addition to having a strong supervisory and prudential network, policy makers also need to resist the temptation to misuse the opportunity offered by an open banking and financial system. For instance, they can finance large budget deficits through an open financial system for an unduly long period of time, which could lead to a high level of short-term exposure; this in turn could become an unstable debt structure. Markets can turn against it with a vengeance when attitudes and expectations change. Although, it did not happen in Asia, other financial crises that broke out more recently (in the Russian Federation and Ukraine) were primarily caused by such borrowings by the respective governments.

## **VII. KEY FEATURE OF A SOUND BANKING SYSTEM**

The preceding sections have demonstrated how significant are the supervision and prudential norms for the sound health of the banking sector. This section delves into what it takes to have a sound banking sector. A great deal of international thinking and effort has gone into strengthening banking and financial sectors around the world. In 1992, the World Bank issued *The Bank Supervision Guidelines*, which was based on its extensive experience in advising countries on regulatory issues. These guidelines had a decisive influence on the development of best practices for prudential supervision in emerging markets. Other international bodies and industrial groupings that have been endeavouring to formulate best practices include the International Accounting Standards Committee (IASC, 1997) and the Group of Thirty (G-30, 1997).

Between 1975 and 1999, a series of policy papers and recommendations were put out by the Basle Committee on Banking Supervision (BCBS),<sup>4</sup> which had been working in this area for many years and has provided a blueprint for enhanced bank supervision: following the G-7 Communiqué of June 1996, BCBS prepared what is now called the Basle Core Principles (see BCBS, 1997). BCBS decided to also publish periodically an update called *Compendium*. In developing these Core Principles, the BCBS worked closely with the supervisory authorities of the G-10 countries as well as non-G-10 countries. The Asian economies that participated in the preparation of these documents included China, Hong Kong (China), India, Indonesia, Malaysia, the Republic of Korea, Singapore and Thailand.

The Basle Core Principles comprise 25 basic principles that need to be applied for a supervisory system to be effective. The Principles relate to: (i) preconditions for effective banking supervision; (ii) licensing and structure; (iii) prudential regulations and methods of banking supervision; (iv) information requirements; (v) formal powers of supervisors; and (vi) cross-border banking principles. A vitally important lesson of the Asian crisis is that national authorities should apply the Principles in the supervision of all banking organizations within their jurisdictions. In countries where non-bank financial institutions provide financial services similar to those of banks, many of the Principles set out in this document are also applicable to such institutions themselves. The Principles are intended to serve as a basic reference for supervisory authorities universally. They are minimum requirements, and in many cases may need to be supplemented by other measures designed to address particular situations and risks in the financial systems of individual countries.

Market discipline and corporate governance are the two fundamental ingredients for sound banking. Failings in the quality of management weaken these two fundamental elements; such weakness leads, inter alia, to excessive risk-taking. According to Folkerts-Landau and Lindgren, (1998), there are five broad sets of challenges for regulators and supervisors:

- (i) They need to control undue risk-taking by bank managers, because it works to the detriment of the interest of depositors and other creditors;
- (ii) Inadequate accounting standards and reporting and disclosure requirements lead to a lack of adequate information on the financial health of banks. Also, insufficient rules and practices for loan valuation undermine the market discipline; they delay the recognition of banking problems until it is too late, which makes resolution of problems harder and costlier;
- (iii) The presence of implicit government guarantees also encourages excessive risk-taking, contributing to weakness in the banking sector;
- (iv) Most economies now have regulatory systems and regulations, but they are not able to effectively implement these regulations because of a lack of supervisory autonomy;

---

<sup>4</sup> The Basle Committee on Banking Supervision is a committee of banking supervisory authorities, which was established by the central bank Governors of the Group of Ten countries in 1975. It consists of senior representatives from bank supervisory authorities and from the central banks of Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Sweden, Switzerland, the United Kingdom and the United States. It usually meets at the Bank for International Settlements in Basle, where its permanent secretariat is located.

- (v) Concentrated bank ownership and connected lending increases vulnerability of the financial system. When banks are part of larger conglomerates, lending tends to be directed towards associated entities; this makes it difficult, if not impossible, to evaluate the quality of credit.

Effective supervision alone cannot assure a safe and sound banking system. It is only the correct combination of external market discipline and supervision that enables a competent management to create and preserve a sound banking system. When managers are capable and highly motivated and market discipline exists, the task of supervisors becomes easier and requires a lighter touch. As opposed to this, in many countries where inadequately trained managers have poor knowledge of regulatory norms and supervision processes, political interference and insufficient resources make their supervisory task difficult. The lesson that has emerged for policy makers is that there is not only a need to pay adequate attention to the Principles but also to bring about improvement in these three weak areas.

## **VIII. CONTAINING INSOLVENCY AND FINANCIAL RESTRUCTURING**

In the five crisis-afflicted Asian economies a large number of corporate, banking and financial insolvencies took place. Rising debts, capital losses associated with currency depreciations, and rising non-performing loans (NPLs) made many firms and banks insolvent. According to a simulation exercise done by the World Bank, one out of four listed firms in Thailand suffered balance sheet losses greater than the total equity value of the firm. In addition, NPLs in total loan portfolios ranged from 20 to 35 per cent. In Indonesia, two out of three listed firms went bankrupt, and NPLs went up as high as 50 per cent. In the Republic of Korea, two out of five firms suffered major interest rate and exchange rate losses greater than total equity value, and NPLs ranged from 20 to 50 per cent. In Malaysia and the Philippines these losses were relatively less, as only 5 and 16 per cent of the listed firms, respectively, had losses greater than the total equity value (World Bank, 1998, chap. 4).

In order to manage such a massive scale of corporate and financial bankruptcies and rejuvenate the real economic activity, prompt recapitalization of banks is indispensable. Governments should have given banks some tax relief as well as assistance to tide over NPLs. This would have increased their retained earnings and strengthened their capital base; similar efforts should have been extended to the corporate sector. Some of these measures were taken by the crisis-afflicted economies. Another measure could be de facto nationalization and consolidation of banks under dire financial stress, followed by reprivatization.

No banking sector can continue to be healthy if the corporate sector it serves is unhealthy. To this end, two immediate measures by policy makers were required: first, provision of tax relief to firms in financial distress to improve their cash flow situation; second, to alleviate the credit crunch, limited government guarantees could have been provided for credit for collateralized transactions. An exit policy could have been, and in many cases was, devised for firms that could not be financially restructured. As a well-declared

strategy, such firms should be obliged to declare bankruptcy and sell assets, to enable them to be put back into production, albeit with reduced book values. Institutional assistance should also be provided to help banks and firms to restructure and return to sustained solvency, and later on to profitability.

