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# Beyond the Asian crisis: the evolving international financial architecture

We face a world of crisis. If Hong Kong, with its sound fundamentals and prudent financial management, can be brought to the brink of systemic breakdown by aggressive cross-border speculation, then something must be wrong with the world financial order (Joseph Yam, chief executive of the Hong Kong Monetary Authority, January 5, 1999).<sup>1</sup>

Shortly after the Mexican peso crisis, the G-7 countries launched an effort to strengthen the international financial system. The goal was to expeditiously formulate and implement measures to prevent (or at least mitigate) the risk of future crises and to cope more effectively with those that still occur. At the Halifax Summit of 1995, the G-7 governments made a number of recommendations to this effect. Most notably, they urged the IMF to intensify its surveillance of its members' policies and to send explicit messages to governments that seem to be avoiding the necessary policy reforms. In addition, the G-7 asked the IMF to set standards for the publication of economic and financial data by member governments and to identify publicly those that complied with the standards. While some progress was made, namely the establishment of the IMF's Special Data Dissemination Standards (SDDS) to help countries better participate in international capital markets, much still remained at the planning stage. As the peso crisis receded from the headlines, and with Mexico making a surprisingly quick recovery, the G-7 and the IMF were content with making "minor repairs" – leaving fundamental reforms to the international financial system for another day.<sup>2</sup>

However, the rapid spread and severity of the Asian crisis, the enormous size of the rescue packages, and the realization that such bailouts could not be continued indefinitely finally forced the G-7 governments to look seriously at ways to strengthen the international financial system. Since then, an ever-growing list of architects have come up with proposal after proposal on

how to reform the existing regime and construct a “new international financial architecture.” Although there is general agreement on the need to strengthen the global financial system via more intensive surveillance and monitoring of capital markets and country financial sectors (in particular, the banking systems), timely dissemination of financial information under internationally agreed standards, and greater transparency in both public and private sector activity, including greater private-sector burden-sharing in order to eliminate (or at least keep within permissible limits) the problems associated with “asymmetric information” and “moral hazard,” there is also much disagreement.<sup>3</sup> This chapter discusses some of the core areas of debate, consensus and disagreements on the new international financial architecture.

### **The IMF: critics and reformers**

Without doubt, one of the most contentious issues has to do with the future role of the IMF in the international financial system. To critics, the IMF is a Bretton Woods relic incapable of playing a constructive role in the building of the new international financial architecture.<sup>4</sup> While its harshest critics want the IMF altogether abolished, others are prepared to live with a severely restricted institution with limited powers and resources. Still, some others have proposed alternatives to the IMF. Among those calling for the IMF’s immediate shutdown is the former US Secretary of State, George Schultz, former Treasury Secretary, William Simon, and the former chairman and CEO of Citicorp/Citibank, Walter Wriston. This trio argue that “the IMF’s promise of massive intervention has spurred global meltdown of financial markets . . . the IMF is ineffective, unnecessary and obsolete and should be abolished” (Schultz *et al.* 1998, 7; also see Calomiris and Meltzer 1999). Similarly, Robert Barro (1999, 3), argues that “the IMF can best help the global economy by declaring itself insolvent and going out of business,” while the Nobel laureate Milton Friedman blames the IMF’s huge bailout packages for “helping to exacerbate the Asian crisis” and calls for its immediate dissolution.<sup>5</sup>

To these critics the IMF’s most egregious fault is that its policies (in particular, its large rescue packages) undermine market discipline by promoting *moral hazard*. However, the criticism must be seen in a larger perspective. Specifically, in deciding how much the Fund should lend, they first have to distinguish conceptually between liquidity and solvency crises – a distinction easier to make in theory than in practice. That is, the Fund has to decide whether a country’s balance-of-payments position is sustainable in the medium term. If it is not sustainable, then it will be necessary to restructure the country’s debts. If it is sustainable, the Fund may decide to lend huge sums to help the country through the crisis. The challenge is in deciding when “huge” becomes “too huge,” taking into account the perceived risk of

moral hazard. Suffice it to note that these issues are simply too difficult to judge in the abstract, and they have to be dealt with on a crisis by crisis basis.

Second, it must be recognized that some degree of moral hazard is inherent in any rescue package, as foreign creditors will be willing to take on more risks because of the implicit insurance that packages offer. The critical issue is whether the moral hazard implicit in the expectation of official support induces excessively risky lending. This is a difficult judgement, given that it is not clear *ex ante* what level of lending is excessive, and it is impossible to tell what would have been the level of finance available from the markets without packages. Yet, having noted this (as discussed earlier), it is true that bailout packages have allowed errant private creditors (especially big commercial banks) to escape from bad lending decisions at relatively little cost.<sup>6</sup> It is also true that financial intermediaries in Asia enjoyed both explicit and implicit government guarantees in case of default (and therefore undertook excessively risky ventures based on the highest possible return rather than expected values), just as creditors ignored information about weak supervisory structures in debtor countries. Yet the widespread perception that the IMF bailed out all foreign and domestic investors is incorrect. Private creditors (mostly European and Japanese banks) have taken large losses and have had to lengthen the maturities of their claims, and bondholders and equity investors have sustained huge losses in Asia. One recent study has estimated that foreign equity investors as a group suffered potential losses of roughly US\$240 billion from the Asian and Russian crises, and the corresponding figures for foreign banks and bondholders were US\$60 billion and US\$50 billion respectively. Between June 1997 and January 1998, US investors are estimated to have lost about US\$30 billion on Asian equities alone.<sup>7</sup>

Third, the moral hazard risk must be balanced against a more deadly financial implosion of the monetary system and systemic risks of spillover and meltdown, and the heavy socioeconomic costs of inaction.<sup>8</sup> By providing emergency assistance to *illiquid but not insolvent* borrowers the IMF prevented costly defaults by avoiding driving previously solvent institutions into bankruptcy and thereby limiting risk to the financial system as a whole. After all, we know from the hands-off strategy during the 1980s debt crisis (where creditors and debtors were left to sort out their problems) that inaction can greatly aggravate the problem. Finally, the assumption that only IMF policy creates moral hazard is simplistic. Financial crises, more often than not, reflect misjudgements or “irrational exuberance,” and as Mishkin (1997) carefully argues, “asymmetric information problems” that lead investors and banks to underestimate the risks in emerging markets and then to an overreaction when sentiments begins to change. Given these contexts, Krugman (1999, 200–2) aptly notes that calls to abolish the IMF are akin to declaring that the US Federal Reserve “should no longer be allowed to lend

money during bank runs” – an idea that is “irresponsible and with serious negative implications for the global economy”.<sup>9</sup>

Sebastian Edwards (1998a) also wants to abolish the IMF. He argues that the Asian financial crisis has revealed that the Fund is a secretive, top-down, meddlesome, highly bureaucratized, profligate behemoth that has great difficulty in responding quickly to crises, and implementing even the most modest reforms. To Edwards, “what is needed is a set of new, small and efficient multilateral institutions” that can “provide information and act quickly to avert crises.” Edwards proposes the creation of three new small and efficient entities with defined responsibilities to replace the IMF: (1) a Global Information Agency to provide timely and uncensored information on each country’s financial health, including publishing public ratings of domestic financial systems and issuing red alerts when countries fail to provide adequate information; (2) a Contingent Global Financial Facility to provide contingent credit lines to countries that, although solvent, face temporary liquidity problems (to be eligible, these countries would have to meet some minimum standards of disclosure and transparency); and (3) a Global Restructuring Agency to provide conditional lending and policy advice to crisis countries. Edwards’ proposal has the potential to create an even larger bureaucracy, with coordination and duplication problems. Imagine a scenario with relatively autonomous agencies – one setting standards for transparency and disclosure and one, with little say over the nature of these standards, conditioning its lending on them. This would make the current coordination problems between the IMF, the World Bank and other multilateral agencies seem minor.

In his provocative book, George Soros (1998; 1998a) has argued that the international financial markets are “coming apart at the seams,” creating “a crisis of global capitalism.” He claims that since the private sector has proved to be ill-suited to allocate international credit, it is time to create a publicly funded “international credit insurance corporation” as a sister institution to the IMF. Under this system, borrowing countries would underwrite the cost of insurance by paying a fee when floating loans, and lenders could buy insurance against default. The idea is that “good borrowers” (those with transparent financial systems) would be able to borrow at lower rates. The Fund would set limits on how much each country could borrow and insure investors against debt default, while shielding solvent borrowers from insolvency contagions (since the Asian contagion wreaked havoc on solid borrowers). It is not clear how the IMF would determine limits on how much could be loaned, or what the appropriate insurance fee would be. Soros has yet to provide more specifics for his global central bank (although he does not use the term). As it stands now, Soros’s idea of an international public insurance corporation seems to be a non-starter.

Claiming that the IMF and the World Bank have become “increasingly duplicative,” James Burnham (1999) calls for the merger of the two

institutions. On the other hand, the Dean of the Yale School of Management, Jeffrey Garten (1998), advocates the creation of a global central bank with the responsibility for overseeing a new global currency, and with wide-ranging powers to engage in market operations by purchasing government securities of its members when they get into financial difficulties. Its operations would be financed by credit lines from national central banks or drawn from a modest tax on international merchandise transactions and/or selected global financial transactions. Moreover, it would enjoy oversight powers over banks and other financial institutions, establish uniform standards for lending, and be accountable to a committee of governors drawn from the G-7 and eight rotating emerging-market members. Garten (1998, 8) writes:

A global central bank could provide more money to the world economy when it is rapidly losing steam. For example, it could buy the bonds of the Central Bank of Brazil, thereby injecting hard currency into that country when it most needs the help (like right now). It would have the ability to buy a country's debt at steep discounts, a crucial need now because in countries like Thailand and Venezuela debts are piling up and preventing new lending and new investment.

Garten's global central bank faces two difficult challenges. First, it is not clear if the credits extended by national central banks would be sufficient, and second, the question of how much authority national central banks would cede (or whether they will be willing to cede any at all) to a global central bank, and how this political and economic obstacle would be overcome, remains unresolved. Henry Kaufman (1998) has proposed the creation of a single super-regulator – an “international credit-rating agency” – with broad supervisory and regulatory powers over financial markets and institutions, including the capacity to enforce common prudential standards on financial institutions and monitor the performance of financial institutions and markets. Like Garten's, Kaufman's proposal is short on specifics. It does not spell out the standards or specify how greater transparency and risk-management would be enforced. What is clear is that no national government will be willing to cede so much power and sovereignty to international regulators or supervisors. As Barry Eichengreen (1999, 9), has aptly noted, at a time when there is little interest in creating new supranational bodies with the power to usurp the traditional prerogatives of nation-states, what “such proposals have in common is their impracticality. They have not a snowball's chance in hell of being implemented.”

Willem Buiter and Anne Sibert (1999) have proposed adding a “universal debt-rollover option with penalty” (UDROP) to all foreign-currency denominated loans and credits as a way of dealing with the creditor panic problem. It would give the borrower the option of extending a maturing debt for a specified period. The authors argue that the regulatory authorities should mandate the inclusion of this option in all debt instruments in order to solve

the adverse selection problem. Its precise terms could, however, be negotiated between the debtors and creditors. Moreover, to prevent the borrower from exercising the option under orderly market conditions, Buitier and Sibert propose requiring a debtor invoking the option to compensate the lender at a penalty rate. The option could be invoked only once. Hence a borrower who was insolvent would not be sheltered from the need to restructure his/her debts at the end of the rollover period. No doubt, in a pure liquidity crisis – where by definition the debtor has no trouble in making debt-service payments in full so long as investor confidence is maintained – UDROP may help ameliorate its effects. Also, if the main cause of crises is creditor panic, then UDROP would reduce crisis incidence, because the cost to a foreign creditor of being last through the exit is less in the presence of UDROP than in its absence. While it is argued that the IMF would activate the UDROP only if the country was suffering from a pure investor panic or if it had demonstrated a credible commitment to adjust, some fundamental problem areas need to be resolved first. As Eichengreen (2000, 45) notes, “does the Fund have the capacity to distinguish these cases? Can its conditionality be effective? Since it will have its own loans to the country, can it solve the potential conflict of interest created by the fact that it is a priority creditor?”

A task force convened by the Council on Foreign Relations (1999) has proposed new rules for IMF lending to address the moral hazard problem. Specifically, the task force recommends that IMF loans be greatly limited. To achieve this, the Fund must return 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 program – except under exceptional circumstances that threaten systemic stability. Investors and governments will thereby realize that the assistance on offer is limited and lend and borrow more cautiously. However, while limited lending may limit moral hazard, it might also fail to calm investor panic. For example, the more than US\$21 billion that the IMF lent to South Korea was 2,000 per cent of quota – and even this failed to stem panic. It is clear that if IMF lending is to be limited in this way, then other mechanisms will have to be in place to resolve the crisis problem.

The International Financial Institution Advisory Commission (IFIAC), also known as the Meltzer Commission (after its chair, Professor Allan Meltzer) has proposed new rules and procedures to limit the frequency, magnitude and duration of IMF rescue loans.<sup>10</sup> Specifically, the Commission has proposed that while the IMF should lend more freely to countries encountering liquidity crises, it should avoid lending to countries experiencing crises for reasons having to do with flawed fundamentals. This means allowing the Fund to lend only for short periods and only to countries with strong banking systems (those that adequately capitalize their banks and open domestic financial markets to foreign entry), strong fiscal policies, and a willingness to treat obligations to the Fund as senior to other liabilities

(Calomiris 2000). Moreover, the Commission recommends that the IMF lend at penalty rates. This recommendation is based on the presumption that if the problem is simply one of liquidity (rather than fundamentals), countries needing assistance for extended periods to service otherwise unviable loans will be precluded from obtaining funds from the IMF. It also means that if the IMF lends at only penalty rates, then a country with major structural flaws will stand to lose by borrowing from the IMF, since borrowing from the Fund subordinates existing debts, exacerbates the deficit (through the high borrowing costs), and makes it harder to repay private debts. The assumption is that the IMF will receive requests for assistance only from illiquid countries, while those with poor long-term fundamentals will opt to adjust. While the G-7 are generally supportive of the Commission's recommendations, some problem areas need to be resolved. First, given the difficulty in distinguishing between liquidity and structural problems, it is not clear that penalty rates will filter out insolvent countries. Second, even if it makes economic sense to refuse to lend to a country because its problems are clearly structural, can the IMF simply stand aside when a crisis erupts in a country like Russia or some other geo-strategically important country? The reality is that the costs of inaction (and the resultant economic contraction) can be extensive, and too painful for the international community to bear. Indeed, experience has shown that the IMF and other multilateral financial institutions are usually forced to back down and release funds, despite *ex ante* commitments to the contrary.

Finally, Barry Eichengreen (2000, 40) has recently proposed two "new approaches" intended to provide alternatives to IMF bailouts: officially sanctioned stand-stills and collective action clauses. According to Eichengreen, financial crises are either the result of investor panic or problems with the economic fundamentals. First, if the crises are mainly caused by investor panic, then a payments standstill imposed or endorsed by the IMF "could shelter countries from destructive creditor grab races until lenders collect their wits and calm returns to the markets."<sup>11</sup> In other words, when a crisis is due to investor panic, resolving it "requires only a cooling-off period for investors to collect their wits, for the authorities to signal their commitment to sound and stable policies, and for calm to return to the markets." Eichengreen claims that making provisions for an IMF-imposed or IMF-endorsed standstill would provide an alternative to large-scale financial rescues for countries experiencing panic-induced liquidity crises. Second, if a crisis reflects problems with economic fundamentals that prevent a country from servicing its obligations, resolving it will require debt restructuring – with initiatives to facilitate orderly restructuring receiving top priority. Eichengreen notes that "the obvious initiative along these lines is the addition of collective action clauses to loan agreements to make the agreement between the debtor and his creditors easier to reach." He adds that "there may also be a case for an IMF imposed or sanctioned standstill, but only if

there is reason to think that the country to which it is applied will satisfy the conditionality the Fund attaches to its support, make good-faith efforts to adjust, and resume debt service on reasonable terms” (2000, 41). For Eichengreen, the key point is that there should be a correspondence between the nature of crises and the nature of the reforms pursued to enhance the official community’s capacity to contain and resolve them. Eichengreen’s proposal clearly outlines that which measure is more attractive depends, therefore, on which type of crisis is more frequent. While neither proposal is without its problems, some initiative along these lines is essential if the international financial architecture is to be reformed to limit reliance on IMF bailouts and to ameliorate the moral hazard problem.

