

Capital Market Liberalization and Exchange Rate Regimes: Risk without Reward

By JOSEPH E. STIGLITZ

ABSTRACT: This paper examines the consequences of capital market liberalization, with special reference to its effects under different exchange rate regimes. Capital market liberalization has not led to faster growth in developing countries, but has led to greater risks. It describes how International Monetary Fund policies have exacerbated the risks, as a result of the macro-economic response to crises, with bail-out packages that have intensified moral hazard problems. The paper provides a critique of the arguments for capital market liberalization. It argues that capital flows give rise to large externalities, which affect others than the borrower and lender, and whenever there are large externalities, there is potential scope for government interventions, some of which are welfare increasing.

Joseph E. Stiglitz holds joint professorships at Columbia University's Economics Department, School of International and Public Affairs, and Business School. From 1997 to 2000 he was the World Bank's Senior Vice President for Development Economics and Chief Economist. From 1995 to 1997, he served as Chairman of the U.S. Council of Economic Advisers and a member of President Bill Clinton's cabinet. He was previously a professor of economics at Stanford, Princeton, Yale, and All Souls College, Oxford. He was awarded the Nobel Prize in Economics in 2001 for his analysis of markets with asymmetric information.

FOR almost half a decade, capital market liberalization raged as the prime battleground between those who were pushing for and against globalization, and for good reason: By the mid-1990s, the notion that free trade or at least freer trade brought benefits both to the developed and the less developed countries seemed well accepted. President Clinton could claim passage of NAFTA and the Uruguay Round, with the establishment of the World Trade Organization, among the major achievements of his first four years. APEC and the Americas had both committed themselves to creating a free-trade area. Not only had the intellectual battle been won—only special interests resisted trade liberalization—but so seemingly had the political battle. On other fronts, the broader liberalization/free-market agenda was winning victory after victory: the Uruguay round had extended the scope of traditional trade liberalization to include liberalization in financial services, the protection of intellectual property rights, and even investment. Although the Multilateral Investment Agreement was having trouble, investment protections in NAFTA were cited as a basis on which further agreements could be reached. Even “liberal” governments—the democratic administration in the United States, the labor government in Britain—embraced privatization and deregulation, with the United States going so far as to push through the privatization of the corporation making enriched uranium, the core ingredient in making nuclear weapons (as

well as fuel for nuclear reactors). Only capital market liberalization—eliminating the restrictions on the free flow of short-term capital—remained as a point of contention. At its annual meetings in Hong Kong, the International Monetary Fund (IMF) sought to settle this issue too: it asked for a change in its charter, to give it a mandate to push for capital market liberalization, just as it had a mandate, in its founding, for the elimination of capital controls that interfered with trade.

The timing could not have been worse: the East Asia crisis was brewing. Thailand had already succumbed, with a crisis that began on 2 July. The delegates to the Hong Kong meeting had hardly unpacked their bags on returning home when the crisis struck in Indonesia. Within a little more than a year, it had become a global economic crisis, touching virtually every corner of the globe, with bailouts billed at more than 150 billion dollars occurring not only in Thailand and Indonesia, but Korea, Brazil, and Russia. And it was clear that hot, speculative money—short-term capital flows—was at the heart of the crisis: if they had not caused it, they at least played a central role in its propagation. The only two large emerging markets to be spared the ravages of the global financial crisis were India and China, both of which had imposed capital controls. (Even as the global economy faced a major slowdown, China managed to grow by more than 7 percent, India by more than 5 percent). Malaysia had imposed capital controls to help it manage its way

through the crisis, and as a result, its downturn was shorter, and as it recovered, it was left with less of a legacy of debt than the other countries because it had imposed capital controls. By the time matters settled down, the IMF had markedly changed its tune: its chief economist (Mussa 2000) admitted that financial market liberalization could have markedly adverse effects on less developed countries that were not adequately prepared for it (in the view of many economists in the developing world, this meant virtually all developing countries).¹ It admitted that its predictions (and those of the U.S. Treasury) that Malaysia's imposition of controls would prove to be a disaster had been wrong—they had succeeded in spite of what might have seemed as efforts to undermine the country through public criticism of an almost unprecedented nature.²

But while the intellectual battle was thus seemingly over, the political battle continued: the managing director of the IMF, Michel Camdessus, continued pushing for capital market liberalization in his annual speeches until his departure from the IMF. And countries that propose going back on capital market liberalization are strongly advised against it—to the point of implicit or explicit threats of having programs cut off.³

But these political battles are, for the most part, going on behind the scenes. The more visible political debate has moved back to issues thought at one time settled—for instance, to trade and intellectual property rights. Still, revisiting that earlier debate has much to teach us,

both about economics and politics. It is precisely because the disjunction between the positions that the IMF took and the theory and evidence concerning capital market liberalization, between their mandate to promote global stability, and the policy which seem so patently to lead to global instability was so great that the debate on capital market liberalization throws into such stark relief broader aspects of the globalization controversy. (In other arenas, such as trade liberalization, theory and evidence are more ambiguous, and while the IMF may have pushed policies that could not be *defended* as fulfilling its mandate, neither could they, by and large, be criticized for actually going against their mandate.)