Functional alternatives to bankruptcy exist. During the restructuring phase, voluntary restructuring of corporate debt was attempted in Indonesia, the Republic of Korea and Thailand. This included promotion of mergers and acquisitions (M&As), and elimination of tax disincentives to this end. Conversion of debt into equity was also sought as a means of restructuring corporate debt. Liberalizing FDI in selected sectors could open up new sources of management and capital. Allowing takeovers by foreign investors was seen as a viable alternative to bankruptcy. The Republic of Korea went as far as providing 100 per cent ownership to foreigners in previously restricted business areas. Policy makers also needed to provide institutional assistance for voluntary negotiations between debtors and creditors, including providing some foreign exchange assistance to debtor firms. Corporate debt restructuring required on the part of policy makers a great deal of attention and policy acumen. Policy makers should keep in sight the fact that the sooner corporate and financial sectors come back on an even keel, the sooner real economic activity will return to normalcy. Failure to initiate corporate debt restructuring simply prolongs economic and social costs.

## **IX. PROJECT APPRAISALS AND RISK ASSESSMENT VERSUS CRONY CAPITALISM**

Financial intermediaries in the crisis-stricken Asian economies either malfunctioned, or were incited to underperform as a consequence of poor credit-rating and risk assessment services, as well as inadequate commitment to sound project appraisal practices. Also, as noted earlier, both domestic and foreign investors (mis)perceived the respective governments as implicitly guaranteeing the liability of financial intermediaries. This (mis)perception had a historical rationale: the implicit assumption here is that the downward sloping demand curve for capital remains stable. In order to raise the level of capital inflows, Asian governments began offering bailouts, in the late 1980s, to investors whose investments went sour. This was the beginning of the general (mis)perception that when financial institutions became unstable, the governments would extend a helping hand and bail them out. Apparently, the governments had no such plans. Yet this (mis)perception led to overinvestment, financial distortions and severe moral hazard problems. Financial institutions downplayed the risks and expanded their balance sheets in this manner. Risk assessment was put on the proverbial back-burner, if not ignored. The stock of implicit guarantees for the financial system rose markedly in a short period of time. This (mis)perception led to the vulnerability of the financial system (Krugman, 1998). The investors could have assumed implicit government guarantees, and there was some probability of this working as long as the implicit guaranteed amount remained small. However, when the amount of these guarantees increased, there was little possibility of honouring them because the governments did not have such large financial resources. They would also be reluctant to raise them through taxes. When this situation arose in Asia, economies became vulnerable to the risk of a financial collapse. The banks and

other financial institutions accumulated such large losses on their balance sheets that the governments became unable and/or unwilling to cover them.

The Asian financial markets also suffered from other micro excesses. Firms and banks had well-established, long-term relationships, thereby turning debts into quasi-equity,<sup>5</sup> which led to lax risk assessment processes. This relationship probably supported politically preferred projects, without paying due regard to creditworthiness. This financial system, or “crony capitalism”, typically functioned as follows: the downward sloping demand curve for capital faced a given world interest rate; in the absence of government guarantees, investors added to their capital stock until the marginal product of the capital was equal to interest rates. However, when the banks obtained government guarantees of bailouts (or at least this was the assumption) when investments went sour, investors naturally overinvested and went beyond the point where the marginal productivity of capital was equal to the rate of interest. Overinvestment implies that the investors went to a point where the marginal productivity fell below this level. Poor risk-assessment and project appraisal practices easily allowed overinvestment (or poor investment) in the Asian economies. As the amount available for bailout payments was limited when a good number of projects with negative returns accumulated, a financial crisis was precipitated (Dooley, 1999). The lesson that emerges is that risk assessment practices need to be strengthened in the financial sector – which has no room for crony capitalism. The Asian crisis has clearly shown that if bailouts are ensured, and credit risk analysis is dubious, the road to financial crisis is a short one.

## **X. FLEXIBILITY IN EXCHANGE RATE REGIMES**

Whether de facto fixed or pegged (see section II), exchange rate served well the emerging market Asian economies during the 1980s and early 1990s. Various publications of the World Bank and IMF supported the thesis that fixed exchange rate and fiscal prudence were part of the “Asian miracle” policy framework (e.g. Kochar et al., 1996).

Although the de facto fixed exchange rate system had performed adequately in the past, there were two principal reasons behind its failure. First, it is common knowledge that the celebrated Mundell-Fleming model shows that the trilogy of fixed exchange rates, autonomous monetary policy and free capital mobility are incompatible. Second, during their liberalization phase the emerging market Asian economies experienced large booms in investment and consumption. Liberalizing economies are expected to experience such booms (Portes and Vines, 1997). The booms that preceded the crisis were not choked off by an appreciating exchange rate, precisely because of the exchange rate peg. One of the consequences of these booms was cost increases, which rendered the export sectors increasingly uncompetitive. Warr and Vines (1999) concluded that this clearly applied to Thailand, as it did also to the other Asian countries, though perhaps to

---

<sup>5</sup> This seems to be the origin of the term “Asian evergreens”.

a lesser degree. This sequence leads to the inference that the Asian emerging economies were rendered vulnerable, inter alia, by the confluence of a pegged exchange rate and worsening external environment.

Since Krugman (1979), a substantive body of literature has been published on the origins of currency crises and on when currencies are ripe for attack by speculators. There has been a profusion of models, including several notable ones in the past by Michael Obstfeld, F.G. Ozkan and A. Sutherland, and a more recent one by Davies and Vines (1998). These are now denoted as the first, second and third generation models, which explain how a fixed exchange rate constitutes a constraint on macroeconomic policy when capital markets are open and there is high capital mobility. The pegged exchange rate is abandoned when the constraint becomes too costly for policy makers to sustain. For instance, in a situation where the business cycle goes into a downswing, the external demand shock may be severe enough to cause a recession in the domestic economy. It may, therefore, be optimal to go off the pegged exchange rate regime. These models also delve into circumstances of vulnerability. For instance, when markets apprehend that the peg may be abandoned, the situation may lead to a risk premium being attached to holding the currency, with the consequence that the interest rate may rise; a rising interest rate would in turn make maintenance of a fixed exchange rate more costly. In the emerging market Asian economies, the pegged exchange rate regime induced massive unhedged borrowings in foreign currency (Corbett and Vines, 1999). When the currencies went into precipitous depreciation, the burden of borrowing for domestic firms soared equally steeply, in turn leading to financial instability. There is sufficient evidence of the pegged exchange rate system turning out to be highly crisis-prone. Equally striking is the evidence from other economies (such as Mexico, South Africa and Turkey) which faced financial pressure but whose flexible exchange rates allowed them to manage the situation better.