### **The IMF: what future role?**

Despite the at times heated discussions on what should constitute the new international financial architecture, there is an emerging consensus that the world needs some sort of a global institution to mitigate the recurrent financial crises. For better or worse, that global institution is the IMF. Despite the fact that the IMF made mistakes in dealing with the Asian crisis (and undoubtedly will make more mistakes in the future), this should not invalidate the rationale for having a universally representative institution to oversee the implementation of collectively agreed rules. Moreover, given its institutional resources, administrative capacity, worldwide membership, broad experience and technical and policy competence, the IMF can play an important role in coordinating global economic integration and crisis management. This reality has not been lost on the G-7 governments.

Although the precise nature and extent of the IMF’s future role remains unclear, there is no doubt that the institution is currently playing a major role in shaping the new financial architecture. The United States, the G-7 and the G-22 group of nations (the G-7 and G-22 are the major shareholders of the IMF and World Bank) have publicly acknowledged that the IMF is an “indispensable institution” and want the Fund to play a central role in constructing the new international financial architecture.<sup>12</sup> Even the usually reserved US Treasury Secretary, Larry Summers (1999), noted that “events have reaffirmed that the IMF is indispensable. All of us involved with global finance would be breathing less easily this holiday season if the IMF had not taken the steps that it did in response to the crises in Asia and elsewhere.”<sup>13</sup>

At the Halifax Summit in June 1995, the G-7 leaders called for a doubling of the SDR 17 billion available to the IMF under the General Arrangements to Borrow (GAB) to respond to financial crises. The New Arrangements to Borrow (NAB) were approved by the IMF’s Executive Board in early 1997 and came into effect in mid-1998. In October 1998, the United States

Congress approved some \$18 billion in much-needed new funding for the IMF. Indeed, under the NAB, the 25 participating countries agreed to provide up to SDR 34 billion in supplementary resources to the IMF.<sup>14</sup> The Fund has also taken steps to increase its own resources. A 45 per cent quota increase, raising the Fund's total quotas to SDR 210 billion, took effect in January 1999.

With this strong backing, the IMF has already begun to implement measures to "reform the way the International Monetary Fund does business as well as enhance its capacity to respond to future crises more effectively" (IMF 2001). Although progress will be incremental, some measures are already in the process of implementation. *First*, it is clear that the advisory body of the IMF will be more involved in shaping policy and follow-up. In September 1999, the Interim Committee of the IMF (its principal advisory body) was transformed into the International Monetary and Financial Committee (IMFC). The committee's membership consists of IMF governors (typically finance ministers or central bank governors) of those countries that have been appointed or elected to the IMF's 24-member Executive Board. As was the case with the Interim Committee, the IMFC advises and reports to the IMF's Board of Governors, on IMF-related issues, including the international monetary and financial system. The transformation of the Interim Committee involved more than just a name change. Its advisory role was strengthened with the introduction of a deputies' process. IMFC deputies from the finance ministries and central banks now regularly meet before IMFC meetings to allow for greater debate and consensus-building among IMF members on all key issues.

*Second*, in recognition of the fact that banking system weaknesses have been a significant feature of financial crises, a key element in the architecture reforms is the development of frameworks to strengthen banking systems and to promote more effective risk-management capacity within them. In this context, a number of initiatives are under way to strengthen the supervisory arrangements applicable to banking systems. The Fund, along with the World Bank, the regional development banks and the Basle Committee for Banking Supervision (BIS) has taken the lead. Following on the request by G-7 leaders at the Lyons Summit in 1996, the Basel Committee developed "25 Core Principles for Effective Banking Supervision." These principles cover seven broad headings, including preconditions for effective supervision, licensing and structure, prudential regulations, methods of ongoing supervision, information requirements, powers of supervision and cross-border banking (Basel Committee 1997; 1999; 1999a). Comparable principles were subsequently developed for securities supervision by the International Organization of Securities Commissions (IOSCO), and for insurance supervision by the International Association of Insurance Supervisors (IAIS).

To assist emerging-market economies to develop the necessary supervisory expertise, the IMF has been given the key task of helping to improve

the banking system of its members. This involves carrying out more intensive surveillance of the financial sectors of member countries, as well as helping members develop their financial sector supervisory and regulatory frameworks in conformity with international standards.<sup>15</sup> Priority has been given to reforming the banking sector in emerging market economies by developing standards (in line with the international standards for Banking Supervision as outlined in the Basle Committee's Core Principles for Banking Supervision) in banking supervision, accounting and disclosure, auditing and valuation of bank assets, and in corporate governance. In addition, the Basel Committee has developed proposals for reforms to the Capital Accord, designed to strengthen the capital adequacy arrangements for banks. In May 1999, the IMF and the World Bank launched a joint Financial Sector Assessment Program (FSAP) to identify strengths, risks and vulnerabilities in national financial systems and to ascertain their development and technical assistance needs. These assessments, which feed into the IMF's regular surveillance process, are conducted by teams composed of staff from the IMF and from other international bodies, as well as national supervisors and central banks. Conducted in more than two dozen countries so far, the FSAP program aims to cover another two dozen countries each year, "with a bias towards those that are important to the health of the global financial system" (IMF 2001, 3). The IMF and the World Bank plan to conduct FSAP assessments of all member countries at least once in the next five years.

*Third*, there is now agreement that the IMF, in collaboration with other institutions such as the World Bank and the Bank for International Settlements,<sup>16</sup> should closely monitor developments in global capital markets, which involves – keeping a watchful eye on the risks of potential large reversals of capital flows and the contagion effects; on the rapid accumulation of short-term debts; on unhedged exposure to currency fluctuations; and on the impact of selective capital-account liberalization. Moreover, in order to prevent a private debt problem rapidly turning into a sovereign debt problem, guidelines on good practices in public debt management are currently being developed by the IMF and the World Bank with international debt-management experts. Similarly, measures are also being developed to make capital flows less volatile and the exchange-rate regimes more realistic, and to make domestic asset prices better reflect the actual underlying returns and risks.<sup>17</sup>

*Fourth*, the Fund has been actively encouraging member countries to adopt the IMF's Code of Good Practices on Fiscal Transparency, and to disseminate reliable, timely and comprehensive fiscal and monetary data – both to the IMF and to market participants by subscribing to the Fund's General Data Dissemination System (GDDS) and the Special Data Dissemination Standard (SDDS). The SDDS has already been amended to include data on reserve-related contingent liabilities, and to provide better

coverage of the foreign liquidity position of the corporate and government sectors. Countries subscribing to the SDDS will need to be in full compliance by March 2000. The Fund has also prepared and published several rounds of Reports on the Observance of Standards and Codes with the aim of building up over time a comprehensive analysis of individual country progress.

*Fifth*, the IMF executive board now more fully recognizes that not only do its bailouts, in creating moral hazard, weaken market discipline, but also that continued reliance on bailouts is unlikely to be acceptable on either efficiency or equity grounds.<sup>18</sup> In response to the charges that the IMF's policies encourage moral hazard, the Fund is considering ways to increase private-sector involvement in crisis prevention, and especially in "burden-sharing" (rather than "bailing in"), thereby limiting the "exit-option" that removes private-sector credit from a distressed economy at the very time the organs of the official governmental and multilateral financial community, such as the Fund, are being called upon to inject large doses of public resources. While there is general agreement that private-sector involvement should as far as possible be *market-oriented and voluntary*, as noted earlier, the precise mechanisms are evolving slowly. To date, the range of options being considered include: (a) modifying the terms of international sovereign bond contracts so that creditors have a greater opportunity and incentive to reach a settlement with the debtor; (b) eliminating the regulatory bias to short-term inter-bank credit lines, including assigning higher capital risk weights to banks' short-term debt claims; (c) encouraging debtor countries to put in place private contingent credit lines so that liquidity support is available in periods of financial difficulty; (d) encouraging the use of creditor committees and improving insolvency law to provide greater scope for involving creditors in the resolution process in debtor default situations; and (e) the possible use of debt standstills in a period of financial crisis. A debt standstill aim would be to freeze temporarily the repayment of debt in order to stem the extent of capital outflows, to ease pressure on the domestic economy and to provide time for the implementation of a program to resolve the crisis.

*Sixth*, the Fund has introduced several innovations that will enable it to play the role of crisis manager more effectively than in the past. Following the Mexican peso crisis, it created the Emergency Financing Mechanism in 1996 to respond more quickly to crisis situations. Following the Korean crisis (at the end of 1997), the Fund created another financial instrument, the Supplemental Reserve Facility (SRF), which enabled it to provide finance beyond the normal quota-based access limits to handle any crisis situation (i.e. South Korea) where a loss of confidence created a very large financing gap. As is appropriate in such situations, the period for which financing is made available is very short (12–18 months and extendable by another year), and at a much higher interest rate than regular Fund financing. Overall, the

SRF is intended for use by member countries already in crisis or facing exceptional balance-of-payments outflow due to short-run speculative attacks.<sup>19</sup> The short maturity and higher-than-normal interest rate reflect the extraordinary nature of SRF borrowing and the expectation that the borrowing country will take immediate steps to calm financial markets and reverse the outflow of capital.

In April 1999, the IMF's Executive Board agreed to provide Contingent Credit Lines (CCL) to member countries. The CCL is intended as a precautionary measure for countries with fundamentally strong policies, but at risk of possible contagion or a crisis of confidence unconnected with economic fundamentals. Loans under the CCL will have the same maturity as loans under the SRF, but will not be subject to IMF general access limits. To be eligible for a contingent line of credit, a country must receive a positive assessment from the Fund at its previous Article IV consultation. The critical innovation with the CCL is that it would enable the IMF, for the first time, to use its financing in a preventive mode and to help good performers. Thus it seeks to prevent crises by providing a financial incentive for countries to pursue appropriate policies and undertake needed reforms ahead of time. In addition, the IMF Executive Board has approved measures to encourage early repayment of IMF loans and to discourage excessive borrowing by charging higher interest rates on big loans. It is hoped that "these measures will reduce reliance on the Fund as a source of longer-term financing and help it maintain a strong liquidity position in the event of widespread crises" (IMF 2001, 5).

*Seventh*, the IMF, along with other multilateral financial institutions, in consultations with donor and recipient country members has begun the task of designing programs that take better account of the broader structural and institutional environment within which they are implemented, with greater focus on reforms to reduce trade barriers and unproductive or "market-distorting" expenditures, to promote core labor standards and to mitigate the social costs of economic adjustments. *Eighth*, there is broad consensus that the IMF (an institution with tremendous clout in the global economy), not to mention an institution that is underwritten by the world's taxpayers, should not operate behind a wall of secrecy. The IMF has been instructed to move "significantly towards openness and transparency" by the G-7. Specifically, the Fund is now to release a broad array of information on its policies, programs and objectives, including a more comprehensive summary of countries' accounts with the Fund and all outstanding loans. The establishment of an expanded IMF web-site ([www.imf.org](http://www.imf.org)), has already increased accessibility.

*Ninth*, the IMF surveillance systems have been widely criticized for not providing early warning of problems in Mexico and later in Asia. However, one has to bear it in mind that the IMF can only go so far in the area of transparency. If everything that is shared with the IMF immediately

becomes public, governments will be less willing to reveal sensitive information. Similarly, if every warning issued by the IMF becomes public, it runs the risk of precipitating precisely the crises that it seeks to avert. Yet there is now increasing agreement that IMF surveillance must be strengthened as an instrument of crisis-prevention. To this effect, the Fund introduced (in mid-1997) the practice of issuing Public Issuance Notices (PINs), which summarize the main features of the IMF Executive Board discussion on Article 4 reports (which traditionally have been treated as confidential), provided a country requests such a release. Some 80 per cent of member countries now issue PIN reports, which share with the public the IMF Executive Board's assessment of the annual "economic health check" carried out under Fund surveillance. In addition, public users can access a wealth of institutional information and data, including members' financial positions *vis-à-vis* the Fund, numerous letters of intent, Policy Framework papers, speeches by management, the IMF publications database and full texts of hundreds of IMF publications. Yet, important as these reforms are, they are generally considered to be "easy." As the next sections show, a number of important issues remain to be resolved.

### **The IMF: an international lender of last resort?**

More than a century ago, Walter Bagehot (1999, original 1873) explained that a financial system requires a lender of last resort to assist financial institutions in a liquidity crisis.<sup>20</sup> Bagehot distinguished between liquidity and solvency, and provided rules that separated the two. He argued that in a crisis, the lender of last resort should lend freely, at a penalty rate, on the basis of collateral that is marketable in the ordinary course of business when there is no panic.<sup>21</sup> The collateral requirement separates insolvent from illiquid financial institutions, in particular, banks (banks are vulnerable to runs because they issue highly liquid short-term liabilities). The penalty rate eliminates subsidies, reduces moral hazard, and reduces reliance on the lender. In a national setting, governments (usually a central bank) generally opt for providing lender of last resort facilities, because the public costs of a banking panic are large, and because the private sector is unable to fulfill this role, since lenders cannot quickly determine how a given shock will affect individual institutions. To limit moral hazard and the use of these facilities, the authorities impose supervisory and regulatory standards, and require, through partial deposit insurance and capital adequacy standards, that the private sector should share the cost of risk-taking. Moreover, since a domestic lender of last resort usually has regulatory authority over the commercial banks to which it lends, it can actually increase the supply of domestic money through its operations (for example, by emitting additional currency to buy government securities). Analysts credit the development of lender of

last resort facilities with reducing the frequency and severity of national banking crises.<sup>22</sup>

If a lender of last resort is necessary in a domestic context, isn't an analogous institution necessary at the *international* level to resolve collective action problems? Despite quota increases and the creation of instruments such as the New Arrangements to Borrow, the Fund's resources are still minuscule when compared to the sheer volume of private global capital flows. Moreover, the IMF still cannot lend freely (since it cannot create hard currencies) nor quickly (since it must get member approval of and borrower agreement to its conditional loan programs). Also, as Kenen (2001, 60) notes, "the IMF does not lend freely in a Bagehot-like manner, against good collateral. Instead, it disburses large-scale financing in tranches to make sure that policy commitments are being fulfilled." Deepak Lal argues that the IMF should not serve as a lender of last resort, because it cannot distinguish between an illiquid bank and an insolvent bank. Lal (1998, 17) notes:

The IMF can lend only after lengthy negotiations with a country's government and with the approval of its board. It has no way of sorting out the "good" from "bad" loans, for instance made by foreign banks to residents in the country, and to liquidate the latter. The lender of last resort function for the money center banks involved in foreign lending must therefore continue to be provided by their parent central bank.

Indeed, some prefer that the IMF should stop pretending to be a lender of last resort and get out of the lending business – allowing private markets to distribute liquidity to solvent financial institutions. For example, Schwartz (1999) and Calomiris (1998) argue that official financial support for countries in crisis allows private creditors to get their funds out fully or with reduced losses. They contend that IMF lending in the Mexican crisis (which was used to bail out foreign lenders) set the stage for the Asian crisis, because these lenders expected to be bailed out if things went wrong. More generally, they claim that the presence of an international lender (such as the IMF) gives rise to serious problems of moral hazard – which would only be exacerbated if the Fund were to become a true lender of last resort. Allan Meltzer (1998) agrees, reiterating that when there is a lender of last resort, lenders have less need to assess and monitor foreign borrowers, which potentially leads to an increase in risky behavior and, consequently, more financial crises. Meltzer argues that the IMF should be replaced by a "true lender of last resort." That is, unlike the IMF, a true lender of last resort must employ Bagehot's classic rule: *never to subsidize borrowers*. At best, a lender of last resort must lend freely, to temporarily illiquid but solvent financial institutions, at penalty rates and matched by the borrower's best collateral. At worst, the IMF should restrict itself to providing very short-term, essentially unconditional liquidity support for a limited number of

relatively strong emerging-market economies that would have pre-qualified for IMF assistance.

In response, Stanley Fischer (1999), at that time the first deputy managing director of the IMF, argues that the Fund's powers must be enhanced so it can function as a "true international lender of last resort." Underpinning Fischer's claim is the view that there are market failures, that capital flows are very volatile, that investors are subject to financial panics, and that crises are contagious. In such a world, an international lender of last resort could not only help mitigate the effects of such instability, but, by its very existence, mitigate the instability itself. Fischer notes that although "the IMF is not an international central bank, it has already undertaken important lender of last resort functions," such as using its own funds to design financial stabilization programs and organizing international rescue packages, including preventing panic-induced declines in the aggregate money supply and contagious spillovers. While the IMF lacks the powers of a central bank, and does not have the resources to cover all potential foreign-exchange obligations, it nevertheless has the capacity to act as a lender to individual countries in specified circumstances. For Fischer, the major function of the lender of last resort in modern economies is that of a "crisis manager" – a role that does not require large amounts of capital – indeed, "the lender of last resort need not have the power to create money as long as it can provide credit to the market or to institutions in trouble."<sup>23</sup> He notes that "panics caused by a demand for currency are rare." More generally, panics take the form of a bank run (possibly enhanced by contagion), in which deposits shift from those banks and financial institutions deemed unsound to those thought to be healthy. In these cases, creating additional money may be unnecessary. At least in principle, the liquidity can simply re-circulate from the institutions gaining money back to those losing it.