The consequences of capital market liberalization depend, of course, in part, but only in part, on the exchange rate regime, which is the focus of many of the articles in this issue. But before turning to that issue, it is important to understand the more general case against and for capital market liberalization. Accordingly, in this article, I propose first to explain the strength of the opposition to capital market liberalization: it increases the risks facing a country while it does not promote economic growth. Given the overwhelming theory and evidence against capital market liberalization, one wonders: how could the major international organization responsible for promoting growth and stability have promoted a policy that seemed so contrary to its objectives? I first review the arguments that were put forward for capital

market liberalization. I then turn to the deeper political economy questions, exploring the role of ideology and interests. I conclude by arguing that at the root of the problem is governance: the governance structure of the IMF led it to push for policies that were contradictory to its mandate for promoting global stability and that reflected the interests and ideology of those to whom it was directly accountable. There is, in this, an important lesson for the evolving globalization debate, to which I turn briefly in the concluding section.

THE ECONOMIC CASE
AGAINST CAPITAL
MARKET LIBERALIZATION

The evidence is that capital market liberalization is not associated with faster economic growth or higher levels of investment but is associated with higher levels of economic volatility and risk. And, in general, the poor bear the brunt of much of this risk, especially in developing countries, where safety nets (like unemployment insurance systems) are nonexistent or inadequate.

Growth

Ascertaining whether trade liberalization, or capital market liberalization, leads to faster economic growth is not an easy matter. A standard, though widely discredited, methodology entails looking at the growth rates of different countries, attempting to ascertain whether those who have liberalized more or faster have grown faster, controlling for other factors that might have affected growth. The problematic

nature of such studies is highlighted by the contradictory results that have been obtained in the trade liberalization literature, with scholars like Sachs and Warner (1995) arguing that trade liberalization is systematically associated with growth, and others, like Rodriguez and Rodrik (1999), questioning the results. The results are highly sensitive to issues like how to weight the experience of different countries and how to separate causal factors with mere association. For instance, China with its more than 1 billion people has been the fastest growing developing country in the world; growth in China accounts for a substantial fraction (by some accounts, two-thirds or more) of total growth among the low-income countries. But should China—which did not liberalize—be given the same weight in the analysis as some small country in Africa with a couple million people? If some of these small countries grew slightly faster, some grew slightly slower, and on average, those who liberalized grew slightly faster, are we to infer that liberalization is an important ingredient in growth—when the world's major success story, with growth a multiple of that of any of the African countries, did not liberalize? The matter can be put another way: if one treated the separate provinces of China as separate data points—and they are each large, many times the size of the average African states, and each followed slightly different policies—then the twenty fastest growers in the past two decades are all in China. A study that treated these provinces as units of analysis might conclude strongly

that liberalization was not good for growth, while a study that treated China as a single data point might conclude that it was.

There are other statistical problems. Assume it were the case that countries that did not liberalize, on average, were more authoritarian and that authoritarianism is bad for growth; but in the statistical analysis of growth, no measure of authoritarianism was included, or a measure that did not capture the relevant dimensions of a multidimensional political construct. Then, the statistical analysis might conclude that liberalization was good for growth, when the correct conclusion is that nonauthoritarian political structures, appropriately defined, are good for growth.

What was most remarkable about the drive for capital market liberalization from the IMF was that at the time they pushed for this change in the global economic architecture, there was no study even of the cross-country statistical kind that supported trade liberalization, as discredited as those studies might be, which provided empirical evidence in support of capital market liberalization. The one widely cited study by Rodrik (1998)—using the IMF's own measures of liberalization—showed that it did not lead to faster economic growth. One might have thought that the IMF would have made a major effort to refute Rodrik's study and to present countervailing studies showing the contrary. That they did not, and that they seemingly did not feel the need to refute the even more compelling evidence showing that capital market liberalization led to greater

risks, may say a great deal about the nature of the organization, a point to which we return later.

But there is, perhaps, a simpler reason: Rodrik's (1998) study merely corroborated what was obvious, both empirically and theoretically. It was not only China that had grown rapidly without capital market liberalization; India, too, had experienced rapid growth over the 1990s, and it too had not liberalized. Russia had liberalized, and the liberalization had led not to a flow of capital into the country but to massive capital flight, and the country's GDP had, partly as a result, plummeted by more than 40 percent, a decline that was reflected in socioeconomic statistics, such as marked shortening of life spans, and in data, collected through household surveys, showing an increase in poverty from around 2 percent to between 25 percent and 40 percent, depending on the measure used.

But these results should not have come as a surprise. Growth is related to investment, to new enterprises and old enterprises expanding. Such investments cannot be based on speculative money that can come into and out of a country on a moment's notice. On the contrary, the high volatility associated with such flows destabilizes the economy, as we shall see in the next section, and the higher economic volatility makes investment less attractive.

There is another channel through which capital market liberalization hurts growth. The flow of funds into the country leads, under flexible exchange rates, into a higher exchange rate, making it more difficult for a

country to export or compete against imports (a version of the so-called Dutch disease problem). In some cases, such as Thailand, the funds helped feed a speculative real estate boom, which distorted the economy. To prevent inflation, to sterilize the inflow of funds, which might otherwise have led to an excess demand for goods, the monetary authorities had to raise interest rates, which stifled investment in other sectors.⁴ The distinction between foreign direct investment and these short-term flows could not be clearer. The foreign direct investment leads directly to an increase in GDP and in employment; it brings with it new technology, access to markets, and training—none of which accompany speculative portfolio flows.

There is another way of seeing the adverse effects on growth: today, countries are told to keep reserves equal to their foreign denominated short-term liabilities. Consider the consequence of a company within a poor small country borrowing money from an American bank \$100 million in dollars short term, paying say 18 percent or 20 percent interest. The country then is forced to put a corresponding amount in reserves—money that could have gone toward high-return investments in schools, health clinics, roads, or factories. The reserves are held in the form of U.S. treasury bills, yielding 4 percent. In effect, the country is lending \$100 million to the United States at 4 percent and borrowing it back again at 20 percent—at a net cost of \$16 million a year to the country, a transaction that clearly might be good for growth in the United States but is

unlikely to have a substantial positive effect on the growth of the developing country.⁵

Risk

The rapid movement of funds into and out of a country is clearly destabilizing, a point brought home forcefully by the East Asian crisis, where the capital outflows exceeded in some cases 10 percent of GDP. Flows of that magnitude (equivalent to close to \$1 trillion for the United States) would be highly disruptive, even in a country with strong financial markets. The effects on developing countries have been devastating.