The Asian crisis has seriously influenced the thinking of scholars and policy makers regarding the exchange rate regime. A fixed exchange rate is no longer seen as a constraint on macroeconomic policy. The crisis has demonstrated that pegged, but adjustable, exchange rates are difficult to sustain in a world of increasing capital mobility. Sooner or later they are likely to be tested by a speculative attack, forcing high interest rates and budget cuts, if not more. We also saw, in the preceding paragraph, that by creating an illusion of permanent currency stability, fixed exchange rates tend to reinforce the incentive for financial institutions and firms to borrow unhedged from abroad. Given these problems, the consensus among economists now is that only the extremes of exchange rate management are likely to succeed (ADB, 1999). The post-crisis conventional wisdom in this regard is that economies must either rigidly and irrevocably tie their currency to another by adopting a currency board (as in Argentina or Hong Kong [China]), enter into a currency union, or allow their currency to float. Three related arguments support flexible exchange rate regimes. First, countries with floating currencies are less likely to suffer a crisis of investors' confidence. By definition, they will not waste precious reserves defending an exchange rate peg. Second, a fixed exchange rate regime allows the government more room to act as a lender of last resort to the financial sector. Countries committed to defending a currency peg cannot provide domestic liquidity freely without risking a loss of reserves. Countries with a flexible rate need not worry about losing reserves, because the

exchange rate will simply depreciate as more domestic liquidity is created. Third, a flexible exchange rate allows a country more autonomy in regard to its macroeconomic policy. This is a classic argument in favour of floating rates. However, it is easy, especially for developing countries, to exaggerate this benefit. A developing country with significant policy autonomy may have trouble gaining credibility in international financial markets. Too often in the past governments have used their discretion to pursue imprudent inflationary policies. Countries with floating exchange rates often have to keep interest rates high to maintain investors' confidence. Mexico's experience in mid-1998 makes the point: the peso fell by 20 per cent in response to turmoil in Asia and the Russian Federation, yet Mexican interest rates were considerably higher than those in Argentina, which had a currency board.

The choice of currency regime will depend on a country's size, history and geographical location. For instance, in Europe more countries are ultimately likely to adopt the euro; in Latin America Argentine policy makers are talking seriously of dollarization; in Asia the future is uncertain, and the political and practical hurdles for any regional currency union are high. Yet the cost of excessive volatility and competitive devaluation are an important concern in Asia's highly open economies.

## **XI. ORTHODOX REMEDIES OF IMF**

The Asian crisis has tarnished the reputation and credibility of IMF; it has been challenged, chastized and castigated for its response to the crisis. With the benefit of hindsight, one can say that IMF did not fully comprehend the nature of the Asian crisis initially, and treated it with the orthodox set of remedies that are intended for a commonplace balance-of-payments crisis. In the process, the Fund did not prescribe the most pragmatic set of monetary and fiscal policies; it needs to seriously rethink its one-size-fits-all strategy. The routine remedies of tight fiscal and monetary policies, which curb excess absorption and steer exchange rates to modest levels of depreciation, did not form the correct remedy package for the Asian economies. Many scholars believe that tight monetary policies imposed on the Asian economies reduced, rather than improved, the creditworthiness of indebted firms and exaggerated the financial collapse (Stiglitz, 1998). Fiscal contraction, by exacerbating the downturn, caused the revenues of firms to fall, as well as deepened and prolonged the recession in the Asian economies. The lesson for the Fund is that a different – from the normal – set of policy measures should have been applied to the Asian economies to help them out of the crisis.

Corbett and Vines (1999) argue that as soon as the crisis broke out, the emerging market Asian economies suffered from negative inflation or disinflation in their non-traded goods sector. This can be demonstrated by comparing the extent of exchange rate depreciation with the extent of rise in the consumer price index (CPI). Under normal circumstances, one would expect CPI, after a certain lag, to reflect the exchange rate times the import content of output and expenditures, plus any domestic demand effects. In the crisis-stricken Asian economies, CPI rose significantly less than exchange rate depreciations. What was observed in these economies was: sharply rising import costs, slow increase in the prices of the import

consumption basket and a negative increase in the price of its domestic content. It may reasonably be argued that the slow increase in non-traded goods prices was a consequence of the stringent monetary policy adopted under the tutelage of IMF. A monetary policy that causes decline of non-traded goods prices is undoubtedly very tight.

The confluence of falling non-traded goods prices and long-lasting high interest rates had destructive results for the real sector of these economies. It was particularly detrimental to those entrepreneurs in the non-traded goods sectors which had borrowed large amounts. The worst affected were those enterprises that had borrowed in the international capital markets. The Fund's defence of high interest rates was that it was trying to save currencies from uncontrolled depreciatory falls. This argument is not a strong one because there are other known methods of preventing free falls of currencies than sky-high interest rates. One policy option that was open was announcing a new form of nominal anchor, namely, an inflation target providing a trajectory for prices. This was successfully tried in Latin America. Interest rates could then be manipulated to steer prices into that trajectory. Thus, instead of using only the interest rates, two policy instruments, namely, inflation target and interest rates could have been profitably and pragmatically used by the Fund. The inflation target is a useful instrument for influencing domestic prices and wages. It is equally useful in determining long-term nominal foreign exchange rate. Once this instrument has cautiously been used, interest rates can be cut to low levels without any risk of unrestricted exchange rate depreciation. These two policy instruments were used in this way in Italy and the United Kingdom when their currencies tumbled out of the exchange rate mechanism of the European Monetary System (EMS).

What happened in Asia was much worse than that in Italy and the United Kingdom because, under IMF's tutelage, the authorities used only the interest rates to arrest the fall of currencies (Corbett and Vines, 1999). Due to a lack of policy transparency, the markets were uncertain as to the governments' objectives. It was this uncertainty that led the markets to a reasonable belief that the authorities were ready for a large price slippage, which in turn led to large currency depreciations. Both the Fund and the policy makers in the crisis economy had a lesson to learn here. Had the policy mandarins in the Asian economies given clear signals regarding an inflation target strategy, as was done in the United Kingdom, the situation would not have deteriorated as much as it did.

IMF prescribed a stringent monetary policy to stall the flight of capital and plunging currency values in the crisis-affected economies. Many analysts felt that the Fund had relaxed its fiscal policy measures after an avoidable delay. The hindsight clearly reveals that this prescription was inappropriate for the crisis-stricken Asian economies, and that it had deepened and broadened the Asian crisis. Some argue that in Indonesia fiscal stringency caused the collapse of the financial sector. The first 1998 budget, which was quickly rejected by the Fund, provided for a deficit in the order of 1.5 to 2 per cent of GDP. At the end of the 1999, it seems to have been a clairvoyant move because budget tightening beyond this level turned out to be disastrous. Markets reacted badly to rejection of the budget and public castigation by the Fund. The rupiah depreciated from 4,000 to the dollar in November 1997 to 17,000 in January 1998. Although these fiscal errors were the worst, similar policy errors were made in other Asian economies with the same results – that is, the

depression deepened. The lesson for the Fund was that once it had noted the extent (the depth and length) of the depression, the gear should have been reversed and the fiscal policy relaxed.