Fischer (1999) claims that, more than anything, it is the IMF's inability to act as a reliable lender of last resort that increases moral hazard and investor volatility. In this era of globalization, where adjustment occurs rapidly through the capital account, crises tend to be more systemic and localized. These crises requires a lender of last resort because, although lending may have caused the crises, lending is also required to end them. Without a body like the IMF, an *ad hoc* consortium of countries led by the G-7 would have to be pulled together during times of crises. If past experience is any guide, this consortium would neither act in a timely manner, nor as effectively as the IMF. No doubt, leading the consortium would be the *leader of last resort*, the United States. The idea that the United States should act as the world's central banker would hardly be acceptable at home or abroad. To Fischer, the IMF is the only institution that can coordinate large and rapid injections of credit when fast-moving global financial panics hit sovereign nations.

To date, the international community has steered a middle course between these two views – acknowledging that financial markets are not perfect and that the IMF has a significant role to play in dealing with international crises, especially those that may pose a risk to the stability of the international financial system. As was noted earlier, the G-7 and other IMF shareholders have increased the Fund's financial resources, including its ability to provide liquidity in times of crisis, so that it can continue to serve as an informal lender of last resort. However, the Fund, on its part, must now make certain that its prescribed standards on improving financial disclosure, supervision and regulation are implemented in both the public and private sectors. Most importantly, the Fund must find ways to limit the moral hazard problem. For a start, it should make it clear that it will extend liquidity only to governments that put proper measures in place to prevent excessive risk-taking. In addition, it can reduce the incentives for risk-taking by restricting the ability of governments to bail out stockholders and large uninsured creditors of domestic financial institutions. Indeed, the new provision that only countries that meet specified standards will be eligible to borrow IMF funds under the CCL provides incentives for countries to adopt the necessary international standards. Equally encouraging is the fact that the IMF is now required to become more selective in its lending – providing funds only when there is a liquidity crisis – that is, when private lenders are unwilling to lend. Already, the Fund's lending under the SRF incorporates Bagehot's classic prescription that crisis lending should be at a penalty rate. The fact that SRF short-term loans made to Korea, Russia and Brazil were subject to penalty rates and to strict but necessary policy conditionality (which serves as a further element of the penalty) is an indication that the IMF is serious about limiting moral hazard.

### **Capital account liberalization or capital controls?**

In 1944, the Bretton Woods conference recognized the fundamental link between capital controls and international trade. Indeed, one of the main purposes of the IMF (which was created at the conference) was to assist in the elimination of foreign-exchange restrictions that hampered the growth of global trade.<sup>24</sup> However, the maintenance of capital controls was not viewed as inconsistent with this objective, partly because capital controls were considered necessary for supporting the system of fixed exchange rates and thus fostering trade. In the ensuing years, dramatic changes in information and communications technology fundamentally transformed the financial services industry and made highly mobile capital a fact of life. Today private capital flows to emerging markets comprise a wide range of instruments, including bank deposits, equities, direct investments, corporate bonds and government securities, among others. In recognition of this, over the

past two decades the IMF has steadfastly promoted the liberalization of cross-border capital flows.<sup>25</sup> Just before the outbreak of the financial crisis in Asia, the Interim Committee of the IMF (at its semi-annual meeting in April 1997) proposed that the organization's Articles of Agreement (the basic constitution of international financial relations among the 182 member nations) be amended to include currency convertibility for capital transactions. This view was reiterated in the following months by senior Fund officials, who stated that capital account liberalization should become one of the IMF's fundamental objectives (Fischer 1998; 2000).

Many countries that have current account convertibility (i.e. that allow foreigners and local residents to buy and sell the currency for trade purposes) do not have capital account convertibility (i.e. they do not allow the purchase and sale of the currency for portfolio investments). Capital account convertibility can benefit a country by encouraging capital inflows and by permitting domestic residents to enjoy the benefits of international portfolio diversification. However, capital account convertibility also brings with it the possibility of much more volatile capital flows that can destabilize domestic financial markets and the exchange rate. The Asian countries hardest hit by the crisis had all pursued diverse approaches to opening up their capital accounts. Indonesia liberalized outflows in the 1980s and inflows only gradually. In 1989 it eliminated controls on foreign borrowing by banks (but reintroduced them two years later because of concerns about excessive borrowing). Indonesia continued, however, to liberalize inflows to corporations, allowing borrowing for trade finance, sales of securities to non-residents and foreign investment in the domestic stock market. South Korea took a more gradualist approach. It liberalized outflows in the early 1980s, and inflows into its securities markets in the early 1990s. In 1992, for example, non-residents were given limited access to the Korean stock market, and the types of securities that resident firms could issue abroad were expanded. Thailand attracted foreign inflows by offering tax incentives to foreign investors, including setting up a special facility in 1993 – the Bangkok International Banking Facility (BIBF) – in order to enable domestic banks and financial institutions to borrow from abroad to finance local investment projects and allow foreign investment in Thai securities markets.<sup>26</sup> Not surprisingly, in 1996 almost 60 per cent (or US\$100 billion) of total capital flows to developing countries went to Asia (IMF 1999).

During the height of the Asian crisis, the Malaysian government dramatically challenged the prevailing wisdom and imposed capital controls – bringing the issue to the forefront of economic policy debates. In a broad sense, capital controls are measures that discourage capital flows – both in and out of a country. Capital controls encompass a wide range of, often country-specific, measures, although they all attempt to restrict the movement of capital across national boundaries, or between residents and non-residents. Capital controls may affect: (1) foreign direct investment of

residents and non-residents; (2) portfolio investments by non-residents; (3) borrowing and lending between residents and non-residents through financial institutions; and (4) other capital transactions, such as controls over resident holdings of foreign-currency deposits or personal transfers and real-estate investments. Capital controls have mainly taken two general forms: *direct* or *administrative* controls and *market-based* or *indirect* controls. Direct controls restrict capital movement and/or the associated payments and transfers of funds through outright prohibitions, explicit quantitative limits, or an approval procedure – which may or may not be rule-based. Administrative controls typically seek to affect the volume of the relevant cross-border financial transactions directly. A common characteristic of such controls is that they impose administrative obligations on the banking system to control flows. Market-based controls discourage capital movements and the associated transactions by making them more costly to undertake. Such controls may take various forms, including: (1) explicit taxation of cross-border flows, in forms such as taxes and levies on external financial transactions; (2) indirect taxation of cross-border flows, in forms such as non-interest-bearing reserve or deposit requirements – under which residents may be required to deposit at zero interest rates a proportion of capital inflows at the central bank; and (3) a multiple exchange-rate system, where different exchange rates apply to different types of transactions. Depending on their specific type, market-based controls may affect either the price or both the price and the volume of a given transaction.

### *The Malaysian capital controls*

In the region, Malaysia was the most open of the economies, following an approach to economic development that included the liberalization of capital movements. By the mid-1990s Malaysia was home to one of the world's most highly capitalized stock and open financial markets. By 1996, Malaysia's capital account was generally opened. Portfolio inflows were free of restrictions on all types of Malaysian financial instruments (bonds, equities, money market, derivative instruments and bank deposits), while portfolio outflows were also free except for resident corporations with domestic borrowing.<sup>27</sup> Although, prior to the crisis, Bank Negara Malaysia (the country's central bank) did not maintain an official parity for the ringgit, cross-border activities in ringgit were treated liberally, including the use of ringgit in trade and in financial transactions with non-residents.<sup>28</sup> Offshore trading of ringgit securities was also tolerated. Local banks were allowed to provide forward cover against ringgit to non-residents, facilitating arbitrage between domestic and offshore markets. As a result, an active offshore market in ringgit had developed (mainly in Singapore), with the bulk of cross-currency hedging of ringgit taking place in this market rather than onshore. Finally, inward foreign direct investment flows were actively encouraged

through tax and other incentives, and non-residents were completely free to repatriate their investments through a system of external accounts (Bank Negara Malaysia 1998).

However, like its neighbors, Malaysia was also susceptible to regional contagion. Institutional investors could not but be concerned about the virtual pegging of the ringgit to the US dollar, which left Malaysia vulnerable to changes in the value of external currencies. Furthermore, the persistent current-account deficit fueling the economic boom and a high investment rate that exceeded the domestic savings rate did not go unnoticed. Finally, the excessive expansion in bank credit to non-productive sectors contributed to speculative price bubbles in real estate and stock markets, and the growing maturity mismatches between assets and liabilities left the financial sector exposed and vulnerable.

Yet, on the eve of the crisis, the Malaysian economy enjoyed stronger fundamentals than her neighbors – partly because of the early set of regulations and restrictions on capital flows that it had instituted in 1989 and 1994. The GDP growth of Malaysia averaged 8.9 per cent in the period 1990–95 and 8.6 per cent and 7.7 per cent respectively in 1996 and 1997. In fact, in the first quarter of 1997, Malaysia enjoyed a robust 8 per cent growth-rate – one of the highest in the region (Bank Negara Malaysia 1998; 1999). Also, as Athukorala (1998, 85) notes, “the Malaysian economy had experienced virtually full employment for the previous six years and modest inflation (4.5 per cent). The country’s foreign currency sovereign credit rating was an A+, in the same league as Hong Kong.” Second, Malaysia enjoyed a succession of budget surpluses – which helped to lower public debt, contain inflation, boost savings and encourage private-sector growth. Indeed, Malaysia’s savings as a share of GNP were only exceeded by Singapore among the regional economies. Third, although, the external current-account deficit was high when the crisis began, it was financed largely by foreign direct investment. Specifically, the government’s explicit policy to limit short-term borrowing, encourage foreign direct investment inflows, and rely on equity capital prevented the corporate sector from building up excessive unhedged foreign-exchange exposures and high debt/equity ratios. Fourth, in sharp contrast to Thailand and Indonesia, Malaysia had a reasonable level of foreign-exchange reserves (an estimated US\$22 billion) relative to its short-term debt, making it far less vulnerable to a run on its reserves. The bulk of short-term foreign capital came through the banking system rather than borrowing. As a result Malaysia’s debt-service ratio stood at only 6.1 per cent of exports at the end of 1996 (Bank Negara Malaysia 1999). Clearly, Malaysia’s low foreign debt placed it in a relatively good position to confront the crisis. Fifth, Malaysia could avoid requesting assistance from the IMF because of the lower exposure of the Malaysian banking sector to foreign liabilities. Finally, since Malaysia had already experienced a banking crisis in the mid-1980s, the government had implemented a

substantial reform program in the late 1980s. Thus, compared to the other crisis-hit countries, Malaysia already had in place a relatively well-developed regulatory, legal and accounting framework for the financial system. For example, all foreign borrowings had to be approved by Bank Negara, and they were approved only when there was a natural hedge. This prevented the corporate sector from building up large unhedged foreign exchange exposures and very high debt-equity ratios. Indeed, owing to its tighter controls on foreign borrowing, Malaysia was also less exposed to short-term foreign debt – which was encouraged by a pegged exchange rate in Thailand and Indonesia.

In spite of these obvious strengths, with the onset of the crisis the ringgit came under significant depreciation pressure along with other regional currencies.<sup>29</sup> Much of this pressure occurred through previously unrestricted currency trading in the offshore ringgit market. As offshore currency traders took short positions in ringgit in anticipation of a depreciation, Bank Negara Malaysia's immediate response was to intervene in the foreign-exchange markets to defend the ringgit against speculative attacks. To punish speculators who were shorting the ringgit, offshore ringgit interest rates increased relative to domestic interest rates (Bank Negara Malaysia 1999). But, this was to no avail. As Cheong (1998, 237) notes, “currency speculators and hedge funds in the major foreign exchange markets in London, New York, Hong Kong and Singapore mounted increasingly larger onslaughts against the ringgit . . . large foreign banks which had monitored the market movements of the currency speculators and hedge funds joined in the attacks with prospects of huge forex profits.”

On July 14, 1997, after about a week of trying to uphold the ringgit's value and spending an estimated RM9 billion (US\$3.5 billion) in external reserves, Bank Negara Malaysia ceased its intervention. The ringgit was allowed to free-float clean for the first time in twenty-two years, as “Bank Negara appeared to be unwilling to commit the rest of its US\$24.6 billion in external reserves in the face of a seemingly unlimited supply of offshore ringgit for sale” (Cheong 1998, 237). In August 1997, the Malaysian authorities temporarily broke the link between the domestic and offshore rates by imposing limits on ringgit non-trade-related swap transactions with non-residents, besides imposing limits on banks non-commercial-related offer-side swap transactions (i.e. forward order/spot purchases of ringgit) by foreign customers. As a result, wide spreads emerged between domestic and offshore interest rates.<sup>30</sup> However, the breaking of the direct arbitrage link did not prevent outflows. Rather, outflows continued through various unrestricted channels to take advantage of the large interest differentials created by the swap limits. The flow of ringgit funds offshore led to further increases in domestic rates, accelerating the economic contraction (some 5 per cent in the first half of 1998), and exacerbating the difficulties in the corporate and banking sectors.<sup>31</sup>

Malaysia's initial response to the crisis was to mimic faithfully the IMF prescription of tight fiscal and monetary policies – referred to as a case of “virtual IMF policy without the IMF loans” (Jomo 2001a, xl). Interest rates were raised (from 6 per cent in June 1997 to 35 per cent in July 1997) to stem the decline of the ringgit, and in early December 1997 a drastic cut (18 per cent) in government spending was announced to improve the current-account balance (Boorman *et al.* 2000, 12). However, by the end of 1997 it was clear that these measures had failed to produce the expected results. Instead, the contractionary measures transformed the financial crisis into a nationwide crisis. As Yusof, Hew and Nambiar (2000, 70), note, “the effect of the tight macroeconomic policy stance, therefore, proved very destructive.” However, the “virtual IMF policies” cannot be held solely responsible. The Malaysian government's policy responses made the situation worse. First, Mahathir's diatribes against international currency traders and hedge fund managers, in particular, George Soros, only served further to undermine market sentiment. Second, the government's repeated threat to use repressive measures against commentators making unfavorable reports about the Malaysian economy only gave credence to the impression that the government was hiding important economic information from the markets. Third, in early September 1997 the Malaysian government unveiled a plan to use funds from the Employees Provident Fund (totaling some RM60 billion), to prop up share prices by buying stocks from selected Malaysian shareholders only at premium prices. Besides the well-connected cronies, the “selected” also included Mahathir's eldest son, the publicly-listed corporation set up by his party cooperative (KUB), and the country's largest conglomerate, Renong – controlled by Mahathir and his close confidante, Daim Zainuddin. As Gomez and Jomo (1999, 189) note, the government's generous financial package “was understandably seen as a bailout facility designed to save cronies.” Moreover, the mid-October 1997 budget announcement for 1988 was seen by foreign financial interests as further evidence of official denial of the gravity of the crisis and its causes. In the ensuing several months policy inconsistency, culminating in political conflicts within the ruling UMNO party (especially between Prime Minister Mahathir and Deputy Prime Minister Anwar Ibrahim) generated market uncertainty. When it became clear (by late 1997) that Mahathir and Daim had literally taken over economic policy-making from the reform-oriented Anwar, there was a sharp exacerbation of economic problems.

Not surprisingly, the ringgit fell precipitously after mid-July 1997, reaching RM4.88 to the US dollar in early January 1998. This was the ringgit's lowest level ever, representing a collapse by almost half within less than six months from a high of RM2.47 in mid-July 1997. Similarly, the Kuala Lumpur Stock Exchange (KLSE) Composite Index dropped from over 1,300

in the first quarter of 1997 to less than 500 in January 1998. On 7 January 1998, a National Economic Action Council (NEAC) was established to develop a plan to deal more effectively with the crisis. Made up of senior cabinet members, technocrats and executives from the private sector, the NEAC unveiled its “alternative action plan” – the National Economic Recovery Plan (NERP) – in July 1998. Among other things, the NERP recommended a relaxation of the tight fiscal policy; fiscal stimulus to boost the domestic economy; improvement in corporate governance; and, without doubt, the most controversial: selective capital controls.