Empirical studies have shown that there is a systematic relationship between capital market liberalization and instability (see Demirgüç-Kunt and Detragiache 1997, 1999). The period immediately following liberalization is one in which risk is particularly marked, as markets often respond to the new opportunities in an overly exuberant manner, as they see previously closed opportunities opened up. The increased macro-economic risk would imply a necessity for increased monitoring of financial institutions, as the franchise value, the expected present discounted value of future profits, is likely to be eroded given the higher probability of an economic downturn; and in the absence of increased monitoring, the higher level of risk taking itself would contribute to greater instability. Unfortunately, typically governments have not done a better job of regulation, for two reasons. Often, the capital market liberalization is in response to external pressure (e.g., from the IMF or the United

States), and that same pressure has been accompanied by pressure to liberalize financial markets, that is, remove restrictions that, in part, result in less exposure to risk (the elimination of Thailand's restrictions on speculative real estate investments are a case in point). Second, the process of liberalization has been accompanied by huge increases in demand for the relatively few trained personnel, many of whom worked for the regulatory authorities and the central bank; the public sector simply cannot compete in paying salaries against the private sector. Hence, just at the time when the need for improved regulation is greatest, the country's capacity is reduced (see Hellman, Murdock, and Stiglitz 1996).

Capital market flows to which capital market liberalization gave rise are now recognized to be the pivotal factor in the East Asia crisis.⁶ But there have been more crises that have been deeper and longer lasting in the past quarter century—more than one hundred countries have been afflicted (see Caprio and Klingebiel 1996; Lindgren, Garcia, and Saal 1996), and it is apparent that the trend toward increased capital and financial market liberalization has been a key factor. The IMF and U.S. Treasury suggested that the East Asian countries were vulnerable because of a number of structural failings; on the contrary, these countries had performed better over the preceding three decades, not only in terms of growth but also in stability: two of the affected countries had had only one of economic downturn, two had had none, a better performance

than any of the OECD countries. If they were vulnerable, it was a newly acquired vulnerability because of the capital and financial market liberalization that had been foisted on these countries.

IMF responses exacerbated the risk. The nature of the response to a crisis affects the consequences, including who bears the burden. In the case of the East Asia crisis, the IMF responded with fiscal contractions and monetary tightening, which deepened the economic downturns and failed in their intended effects of sustaining the exchange rate. In addition, the restructuring strategy, which involved closing financial institutions (in the case of Indonesia, closing sixteen banks, with an announcement that more were to follow, but that depositors would not have their deposits guaranteed, leading to a run on the banking system), led to a further collapse in the supply of credit; and the more hands-off corporate restructuring strategies meant that corporate distress was addressed at an extremely slow pace—four years after the crisis, between 25 and 40 percent of Thai loans remained nonperforming.

The failure was predicted by economists within the World Bank, and the reason was obvious: given the high leverage, the high interest rates forced many firms into distress and worsened the problems of the financial institutions. The combination of the normal Keynesian demand-side and supply-side contractions proved devastating. Although at this juncture, the IMF admits several of the failures, on the critical issue of monetary policy it remains adamant. It

believes that higher interest rates lead to a capital inflow that supports a country's currency, evidently even in circumstances such as those of East Asia with high levels of leverage, in spite of the absence of evidence in support and some evidence against and in spite of the overwhelming theoretical arguments against the policy. The statistical analyses of whether raising interest rates leads to higher exchange rates is even more problematic than the cross-country regressions referred to earlier. Here, the critical issue is to identify the appropriate counterfactual, that is, what would have happened but for the policy. It is clear that the IMF interventions in East Asia, which included not only the high interest rates but also massive bailouts and contractionary fiscal policies, did not prevent a slide in the exchange rates; indeed, looking at exchange rate movements, it is hard to detect evidence of interventions having any positive impact. It is, of course, possible that the mistaken part of the IMF packages systematically undermined the positive effects of the interest rate policies, or that just at the moment of the interventions, the pace of decline in exchange rate would have accelerated, and this acceleration was reversed by the interventions. But neither of these is plausible, and a more detailed analysis of interest rate increases in other crises does not suggest that they are very effective instruments (see Furman and Stiglitz 1998a). The theoretical arguments put forward by the advocates of this policy are not compelling: the higher interest rates are supposed to attract funds into the

country, bolstering the exchange rate. In fact, the economic disruption not only does not attract funds into the country but also leads to massive capital flight. Lenders care not just about the interest rate promised but also about the probability of being repaid; it was concern about default that led banks to refuse to roll over their loans. Thus, this was a variable of first-order importance—but left out from the IMF analyses. The policies increased the probability of default so that the total impact was to make it less attractive to put funds into the country.⁷

The important point is this: having failed to identify the reasons for their admitted failures in their fiscal and financial policies and having even refused to acknowledge the mistakes in monetary policy means that in the future, the mistakes are likely to be repeated so that countries can anticipate facing major economic downturns in the event of a crisis.