To judge by the discussion in the preceding section, under Article IV consultations the Fund needs to advise member countries to adopt greater exchange rate flexibility before they are forced to do so by a crisis. Two exceptions to this statement are Argentina and Hong Kong (China), which have successfully operating currency boards. The Fund should counsel policy makers to abandon simple pegs, crawling pegs, narrow bands and other similar mechanisms that limit exchange rate flexibility, because when a crisis situation develops the market will force them off such arrangements. The most opportune period for the central banks to move gradually towards flexible currency regimes is when there are no pressures from the market and capital is still flowing in. This is an important lesson to be drawn from the Asian crisis.

Learning from the Asian crisis, IMF created in December 1997 a new instrument to help emerging market economies cope with sudden loss of market confidence. This instrument has been called the Supplemental Reserve Facility (SRF). It permits large lending, without any access limit. Maturity has been kept short because the member is expected to repurchase within 12 to 15 months. Under special circumstances the IMF Board may extend the repurchase period up to two years. Interest rates have been kept high at 300 to 500 basis points above any of the other facilities. IMF's objective is to provide strong incentives to the emerging market economies to return to market financing as quickly as possible. The first beneficiary under the SRF was the Republic of Korea. This facility makes IMF look like something of a lender of last resort, although it has neither the authority nor the resources to serve as one. In 1999, the Fund also considered creating a facility for countries threatened by contagion from a crisis originating in another country or part of the globe.

The Asian crisis has brought home forcefully that the global economy has changed considerably since the Bretton Woods institutions were created. The new reality, that needs to be recognized, is that now the private capital markets are the overwhelming source of capital. In such an environment the Fund needs to take on a different role;<sup>6</sup> the pricing and design of its financial products will have to change. More specifically, the Fund should increasingly focus on enhancing transparency for markets, and lay greater emphasis on the vulnerability of national balance sheets. The Fund should restrict its lending to the provision of short-term liquidity, and also limit to emergencies its lending to emerging market economies and focus its role in low-income developing economies on macroeconomic advice (Summers, 2000).

---

<sup>6</sup> The report of the International Financial Institutions Advisory Commission – popularly known as the Alan Meltzer Commission – was submitted to the United States Congress in March 2000 (USC, 2000). It has made several radical recommendations for clearer delineation of the role of the Bretton Woods and other multilateral financial institutions. The recommendations of the Commission were not unanimous. They immediately became a debatable issue among policy makers and academics.

## **XII. LENDER OF LAST RESORT**

In the crisis-stricken economies, an international lender of last resort is needed to help them to recover and the financial system to resume its function of channelling capital into productive avenues. Also, a lender of last resort makes it feasible for crisis-stricken economies to make an early return to the capital market. However, this situation should not be seen in such a simplistic light. The other side of the coin is that such a lender can and does create a serious moral hazard problem, which in turn can contribute to more crisis situations in the future. Yet, on balance, one does need a lender of last resort for various reasons. If there is no lender of last resort and individual countries have to hold large volumes of financial capital in low-return reserves to meet the potential threat of flights from their currencies, most of the benefits of a more open international market for capital will be lost (Bosworth and Collins, 2000). Central banks in the emerging market economies are generally unable to promote recovery because, inter alia, much of the debt is short-term and denominated in foreign currencies; neither can they resort to expansionary policies to promote recovery because of the fear of an undesirably high rate of inflation during an inopportune period. The direct outcome of a high inflation rate will be further depreciation of the weakened currency as well as higher nominal interest rates. Such developments are undesirable because they will lead to worsening balance sheets for firms, banks and households; they will also lead to cash flow problems for the financial and corporate sectors. Thus viewed, a central bank in an emerging market has a limited ability to extricate the economy from a crisis situation. Therefore, while there is a pressing need for an international lender of last resort when a crisis occurs, it will be accompanied by the risk of moral hazard.

A further rationale for having an international lender of last resort is provided by Mishkin (1999), who believed that if contagion is spreading from one emerging market economy to another, an international lender of last resort becomes indispensable. The Asian financial crisis and those preceding it have demonstrated that a successful speculative attack on one emerging market economy leads to speculative attacks on other regional emerging market economies, thus leading to currency crises. Since these crises have displayed a strong tendency to snowball, an international lender of last resort is needed to stop the crisis from spreading by providing international reserves to countries threatened by contagion-generated speculative attacks. This kind of assistance will keep their currencies from sharply depreciating and the crisis from spreading.

To resolve a financial crisis, the lender of last resort needs to provide sufficient liquidity rapidly, put the banking and financial sector back in gear, and regenerate market confidence in it. The quicker a loan is granted, the lower its amount will be<sup>7</sup> (Mishkin, 1991). Concomitantly, appropriate measures should be taken to keep moral hazard at bay. To this end, the lender of last resort must insist on strengthening the regulatory and supervisory systems in the recipient economies – in fact, this should be a precondition to providing the

---

<sup>7</sup> An illustration of this is the support provided by the Federal Reserve Board (FRB) in the aftermath of the Wall Street crash of 19 October 1987. At the end of that day, securities firms needed several billion dollars to service their customers in an orderly manner. As the banks were wary, and reasonably so, FRB stepped in as the lender of last resort, and Chairman Alan Greenspan announced, before the market opened on 20 October, FRB's readiness to serve as a source of liquidity to "support the economic and financial system".

much-needed liquidity. Without decisive measures in these areas, market confidence in the banking and finance sector will not be restored, nor the crisis resolved. An efficient regulatory and supervisory system entails deserving punitive measures for the managers and stockholders of insolvent financial institutions, more careful monitoring of risk, and adequate accounting and disclosure requirements. A limiting condition here is that some managers and institutions may be foreigners and foreign subsidiaries. In such cases, punitive measures cannot be effectively implemented.

The lender of last resort has to be associated with the task of strengthening the banking sector and the cleaning up of the balance sheets of both financial and non-financial institutions, without which no financial crisis can be properly resolved. To this end, as discussed earlier, a well-functioning bankruptcy law is needed. To restore their balance sheets many firms will need public funds, to enable healthy institutions to buy assets from insolvent ones. Creation of new institutions to sell off the assets of insolvent institutions is the next logical step, without which banks would be unable to clear their balance sheets. International organizations and the lender of last resort can help countries in crisis by providing them with the professional expertise required to create new institutions and legal structures. Both IMF and the World Bank provide technical advice to policy makers in this regard.