The Malaysian economy contracted every quarter in 1998, with the biggest contraction (10.9 per cent) in the third quarter. On September 1, 1998, 14 months after the outbreak of the crisis, and after substantial capital outflows had already taken place, the Malaysian government imposed controls on *capital outflows and restrictions on exchange rate transactions* in an effort to (to use Prime Minister Mahathir Mohamed’s words), stop “rogue foreign speculators from trying to destroy the Malaysian economy” (Mahathir 1999). On September 2, the leading opponent of capital controls, finance minister Anwar, was dismissed from cabinet.<sup>32</sup> The government now had a free hand to introduce the control measures. Specifically, the measures were designed to insulate monetary policy from external volatility and facilitate a low-interest-rate policy and to contain speculative capital movements. Thus a series of measures were introduced for containing ringgit speculation and the outflow of capital by eliminating the offshore ringgit market (which was viewed as the source of the speculative pressures on the ringgit) and restricting the supply of ringgit to speculators in order to prevent them from taking positions against the currency. Bank Negara Malaysia was given the task of repatriating all ringgit held offshore, including ringgit deposits in overseas banks, by October 1, 1998. In addition, Bank Negara approval was required to transfer funds between external accounts (freely allowed previously), and licensed offshore banks were prohibited from trading in ringgit assets. Similarly, residents were prohibited from granting ringgit credit facilities to non-resident corresponding banks and stockbroking companies (Bank Negara Malaysia 1998). Also, a “temporary” (one-year) prohibition was instituted (effective September 1, 1998) against repatriation of earnings by foreign investors on portfolio investments held in the country for less than one year.<sup>33</sup> In addition, exporters were required to turn in foreign-currency earnings to the central bank in exchange for ringgit at the new pegged exchange rate of 3.80 to the US dollar – a rate that represented a 10 per cent appreciation relative to the level that the ringgit had been trading at. Finally, the authorities imposed tight limits on transfers of capital abroad by residents, and Malaysian citizens were prohibited from taking as little as US\$100 out of the country – the law being enforced by random searches at the airport and other exit points.<sup>34</sup>

As Yusof, Hew and Nambiar (2000, 85) note, “the earlier indictment that capital controls would be disastrous for Malaysia has been proved to be incorrect.” Nevertheless, the effectiveness of the Malaysian controls in realizing their intended objectives remains the subject of controversy. Ethan Kaplan and Dani Rodrik (2001) present empirical evidence on the aggregate effects of the Malaysian controls. Were they a success? they ask. According to the authors, that depends on the counterfactual. Contrasting Malaysia’s performance with that of the other Asian countries during the year *after* controls were imposed suggests that the controls were not successful. On the other hand, if economic performance is compared during the *preceding* 12 months, Malaysia looks like a considerable success – even controlling for differences in the external environment across the two periods. To the authors, the latter is the right comparison, because the preceding 12-month period is the time when IMF-supported programs – the presumed alternative for Malaysia – began to be implemented by the other crisis-affected Asian countries. Moreover, financial indicators in Malaysia worsened before the imposition of the controls, suggesting that the main crisis was yet to come. Thus Kaplan and Rodrik conclude that, compared to the performance of Thailand, Korea and Indonesia while they were under IMF programs, Malaysia’s non-IMF policies produced faster economic recovery, lower inflation, smaller declines in employment and inflation-adjusted wages and a more rapid turnaround in the stock market.

There is no doubt that the controls did provide a measure of certainty at a time of unprecedented financial turbulence. The reduction of the ringgit’s internationalization and the elimination of most potential sources of access to ringgit by non-residents effectively eliminated the offshore ringgit market. For example, the offshore bank in Singapore had to dispense with the ringgit, thereby eliminating external restrictions on the velocity of circulation. This, coupled with the restrictions on non-residents’ repatriation of portfolio capital and on residents’ outward investments, contributed much to the containment of capital outflows. In conjunction with other macro-economic and financial policies, the controls helped to stabilize the exchange rate. Since the introduction of the controls, there have been no signs of speculative pressures on the exchange rate, despite the marked relaxation of fiscal and monetary policies to support weak economic activity. Finally, it can be argued that Malaysia had the last laugh, since its decision to revitalize the economy via fiscal expansion and a more easy monetary policy was later advocated by the IMF for Indonesia, South Korea and Thailand.

On the other hand, those critical of the Malaysian controls, including the IMF, point out that they were introduced well into the crisis, after a substantial amount of capital had already left the country, and thus their effects

on portfolio outflows were limited. For example, Boorman *et al.* (2000, 10) note that “Malaysia’s capital controls introduced in September 1998, after market conditions had stabilized and capital outflows abated, hardly provide a test of the usefulness of capital controls in handling a crisis.” Critics like Boorman also note that several rating agencies downgraded Malaysia’s credit and sovereign risk ratings immediately following the imposition of capital controls. Malaysia’s risk premium in international markets also increased, raising the costs of foreign-currency funding to Malaysian corporations and banks. Thus, for the critics, the Malaysian controls have been somewhat of a missed opportunity. They claim that rather than utilizing the so-called “breathing space” to implement more fundamental policy reforms, in particular, the correction of macroeconomic imbalances and the strengthening of its fragile and highly leveraged financial sector, the Malaysian government has done very little. They note, for example, that Prime Minister Mahathir, besides sacking reform-oriented policy-makers (such as Anwar Ibrahim), has followed policies, including further loosening non-performing loan classification regulation and setting minimum lending targets for banks, that will only serve to exacerbate the underlying structural problems. Second, it has been argued that the controls were designed to bail out the regime’s cronies. According to Johnson and Mitton (2001, 4) capital controls created a “screen for cronyism” that made it easier for strong politicians to support favored firms. They add that “only firms connected to Prime Minister Mahathir experienced a disproportionate increase in stock prices in September 1998.” Namely, following the imposition of capital controls, the stock of politically connected firms rose by about 20 per cent more than other similar, but unconnected firms. In addition, among politically connected firms, those that benefitted the most had not previously reduced their cost of capital by listing overseas. That is, they stood to gain more from official support. Similarly, Jomo (2001, 3) notes:

The window of opportunity offered by capital controls has been abused by certain powerfully-connected business interests, not only to secure publicly funded bail-outs at public expense, but even to consolidate and extend their corporate domination, especially in the crucial financial sector. Capital controls have been part of a package focused on saving friends of the regime, usually at the public’s expense.

Yet the arguments of supporters and critics notwithstanding, a balanced assessment of the pro and cons of the Malaysian controls requires that we take into account a number of key policy measures introduced by the Malaysian government that had nothing to do with the controls, but that enabled the government to curtail the deterioration in the financial sector and assist in the recovery. *First*, the government’s announcement of a guarantee of bank deposits early in the crisis (January 1998) was perceived to be credible in view of the country’s legal and regulatory framework. This

prevented the type of bank runs and “flight to quality” experienced in Indonesia, Thailand and Korea. In March, the authorities adopted a strategy to safeguard the soundness of the financial system. Key measures included the upgrading of capital adequacy, prudential guidelines and disclosure standards for banking institutions, as well as a merger program for finance companies. *Second*, in June 1998, the government established *Pengurusan Danaharta Nasional Berhad* (or *Danaharta*), an asset-management and recovery agency designed to acquire non-performing loans from banks and manage their impaired assets. Initially invested with RM1.5 billion in capital provided by the Finance Ministry, *Danaharta* was authorized to issue up to RM15 billion (face value) in bonds. Moreover, legislation vested the agency with special power over borrowers, including insulation of the agency from undisclosed claims made after the initial purchase of assets; the ability to appoint special administrators without having to go to court; and the power to abrogate underlying contracts when the agency foreclosed on collateral. Indeed, the legal power vested in *Danaharta* helped ensure that banks were left with a manageable level of problem loans, that acquired assets were rehabilitated, and that non-performing loans would be dealt with promptly. The use of independent auditors to determine the value of assets acquired by *Danaharta* avoided the subsidies required in Indonesia and Korea, besides ensuring that the agency did not become a tool for indirect bailouts of existing shareholders – which would have undermined the incentives for private sector recapitalization.

*Third*, in July 1998, the government established *Danamodal Nasional Berhad* (or *Danamodal*) to manage bank restructuring and recapitalization. Capital injections from *Danamodal* were designed to enable institutions to restore their capital adequacy ratio to 9 per cent. To support its mission, *Danamodal* raised RM10.7 billion – RM3 billion in paid-up capital from *Bank Negara* and RM7.7 billion through the issuance of bonds to financial institutions. The selection of candidates for recapitalization was initially guided by *Bank Negara*’s watchlist-based stress tests of banking institutions. Institutions requesting capital injections were required to submit recapitalization plans and were subject to monthly reporting of performance against a list of targets. Moreover, *Danamodal* exercised control over management by appointing at least two members to the boards of directors – one of whom had to be an executive director or chairman of the board. Indeed, *Danamodal* succeeded early in restoring the capital levels of domestic banks, whereas the capital standards were not fully met in Indonesia and Thailand, which employed a more decentralized process. Clearly, *Danamodal*’s mandate inspired confidence that all domestic financial institutions in Malaysia would be recapitalized to the required standards and that necessary operational restructuring would be imposed through the exercise of control over their management. Moreover, the requirement that institutions seeking *Danamodal*’s capital would have to sell non-performing loans in excess of

the specified proportion to Danaharta gave banks the incentive to deal with their bad assets in a timely manner.

*Fourth*, also in July 1998, the government established the Corporate Debt Restructuring Committee (CDRC) to help mediate voluntary out-of-court restructuring of large debt involving a number of major creditors, following the London Rules model. Specifically, CDRC's aim was to minimize losses to creditors and company shareholders through coordinated debt workouts that avoided placing viable companies into liquidation or receivership, and to have banking institutions play a greater role in the financial rehabilitation of the corporate sector. Thus, debt-restructuring under CDRC was reserved for viable businesses only, and not those in receivership or liquidation. Moreover, aggregate bank loans had to be RM50 million or more, with at least three lending institutions participating, and the creditor committees representing the interests of at least 75 per cent of the total debt of all creditors. Overall, Danaharta, Danamodal and CDRC worked in tandem to allow banks to reduce their non-performing loans, corporations to reduce their debts and both to strengthen their capital bases.

And *fifth*, Malaysia was also fortunate to experience a cyclical recovery in its key manufacturing industry, namely electronics – which saw a major resurgence in exports in the first quarter of 1999. Moreover, as an oil exporter, the sharp increases in oil prices three times in the period 1998–2000 greatly helped Malaysia overturn the current-account deficit. Of course, these developments were driven by forces that had nothing to do with capital controls.

#### *The broader debate on capital controls*

Malaysia's heterodox policy response to the crisis, besides bringing sharp rebuke from the Fund and the United States Treasury, also re-ignited an old debate on the appropriate sequencing of financial sector reforms – specifically, on the appropriate timing for liberalizing the capital account. No doubt, economic theory has long recognized the negative effects of exchange and capital controls. The efficient market hypothesis and conventional neoclassical accounts support capital market liberalization largely on “efficiency arguments.” In a nutshell, it is argued that open capital accounts can foster a more efficient allocation of resources, provide opportunities for risk diversification and help promote financial development. To quote Fischer (1998, 2–3):

free capital movements facilitate an efficient global allocation of savings and help channel resources into their most productive uses, thus increasing economic growth and welfare. From the individual country's perspective, the benefits take the form of increases in the pool of investible funds and in the access of domestic residents to foreign capital markets. From the viewpoint of the international economy, open capital accounts support the multilateral

trading system by broadening the channels through which countries can finance trade and investment and attain higher levels of income. International capital flows expand the opportunities for portfolio diversification and thereby provide investors in both industrial and developing countries with the potential to achieve higher risk-adjusted rates of returns.

It is argued that by taxing foreign money required to purchase foreign-made goods and services, exchange controls cut the quantity imported and/or raise the domestic relative price of imports. Moreover, exchange and capital controls raise transaction and other trade-related costs, and give rise to negative market perceptions, which in turn make it costlier and more difficult for the country to access foreign funds. Costs associated with international transactions increase because exchange controls tend to undermine the development of liquid (and efficient) foreign-exchange markets, besides postponing necessary adjustments in policies and hampering private-sector adaptation to modern financial instruments and changing international circumstances. Both types of controls foster evasion, rent-seeking, and the development of a parallel or black market in foreign exchange, including corruption, besides prolonging the survival of unsustainable domestic policies. In addition, controls will inevitably generate a huge bureaucracy to enforce the rules, besides reducing trade by limiting the transfer of technology, portfolio diversification, managerial expertise and skills through foreign direct investment. These problems make capital controls poor candidates for permanent solutions.

Similarly, controls on repatriation of profits and dividends discourage direct foreign investment, reduce international trade and limit domestic business opportunities. In the presence of capital controls, financial intermediation is less efficient, since savings are not allocated to the most efficient uses, and the range of available financial products and services tends to be narrow and of poorer quality. Also, as capital controls tend to create a wedge between domestic and external financial markets, the resultant differentials between domestic and international interest rates may create problems. That is, the wedge may create incentives for circumvention – meaning that the effectiveness of controls will then depend on the size of this incentive relative to the cost of circumvention.<sup>35</sup> It has been argued that the amount of foreign currency and currency-related derivative trading has risen so rapidly that it is almost impossible to impose effective controls on them. Coupled with the sheer volume of international financial transactions in global markets, controls only provide new incentives for evasion. Moreover, as Stanley Fischer (2001, 10–11) notes, “controls on capital outflows can be used to help maintain a pegged exchange rate, given domestic policies are consistent with maintenance of the exchange rate. However, such controls tend to lose their effectiveness and efficiency over time. Capital inflow may for a time be useful in enabling a country to run an independent monetary policy when the exchange rate is softly pegged, and may influence the composition of

capital inflows, but their long-term effectiveness to those ends is doubtful.” Finally, it is well understood that capital controls cannot substitute for sound macroeconomic policies. Countries with serious macroeconomic imbalances and no credible prospects for correction in the short-run, however, have regularly been unable to address large-scale capital outflows by using capital controls. Indeed, in some cases, controls have reduced pressures on the authorities to introduce needed policy reform.<sup>36</sup> And, as Eichengreen (1999) notes, capital controls are ineffective in the sense that they do not prevent speculative attacks and exchange-rate adjustment from occurring, even if they buy time before this happens.

On the other hand, it is also recognized that there are situations in which capital-account restrictions improve economic welfare by compensating for financial market imperfections, including those resulting from informational asymmetries. In the case of herd behavior, foreign investors may suddenly react to the actions of others whom they believe to have access to better information. In such circumstances, capital flows become volatile and are easily reversed. Policy implementation arguments hold that capital controls may help reconcile conflicting policy objectives when the exchange rate is fixed or heavily managed. Also, since unimpeded capital inflows can lead to real exchange-rate appreciation and current-account deficits, capital controls can act as a shield to protect monetary and financial stability in the face of persistent capital flows. This is particularly true when there are concerns about (1) the inflationary consequences of large inflows, or (2) inadequate assessment of risks by banks or the corporate sector in the context of a heavily managed exchange rate – which, by providing an implicit exchange-rate guarantee, encourages a build-up of unhedged foreign-currency positions.

Thus, it is argued that regulating short-term capital inflows – on the basis of prudential requirements on financial institutions – and regaining maneuvering room for monetary policy is highly beneficial. Specifically, it is often pointed out that Asian economies that did not experience a severe crisis during the Asian crisis had controls on capital flows. For example, China had extensive capital controls. Singapore had not internationalized its currency, given the restrictions on the usage of the Singaporean dollar and on borrowing outside Singapore. India’s policy towards foreign capital in the 1990s differentiated between different types of flows. While there was considerable liberalization of the regime for foreign direct investment, liberalization of portfolio flows began gradually in 1993. Most importantly, debt flows have not been liberalized, and short-term debt is tightly controlled for all Indian residents, including banks. Also, unlike many other emerging market countries, India also restricts capital outflows. Thus, it is argued that India’s cautious approach insulated it from the destabilizing forces of highly volatile capital flows.