There are further aspects of IMF responses that exacerbated the downturn in Indonesia. Even in the best of circumstances, major economic downturns can give rise to political and social turmoil. In the case of ethnically fractionated societies, such turmoil is even more likely (see, for instance, Collier and Hoeffler 1998). A perception that the burden is borne unfairly by the poor increases the likelihood of turmoil even more. I predicted in early December 1997 at a meeting of finance ministers and central bank officials at Kuala Lumpur that if the IMF maintained its macro-economic policies in Indonesia, there was a high probability of such turmoil

within six months. I argued that even if the IMF did not care about social costs, especially those borne by the poor, it was simply bad economic policy. All that the head of the IMF, who was in attendance, could say in reply was that the country had to bear the pain. I was perhaps overly optimistic: riots, every bit as bad as my worse fears, broke out within five months. But I had not anticipated that just as the economy was plunged into depression, with unemployment soaring and real wages plummeting, food and fuel subsidies for the very poor would be cut back. Evidently, the IMF could provide billions to bail out Western banks and lenders, but there were not the measly millions required to finance subsidies for the very poor. The outrage was understandable and the consequences long lasting: it will take years before that country recovers to its precrisis level.

There were other aspects of IMF policies that exacerbated the downturns. In East Asia, the debt was largely private. When private parties cannot meet their obligations, the normal mechanism by which the problem is handled is bankruptcy. (Sovereign defaults pose special problems, which is why it is important to note that the debt in East Asia was private. The governments themselves had been running surpluses.)

But the IMF was dead set against bankruptcy and facilitating the process of debt workout, for example, through a debt moratorium. Its first deputy managing director referred to bankruptcy as if it were an abrogation of the debt contract, failing to note that bankruptcy was at the core of modern capitalism and was an

essential part of limited liability corporations. (Critics pointed out that while the IMF was willing to put up billions to preserve the sanctity of the debt contract, it was reluctant to put up the millions needed to preserve the social contract, for example, the food and fuel subsidies for the poor, and the social and economic consequences of the abrogation of the social contract were far more severe than the consequences of bankruptcy could possibly have been.) Bankruptcy (or a debt moratorium) would have relieved downward pressure on the exchange rate (see Miller and Stiglitz 1999)—indeed, it was only with the essentially forced rollover of Korea's debt that its exchange rate was stabilized. Those who opposed such policies said that it would be impossible to engineer them, but Korea showed that that was wrong. They argued that capital would not flow back into the country, and that was partially irrelevant, partially just wrong, both in terms of theory and evidence. Capital was not going to be flowing into these countries in the short run in any case. And the countries in East Asia, given their high savings rate, had little need for capital even in the longer run. But capital markets are forward looking: there is not a single participant who can decide to punish someone who does not obey his strictures. Rather, there are a multitude of participants, each of whom must decide on whether the return is sufficient to justify the risk. A country in deep recession, with a large overhang of debt, public and/or private, is less likely to attract funds than a country that has put the past behind it. More-

over, why should investors hold a new government to blame for mistakes made by past governments; if anything, a new government that has rectified the problems of the past will gain in credibility. All of these provide part of the reason that countries that default do regain access to international capital markets, and often after a remarkably short time—perhaps more determined by the time it takes to restore economic stability and growth prospects than anything else.

One country in the region took an alternative course; after first flirting with an IMF program without the IMF, Malaysia imposed capital controls. Its downturn was shorter, and it was left with less of a legacy of debt, as a result. In the next section, we shall explain why, but first, I want to discuss briefly some of the consequences of the increased risk, besides the adverse effect on growth that I have already discussed.

The consequences of increased macro-economic risk. Normally, as countries go into a downturn, it is the poor who disproportionately bear those costs. Their unemployment rate goes up more,⁸ perhaps because employers value of the firm-specific human capital of the more skilled workers, and as their demand for labor decreases, they would rather re-deploy them to less skilled jobs rather than having them leave the firm.

Less developed countries typically have limited safety nets. Even in developed countries, unemployment insurance in the self-employed and agricultural sectors is limited, and in

developing countries, these sectors predominate. In some less developed countries, flexible labor markets imply that reductions in the demand for labor do not show up in the form of unemployment but are reflected in changes in real wages. But the reductions in real wages may be very large—in some of the countries in East Asia, real wages fell by more than a quarter.

One of the important arguments to emerge from the 2000 World Development Report (World Bank 2000) is that the poor are not only adversely affected by lower incomes but also by higher insecurity. Deprived of the instruments with which to deal with economic volatility, their lives are particularly affected by the instability that is associated with capital market liberalization.⁹

Moreover, extended periods of high unemployment and low wages can have a devastating effect in undermining social capital, the social fabric that enables a society, and a market economy, to function—witness the increase in urban violence in Latin America following the debt crisis. Not only are there severe social consequences, but the social instability provides adverse conditions for investment and thus growth.

The defenses

Given the overwhelming theory and evidence against capital market liberalization, one might wonder, on what grounds did the IMF argue in its favor? While they refused to refute the arguments put forward above, in particular, never addressing the issue of the impact of liberalization on the poor, they argued that

capital market liberalization enhanced growth and actually reduced risk!

Growth. Underlying the analysis is a simple analogy: free mobility of capital is like free mobility of goods; and just as free trade increases incomes, so too does free mobility of capital. But capital markets are distinctly different from goods markets. *Risk* and *information* are at the center of capital markets: capital markets are concerned with the acquisition, analysis, and dissemination of information; with making choices about how to allocate of scarce capital to investment opportunities; and with spreading, sharing, and pooling risks. Markets for information are markedly different from markets for goods. While with perfect information and perfect risk, competitive markets are in general (pareto) efficient, with imperfect information and incomplete risk markets, markets typically do not behave in the way predicted by standard competitive models, and market equilibrium is in general not (constrained pareto) efficient.¹⁰ Thus, while there may be some presumption that trade liberalization may be welfare improving,¹¹ there is little basis for presuming that liberalization in financial and capital markets is welfare improving.¹²

There are two more specific arguments that the advocates of capital market liberalization put forward. One is patently wrong: that without capital market liberalization, countries will not be able to attract the foreign direct investment, which is so important to economic growth. China

has not liberalized its capital market, and yet has been able to attract more foreign investment than any other emerging market.