On the other hand, the concept of lender of last resort is fraught with practical difficulties as well as conceptual flaws. Conceptually, scholars do not agree on exactly what a lender of last resort does. The classic definition stems from Bagehot (1873), who stated that the lender of last resort should lend freely, at a penalty rate, on good collateral in a time of financial panic. The most appropriate policy response would be to follow Bagehot's dictum to lend quickly and generously, but at a penalty rate. It is essential that the lender of last resort be able to distinguish between healthy and insolvent institutions, intervening only to stop unwarranted panic leaving insolvent institutions to fail. Extending these conditions from banks to countries and from national authorities to international institutions is extremely difficult. The first problem is that of distinguishing between illiquidity and insolvency. An international lender of last resort should provide limitless liquidity in the case of the former, and demand restructuring and adjustment in the case of the latter; but, as the Asian crisis highlighted, distinguishing between the two is extremely difficult. Secondly, moral hazard, referred to at the beginning of this section, is not easy to resolve. While central banks can control the reckless financial behaviour of domestic institutions, and have the power to close or merge insolvent financial institutions, neither capability exists at the international level. No binding global rules of financial behaviour exist, and IMF certainly cannot close down a recalcitrant country!

A lender of last resort is unlikely to emerge at the institutional level in the near future for several reasons, one of the most important of which is the issue of resources. If necessary, a central bank can provide limitless liquidity simply by printing money, unless it is constrained by a fixed exchange rate regime. IMF has no capacity to issue fiat money. Its resources are limited, and, despite the recent capital increase and introduction of the New Agreement to Borrow (NAB), they are insufficient to make it a credible lender of last resort. NAB is an emergency credit line from donor countries to IMF. To fulfill this role, IMF would need a substantial increase in its resources. Whether this would be politically feasible is unclear. However,

IMF has gone on refining its role as a global financial crisis manager and has adopted newly designed facilities, such as the Supplemental Reserve Facility (SRF) and Contingent Credit Lines (CCL). These developments in IMF lending practices have been interpreted as an evolution towards international last-resort lending – an evolution which Fischer (1999) argues should be further pursued and institutionalized.

Some observers suggest that only countries that meet stringent requirements, particularly in their banking and financial sector, should have access to IMF funds (Calomiris, 1998). To those countries that fulfill the requirements, IMF should lend without policy conditionality, but should demand collateral in the form of government bonds. One academic scholar has suggested that only countries which have complied with an agreed risk control strategy should qualify for IMF funds (Dornbusch, 1998). These suggestions suffer from the problem that few countries would fulfill the Fund's requirements. Given the contagious nature of financial crises, it is unlikely that large countries would be left unaided, even if they failed to meet IMF criteria. Moreover, by announcing that country A no longer fulfills the criteria for assistance, IMF might actually precipitate a crisis in that country. A more modest proposal suggests that this risk can be reduced by charging higher interest rates for assistance to countries with lower financial standards (Fischer, 1999). A task force convened by the Council of Foreign Relations (CFR, 1999) recommended that IMF loans be limited, and that the Fund should retreat to its traditional practice of lending no more than 100 per cent of quota in a year and 300 per cent of quota over the life of the programme. Higher levels of lending should only be resorted to under exceptional circumstances threatening systemic stability. If the Fund adopts this financial posture, the task force believed that investors and governments would realize that the assistance on offer is limited, and therefore that they would lend and borrow more cautiously. However, while pared down lending might limit moral hazard, it might also fail to calm an investor panic. The \$21 billion that the Fund lent, in collaboration with other multilateral institutions, to the Republic of Korea during the Asian crisis was 2000 per cent of quota. Even this amount failed to stem the panic. It can be well imagined what the 100 per cent of quota limit would have done to the crisis-stricken Korean economy. If IMF lending is to be limited in this manner, an alternative mechanism will have to be devised to solve crises (Eichengreen, 2000).

Running the lender of last resort operations is far from simple. On the domestic scene, most countries combine the lender of last resort function with a strong system of regulatory oversight. It is hard to visualize sovereign governments permitting the same degree of oversight and regulation of their domestic institutions by an international institution. Yet, without strong oversight, the system could cause more harm by encouraging unproductive risk-taking, delaying the process of restructuring, and closing defunct financial institutions (Bosworth and Collins, 2000). In addition, at this stage some industrial economies do not perceive an imperious need for having a lender of last resort. According to their perception, such an institution addresses the need of the developing economies only. That being the perception, it is difficult to visualize the industrial economies authorizing lendings of the magnitude and speed that would be required by a lender of last resort. Under these circumstances, if an international lender of last resort were instituted, it would only be able to provide too little, too late – which would defeat the purpose of establishing such an institution.

### **XIII. WHAT PRECISELY COULD THE POLICY MAKERS LEARN?**

That a crisis is a learning experience applies as much to an individual as it does to an economy. Financial crises cannot be totally eliminated, albeit their frequency can be reduced and impact minimized. One of the salient lessons to be learnt from the Asian crisis is that large capital inflows can potentially have a destabilizing impact over the recipient economy, particularly when the currency is convertible; numerous analysts have hammered this point home. It is difficult to find an evaluation of the Asian crisis that does not ascribe a central role to large capital flows in the region's debacle. Most scholars have emphasized the fact that short-term capital is particularly volatile and that, in a world of high capital mobility, losses in confidence result in massive portfolio reallocation and large losses in reserves (Radelet and Sachs, 1998; Chote, 1998; Fisher, 1998). Therefore, excessive reliance on external capital needs to be avoided. Cautious management of capital inflows is a critical lesson of the Asian crisis. There is evidence that this lesson has been well learnt by policy makers and corporations in Asia, and now fewer external bonds are being issued by them. Short-term capital inflows are known to cause volatility in financial markets, which in turn leads to macroeconomic instability. Short-term inflows can be best controlled at the time of entry into the borrowing economy. Monetary authorities should keep strict watch over short-term borrowings denominated in foreign currencies. A flexible exchange rate regime is known to discourage excessive short-term capital inflows. Also, the structure and incentives under which interbank lines of credit operate need to be examined from the perspective of both creditor banks and borrowing banks. In addition, if all else fails, capital controls should be imposed, albeit a short-term and transparent measure.

The contagion effect, working through different channels, can engulf an economy and create a crisis situation, although not all economies are equally vulnerable to it; those with large foreign exchange reserves and a robust banking and financial sector are less vulnerable to contagion, and they will also be buffered from the domino effect by avoiding close trade and financial ties with a crisis-stricken economy. Policy makers should therefore devote adequate time and attention to augmenting reserves and strengthening banking and financial sector.

At the best of times, liberalizing the capital account is a difficult process and can potentially prepare the grounds for systemic disturbances. This situation can be brought under control through sound macroeconomic and prudential policies. The capital account should not be liberalized if important segments of the financial sector are insolvent or are likely to be driven into insolvency by the process of liberalization. Sequencing in liberalizing capital accounts helps; an important step in sequencing is to ensure that all major problems in the domestic financial system are addressed before restrictions on capital account transactions are removed. The capital account must be liberalized gradually – speed can be counterproductive – after eliminating all the systemic distortions. Also, there is a strong case for liberalizing longer-term flows well ahead of short-term capital inflows.