On the other hand, it is argued that in countries where the capital account was liberalized prematurely, without adequate preparation and strengthening

of the financial system to build in an appropriate reflection of risk, there have been huge inflows of capital, especially short-term borrowing, that made these countries extremely vulnerable to a sudden change in investor sentiment. Specifically, in South Korea, Thailand and Indonesia, a key source of vulnerability had been the large capital inflows in the earlier part of the 1990s – particularly, unhedged short-term foreign borrowing. This had made these three crisis countries vulnerable to capital outflows and exchange-rate depreciation. Capital inflows had also fueled a rapid credit expansion that led to asset-price inflation and financing of low-quality investments. The credit expansion also reflected weaknesses in lending practices, ineffective market discipline, deficiencies in prudential regulation and supervision, and close links among governments, banks and corporations. Finally, capital controls are sometimes justified on the grounds that it is necessary to ensure that scarce domestic savings are used to finance investments at home rather than investments abroad. In such cases, controls usually take the form of rules on investments by resident individuals or institutions in foreign assets. At times such controls are used to ensure adequate (and lower-cost) financing for the government. Conversely, controls may also be used to limit foreign ownership of domestic firms.

Before the Asian crisis, the general perception in the international financial community was that liberalization of capital movements was an essential element of economic liberalization – almost a touchstone of commitment to market reforms. However, the Asian financial crisis forcefully demonstrated that capital flows carry both benefits and costs. First, the highly competitive and globalized financial world has created individual market participants that are huge enough to mobilize, often with the help of leverage, financial resources larger than the GDP of smaller economies. Thus, they can build up dominating positions in the markets of smaller economies and influence short-term market movements either singly or through acting in concert. This means that for countries with poorly developed financial markets, free cross-border movement of capital is incompatible if these countries try to maintain separate currencies and their own exchange arrangements. Second, there has been growing awareness that rapid liberalization and the associated expansion of credit and increase in the mobility of cross-border capital can give rise to significant risks, unless liberalization is preceded or accompanied by measures to promote more effective risk-management. One of these risks is the potential for large capital inflows to be poorly invested, resulting in a misallocation of resources – which in turn can reduce the growth capacity of an economy and distort asset prices.

Thus a number of distinguished economists (who on principle are supportive of the idea of free capital mobility) have nevertheless cautioned that controls help limit *volatile short-term capital flows*, thereby avoiding balance-of-payments crises and limiting exchange-rate volatility. Equally important, it provides governments greater independence in determining the interest-rate

policy. In 1978, James Tobin (later a Nobel laureate in economics) proposed “throwing sand in the wheels of short-run capital flows” by imposing a uniform tax (dubbed the Tobin tax) on all foreign-exchange transactions to reduce the destabilizing speculation in international financial markets. Admittedly, the Tobin tax would be a small percentage levy (in the order of about 0.1 per cent to 0.5 per cent) on all foreign-exchange transactions. Tobin (1978) argued that such a tax would greatly lessen the profit margins on short-term currency trading (so called “round-tripping”), while having minimal effects on the returns to long-term international investments.<sup>37</sup> In a similar vein, MIT’s Rudiger Dornbusch (1986) noted that since financial markets are very liquid and react quickly to shocks (while the real economy is slow to react, owing to price and wage rigidities and investment irreversibility), this “differential speed of adjustment” may induce excess exchange-rate volatility (over-shooting, bubbles, etc.), with negative effects on real economic activity. Dornbusch proposes the adoption of measures such as dual exchange-rate systems to protect the real economy from the fluctuations in the financial markets. Similarly, Radelet and Sachs (1998, 36) have concluded:

the rapid push towards fully open capital markets among the developing countries would seem to be misguided. There is certainly no strong empirical evidence that economic growth in middle-income developing countries depends on unfettered access to short-term capital flows from abroad. The policy goal – should be to support long-term capital flows especially foreign direct investment, and equity portfolio flows, but to limit short-term international flows mainly to the financing of short-term trade transactions.

Angered by the “unnecessary destruction” caused by the Asian financial crisis, the Columbia University economist Jagdish Bhagwati (1998, 7; also 1998a; 1998c) – an uncompromising advocate of free trade – accused the “Wall Street–Treasury Department Complex” (which he claims commands tremendous influence over the IMF and the World Bank) for preaching the virtues of unfettered capital flows without highlighting the costs associated with “the inherently crisis-prone nature of freer capital movements” – in particular, that large influxes of capital can lead to overcapacity and speculative bubbles. Bhagwati notes that for a long time it has been taken for granted that capital flows are analogous to trade flows. – i.e. that wherever they occur and in whatever form, they invariably benefit long-term economic development. However, he cautions that between the processes of trade liberalization and financial liberalization there lies a great difference. Specifically, Bhagwati (1998, 10–11), notes that there is a “difference between trade in widgets and dollars . . . many assumed that free capital mobility among all nations was exactly like free trade in their goods and services . . . that the gains might be problematic because of the costs of crises was not considered . . . [and it is this] original version of the myth which has

steadily propelled the IMF into its complacent and dangerous moves toward the goal of capital account convertibility.” Thus, trade liberalization should not be linked to capital liberalization – as the former is not subject to herd behavior, market panics and speculation. While Bhagwati (1998, 8) cautions that countries should “not jump to capital controls,” he notes that “it has become apparent that crises attendant on capital mobility cannot be ignored.” Bhagwati’s (1998a, A-38) advice includes:

For many developing countries today, including India and China, the question is not whether to impose capital controls but whether to drop them. To them, I say: Cease moving towards free capital flows until you have political stability, sustained prosperity and substantial macroeconomic expertise. Concentrate instead on internal reforms such as privatization and external reforms such as freer trade. Allow “targeted convertibility” for dividends, profits and invested capital for direct foreign investment. It brings capital and skills and is more stable than short-term capital flows. For the countries that had already freed capital flows substantially and are currently afflicted by panic-driven outflows, my advice is the opposite: Do not jump into capital controls.

On August 28, 1998 (just three days before Malaysia imposed controls), the iconoclastic MIT economist Paul Krugman posted on his web-site a provocative article justifying the use of controls on capital outflows to combat speculative attacks (Krugman 1998a). Specifically, Krugman argued that emergency controls on capital outflows may be a prudent choice at times of severe speculative attacks from domestic and foreign speculators. While some viewed Krugman’s piece as providing intellectual cover for Malaysia’s use of controls, Krugman clarified his position a week later in an article (1998) aptly titled, “Saving Asia: It’s Time to Get Radical” – arguing that since earlier prescriptions, in particular protecting the currency through sharp rises in interest rates (“the IMF model”), or allowing a sharp depreciation of the exchange rate (advocated by Sachs and others), have not worked – “*temporary controls on capital*” is the least bad choice, if not the only choice, left to a country desperately trying to halt a financial meltdown.<sup>38</sup> In “A Letter to Malaysia’s Prime Minister” Krugman (1998c), argues that Malaysia has little choice but to introduce capital controls. He (1998, 75–6) provocatively notes:

think about China right now: a country whose crony capitalism makes Thailand look like Switzerland and whose bankers make Suharto’s son look like J. P. Morgan. Why hasn’t China been nearly as badly hit as its neighbors? Because it has been able to cut, not raise, interest rates in this crisis, despite maintaining a fixed exchange rate: and the reason it is able to do that is that it has an inconvertible currency, a.k.a. exchange controls. Those controls are often evaded, and they are the source of lots of corruption, but they still give China a degree of policy leeway that the rest of Asia desperately wishes it had.

Yet Krugman also adds that such temporary and “curative” controls must serve as an aid to reforms, and should be dismantled once the economy recovers. A host of other distinguished analysts have echoed similar sentiments. Harvard University’s Dani Rodrik (1998a) uses a GDP per capita growth equation and a simple index of capital-account openness with a sample of some 100 developed and developing countries for 1975–89, and finds that there was no significant relationship between liberalizing capital flows and economic growth. He issues an indictment of the IMF’s push for unconditional capital market liberalization, arguing that since asymmetric information problems are endemic to financial markets it is time for “the IMF to accept temporary capital controls in the countries that are otherwise following its recipes, so that they, too, can revive their economies.” Princeton University’s Alan Blinder (1999, 50–63) (also a former vice-chairman of the Federal Reserve) suggested that emerging economies should not “rush to open capital markets [since] unfettered international financial mobility is not the best system for all countries.” Berkeley’s Barry Eichengreen and Charles Wyplosz (1996) point out that most foreign-exchange transactions have little to do with economic fundamentals, and only contribute to destabilizing and reducing social welfare. Thus they make a case for the Tobin tax as a tool to lower welfare-reducing short-term capital flows without affecting welfare-enhancing long-term flows. For Eichengreen (1999) capital controls can be used as a third line of defense following the first line of defense (banks’ own risk-management practices), and the second line of defense (regulatory supervision). Eichengreen (1999, 49–50; 2000a) argues that, since building effective regulatory and supervisory institutions for financial markets may take a long time, countries with underdeveloped domestic financial markets and inadequate auditing and accounting standards should impose a tax on short-term capital inflows, because, “under these circumstances, banks gambling for redemption or otherwise unable to manage the riskiness of their portfolios will tend to fund themselves excessively abroad, and foreigners will tend to accommodate them. Holding-period taxes on all capital inflows are the only effective way of containing this problem.” For Eichengreen, Chilean-style controls on *capital inflows* is an appropriate way to stop the “boom and bust cycles” associated with volatile short-term capital flows.

Similarly, Joseph Stiglitz (1999, 6) (at that time, the Chief Economist at the World Bank) argued that developing countries needed to put some limits on capital inflows in order to moderate the excessive boom–bust pattern in financial markets. He noted that “it has become increasingly clear that financial and capital market liberalization – done hurriedly, without first putting into place an effective regulatory framework – was at the core of the problem. It is no accident that the two large developing countries that survived the crisis – and continued remarkably strong growth in spite of a difficult global economic environment – were India and China, both

countries with strong controls on these capital flows.” Stiglitz’s (1999, 6) solution is clear: “volatile markets are an inescapable reality. Developing countries need to manage them. They will have to consider policies that help stabilize the economy. . . . These could include sound bankruptcy laws and Chilean-style policies that put some limits on capital flows.”<sup>39</sup> And last, but not least, Morris Goldstein (1999) recommends that the IMF advise all emerging economies with fragile domestic financial sectors and weak prudential regulations to implement Chilean-style capital restrictions until they can successfully intermediate such flows. Such advice seems prudent. Edwards’ (2001) careful empirical analysis suggests “quite strongly that the positive relationship between capital account openness and productivity performance only manifests itself after the country in question has reached a certain degree of economic development . . . a plausible interpretation is that countries can only take advantage, in net, of a greater mobility of capital once they have developed a somewhat advanced domestic financial market.” It should be noted that all four authors recognize that taxes on short-term capital inflows are not a panacea, and indeed can be counter-productive if authorities use the measures as an excuse to delay implementing financial-sector reforms. They all agree that banks and non-bank financial intermediaries must manage their balance-sheets’ risks prudently by adopting proper credit-risk analysis and avoiding dependence on short-term foreign-denominated debt. Equally importantly, implicit government guarantees must be avoided so as to discourage excessive short-term capital inflows.

*A sort-of “emerging consensus”*

While it is difficult to gauge to what extent these criticisms, including the Malaysian controls, forced the IMF to “reevaluate” its policies on capital liberalization and capital controls, there is little doubt that there has been a re-thinking within the IMF on these issues. It should be noted that at present the IMF’s Articles of Agreement do not give the Fund any mandate in the area of restrictions on capital-account transactions. In 1997, the IMF’s Interim Committee had directed that the Fund should explore the possibility of amending the Article to include liberalization of capital movements as one of the “objectives” of the Fund. However, developing country opposition and the financial crisis in Asia clearly put the issue on the back burner. Nevertheless, on the basis of my interviews with senior Fund officials, two broad perspectives can be discerned. To some, full financial liberalization is still the least bad alternative, because imposing capital controls and limiting capital mobility is no solution to the structural problems underlying many emerging economies. Hence they maintain that there should not be any retreat from current levels of capital account liberalization, and second, that if there is, then the Fund should have authority to approve it in advance.

Also, the proponents of financial liberalization point out that the restoration of capital inflows will be crucial in ensuring an early recovery. After all, one reason Mexico recovered so quickly from the peso crisis was the large foreign investor participation in its export sector. Moreover, capital controls may insulate economies, thereby eroding the incentive to reform. However, others believe in a more gradualist approach. They argue that in order to compensate for financial market imperfections and the reality that adequate domestic regulation in emerging markets will take many years at best, some controls on volatile short-term capital could be permitted to allow “some temporary breathing space in which to adopt and implement sound economic policies and reforms” (IMF 2000a, 32). They add that the Fund should allow for a transitional arrangement during which countries would be urged (via a carrot-and-stick approach) to take concrete steps to strengthen their banking and financial systems.

The IMF has now qualified its earlier advocacy with an approach that favors a gradual, orderly, “properly sequenced and managed” capital-account liberalization – where long-term flows (such as FDI and term loans) are favored over short-term equity flows. As regards control on capital inflows, there is greater acceptance of the need to deter large-scale short term capital inflows with the help of indirect price-based policy tools such as the reserve requirements used by Chile. In the case of capital outflows, the Fund remains opposed to controls, considering them unworkable, especially if they are introduced during a crisis. The Fund’s unorthodox position is nicely summed up by Stanley Fischer (1998, iii–iv):

Malaysia’s decision to impose controls on capital outflows – and support for the idea among some academics – raises the question of whether such controls will once again become widespread. The IMF’s position has long been that capital account liberalization should proceed in an orderly way: countries should lift controls on outflows only gradually as the balance of payments strengthens; liberalization of inflows should start at the long end and move to the short end only as banking and financial systems are strengthened. We have not opposed Chilean-style, market-based measures to regulate capital inflows at the short end, but they must be considered case-by-case (Chile has recently eased its controls).

Thus, the Fund’s position means neither a return to pervasive capital controls nor a rush towards unconditional capital liberalization. Rather, it seems to have adopted a policy that recognizes that controls over inflows, particularly those designed to influence their composition, might be justified, but only in countries with appropriate prudential policies. An important lesson of the Asian financial crisis is that capital-market liberalization must be undertaken with care. The problem in Asia was not that they liberalized their capital accounts, but that the sequencing was wrong and that liberalization was only partial. Most of these countries liberalized short-term capital inflows before foreign direct investment, when they should have done it the

other way around. Also, if the domestic financial systems are weak, poorly regulated and subject to institutional distortions, rapid capital-account liberalization can lead to excessive short-term borrowing and lending and a build-up of excessive debt burdens – quickly turning liquidity problems into solvency problems. Hence, an orderly and sequenced liberalization until the requisite regulatory institutions are in place is critical.

Finally, the IMF's admittedly qualified support of the market-based Chilean controls on capital inflows should not be interpreted to mean that it views these as a model to be applied more broadly. The Chilean controls, or the *encaje*, in effect between May 1992 and May 1998 required anyone borrowing abroad to pay a premium of between 20 per cent and 30 per cent of the loan, to be held at the central bank without interest, for one year. The penalty rate for early withdrawal was 3 per cent. The rationale for the Chilean tax was threefold: (1) to prevent overvaluation of the peso, which would have negatively affected the country's export-oriented growth; (2) to encourage more long-term capital inflows for developmental purposes; and (3) to discourage residents from relying too heavily on short-term borrowing, thereby reducing the problem of maturity mismatch (that is heavy short-term borrowing and long-term lending). When short-term flows dried up in 1998, the premium was reduced to zero. However, what is important to note is that Chile's unremunerated reserve requirement (URR) on most capital flows was a market-based and non-discriminatory form of capital control with many desirable macroeconomic effects. Studies of the Chilean case suggest that, while the controls had limited success in reducing the overall size of capital inflows, they were effective in altering the composition of inflows away from short-term money in favor of longer-term funds (Edwards 2001). However, the Chilean control "worked because it was comprehensive and an integral part of broader macroeconomic reforms." Specifically, the Chilean authorities closed all possible loopholes – even to the extent that domestic banks were prevented from writing offshore derivative swap contracts with foreign holders of long-term Chilean debt. Most importantly, Chile could do this because of its strong macroeconomic fundamentals. Its regulation of the financial sector is well developed. Chile has in place a modern system of prudential banking regulation, effective loan-recovery mechanisms and high transparency, disclosure and accountability standards, and an autonomous central bank. Suffice it to note that these preconditions are sadly absent in most emerging economies.<sup>40</sup>

### **What exchange-rate regimes?**

In 1944, delegates from 44 countries met at Bretton Woods, New Hampshire, to reform the international monetary system. The delegates hoped to design a system that would combine the benefits of both flexible and fixed

exchange-rate systems. The result was a system of fixed, but adjustable, nominal exchange rates. Under the system, the US dollar was fixed in terms of gold (initially at US\$35 per ounce), and the US Treasury bought and sold gold to maintain this official price. In turn, every other member country was to anchor its currency to the dollar (and indirectly to gold) and keep its exchange rate within a 1 per cent range on either side of the parity by buying or selling US dollars in the foreign-exchange market. Only in the face of a significant and long-lasting deficit or surplus in its balance of payments was a country allowed to adjust the parity of its currency. In fact, to maintain fixed exchange rates when countries suffered balance-of-payments deficits and were losing international reserves, the IMF would loan deficit countries the needed funds. If the IMF loans proved insufficient to prevent currency depreciation, the country was allowed to devalue its currency by setting a new, lower exchange rate. Thus, the goal was to enjoy the stability associated with fixed exchange rates while simultaneously retaining the ability to move the nominal exchange rate when necessary to restore equilibrium in the balance of payments.