The second is more subtle. It argues that capital market liberalization provides an important discipline device—countries that fail to pursue good policies are quickly punished, and thus capital market liberalization helps keep countries on a solid path of economic reform. Underlying this argument is a highly antidemocratic bias: the belief that democratic processes provide an inadequate check and the willingness to delegate discipline to foreign financial interests. But the argument is more problematic. If one is to choose an outside disciplinarian, one wants one that punishes one if and only if one has “misbehaved.” But as many countries—for example, in Latin America—learned with great pain, with capital market liberalization, they can be punished even if they do everything “right.” If emerging markets fall from favor, in the inevitable vicissitudes that characterize capital markets, then even the countries that have been awarded A’s from the IMF are punished. Equally bad, capital markets may have certain biases—they may, in the first stance, overreact to certain actions a country undertakes and fail to react to other actions.

This point may be highlighted by considering the consequences of delegating the responsibility of “disciplinarian” to labor markets. Labor markets might discipline a country for following bad environmental policies with a rush of skilled labor out of a country should it decide, for instance,

to allow arsenic in its water supply. The choice of a disciplinarian determines what a country is to be rewarded, or punished, for—and therefore affects what a country does or does not do. It affects the very nature of the evolution of society.

Who gets to play the role of disciplinarian is affected by *mobility*. Capital market liberalization does give capital markets more power, in this sense. And in doing so, it affects the ability of society to redistribute: any threat to increase the taxes on capital can result in quick retribution in the form of the withdrawal of funds. Whether such funds contribute to the long-term growth of the economy is not the issue: the withdrawal of funds can impose enormous costs, especially in the context of the IMF-style responses.¹³

Enhancing the mobility of capital thus has real consequences: it affects bargaining positions and the outcome of bargaining processes in ways that are advantageous to capital and disadvantageous to labor.

The argument that capital market liberalization was good for growth was, to be sure, fairly unpersuasive in the context of the countries in East Asia, where domestic savings rates were very high. Although the countries did an impressive job in investing these savings productively, little argument could be put forward that additional funds from more developed countries would substantially increase growth.

In the face of this, the IMF and the U.S. Treasury used an even more peculiar argument.

Risk. They argued that capital market liberalization would reduce risk, enabling countries to have access to outside funds in the face of a threatened economic slowdown. Diversification of the source of funding would enhance economic stability. What was remarkable about this argument was the overwhelming empirical evidence against it, even at the time it was put forward: short-term flows of funds are procyclical, exacerbating, not dampening, economic fluctuations. As the expression goes, bankers are most willing to provide credit to those who do not need it; and as a country faces a downturn, bankers withdraw credit.¹⁴

Externalities and capital controls

Thus, today, there is widespread agreement that capital flows impose huge costs on others—on innocent bystanders, small businesses, and workers who neither participated in nor benefited from these flows. They impose huge externalities. Whenever there are externalities, there are standard remedies—government interventions—that can take a variety of forms, for example, regulatory or tax. There is a large literature addressing the relative merits of various forms of intervention.¹⁵

One of the standard objections to these interventions is that they raise the cost of funds, especially short-term funds. But that objection is like the steel industry complaining that taxes on pollution will discourage the production of steel. It will—but that is precisely the point. Efficiency

requires that the marginal social cost of production equal the marginal social benefit; and the steel industry, in its private calculations, does not include the social cost of pollution. Once that is included, production should be reduced. So too, since there is a large social cost associated with short-term capital flows (and questionable social benefits), these capital flows should be discouraged.

The battle of the metaphors. While the economic case for some form of intervention is compelling, opponents (and proponents) of intervention have often resorted to metaphors and false analogies to help “prove” their point. We have already disposed of one such: the argument that the free flow of capital is just like the free flow of goods; and just as free trade is welfare enhancing, so are free capital movements.

One popular metaphor has involved the automobile. Critics of capital market liberalization have argued that capital market liberalization, at least for most developing countries, is like giving a teenage kid a high-powered car before making sure that the tires were in good condition and before installing seatbelts, let alone airbags. They noted that when there was an isolated accident on a highway, one might infer that the problem was with the driver, but when there were repeated pile-ups at the same bend in the highway, the problem was more likely with the design of the road. Supporters of capital market liberalization responded that the appropriate response was to widen the highway, not to return to the days of the horse and buggy, and

in the meanwhile, the drivers needed to be better trained. Critics responded that roads and cars have to be designed for ordinary mortals; if only those with years of experience as racetrack drivers can survive, then something is fundamentally wrong. Moreover, they suggested that the only repair work on the road system that the international community had proposed was better road signs (improved information)—and even that initiative was halfhearted and incomplete, as the United States refused to allow the posting of signs at the most dangerous turns (disclosing information concerning the activities of hedge funds and offshore banking centers).

Another popular metaphor likened small developing countries to small boats on a rough and wily sea. Even if well designed and well captained, they are likely eventually to be hit broadside by a big wave and turned over. But the IMF program of capital market liberalization had set them forth into the most tempestuous parts of the sea, in boats that were leaky, without life vests or safety nets, and without training.