Micro-financial conditions matter as much as macroeconomic conditions. If the economy is riddled with weak or financially troubled institutions, a crisis situation not only develops more rapidly but also a

minor crisis can quickly escalate into a major one. Lack of financial discipline and following risky financial practices always have a pernicious influence over the economy, leaving it highly crisis-prone. To keep a crisis at bay, it is essential to develop both the banking and non-banking sectors in a balanced manner. Developing the former at the cost of the latter may cause instability in the medium, if not short, term.

A financial crisis causes large-scale corporate and financial insolvency. Prompt recapitalization of banks and restructuring of corporate debt should be attempted by policy makers. An exit policy should be devised for firms that cannot return to financial health in a short time span. Several functional alternatives to bankruptcy are also available, which must be attempted. The significance of prudential norms, regulations and supervision cannot be overemphasized. To this end, policy makers must earnestly apply the Basle Core Principles. These Principles should be the declared minimum norm in the banking and financial sector. Policy makers need to realize that market discipline and corporate governance are the two fundamental ingredients of sound banking. Surveillance of financial and corporate sectors is important; it should focus on identifying vulnerabilities, assessing the quality of policies, and ensuring transparency of information and regulations. Transparent information and rules, regulations and administrative procedures can certainly help to prevent or lessen the impact of financial crises.

The perception by investors, both domestic and foreign, that the government implicitly guarantees the liabilities of financial intermediaries leads to poor quality risk assessment, overinvestment and crony capitalism. Creating such a misperception is a costly mistake to make. The fixed exchange rate regime failed to cope with financial globalization and the resulting rapid capital flows. It also tended to render export sectors increasingly uncompetitive. The post-crisis consensus among economists is that only the extremes of exchange rate arrangements are likely to succeed. An economy must either rigidly tie its currency to another by adopting a currency board, or it must allow its currency to float.

IMF needs to give up its propensity to apply uniform reform strategies to crisis-stricken economies. Stringent monetary and fiscal policies are not the answer to the financial problems of all and sundry member economies. Different crises call for different solutions. When currencies depreciate, other policy instruments can be more effective than merely hiking interest rates to sky-high levels. IMF has acknowledged learning from the Asian crisis, and has consequently created the SRF and CCL to augment the foreign exchange reserves of the crisis-ridden economies, to help them to return to market financing as quickly as possible (refer to section XII). After much self-recrimination and introspection on the role of IMF in a financial crisis, its Executive Directors have concluded that “ownership” of IMF-supported programmes by governments in the crisis-affected countries is critical for the success of the reform process. They feel that IMF should help countries to achieve effective ownership and gain public support for the envisaged reforms (IMF, 2000). IMF’s role in dealing with crises – of which financial sector turmoil has increasingly become a major ingredient – points to the need to further develop IMF conditionality and policies to deal with financial sector issues, in close collaboration with the World Bank. Reform programmes should be so designed as to convince markets that they can be implemented successfully. The Executive Directors have stressed the need for appropriate sequencing and for setting realistic targets and timetables in the reform programmes. The

management of these crises also requires intensive technical assistance from IMF and other institutions, particularly the World Bank. IMF therefore needs to have expertise and human resources to support member countries in developing robust financial systems and in managing financial crises.

An international lender of last resort is needed to help the crisis-stricken economies return to normalcy. Its presence makes it feasible for these economies to return to capital markets early, as well as prevents contagion from spreading. The lender of last resort needs to be proactive and to provide sufficient liquidity rapidly, as well as to put the banking and financial system back in gear. The quicker a loan is granted, the lower its amount will be.

## REFERENCES

- ADAMS C, MATHIESON DJ, SCHINASI G and CHADHA B (1998). *International Capital Markets: Developments, Prospects, and Key Policy Issues*. Washington, DC. IMF.
- ADB (Asian Development Bank) (1999). *Asian Economic Outlook 1999*. Oxford and New York, Oxford University Press.
- BAGEHOT W (1873). One banking reserve or many. *The Economist*, 24, September: 1025–1026.
- BCBS (Basle Committee on Banking Supervision) (1997). *Core Principles for Effective Banking Supervision*, Basle, Bank for International Settlements.
- BCBS (1999). Supervisory lessons to be drawn from the Asian crisis. *Basle Committee on Banking Supervision Working paper No. 2*. Basle, Bank for International Settlements, June.
- BERGER A (1995). The relationship between capital and earnings in banking. *Journal of Money, Credit and Banking*, 25(2): 432–456.
- BHAGWATI JN (1998). The capital myth: The difference between trade in widgets and the dollars. *Foreign Affairs*. 77(3), May/June: 7–12.
- BOSWORTH B and COLLINS SM (2000). From boom to crisis and back again: What have we learned? *ADB Institute Working Paper No. 7*. Tokyo, Asian Development Bank, February.
- BRECHER R and DIAZ-ALEJANDRO C (1987). Tariffs, foreign capital, and immiserizing growth. *Journal of International Economics*, 7, November: 317–322.
- CALOMIRIS C (1998). Blueprints for a new global financial architecture (unpublished manuscript). New York, Columbia University.
- CAPRIO G (1998). Banking on crises: Expensive lessons from recent financial crises (mimeo). Washington, DC, World Bank, June.
- CFR (1999). *Strengthening Prosperity in a Global Financial System*. New York, Council on Foreign Relations.
- CHOTE R (1998). Financial crises and Asia. *CERP Conference Report No. 6*. London, Centre for Economic Policy Research.
- CORBETT J and VINES D (1999). The Asian crisis: Lessons from the collapse of financial system, exchange rates, and macroeconomic policy. In: Agenor R, Miller M, Vines D and Weber A, eds. *The Asian Financial Crises: Causes, Contagion and Consequences*. Cambridge, UK, Cambridge University Press.
- CORSETTI G, PESENTI P and ROUBINI N (1998). What caused the Asian currency and financial crisis? (mimeo). New York, New York University.
- DAS, DK (2000). Portfolio investment in emerging market economies: Trends, dimensions and issues. *Journal of Asset Management*, 1(2): 172–195.
- DAVIES G and VINES D (1998). Ripe for attack and attackable: When are self-fulfilling currency crises possible? (mimeo). Oxford, Institute of Economics and Statistics.
- DOOLEY MP (1999). Are recent capital inflows to developing countries a vote for or against economic policy reforms? In: Agenor R, Miller M, Vines D and Weber A, eds. *The Asian Financial Crisis: Causes, Contagion and Consequences*. Cambridge, Cambridge University Press.
- DORNBUSCH R (1998). After Asia: New directions for international financial system (unpublished manuscript). Cambridge, MA, MIT.