This system essentially collapsed in August 1971, when the United States suspended its promise to exchange gold for dollars at the official rate.<sup>41</sup> The current international financial system is a hybrid of a fixed and a flexible exchange-rate system. That is, rates fluctuate in response to market forces, but are not determined solely by them. Today, countries can choose from among three basic regimes in linking their economies into the international system. *First*, a flexible or “floating” exchange rate where governments let their currency float freely in the exchange markets against all other currencies. Under this system, the price of one currency relative to another is determined by the market without any intervention by central banks. That is, any current-account deficit has to be financed entirely by capital inflows (a financial account surplus) and vice versa, without any change in official reserves. Therefore, under a floating currency, a growing current-account deficit will generally be self-correcting, as the value of the currency declines in response to an outflow of funds that are seeking protection from a potential currency decline. Indeed, at the macro level, the key argument in favor of a flexible exchange rate is that it allows a country to retain independent and discretionary monetary policy as a tool for responding to shocks, particularly shocks to aggregate demand. However, a flexible regime is not cost-free. A flexible exchange rate and a discretionary monetary policy usually means some loss of credibility – which can lead to an inflation bias. At the microeconomic level, greater exchange-rate variability creates uncertainty and discourages international trade and investment. Although a floating currency introduces volatility that makes business more difficult for exporters and for those companies that compete with imports from overseas, the pain caused to them is much less than the grief of widespread bankruptcies when an overvalued fixed currency falls in a sharp devaluation.

In reality, however, few countries have truly flexible exchange-rate systems. Calvo and Reinhart (2000) have termed the unwillingness to let exchange rates be completely determined in markets “the fear of floating.” This fear is based on the fact that under a pure flexible exchange-rate system, the volatility in capital flows causes corresponding volatility in the exchange rate. A volatile exchange rate, in turn, means that relative prices in the economy are volatile – which can be extremely disruptive to real economic activity.<sup>42</sup> Thus, even when the exchange rate is flexible in this sense, the government may (usually through the central bank) buy foreign exchange to push up the value of the foreign currency and depreciate the home currency, or sell foreign exchange to push down its value and appreciate the home currency, in order to smooth short-term fluctuations in demand and supply, and thus also short-term exchange-rate changes. Such intervention is referred to as a “dirty float,” while the “managed float” means the absence of a specific target for the exchange rate.

*Second*, the general unwillingness to let exchange rates float has pushed countries towards “intermediate” exchange-rate regimes, in which official intervention is used to keep the exchange rate within predetermined bands. Thus, an intermediate regime, or “pegged” exchange rate, are those that can be adjusted or changed through such mechanisms as the “adjustable peg” (or fixing the exchange rate, but without any open-ended commitment to resist devaluation or revaluation in the presence of a large balance-of-payments deficit or surplus), or pursuant to some pre-determined parameters such as “target zones” (a margin of fluctuation around some central rate) or “crawling bands” (a pre-announced policy of devaluing a bit each week) and other hybrid systems. Pegged exchange-rate regimes imply an explicit or implicit commitment by the policy authorities to limit the extent of fluctuation of the exchange rate to a degree that provides a meaningful nominal anchor for private expectations about the behavior of the exchange rate and the requisite supporting monetary policy. Thus, in a pegged regime, it is incumbent on the pegging country to set a monetary policy that always appears to currency traders to be consistent with the pre-announced conversion rate. The best method of upholding this commitment is to run a monetary policy that is similar to that in the anchor country in terms of inflation rates and credit expansion. That is, a central bank trying to maintain an exchange-rate peg has to focus on the interest-rate differential between the short-term rate in its domestic currency and the prevailing short-term rate in the anchor currency. If the home currency comes under selling pressure, an increase in the interest-rate differential can attract buyers by convincing them that higher domestic interest rates will keep domestic inflation in check, prevent a devaluation, and result in excess returns to the domestic currency relative to the anchor currency. However, over the long term, the pegging central bank must keep domestic inflation rates close to inflation in the anchor currency. By harmonizing the inflation rates, the

central bank prevents the real exchange rate from appreciating to unsustainable levels at the pegged nominal exchange rate.<sup>43</sup> A pegging regime is more resistant to speculative attack if banks and other institutions hold an amount of foreign-exchange reserves that is at least as great as the quantity of short-term debt that is denominated in foreign currencies. For example, Taiwan was relatively immune to the Asian crisis owing to its large holdings of foreign-exchange reserves. However, many other emerging markets are net borrowers in foreign currencies, and they attract foreign funds by establishing a peg and promising a stable exchange rate. As was noted earlier, the most prudent way to keep this promise is to run a monetary policy that closely mimics that of the anchor country.

And, *third*, countries can adopt fixed (but potentially adjustable) exchange rates.<sup>44</sup> There are several advantages to a fixed exchange rate. A fixed exchange rate can provide a nominal anchor that helps the country to achieve price stability. Pegging to a low-inflation currency can provide a credible anchor for restraining domestic inflation expectations as long as expectations that the fixed exchange rate will not be abandoned are credible. In addition, a fixed exchange rate encourages an inflow of foreign capital, and by appearing to eliminate exchange-rate volatility can keep interest rates lower than they would otherwise be. However, a fixed exchange rate also brings with it the problem that the real exchange rate can become overvalued – either because the domestic price level increases more rapidly than that of competing countries or because of a relative decline in the nominal value of competing currencies. Foreign lenders may be induced by higher interest rates to continue financing a growing current-account deficit; but eventually the fear of devaluation tends to overcome the high interest incentive. At that time, lenders may no longer extend loans or roll over debt, and domestic residents convert funds and take them out of the country. Finally, fixed rates lacking credibility leave countries open to speculative attacks on their currencies. More broadly, by serving as a so-called “lightning rod” for concerns about debt and banking problems as well as macroeconomic policies, they may trigger crises that greatly amplify the costs of adjustment.

Exchange rates can be fixed through multilateral arrangements, although these require more coordination and negotiation than unilateral pegs. Two multilateral systems are multilateral pegs and currency unions. In a multilateral peg, the distinction between the anchor currency and the pegging currency becomes blurred, because the participating countries are obliged to take monetary policy measures to defend the exchange-rate peg. The best example of a multilateral peg is the European Monetary System prior to the adoption of a single currency in January 1999. In contrast, a currency union consists of an arrangement to merge several currencies to fix the exchange rates and unify their monetary policy-making permanently. The European Monetary Union, undertaken in 1999, is a prime example. A rigidly fixed

exchange rate is where governments can fix the price of their currency against a specific foreign currency or a basket of foreign currencies. Fixed rates can be managed by *currency boards*, albeit a currency board differs from a unilateral peg in that the home country no longer sets its own monetary policy. Instead, the size of the monetary base is determined by monetary policy in the anchor country and capital flows.

Specifically, while the typical fixed or pegged exchange-rate regime allows the monetary authorities some discretion in their conduct of monetary policy because they can still adjust interest rates or print money, under a currency board the commitment to the fixed exchange rate is strong, because the conduct of monetary policy is taken completely out of the hands of the central bank and the government. A currency board combines three elements: an exchange rate that is fixed to an “anchor currency,” automatic convertibility (that is, the right to exchange domestic currency at this fixed rate whenever desired), and a long-term commitment to the system, which is often set out directly in the central bank law. Therefore, unlike a central bank, a currency board issues funds that are fully backed (100 per cent) by reserves of a hard currency such as the US dollar, and the domestic currency is freely convertible into the hard currency. The exchange rate is fixed by law, not just by a currency market intervention, and monetary policy is targeted strictly on maintaining balance-of-payments equilibrium with the fixed exchange rate. Such an arrangement leaves no room for adjustments in the real exchange rate through changes in the nominal exchange rate. Accordingly, adjustments to changing conditions must be made by other means, including domestic prices and costs and economic activity and employment.

A currency-board arrangement has important advantages over a monetary policy strategy that just uses an exchange-rate target. First, the money supply can expand only when dollars are exchanged for domestic currency at the central bank. That is, the increased amount of domestic currency is matched by an equal increase in foreign-exchange reserves. The currency board arrangement leaves no room for policies that are inconsistent with the fixed exchange rate, because the only policy is a commitment to adjust the monetary base in tandem with flows of foreign-exchange reserves in and out of the central bank. As a consequence, the home country’s central bank can no longer act as a lender of last resort to the domestic banking sector. Second, the currency board involves a stronger commitment by the central bank to the fixed exchange rate, and may therefore be effective in bringing down inflation and in reducing the likelihood of a successful speculative attack against the currency.

Currency-board arrangements are the strongest form of exchange-rate peg, short of a currency union or outright dollarization. To take the idea to its logical conclusion, an extreme form of a fixed exchange rate is the abandonment of a national currency and the adoption of a powerful foreign

currency such as the US dollar for domestic use – hence, the term “dollarization.” While a currency board can be abandoned, allowing a change in the value of the currency, a change of value is impossible with dollarization – that is, one US dollar is always worth one dollar whether it is held in the United States or outside. A country that has official dollarization (such as Panama since 1904), besides adopting the US dollar as legal tender, has also eliminated the monetary policy-making role of its central bank. Without a national currency to manage, the country’s monetary policy is, in effect, put into the hands of the United States Federal Reserve. Limited or unofficial dollarization occurs when US dollars circulate alongside a country’s national currency, or where private agents use the dollar as a substitute for the domestic currency. Under both these arrangements, the domestic currency continues to serve to some degree as a medium of exchange, store of value and unit of account. Limited dollarization exists in many countries, especially in Latin America.<sup>45</sup> Figure 6.1 provides a rough overview of major exchange-rate regimes.

Thus the shift from fixed to more flexible exchange rates has been gradual, dating from the breakdown of the Bretton Woods system of fixed exchange rates in the early 1970s. With the collapse of the Bretton Woods par value system and the widespread adoption of floating exchange rates by the major advanced economies in the early 1970s, most developing countries initially continued to peg their currencies either to a key currency (mainly the US dollar), or to a basket of currencies, including the IMF’s special drawing right (SDR).<sup>46</sup> However, starting in the late 1970s, a number of developing countries moved away from these arrangements. At first, the shift was mainly away from single-currency pegs to pegs defined in terms of baskets of currencies. However, since the early 1980s, there has been a market shift towards more flexible exchange-rate arrangements. For example, in 1975, 87 per cent of developing countries had some type of pegged exchange rate, while only 10 per cent had flexible exchange rates. By 1985, the proportions were 71 per cent and 25 per cent respectively (Caramazza and Aziz 1998; Mussa *et al.* 2000). Among other factors, the trend toward greater exchange-rate flexibility has been associated with more open and outward-oriented policies on trade and investment, and increased emphasis on market-determined exchange and interest rates. At the latest count (Autumn 2001), the IMF member countries have distributed themselves rather evenly along the spectrum from free floats to the irrevocably fixed rates of a currency union. At the flexible end, 50 countries, including many economically or geographically large nations like the United States, Japan, Australia and India, allow their currencies to float independently. However, several members of this group (Japan, Canada, and Brazil, for instance) intervene fairly frequently in an effort to offset disorderly market forces. Another group of 45 countries embrace some form of limited flexibility: 26 “manage” their float, while 19 allow the exchange rate to fluctuate within a specified band

**Figure 6.1** *Major exchange-rate regimes*

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*Fixed corner*

- 1 *Monetary union*: participating members replace their national currencies with a new common currency and establish a common central bank (e.g. Euroland) to manage monetary policy for the union as a whole. This includes the special case of the adoption of a foreign currency as legal tender, such as official dollarization (e.g. Panama).
- 2 *Currency board*: rigidly linking the value of domestic money to that of a foreign currency and tying the domestic monetary base firmly to the level of foreign-exchange reserves (e.g. Hong Kong). Argentina also uses this arrangement, exchanging one peso for one US dollar.
- 3 *A truly fixed peg*: a commitment to buy or sell however much foreign currency is necessary at a given exchange rate, with a firm and lasting intention of maintaining the policy.

*Intermediate regimes*

- 4 *Adjustable peg*: fixing the exchange rate, but without any open-ended commitment to resist devaluation or revaluation in the presence of a large balance-of-payments deficit or surplus (e.g. European countries under the European Monetary System).
- 5 *Crawling peg*: a pre-announced policy of adjusting the exchange rate bit by bit over time (e.g. Indonesia before the 1997 crisis). Costa Rica uses a crawling peg system.
- 6 *Basket peg*: fixing not to a single currency, but to a weighted average of other major currencies (e.g. Thailand before the 1997 crisis).
- 7 *Target zone or band*: a margin of fluctuation around a central rate (e.g. Israel).

*Flexible corner*

- 8 *Managed floating or Dirty float*: the monetary authority of the country does not adopt a particular exchange-rate target; nevertheless, it intervenes occasionally in the foreign-exchange market to influence the movements of the exchange-rate. The monetary authority, however, does not specify or pre-commit to any particular value for the exchange rate, thereby allowing the exchange-rate to fluctuate subject to intervention, but without an explicit exchange-rate target (e.g. Japan). It also intervenes or alters interest-rates at discretion to affect the level or path of the exchange rate.
  - 9 *Free floating*: no official intervention undertaken in the foreign-exchange market, or altering of interest rates for the purpose of affecting the level or path of the nominal exchange-rate. Economic policies (especially monetary policy) pursued with benign indifference to the exchange rate (such a system does not exist in its pure form, but the United States comes close).
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or to move gradually (i.e. “crawl”) along a specified path. A further 44 are still trying to maintain a traditional exchange-rate peg. Finally, 45 countries have sought additional stability by joining a currency union or by taking a major world currency as their own.

However, it is important to note that, although the high-performing Asian economies kept their exchange rates in the “flexible” category, in practice most operated a tightly managed policy. Against the single exception of Korea, Thailand and Indonesia maintained regimes virtually pegged in nominal terms against the US dollar.<sup>47</sup> Such regimes were chosen for two reasons: first, to ensure price stability, and second, to make foreign finance available at a cheaper rate by means of bank loans, and portfolio and foreign direct investment with reduced interest rates spreads. Moreover, exchange-rate pegs had a twofold positive effect on interest rate spreads, by both curbing inflation expectations and sustaining market confidence. However, such a regime is fragile. The peg does not necessarily provide monetary and fiscal discipline, and can lead to an overvalued currency and a widening of current-account imbalances. As the Asian crisis vividly illustrated, a pegged rate can encourage excessive foreign-currency borrowing, as the perceived exchange-rate risk is deceptively small. As was noted earlier, the US dollar pegs resulted in massive competitive losses in many East Asian countries after 1995, when the dollar began to appreciate against other major currencies. The choice of the US dollar as the anchor for a pegged exchange-rate regime could be appropriate for a small open economy when at least the following conditions are satisfied: (1) its trade and investment structure is aimed primarily at the dollar area; and (2) its export competitors are also located in the dollar area – in such conditions, a country’s competitiveness would tend to be stable irrespective of any fluctuation in the dollar. From January 1995 to April 1997 the dollar’s nominal exchange rate appreciated by 25 per cent against the yen and by 17 per cent against the then euro-equivalent (IMF 1999). This appreciation affected the East Asian economies, whose export markets and export competitiveness were diverse in terms of currency. The increasing overvaluation of the East Asian currencies in effective terms provoked growing current-account imbalances.

Furthermore, fixed exchange-rate strategies increased systemic risks by providing an implicit guarantee to domestic companies and international investors – giving them a strong (but misleading) signal of confidence. Pegging against the dollar lent credibility to the central bank’s commitment to maintain the currency’s external stability. On the one hand, in the context of weak and underdeveloped domestic financial sectors, it encouraged domestic companies to take full advantage of the efficiency gap between foreign and domestic financial operators and to borrow directly from foreign banks in US dollars without hedging their liabilities. On the other hand, it prompted foreign banks to lend indiscriminately, especially at shorter maturities, without carefully checking for country risk and debtor creditworthiness.