Still a third metaphor involved aviation: the undersecretary of Treasury (who at one time, before he had taken up the job of representing Wall Street’s interests, had argued that failing to regulate capital markets was like failing to regulate nuclear power plants—doing either was an invitation to disaster) used to argue that simply because planes occasionally crash was no reason to give up flying. But critics responded: but if a particular model of a plane consistently crashed, one would want to

ground it; and all governments take strong policies to ensure that those who fly planes are well trained, and those who fly more powerful planes have better training. And one certainly wanted to be particularly careful in flying over territory where the terrain was particularly rough since the dangers of a crash landing were then particularly severe, and even more so if the inhabitants in the territory had a penchant for cannibalism.

The metaphors, of course, were hardly a substitute for deeper economic analysis. But, especially when accompanied by such an analysis, they helped bring home the concerns and the depth of passions, on both sides. For instance, the fact that, as Paul Volcker, former governor of the Federal Reserve Bank, emphasized, the total stock market of a country like Thailand was smaller in size than a medium-sized American company like Home Depot, and that even when well managed, such companies experience huge volatility in their market value, brought home the point that the developing countries were like small boats on a rough sea. Analytic studies showing that most of the shocks that developing countries experience were external—caused, for instance, by sudden changes in investor sentiment in the more developed countries, having nothing to do with the particular policies and events in their particular country—provided the answer to the charge that the problems were of the country's own making; and by the time the East Asian crisis of 1997 had become the global financial crisis of 1998, touching even the best

managed of developing countries, it had become clear that the rhetoric blaming the countries of East Asia for the crisis had been largely self-serving. By the same token, the privately financed but government engineered bailout of the world's largest hedge fund, Long Term Management Corporation, on the grounds that the failure of this one firm would exacerbate markedly the global financial crisis, provided the answer to the IMF study arguing that speculative hedge funds did not play an important role in the 1997 crisis, partly because they were simply too small to do so—and further undermined the credibility of those who claimed that capital market liberalization had little to do with the instability. The sad fact, though, was that advocates of capital market liberalization had forced developing countries to liberalize, without any analytic basis showing that it would be good for growth, ignoring the theory and evidence that it imposed enormous risks, without a clear set of guidelines for the circumstances in which countries might be able to bear those risks, and without a set of prescriptions for how they might prepare themselves appropriately for dealing with them.

The purposes of interventions

Having established that, in principle, some form of intervention is desirable, the next natural question is, are there forms of intervention where the benefits exceed the costs, that is, there are not ancillary costs that more than offset the benefits, or in which evasion is not so large that the benefits are largely eroded?

Interventions by Chile, Malaysia, and China, among others, showed that at least some countries could manage such interventions well and that they could take on a variety of forms. These countries demonstrated that these interventions need not hinder economic growth—or even the ability of a country to attract foreign funds—but they could help ensure economic stability. Before discussing the alternative interventions, it is desirable to describe the multiple purposes that such interventions might serve.

Stabilizing capital flows. The onrush of short-term capital into a country poses two problems: first, it can result in inflationary pressures; and second, such money can leave a country just as fast as it can enter, leaving in its wake economic devastation. One purpose of intervention is to stabilize the flows. Note that interventions designed for this purpose (or several of the other purposes described below) do not have to be perfect to be effective. Two metaphors bring this point home: a leaky umbrella can still be useful in a thunderstorm; even if one gets damp, it is better than being drenched. The purpose of a dam is not to stop the flow of water from the melting of snow from the mountaintop to the ocean but merely to stabilize it; without the dam, the onrush of water can cause death and destruction; the dam can convert this natural disaster into a source of water for food and sustenance. Even with a good dam, there can be spillage; some of the water can go around the dam. Even if it does not

stop every flood, it can contribute greatly to increased well-being.

Most of the well-known ways of avoiding many forms of capital market controls (discussed below) do not undermine the ability of such interventions to stabilize flows, for most of the evasion tactics (e.g., under- and overinvoicing) work slowly. They are more like the flows of water going around the dam; in the long run, the aggregate amounts may be significant, but in the short run, the flows are still moderate, and it is the huge flows that cause the problem.

Dampening the rush of capital out of a country. In the event of a crisis, there may be an irrational pessimism, matching the irrational exuberance that brought the capital into the country. Policies designed to make it more difficult or more costly for capital to leave a country slow the rush of capital out; and, like the circuit breakers that have been put into stock markets, the extra “pause for reflection” can have large positive effects. Before they fully work out mechanisms for avoiding the controls, matters are seen in a calmer light—and markets themselves may have calmed down.

Designing more effective and lower cost stabilization measures for the economy. In simple models, where there is free flow of capital, there is little scope for monetary policy. A decrease in interest rates leads to a rush of capital out of the country. Thus, governments must rely on costly fiscal policy measures to stimulate the economy in the event of an

economic downturn. If, however, there are effective restrictions on short-term capital movements, then monetary policy can be used. This has benefits both in the short run and the long, as Malaysia so forcefully showed. Reliance on fiscal policy forces governments to have large deficits, which can put a damper on future growth. Financing the deficit is also problematic in countries with limited access to foreign borrowing. Government borrowings crowd out private investment, with the net affect on recovery limited. At the high interest rates, lending to firms becomes particularly risky (Stiglitz-Weiss 1981), and banks prefer what they perceive to be relatively safe loans to government. In countries where many firms have high leverage, the high interest rates induce massive corporate distress, weakening the banking system and reducing its ability to lend even more. The cost to the public of resolving the corporate and financial stress is all the larger, again with adverse effects on the country's future growth.