- EICHENGREEN B and MASSON P (1998). Exit strategies: Policy options for countries seeking greater exchange rate flexibility. *Occasional Paper No. 168*. Washington, DC, IMF.
- EICHENGREEN B and MUSA M (1998). Capital account liberalization: Theoretical and practical aspects. *Occasional Paper No. 172*. Washington, DC, IMF.
- EICHENGREEN B (2000). Can the moral hazard caused by IMF bailouts be reduced? Geneva, International Center for Monetary and Banking Studies.
- EICHENGREEN B, ROSE A and WYPLOSZ C (1995). Exchange market mayhem: The antecedents and aftermath of speculative attack. *Economic Policy*, 21(4): 249–312.
- EICHENGREEN B, ROSE A and WYPLOSZ C (1996). Contagious currency crises. *NBER Working Paper Series*, No. 5681. Cambridge, MA, National Bureau of Economic Research, July.
- ESCHWEILER B (1999). Asia's financial evolution. *The Asian Wall Street Journal*, 3 August: 6.
- FISCHER S (1998). The Asian crisis: A view from IMF. Address at the Midwater Conference of the Bankers' Association for Foreign Trade, Washington, DC, 22 January.
- FISCHER S (1999). On the need for an international lender of last resort. *Journal of Economic Perspectives*: 85–104.
- FOLKERTS-LANDAU D and LINDGREN CJ (1998). *Toward a Framework for Financial Stability*. Washington, DC, IMF.
- FRANKEL JA and ROSE AK (1996). Currency crashes in emerging markets: An empirical treatment. *Journal of International Economics*, 41(3): 351–366.
- FURMAN J and STIGLITZ J (1998). Economic crises: Evidence and insights from East Asia. *Brookings Papers on Economic Activity*, No. 2: 1–135.
- GLICK R and ROSE A (1998). Contagion and trade: Why are currency crises regional? (mimeo).
- GOLDSTEIN M and FOLKERTS-LANDAU D (1993). *International Capital Markets: Part 1, Exchange Rate Management and International Capital Flows*, World Economic and Financial Surveys. Washington, DC, IMF.
- G-30 (1997). *Global Institutions, National Supervision and Systemic Risk*. Washington, DC, Group of Thirty.
- HARWOOD A, LITAN RE and POMERLEANO M (1999). The crisis in emerging financial markets. Conference Report. Washington, DC, The Brookings Institutions. May.
- IASC (International Accounting Standards Committee) (1997). *International Accounting for Financial Assets and Financial Liabilities*. Rochester, UK, Stanhope Press.
- IIF (1998). Capital flows to emerging market economies. Washington, DC, Institute of International Finance, April. Available on the website at: <http://www.iif.com>
- IMF (1997). *International Capital Markets: Developments, Prospects, and Key Policy Issues*. Appendix 2. Washington, DC, International Monetary Fund.
- IMF (1998). *World Economic Outlook*. Washington, DC, May.
- IMF (2000). *Annual Report 2000*. Washington, DC.
- JP MORGAN (1997). Latin American banks: How conservative regulations help create profits. In: *Equity Research*, 22 January.

- KOCHAR K, DICKS-MIREAUX L and HORVATH B (1996). Thailand: The road to sustained growth. *Occasional Paper No. 146*. Washington, DC, IMF.
- KRUGMAN P (1979). A model of balance of payments crisis. *Journal of Money, Credit and Banking*, 1(3): 311–25.
- KRUGMAN P (1998). What happened to Asia. Available on the website at: <http://web.mit.edu/krugman/www.DISINTER.html>.
- KRUGMAN P (1999). *The Return of Depression Economics*. New York, WW Norton & Co.
- MISCHKIN FS (1991). Asymmetric information and financial crises: A historical perspective. In: Hubbard RG, ed. *Financial Markets and Financial Crises*. Chicago, University of Chicago Press: 69–108.
- MISHKIN FS (1999). Lessons from the Asian crisis. *NBER Working Paper Series*, No. 7102. Cambridge, MA, April.
- POMERLEANO M (1999). The East Asia crisis and corporate finances (mimeo). Washington, DC, May.
- PORTES R and VINES D (1997). *Coping with International Capital Flows*. London, Commonwealth Secretariat.
- RADELET S and SACHS J (1998). The onset of the East Asian financial crisis. *NBER Working Paper No. 6680*. Cambridge, MA, National Bureau of Economic Research, August.
- RAMOS R (1997). A comparison of prudential norms across Asia and in the US: Using the CAMELOT framework. In: Goldman Sachs, ed. *Asia Banking Research*, 8 January.
- ROSSI M (1999). Financial fragility and economic performance in developing economies. *IMF Working Paper WP/99/66*. Washington, DC, IMF.
- STIGLITZ J (1998). Sound finance and sustainable development in Asia. Keynote address at the Asia Development Forum. Available on website at: <http://www.worldbank.org/html/extdr/extme/jssp031298>
- SUMMERS L (2000). The troubling aspects of IMF reforms. *The Financial Times*, 23 March: 17.
- TORNELL A (1999). Common fundamentals in the Tequila and Asian crises. *NBER Working Paper Series*, No. 7139. Cambridge, MA, May.
- USC (2000). The Report of the International Financial Institutions Advisory Commission. Washington, DC, United States Congress, March.
- WARR P and VINES D (1999). How boom turned to bust. A macroeconomic analysis of Thailand's economic crisis (mimeo).
- WORLD BANK (1998). *East Asia: The Road to recovery*. Washington, DC.
- WTO (1998). *Annual Report 1998*, Vol. II. Geneva, World Trade Organization.

*UNCTAD Discussion Papers*

---

No. 90, October 1994	Manuel R. AGOSIN	Saving and investment in Latin America
No. 91, October 1994	Yilmaz AKYÜZ & Charles GORE	The investment-profits nexus in East Asian industrialization
No. 92, November 1994	Charles GORE	Development strategy in East Asian newly industrializing economies: The experience of post-war Japan, 1953–1973
No. 93, December 1994	J. F. OUTREVILLE	Life insurance in developing countries: A cross-country analysis
No. 94, January 1995	XIE Ping	Financial services in China
No. 95, January 1995	William W.F. CHOA	The derivation of trade matrices by commodity groups in current and constant prices
No. 96, February 1995	Alexandre R. BARROS	The role of wage stickiness in economic growth
No. 97, February 1995	Ajit SINGH	How did East Asia grow so fast? Slow progress towards an analytical consensus
No. 98, April 1995	Z. KOZUL-WRIGHT	The role of the firm in the innovation process
No. 99, May 1995	Juan A. DE CASTRO	Trade and labour standards: Using the wrong instruments for the right cause
No. 100, August 1995	Roberto FRENKEL	Macroeconomic sustainability and development prospects: Latin American performance in the 1990s
No. 101, August 1995	R. KOZUL-WRIGHT & Paul RAYMENT	Walking on two legs: Strengthening democracy and productive entrepreneurship in the transition economies
No. 102, August 1995	J.C. DE SOUZA BRAGA M.A. MACEDO CINTRA & Sulamis DAIN	Financing the public sector in Latin America
No. 103, September 1995	Toni HANIOTIS & Sebastian SCHICH	Should governments subsidize exports through export credit insurance agencies?
No. 104, September 1995	Robert ROWTHORN	A simulation model of North-South trade
No. 105, October 1995	Giovanni N. DE VITO	Market distortions and competition: the particular case of Malaysia
No. 106, October 1995	John EATWELL	Disguised unemployment: The G7 experience
No. 107, November 1995	Luisa E. SABATER	Multilateral debt of least developed countries
No. 108, November 1995	David FELIX	Financial globalization versus free trade: The case for the Tobin tax
No. 109, December 1995	Urvashi ZUTSHI	Aspects of the final outcome of the negotiations on financial services of the Uruguay Round
No. 110, January 1996	H.A.C. PRASAD	Bilateral terms of trade of selected countries from the South with the North and the South
No. 111, January 1996	Charles GORE	Methodological nationalism and the misunderstanding of East Asian industrialization
No. 112, March 1996	Djidiack FAYE	Aide publique au développement et dette extérieure: Quelles mesures opportunes pour le financement du secteur privé en Afrique?