Thus fixed nominal pegs against the US dollar (combined with other inappropriate policy measures) brought on the crisis sooner and made it more widespread. In fact, the Asian crisis dramatically validated Mundell's (1968) famous "open economy trilemma" – the so-called "impossible trinity" or "incompatibility triangle" – whereby fixed exchange-rate regimes are incompatible with free capital mobility and independent national monetary policies.<sup>48</sup>

The choice of exchange rate has important consequences for an economy, since the exchange rate is one of the most important price signals in the market of tradeable goods and services under an open economy. Thus, the correct choice is crucial to ensuring financial and macroeconomic stability. While all the various regimes have their strengths and weaknesses, until the outbreak of the Asian financial crisis the conventional view among economists was that, for emerging economies, the limited flexibility of a crawling band or managed float offered a good middle ground between the confidence and stability of fixed exchange rates and the flexible monetary policy of floating rates.<sup>49</sup> However, an important lesson of the Mexican and Asian financial crises is that fixed but adjustable exchange-rate pegs (be it soft pegs, bands or crawling pegs) tend to crumble too easily under speculative attacks. Specifically, although adhering to a pegged exchange-rate regime can be a successful strategy for controlling inflation, it also has fatal flaws.<sup>50</sup> According to Eichengreen (1999), pegged exchange-rate regimes are inherently crisis-prone. As Mishkin (1999a, 19) notes, "under a pegged exchange rate regime, when a successful speculative attack occurs, the decline in the value of the domestic currency is usually larger, more rapid and more unanticipated than when a depreciation occurs under a floating exchange rate regime." No doubt, in each case – Mexico in 1994, Thailand, Indonesia and Korea in 1997, Russia and Brazil in 1998 and Argentina and Turkey in 2000 – the defense of an exchange rate pegged at untenable levels was at the heart of the crises.<sup>51</sup> The worst-hit country (Indonesia) saw its currency decline to less than one-quarter of its pre-crisis value in a matter of weeks. In fact, all the crisis-affected Asian countries were forced to abandon their *de facto* exchange-rate pegs, and the subsequent floats of their currencies were associated with very sharp declines and fluctuations in their values. In contrast, "emerging market economies that maintained greater flexibility in their exchange rate regimes generally fared better. For example, Chile, Mexico, Peru, South Africa and Turkey all seem to have benefitted from the flexibility of their exchange rates during the recent international financial crisis" (Mussa *et al.* 2000, 38).

Why don't pegs work as well as they used to do, and why don't countries abandon them? Most analysts agree that financial globalization and high capital mobility have rendered the operation of intermediate arrangements (in particular, the adjustable peg regime) problematic because rapid flows of large and liquid international capital markets make its exceedingly difficult

**Table 6.1** *Official exchange-rate regimes in selected Asian countries*

<i>Country</i>	<i>Date</i>	<i>Regime</i>
Indonesia	November 1978–June 1997	Managed floating
	July 1997–December 2000	Independently floating
South Korea	March 1980–October 1997	Managed floating
	November 1997–December 2000	Independently floating
Malaysia	January 1986–February 1990	Limited flexibility
	March 1990–November 1992	Fixed
	December 1992–September 1998	Managed floating
	September 1998–December 2000	Pegged arrangement
Thailand	January 1970–June 1997	Fixed
	July 1997–December 2000	Independently floating

for authorities to support a peg. Specifically, when capital inflows accelerate, if the exchange rate is prevented from rising, inflationary pressures build up and the real exchange rate will appreciate through higher domestic inflation. To avoid such consequences, central banks usually attempt to “sterilize” the inflows by using offsetting open-market operations to try to mop up the inflowing liquidity. However, sterilization only provides short-term relief.<sup>52</sup> Since open-market operations have only a limited impact in offsetting the monetary consequences of large capital inflows, in particular, the more speculative short-term capital inflows – in the face of a sudden reversal of sentiment and currency depreciation – even the most competent central bank will find it difficult to know when to abandon the defense of its currency, or when to call the speculators’ bluff. In any case, both strategies carries enormous costs. As Eichengreen (1999, 104), aptly notes: “pegged rates create one-way bets for speculators, making sitting ducks of the central banks and governments seeking to operate them.” Table 6.1 provides a rough classification of the exchange rate regimes in the four crisis-hit countries before and after the financial crisis.

It is now generally agreed that countries can only with great difficulty maintain intermediate exchange-rate regimes in the face of open capital markets. Although there are a number of developing countries still engaged in intermediate exchange-rate arrangements, the middle has greatly shrunk. What should be done next? It is now argued that only polar extremes – floating or fixed exchange rates supported by very strong commitment mechanisms (“hard pegs”) can be sustained for extended periods. Indeed, in the context of increased integration with international capital markets, it seems that there are two credible choices left: a country can either let its exchange

rate float freely or adopt a truly fixed arrangement such as hard pegs. In fact, this vanishing middle ground for exchange-rate regimes has been identified in the literature as the “hollowing of the middle” in the spectrum of exchange-rate regimes (Williamson 2000). In a provocative article, aptly titled, “Exchange Rate Regimes: Is the Bipolar View Correct?,” Stanley Fischer (2001) notes:

In recent years, fixed or pegged exchange rates have been a factor in every major emerging market financial crisis – Mexico at the end of 1994; Thailand, Indonesia and Korea in 1997; Russia and Brazil in 1998; Argentina and Turkey in 2000; and Turkey again in 2001. Emerging market countries without pegged rates – including South Africa, Israel, Mexico and Turkey in 1998 – have been able to avoid such crises. No wonder many policymakers now warn against the use of pegged but adjustable rates (soft pegs) in countries open to capital flows. This belief that intermediate regimes between hard pegs and free floating are unsustainable is known as the bipolar view, or two-corner solution. Willingly or otherwise, a growing number of countries have come to accept it. The proportion of IMF members with intermediate arrangements fell during the 1990s, while the use of hard pegs and more flexible arrangements rose. Proponents of the bipolar view – myself included – have perhaps exaggerated their argument for dramatic effect.

Yet Fischer (2001) recognizes that developing countries that are not yet very exposed to international capital flows still face a wide range of intermediate exchange regime options, in particular “crawling bands with wide ranges.” Mussa and his co-authors (2000) go a step further in defending intermediate regimes by making a distinction between the sustainability and the desirability of pegs. The fact that soft pegs may not be sustainable for many countries need not imply that they cannot play a positive role for a limited period of time, for example, as a nominal anchor during stabilization from high inflation.<sup>53</sup> More explicitly, Williamson (2000) proposes “monitoring bands” as a viable intermediate regime. Such a system operates within a wide band, ensuring full flexibility of exchange rates. However, once the exchange rate goes outside the band (on either side), the central bank would be allowed to intervene. To Williamson, the key difference between a crawling band and a monitoring band is that the latter does not involve an obligation to defend a publicly announced margin – the major culprit in provoking speculative attacks.

Given the competing views, what is appropriate is difficult to say. As Frankel (1999) has noted, “no single currency regime is right for all countries or at all times.” Indeed, the optimal regime ultimately depends on a wide range of factors peculiar to a country, such as size, openness, labor mobility, fiscal capacity, the size of reserves, and the strength of the banking system, among others. For example, floating exchange rates allow a country to pursue an independent monetary policy. Since such a regime allows the exchange rate to move in response to market forces, it generates an

exchange-rate risk, compelling firms and investors to hedge their currency exposures. Nevertheless, floating exchange rates remain at the mercy of the markets and, in particular, susceptible to herding and contagion. Rapid capital movements can quickly overwhelm emerging markets with limited absorptive capacities. Floating rates can be subject to sharp fluctuations, forcing currencies to “overshoot the economic fundamentals” – thereby pushing a currency far below its underlying economic value – leaving rising inflation, trade deficits, and eroding export competitiveness in its wake. Finally, as Hausmann, Panizza and Stein (1999) have shown, emerging markets in Latin America that have attempted to allow their exchange rates to float have experienced greater interest-rate volatility than fixed-rate regimes. For this reason, Calvo and Reinhart (2000) argue that floating exchange rates can have destabilizing effects on emerging markets.

On the other hand, a fixed exchange-rate regime reduces transaction costs. As was noted earlier, it can provide a useful anchor for price stability by linking weak and emerging economies to the large, powerful economies, *inter alia* bringing about reductions in the transaction costs of international trade and investment. However, a fixed exchange rate can generate moral hazard among foreign investors if the regime is perceived to be credible. Under such conditions, the regime can take the form of an implicit guarantee and a source of moral hazard by promoting unhedged currency borrowing and skewing capital flows toward the short end. Moreover, private capital flows can overwhelm a fixed exchange rate, forcing costly devaluations and revaluations, the costs including raising the current-account deficit and reducing foreign reserves. A “successful defense” of a fixed rate can often be costly, requiring a country to raise interest rates and/or slow its economy to avoid speculative attacks.

The experiences of Hong Kong and Argentina illustrate that even the rigid pegs of a currency board arrangement are not free from speculative attacks or banking collapse. Currency-board pressures in both these countries (especially Argentina) have exacted very high costs in terms of economic growth.

For example, under Argentina’s 1991 convertibility law, the peso/dollar exchange rate was fixed at one to one. This meant that the public could go to the Argentine central bank and exchange a peso for a dollar, or vice versa, at any time. In the early years Argentina’s currency board performed successfully. Inflation, which had been running at an 800 per cent–1,000 per cent annual rate in 1990, fell to less than 5 per cent by the end of 1994. Similarly, economic growth averaged almost 8 per cent as an annual rate from 1991 to 1994 – one of the highest in the world. However, in the aftermath of the Mexican peso crisis, concern about the health of the Argentine economy resulted in the public pulling money out of the banks (deposits fell by some 18 per cent), and exchanging pesos for dollars. This caused a contraction in the country’s money supply, resulting in a sharp drop

in economic activity. What is important to note is that because the Argentine central bank had no control over monetary policy under the currency board system, it was relatively helpless to counteract the contractionary monetary policy stemming from the public's behavior. Moreover, because the currency board did not allow the central bank to create pesos and lend them to the banks, it had very little capacity to act as a lender of last resort. However, with the assistance of the IMF, the World Bank and the Inter-American Development Bank (which altogether lent over US\$5 billion to Argentina), the country was able to shore up its banking system, and thereby its currency board system.

Although Argentina was able to maintain its fixed exchange rate *vis-à-vis* the US dollar, the situation became increasingly precarious over time. Brazil (Argentina's main competitor) has a floating exchange rate that made the *real* increasingly competitive against the Argentine peso. The result was a growing trade deficit in Argentina – which in turn placed significant pressure on the peso, leading to extremely high interest rates in Argentina. In turn, the high interest rates produced a mushrooming government deficit because of the higher interest on the national debt and a lower tax base as the economic downturn took its toll. Finally, unable to control the interest-rate differentials between peso-denominated and dollar-denominated debt, Argentina abandoned the system in January 2002.<sup>54</sup> Thus, at the end of the day, a currency board system can be credible only if the central bank holds sufficient official foreign-exchange reserves at least to cover the entire narrow money supply. In this way, financial markets and the public can be assured that every domestic currency bill is backed by an equivalent amount of foreign currency in the official coffers. This was not the case in Argentina.

The two primary benefits of dollarization include the elimination of exchange-rate volatility (against the dollar) and exchange-rate crises. While total dollarization almost eliminates the possibility of a currency devaluation and transaction costs associated with international trade and finance with the United States, dollarized economies face similar problems to those associated with currency board systems. Namely, dollarization is subject to the usual disadvantages of an exchange-rate target. Besides losing several important instruments of control over policy (for example, no domestic institution can act as the lender of last resort, increased the exposure of the economy to shocks from the anchor country), there is also complete loss of seigniorage – or the revenue that a government receives by issuing money.<sup>55</sup> It is recognized that dollarization may be feasible only for small, open economies highly vulnerable to international shocks, and with strong international trade and financial ties to the United States.<sup>56</sup> In addition, a dollarized economy with a weak banking system may not be able to efficiently channel the capital inflow that inevitably accompanies dollarization, leading to unsustainable lending booms and financial disintermediation. Finally, while

a country's decision to dollarize its economy does not require the permission of the United States government or the Federal Reserve, it should be noted that the chief policy-makers at both the Fed and the US Department of the Treasury have stated that the policies of the United States will not be altered to adapt to the economic considerations of countries that choose to dollarize.

As of June 1999, the IMF reported that 67 countries had pegged their currency, 8 adhered to a currency board arrangement and the remaining 73 followed more flexible arrangements, such as managed or independent floating. Even among the more homogeneous group of 29 OECD countries, 6 had pegged their currencies, 12 followed arrangements of independent or managed floating and 11 had just formed a monetary union in which they agreed to adopt a common currency, the euro – which became legal tender in January 2002. In accordance with the IMF's Articles of Agreement, which leave the choice of its exchange-rate system to each country, the Fund does not have an official position on its member countries' exchange-rate regimes. Furthermore, the IMF generally avoids being doctrinaire on the exchange-rate regime when deciding whether to support a country's program. Rather, the Fund maintains that it sees advantages in both fixed and flexible exchange-rate systems – depending on a country's economic circumstances. Indeed, the Fund has taken different approaches in different situations. In Ecuador (early in 2000), the IMF supported dollarization, when a few months earlier it was against the idea. In Turkey, the Fund supported a crawling peg to stabilize triple-digit inflation in early 2000, albeit the strategy did not succeed. Nevertheless, the Fund's deputy managing-director, Stanley Fischer (1999, 10), noted that “the virulence of the recent crises is likely to shift the balance towards the choice of more flexible exchange rate systems, including crawling pegs with wide bands.”

However, if the IMF is to play an important role in shaping the new international financial architecture and building a financial and monetary system with fewer vulnerabilities, it will have to guide countries effectively in adopting exchange-rate regimes that are right for them. That is, the IMF must offer timely assessment of whether the prevailing exchange-rate regime is broadly consistent with the country's external and domestic policy goals. Most importantly, the IMF should not provide large-scale assistance to countries that are intervening heavily to support an exchange-rate peg if this peg is inconsistent with underlying policies. Rather, the IMF should do more to encourage exchange-rate flexibility for countries that liberalize their capital accounts. Of course, flexibility does not necessarily mean free floating. As Fischer (1999) notes, bands of fluctuation allow much flexibility if they are wide enough to ensure that the equilibrium exchange rate is included in the band. For countries that decided to retain a fixed exchange-rate system, they should, as a precondition, be requested to make the regime sustainable.

### **A new approach to sovereign debt restructuring**

Recently Anne Krueger (2002), the new first deputy managing-director of the IMF, made a bold proposal: that under certain conditions, a government's international debt repayments should be temporarily suspended while negotiations take place on restructuring the debt. To Krueger, the establishment of an effective sovereign debt restructuring mechanism (SDRM) will not only fill a glaring weakness in the emerging international financial architecture by ensuring the timely and orderly restructuring of unsustainable sovereign debts, but also put debtors and creditors, rather than the IMF, in the driver's seat regarding debt negotiations.

No doubt, currently sovereign borrowers often find it very difficult to get their creditors to agree collectively to a restructuring that reduces the net present value of their obligations to a manageable level. Even if such a restructuring would be in the interests of creditors as a group, some may prefer to "free-ride," hoping that they will ultimately be repaid in line with their original contracts. Similarly, a debtor country may all too often delay a necessary restructuring until the last possible moment, draining its reserves and increasing the eventual cost of restoring sustainability. Creditors also suffer when fears about some being unfairly favored over others block agreement on a restructuring. Indeed, creditors often "rush to the exits" because they fear that restructuring will be disorderly. This can leave all parties concerned with no option but to accept a disruptive and potentially contagious unilateral default – or a bailout of private creditors that contributes to moral hazard. Moreover, the citizens of the defaulting country experience greater hardship than they need to, and the international community via the IMF has a tougher task helping pick up the pieces.

The proposed SDRM (modeled on corporate bankruptcy law) would allow countries to seek legal protection from creditors that stand in the way of restructuring, and in exchange debtors would have to negotiate with their creditors in good faith. Specifically, a formal SDRM would be built on four principles: (1) creditors would not be allowed to disrupt negotiations by having recourse to their own national courts; (2) debtor countries would need to provide assurances that they are negotiating in good faith and treating all creditors equally; (3) private creditors would need to be encouraged to lend new money by receiving some guarantee that they would be repaid ahead of existing private creditors; and (4) once agreement on a restructuring had been reached by a large enough majority of creditors, the rest would have to be bound to accept the terms. Countries would come to the IMF and request a temporary standstill on their debts (probably lasting a few months) while the country negotiates a rescheduling or restructuring. Extensions would require IMF approval. Moreover, the plan may also require the imposition of temporary exchange controls to stop money from fleeing the country. For Krueger, the primary objective in creating such a formal

mechanism is to create incentives for debtors and creditors to reach agreement on their own, so that the mechanism would rarely need to be used.