Providing greater scope for redistributive taxation. The irony is that while short-term capital imposes enormous costs on society, the ability of a country to tax such capital, should it become fixated on keeping it, is limited. This is a reflection of a general principle in taxation: governments can impose only limited taxes as factors whose supply is highly elastic. Capital market liberalization, in effect, enhances the elasticity of supply, thereby lowering the scope for redistribution. As a second irony, the fact that short-term capital

increases economic volatility means that the return that it must receive—to compensate it for the risks that it itself has caused—is higher. Hence, capital market liberalization can drive up the before-tax returns at the same time that it reduces the scope for taxation.

Preventing massive capital outflows. The rush of capital out of Russia has played an important role in the economic demise of that country; China's investing its huge savings inside the country has similarly been critical in its success. With open capital markets, the oligarchs in Russia were posed with a simple choice: where in the world to invest their wealth—whether in Russia, which was going into a prolonged depression of an almost unprecedented scale, or in the United States (say), which was, at the time, experiencing one of the strongest expansions in its history, with a stock market boom to match? The fact that the wealth of the oligarchs was widely perceived to be ill-gotten, based on political connections in a process of privatization without political legitimacy, and therefore (rightly perceived) subject to be reversed in a subsequent administration only reinforced the wisdom of taking the money out of the country. And as each oligarch (and smaller investors) decided to do so, it made it more desirable for others to do so.

Although of all the objectives of intervention listed, this may be the most difficult to achieve, the analysis above suggests that even when the purpose is discouraging long-term capital outflows, the interventions

may be effective even when there are ways of circumventing them. This is because there may be multiple equilibria; if most people keep their money in the economy, it grows, and it becomes attractive for others to do so. Conversely, if most people pull their money out of the country, it becomes attractive for others to do so. The restrictions on capital outflows can “force” the economy to the “good” equilibrium, and once there, it is self-sustaining.

The forms and mechanisms of interventions

Intervention has taken on a number of different forms and been implemented through a number of different mechanisms. Some of these rely more on “market mechanisms” that are both more flexible and that avoid the opprobrium associated with the term *controls*

Taxes on capital inflows. For a long time, Chile had an effective system of what amounted in effect to a tax on short-term capital inflows. (A third of the money coming into Chile had to be deposited in the central bank for a year at a zero-interest rate; hence, the first-year return was taxed, in effect, at 33 percent.) The tax rate could vary with economic circumstances—discouraging inflows more when they seemed to pose a greater problem. In principle, a subsidy could be provided if the government wished to encourage an inflow.

At the same time, the tax on inflows discouraged speculative outflows: an investor worried about the possibility of a small devaluation would not find it attractive to take

his money out of the country overnight to bring it back in again the next day, for there was a large effective tax on such a roundtrip. There was little evidence that the tax discouraged overall inflows, but it lengthened the maturity of funds, thus stabilizing the economy. Chile was, of course, adversely affected by the global financial crisis, as were all countries, and especially countries heavily dependent on commodity exports. No one believed that it would eliminate all sources of instability. In the aftermath of the crisis, as funds for emerging markets dried up everywhere, Chile decided that the problem was not a surfeit of funds but a lack of funds, and hence the tax was reduced to zero.

Controls on capital outflows. In the uncertainty of the early days of the global financial crisis following Russia’s default, Malaysia responded by imposing controls on capital outflows. It noted high levels of speculative activity on the ringit, especially occurring in Singapore, and worried that such speculation would destabilize the economy. The controls were carefully designed to ensure that those who had invested long term in the country would be able to take their profits out. And they were announced as short term, to be removed within a year. The vituperativeness with which these controls were greeted was almost unprecedented, not only from the IMF, the self-appointed guardian of capital market liberalization, but also from the U.S. Treasury. They forecast that the controls would be ineffective; that the country would never be able

to attract capital; that they would be counterproductive, exacerbating the economic downturn; that they would never be removed; and that without the discipline of capital markets, the country would never address its problems. Their forecasts were as far from the mark and as based on ideology and interests as their earlier advocacy of capital market liberalization had been. Just as Malaysia had once before imposed capital controls in an emergency and removed them as promised, so too did it fulfill its commitment. Its downturn was shorter than any of the other countries,¹⁶ and the country was left with less of a legacy of indebtedness. (See the discussion in the preceding section.) It did use the time well to restructure, with a program that was far more effective than that of its neighbor, who remained under IMF tutelage. Capital (foreign direct investment) continued to flow into the country.¹⁷

The World Bank worked with Malaysia to convert the controls into an exit tax, with the tax rate gradually lowered. The result was that when the controls (taxes) were finally removed, there was no disturbance to the market: it was a virtually seamless change.

Bank regulations. Today, increasingly, capital controls are implemented through bank regulations, which limit not only the (uncovered) foreign exchange exposure of banks but also of the firms to which they lend. Since most financial transactions are intermediated through banks and most domestic firms bor-

row at home as well as abroad, these regulations can be highly effective. Even before the crisis, Malaysia had succeeded in limiting the foreign exchange exposure of its banks.

Such changes can be implemented either through direct regulations or through more price-based mechanisms, for example, through deposit insurance systems where the premia increase with risk and where the foreign exchange exposure of the bank (direct and indirect) is included in the risk measure, or through risk adjusted capital adequacy requirements, again where foreign exchange exposure is included in the risk measure.

Taxes. Many countries have individual and corporate income tax systems that allow the deduction of interest payments. By disallowing the deduction of interest on short-term foreign denominated debt, households and firms would be provided with an incentive not to undertake such debt.¹⁸

EXCHANGE RATE REGIMES AND CAPITAL MARKET CONTROLS

So far, we have argued that capital controls increase risk but do not increase growth. We have elided the question of the extent to which these results are dependent on the exchange rate regime. In this section, we shall argue that in the absence of capital controls, the only exchange rate regimes that, in practice, can work effectively are floating exchange rates or dollarization, but

that even with floating exchange rate systems, capital controls can enhance economic stability.