No. 113, March 1996	Paul BAIROCH & Richard KOZUL-WRIGHT	Globalization myths: Some historical reflections on integration, industrialization and growth in the world economy
No. 114, April 1996	Rameshwar TANDON	Japanese financial deregulation since 1984
No. 115, April 1996	E.V.K. FITZGERALD	Intervention versus regulation: The role of the IMF in crisis prevention and management
No. 116, June 1996	Jussi LANKOSKI	Controlling agricultural nonpoint source pollution: The case of mineral balances
No. 117, August 1996	José RIPOLL	Domestic insurance markets in developing countries: Is there any life after GATS?
No. 118, September 1996	Sunanda SEN	Growth centres in South East Asia in the era of globalization
No. 119, September 1996	Leena ALANEN	The impact of environmental cost internalization on sectoral competitiveness: A new conceptual framework
No. 120, October 1996	Sinan AL-SHABIBI	Structural adjustment for the transition to disarmament: An assessment of the role of the market
No. 121, October 1996	J.F. OUTREVILLE	Reinsurance in developing countries: Market structure and comparative advantage
No. 122, December 1996	Jörg MAYER	Implications of new trade and endogenous growth theories for diversification policies of commodity-dependent countries
No. 123, December 1996	L. RUTTEN & L. SANTANA-BOADO	Collateralized commodity financing with special reference to the use of warehouse receipts
No. 124, March 1997	Jörg MAYER	Is having a rich natural-resource endowment detrimental to export diversification?
No. 125, April 1997	Brigitte BOCOUM	The new mining legislation of Côte d'Ivoire: Some comparative features
*No. 126, April 1997	Jussi LANKOSKI	Environmental effects of agricultural trade liberalization and domestic agricultural policy reforms
No. 127, May 1997	Raju Jan SINGH	Banks, growth and geography
No. 128, September 1997	E. COSIO-PASCAL	Debt sustainability and social and human development: The net transfer approach and a comment on the so-called "net" present value calculation for debt relief
No. 129, September 1997	Andrew J. CORNFORD	Selected features of financial sectors in Asia and their implications for services trade
No. 130, March 1998	Matti VAINIO	The effect of unclear property rights on environmental degradation and increase in poverty
No. 131, Feb./March 1998	Robert ROWTHORN & Richard KOZUL-WRIGHT	Globalization and economic convergence: An assessment
No. 132, March 1998	Martin BROWNBRIDGE	The causes of financial distress in local banks in Africa and implications for prudential policy
No. 133, March 1998	Rubens LOPES BRAGA	Expanding developing countries' exports in a global economy: The need to emulate the strategies used by transnational corporations for international business development

No. 134, April 1998	A.V. GANESAN	Strategic options available to developing countries with regard to a Multilateral Agreement on Investment
No. 135, May 1998	Jene K. KWON	The East Asian model: An exploration of rapid economic growth in the Republic of Korea and Taiwan Province of China
No. 136, June 1998	JOMO K.S. & M. ROCK	Economic diversification and primary commodity processing in the second-tier South-East Asian newly industrializing countries
*No. 137, June 1998	Rajah RASIAH	The export manufacturing experience of Indonesia, Malaysia and Thailand: Lessons for Africa
No. 138, October 1998	Z. KOZUL-WRIGHT & Lloyds STANBURY	Becoming a globally competitive player: The case of the music industry in Jamaica
No. 139, December 1998	Mehdi SHAFI AEDDIN	How did Developed Countries Industrialize? The History of Trade and Industrial Policy: The Cases of Great Britain and the USA
No. 140, February 1999	M. BRANCHI, G. GABRIELE & V. SPIEZIA	Traditional agricultural exports, external dependency and domestic prices policies: African coffee exports in a comparative perspective
No. 141, May 1999	Lorenza JACHIA & Ethél TELJEUR	Free trade between South Africa and the European Union – A quantitative analysis
No. 142, November 1999	J. François OUTREVILLE	Financial development, human capital and political stability
No. 143, November 1999	Yilmaz AKYÜZ & Andrew CORNFORD	Capital flows to developing countries and the reform of the international financial system
No. 144, December 1999	Wei GE	The dynamics of export-processing zones
No. 145, January 2000	B. ANDERSEN, Z. KOZUL-WRIGHT & R. KOZUL-WRIGHT	Copyrights, competition and development: The case of the music industry
No. 146, February 2000	Manuel R. AGOSIN & Ricardo MAYER	Foreign investment in developing countries: Does it crowd in domestic investment?
No. 147, April 2000	Martin KHOR	Globalization and the South: Some critical issues
No. 148, April 2000	Yilmaz AKYÜZ	The debate on the international financial architecture: Reforming the reformers
No. 149, July 2000	Mehdi SHAFI AEDDIN	What did Frederick List actually say? Some clarifications on the infant industry argument
No. 150, August 2000	Jörg MAYER	Globalization, technology transfer and skill accumulation in low-income countries
No. 151, October 2000	Bernard SHULL	Financial modernization legislation in the United States – Background and implications

\*\*\*\*\*

Copies of *UNCTAD Discussion Papers* and *Reprint Series* may be obtained from the Editorial Assistant, Macroeconomic and Development Policies Branch, GDS, UNCTAD, Palais des Nations, CH-1211 Geneva 10, Switzerland (Tel. 41-22-907.5733; Fax 41-22-907.0274; E.mail: nicole.winch@unctad.org). New *Discussion Papers* are available on the website at: <http://www.unctad.org/en/pub/pubframe.htm>

---

\* Out of print.