Krueger makes it clear that the key step would be to enable a majority of creditors (across the broad range of credit instruments) to make the terms of restructuring binding on the rest. That is, all creditors would be obliged to comply with a plan approved by a large enough majority. This would eliminate the free-rider problem, thereby making early agreement more likely, and reducing the threat of unilateral legal action by creditors after a sovereign default. How would decisions made by the debtor and a majority of creditors be made binding on all creditors? For Krueger, the solution is the wider use of collective action clauses (which would allow a majority of creditors to impose a deal on the remaining minority), thereby helping to resolve some debt problems. However, Krueger is fully aware that collective action clauses will solve only part of the problem. Thus she calls for a universal treaty rather than piecemeal changes to national legislation. Such a treaty would set up an international judicial panel to arbitrate disputes.

Krueger's proposal, if comprehensively implemented, would represent a significant improvement over existing arrangements. The new mechanism would create a more efficient debt-restructuring process by allowing countries to resolve debt-problems in an orderly way. Yet the challenges to creating an effective SDRM remain daunting. First, debt-restructuring has become more complicated over the past two decades, in part because of the growing use of bonds and complicated derivatives. Bondholders are more numerous, anonymous and difficult to coordinate than banks. They also have a bigger incentive to sue debtors for repayment. And, second, although the IMF has officially endorsed Krueger's proposal, an amendment to the IMF's articles would be required before this proposal can move to the implementation stage. Even if the Fund's articles are amended (not an easy task), questions regarding what financing the IMF should provide after the restructuring, or to what type of debt the stay should apply, still need to be resolved.

## Notes

- 1 Cited in DeRosa (2001, 114).
- 2 Kenen (2000, 1–2). Also Grunberg (1999, 432) notes that “the Halifax summit only endorsed tougher data disclosure standards . . . the consequences of the inaction at Halifax are seen now” – meaning the Asian crisis.
- 3 “Moral hazard” refers to a situation where someone can reap the rewards from their actions when things go well, but does not suffer the full consequences when things go badly. Hence investors do not have to exercise due diligence, since they would expect a bailout in the case of default; or, for that matter, debtor countries can choose to pursue risky economic policies with the expectation that they will not have to pay the full costs of their debts; and investors will not lose the full amount invested if a financial crisis occurs. In the case of

the Mexican peso crisis, it was argued, the IMF, by cushioning the losses of imprudent lenders and borrowers with generous “bailout packages,” only encouraged reckless behavior in the future. “Asymmetric information” emerges when one party to a financial contract does not have the same information as the other party.

- 4 The IMF (along with the World Bank) was established at Bretton Woods in 1944 to supervise the operation of the system of fixed exchange rates. This system ended in 1971.
- 5 Friedman (1999, 4). For similar arguments, see also Schwartz (1998).
- 6 For example, the Mexican rescue package allowed holders of Mexican government securities (*tesobonos*) to get out with little cost.
- 7 For details, see Institute of International Finance (1999) and Kho and Stulz (1999).
- 8 The collapse of a relatively small US hedge fund, Long-Term Capital Management, in August 1998, and the threat of its bringing down a much wider circle of financial institutions, is illustrative. The Federal Reserve stepped in in time to prevent the contagion.
- 9 Suffice it to note that the moral hazard argument can be applied on a variety of levels, including the IMF, governments and companies. That is, if we do not need the IMF internationally, should we then not have lenders of last resort domestically – more specifically, should we abolish our national deposit insurance schemes?
- 10 For details, see International Financial Institution Advisory Commission (2000) and Meltzer (1998, 1999).
- 11 A standstill agreement is where creditors agree to “stand still” – that is, not to request a debt repayment at the contractual maturity date.
- 12 For details, see G-7 (Group of Seven) (2000); G-22 (Group of Twenty-Two) (1998).
- 13 The United States is the one of the IMF’s major financial backers, with a quota or “membership fee” that accounts for roughly 18 per cent of the total IMF funds. The quota also determines its “drawings,” or voting power and borrowing capacity.
- 14 The establishment of the NAB did not replace the GAB, which remained in force. However, the NAB became the arrangement of first recourse. The GAB was activated during the summer of 1998 to help finance the IMF’s loan of SDR 8.5 billion to Russia. This was the first time in 20 years that the GAB had been activated. Following its entry into force, the NAB was activated in December 1998 to help finance the IMF’s loan of SDR 13 billion to Brazil.
- 15 None the less, it was recognized that Basle Committee on Banking Supervision will continue to take responsibility for formulating banking and supervision standards, while the IMF’s primary role will be to monitor the adoption and implementation of these standards during its regular Article IV surveillance work.
- 16 The Bank for International Settlements, an international institution based in Basle, Switzerland, acts as a kind of central bankers’ bank.
- 17 There was recognition that the monitoring of international capital flows had to be improved. This meant that much better data had to be made available. The Bank for International Settlements (BIS) (which provided some of the best data

- on short-term international capital flows), was available only twice a year, with a six-month lag. Hence a foreign-exchange crisis could arrive and depart well before these data could even provide a warning sign. It was agreed that the BIS move towards a quarterly data system, with a one-month lag.
- 18 After all, when foreign investors escape without “taking a hit,” it is taxpayers who end up footing the bill to service IMF debts.
  - 19 Of course, there is no assurance that the IMF would be able to mobilize the resources needed to meet the requirements if it should be called upon for assistance under the SRF. The inadequacy of resources has in the past forced the Fund to deal with crises by trying to arrange finance from different sources, including multilateral agencies such as the World Bank and bilateral assistance from member countries.
  - 20 Bagehot, of course, was thinking of the Bank of England’s acting as the lender of last resort to avert the liquidity crises afflicting the city of London in the early nineteenth century. Bagehot argued that the lender of last resort should provide cash without limit to solvent borrowers at a penal rate of interest.
  - 21 That is, the collateral should be valued at pre-panic prices.
  - 22 Still, episodes like the US Savings and Loan crisis indicate that good supervision and regulation do not eliminate the need for a lender of last resort.
  - 23 In theory, the IMF has the means to create unlimited resources through the allocation of special assets known as special drawing rights (SDRs). Members could vote it the power to create such liquidity in an emergency, although they have not done so to date.
  - 24 In fact, the IMF Articles of Agreement (Article VI, section 3) signed at Bretton Woods explicitly permitted capital controls. Also, one of the architects of those articles, John Maynard Keynes, was a strong proponent of capital controls.
  - 25 Earlier, the maintenance of capital controls was not viewed as inconsistent with the objective of the elimination of foreign-exchange restrictions, partly because capital controls were considered necessary for supporting the system of fixed exchange rates.
  - 26 In hindsight, the BIBF ended up unintentionally serving as a conduit for local firms vastly to expand their loans from foreign banks. Much of this money went into the real-estate sector, creating over-supply. When these investments went sour, bad loans proliferated. The worst part was that most of these loans were denominated in foreign currency, with usually no hedging against currency depreciation. The results were disastrous.
  - 27 That is, corporate residents with domestic borrowing were required to seek prior approval to remit funds in excess of 10 million ringgit per corporate group per year for overseas investment, including extension of loans to non-residents.
  - 28 In principle, the exchange-rate value of the currency was determined by the market, though Bank Negara Malaysia acknowledged intervening to smooth fluctuations that it considered excessive.
  - 29 On July 14, 1997, the Malaysian government floated the ringgit after finding the existing *de facto* exchange regime to be unsustainable. With the flotation, the ringgit dropped from RM2.50 to the US dollar prior to the crisis to its lowest level of RM4.88 to the dollar on January 7, 1998.
  - 30 As of August 1998, the offshore ringgit market was offering deposit interest rates exceeding 20–40 per cent, compared with 11 per cent in Malaysian banks.

- By that time the ringgit had depreciated to around RM4.20 per US dollar from around RM3.75 in April 1998.
- 31 For example, on January 12, 1998, the Kuala Lumpur Stock Exchange (KLSE) saw its composite index crash to a low of 477.57 points, which wiped out almost RM580 billion or 65 per cent of the total market capitalization recorded when the index was at a high of 1271.57 points in February 1997 (Yusof, Hew and Nambiar 2000, 67).
- 32 Anwar was also accused of being an IMF stooge and blamed for the economic recession.
- 33 In February 1999, a system of taxes on outflows replaced the prohibition on repatriation of capital. Specifically, the old measure was replaced with exit levies on the repatriation of portfolio capital that decline with the holding period of the investment.
- 34 The Malaysian case is quite different from controls on *capital inflows* as implemented in Chile between 1991 and 1998. Specifically, Chile imposed various restrictions on inflows, including a requirement that a portion of any money borrowed abroad be deposited for a year at the central bank, without interest. As was noted earlier, in the case of Malaysia, on February 4, 1999, the 12-month holding restriction on the repatriation of portfolio capital was replaced with a declining scale of exit levies.
- 35 Firms, for example, may evade controls on capital flows by falsifying invoices for traded goods.
- 36 The argument is that high capital mobility limits discretionary policy and forces governments to adopt “good” or market-conforming policies, including sound financial supervision policies.
- 37 Tobin (1978) argued that since the order of magnitude for the tax would be around 0.1 per cent, or US\$1,000 per million dollars sold, it would be a negligible cost for long-term investors. However, for speculators flipping currencies weekly or daily, it would amount to a tax of 10 per cent to 50 per cent on their investment. Criticism of the Tobin tax has focused mainly on its technical feasibility. With over US\$1 trillion changing hands daily in foreign-exchange markets, imposing such a tax would be greatly challenging. Also, to be effective, the tax would have to be uniformly adopted worldwide. That is, if it were to be adopted in only a few countries, it would probably lead the taxed agents to shift to untaxed locations.
- 38 See Krugman (1998, 74–80; 1998b; 1998c). In a later article, Krugman (1999a, 56–7), argued that “Sooner or later we will have to turn the clock at least part of the way back: to limit capital flows for countries that are unsuitable for either currency unions or free floating.”
- 39 Also see Stiglitz (2000).
- 40 No doubt, there is evidence indicating that capital controls involving taxes and reserve requirements can change the composition of capital inflows in favor of long-term investment, and thereby decrease the likelihood of large, sudden outflows. However, Calvo and Reinhart (2000) caution that these results may depend on the accounting classification of capital flows. Furthermore, Edwards (2001, 1999) argues that when analyzing the maturity of a country’s foreign debt, the relevant concept is residual maturity (measured by the value of a country’s liabilities that are held by foreigners and mature within a year), rather

- than contractual maturity. Using data from Chile, Edwards shows that short-term capital controls had a limited effect on Chile's residual maturity of foreign debt and that Chile had higher residual maturity than Mexico (a country without capital controls) at the end of 1996.
- 41 Many elements contributed to the fall of Bretton Woods system, but an important one concerned the liquidity of the system. Under the agreement, the US Treasury fixed the price of the US dollar in terms of gold by buying and selling gold on the market. In other words, the United States promised to exchange US dollars for gold at the official price of US\$35 per ounce. The system collapsed when other countries no longer believed that the United States could keep its promise to exchange US dollars for gold at the official price. In the 1960s, US reserves of gold steadily declined, while the amount of US liabilities to foreigners increased. That is, there were more and more US dollars in circulation for every ounce of gold, putting more strain on the capacity of the United States to honor the agreement. Other countries that had accumulated US dollars became afraid that the dollar would be devalued in terms of gold, and began to convert their holdings of dollars into gold. In August 1971, President Nixon suspended the convertibility of dollars into gold – ending the Bretton Woods system.
  - 42 In support of their argument, Calvo and Reinhart (2000) conduct an empirical analysis comparing the announced exchange-rate regime of countries with their actual exchange-rate behavior. Their findings indicate that countries classified as letting their exchange rate float, in general do not. Thus it seems that very few, if any, countries are in reality willing to take this approach.
  - 43 Speculators often bet that central banks that have allowed substantial appreciation of the real exchange rate through relatively high domestic inflation will choose to break the peg and devalue, rather than let the domestic economy stagnate for a prolonged period with a high, uncompetitive real exchange rate.
  - 44 All so-called fixed exchange rates are potentially adjustable unless the country literally gives up its currency.
  - 45 There are two ways a country's economy can become dollarized. A *de facto* dollarization can occur when citizens lose faith in their national currency and turn away from it towards the dollar. This has occurred in many Latin American countries. Second, dollarization occurs when a foreign government makes a conscious decision to replace its own currency with the US dollar.
  - 46 The end of convertibility of the dollar into gold in the summer of 1971 was a first step toward the breakdown of the Bretton Woods system – which collapsed with the floating of major currencies in early 1973. A major reason why most developing countries continued to peg their currencies was because many restricted the convertibility of their currencies for current transactions, thereby essentially obliging them to peg (either explicitly or implicitly) to a convertible foreign currency.
  - 47 As has been noted, by the early 1980s all the crisis-hit countries had moved away from the old policy of pegging against the US dollar towards more flexible exchange-rate regimes of basket pegging or managed “dirty float.” But the extensive intervention policies of the central banks meant that exchange rates were *de facto* pegged to the dollar. In Korea, although the exchange rate was not fixed, its undervaluation in a managed float system and relatively high interest rates at home had increased the attractions of foreign borrowing. Yen-denominated loans

became especially attractive in the couple of years before the crisis, because the continuing decline in the value of the yen against the US dollar lowered the real cost of yen loans to borrowers.

- 48 A basic principle of open macroeconomics is that one can only have two of the three following features: a fixed exchange rate, full capital mobility, and monetary policy independence. Any pair is possible; however, any attempt to achieve all three inevitably results in a currency crisis. The reason for the inconsistency is well documented. Full capital mobility implies that the interest rate is determined by financial conditions out of reach of the domestic monetary authorities. A fixed exchange rate implies that the central bank must stand ready to buy or sell its own currency in unlimited quantities: thus, the money supply is fully demand-determined, and monetary independence is lost. Viewed in this context, the policies adopted by Asian countries in the 1990s can be seen as challenging the impossible trinity. For example, capital inflows stimulated the domestic economy, but often to the level of overheating. Moreover, the interest rate could not be raised to dampen domestic overheating, because higher interest rates would invite more capital inflows. In the case of Thailand, easy monetary policy played a big role in creating the bubble. However, in the absence of capital controls, monetary policy was bound by the world market, and offshore markets made it very easy to move funds in and out of Thailand. To recover independence, a country can either give up the fixed exchange rate target or recover control of its interest rate and demand for money by preventing capital movements.
- 49 More specifically, prior to the Asian crisis, the mainstream economic literature argued that the desire to satisfy several objectives – flexibility versus commitment, inflation stabilization versus competitiveness, and insulation from monetary shocks versus insulation from real shocks – made the compromise solutions between hard pegs and pure floats inevitable.
- 50 A number of authors have argued that fixed, but adjustable, nominal exchange rates provide an effective device for guiding a disinflation program and maintaining macroeconomic stability. According to this view, a prerequisite for a successful exchange-rate-based stabilization program is that the country in question have its public finances in order. Mexico adopted this strategy in 1988 – the year the exchange-rate-based stabilization program known as the *Pacto de Solidaridad* was implemented. See Edwards and Santaella (1993).
- 51 All these countries had *de jure* or *de facto* exchange-rate pegs or otherwise substantially limited the movement of their exchange rates.
- 52 First, sterilization prevents domestic interest rates from falling in response to the inflows. And, second, given the relatively small size of the domestic market compared with international capital flows, sterilization tends to become less effective over time.
- 53 Of course, this assumes that these countries will find a way to “exit” safely from the peg without a crisis.
- 54 It should also be noted that Argentina’s fixed exchange-rate system was made even more unstable by a full capital account convertibility. This not only allowed domestic residents to convert pesos to dollars at a fixed exchange rate of one peso per dollar, but also allowed an unlimited export of those dollars.
- 55 Seigniorage is the revenue (or the profit) a country earns by issuing currency. For example, when the US Federal Reserve issues dollars it buys US Treasury

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securities in exchange. So when the Treasury makes payments on these securities they go to the Federal Reserve. In turn, the Federal Reserve uses a small portion of these payments to help finance its operations and sends the rest back to the Treasury Department.

- 56 Both the US Federal Reserve and the Treasury have stated that the policies of the United States will not be altered to adapt to the economic exigencies of countries that choose to dollarize. So foreign governments considering full dollarization must do so with the understanding that US monetary policy will remain focused on domestic issues.