*Why fixed exchange
rate systems fail
without capital controls*

A major failing of fixed exchange rate systems is their vulnerability to speculative attack, especially when there is a perception that the exchange rate is overvalued and cannot be sustained. Countries are not given the grace of a gradual adjustment. When there is not sufficient reserves to back up the demands for dollars, then there can be a run on the currency, just as there can be a run on a bank when there is not sufficient reserves available to meet its liabilities (see Diamond and Dybvig 1983). If all creditors and potential claimants believed that the country could meet its obligations, then, of course, they would not wish to “cash in,” to pull their funds out of the country; but if they believe that the exchange rate is not sustainable and will crash, the returns to doing so are enormous. They can pull their funds out today, putting them back in tomorrow, and make an enormous return from the speculative activity.

The problem is that the amount of reserves required to ensure that a country can meet its commitment to maintain the exchange rate is enormous under full capital market liberalization: it equals the total value of the money supply plus short-term, foreign-denominated credit, for any domestic currency can be converted into dollars on demand. In short, the country has to have a fully backed currency—equivalent to the

elimination of fiat money. In effect, then, a country with full capital market liberalization surrenders control over its money supply and monetary policy. The consequences are not only that the government cannot engage in stabilizing macro-policy, but also there may actually be a destabilizing dynamic put into place.

Assume, for instance, its firms decide to borrow more abroad. It must then increase reserves or take strong actions to discourage such foreign borrowing. Assume that the mantra is that the country not only cannot control the capital inflows, but it cannot tax them or the uses to which the funds are put. Then, if it wishes to add to reserves, it will put downward pressure on the exchange rate. But given that it is committed to maintaining the exchange rate at its fixed level, it must offset this pressure by increasing the interest rate. It might well justify that measure further by noting that it dampens the inflationary pressures that are often associated with the capital inflows. But this induces domestic firms that expect the government to fulfill its commitment to a fixed exchange rate to borrow even more abroad, especially if foreign borrowing is being, in effect, encouraged by the foreign lenders, as was the case in East Asia. (The Basle capital adequacy standards provide preferential risk treatment for short-term lending, and the underregulation of the undercapitalized Japanese banks provided them with an incentive to engage in risky lending.¹⁹) There is thus a vicious circle, one that can easily lead to massive distortions of resource allocation, as in the case of Thailand: the

foreign lending goes into areas that are collateralizable, feeds a speculative real estate boom, while the high interest rates meanwhile choke off more valuable domestic investment.²⁰ It made little sense to build empty office buildings in Bangkok and Jakarta when there were other investments that would have enhanced the growth prospects and job opportunities. Yet, that is what happened under deregulation.

There is an alternative strategy that few countries have followed. To discourage foreign borrowing, the country can make loans available at more attractive terms to domestic borrowers. One argument holds that lowering interest rates to domestic borrowers will lead to lower deposit rates and a possible flow of money out of the country. This argument, while often mentioned, is unpersuasive: the objective was to stem an excess flow of foreign borrowing, and there must exist a “fixed point,” a level of interest rates that attracts the desired level of capital.

But there is another argument that is somewhat more compelling. The lower interest rate will normally lead to an increased level of domestic investment and hence possibly contribute to inflationary pressures. In effect, a country in such a situation is forced to cut back on public expenditures or increase taxes in response to an onslaught of foreign capital, no matter whether that onslaught is based on irrational exuberance or not. If such policies had been pursued in Thailand, investments in empty office buildings would have crowded out higher return investments in education or infrastructure or forced

politically unpalatable increases in taxes—in a country already running a fiscal surplus.

(There is still a third alternative strategy, from which the countries were discouraged under the doctrines of liberalization, and that is micro-economic interventions, such as taxing real estate capital gains.)

The dynamic is worse than just described: If the monetary and fiscal measures designed to maintain the exchange rate do not, at the same time, perfectly offset any inflationary pressures, then the capital inflow may well lead to a *real* appreciation, leading to a trade deficit. (In some sense, the trade deficit is the inevitable accompaniment of the capital inflow, and the trade deficit will typically²¹ be generated by a real appreciation.) But the increasingly large trade deficit, under standard doctrines and models, will be viewed as “unsustainable.” That is, markets may increasingly anticipate a correction in the overvalued exchange rate, a correction more likely to occur through a sudden change in the exchange rate than in adjustments in wages and prices.

The fact of the matter is that few governments have been willing to maintain high-cost reserves equal to their money supply and foreign-denominated short-term indebtedness, and short of that, the countries will be vulnerable to a speculative attack. Even the massive amount of money that the IMF has been able to mobilize in recent crises is not enough to fill the gap and therefore to maintain confidence in the overvalued exchange rate.

But the fact that the IMF has engineered massive (and typically unsuccessful) bailouts has exacerbated the overall problem in three distinct ways. First, in effect, the IMF has fed the speculative sharks (though the cost is borne by the taxpayers in the developing country). In the absence of outside funds, speculation is a zero-sum game, with some speculators gaining at the expense of others. The IMF engineered bailouts convert what would be a zero-sum game into a positive-sum game for speculators: they stand to gain at the expense of taxpayers, and they have indeed gained handsomely. Second, the funds have facilitated the bailout of creditors, generating the moral-hazard problem—lenders do not bear the full costs of their lending decisions (even ignoring the macroeconomic externality). IMF economists (including their chief economist, Michael Mussa) have argued that the lenders have borne some costs, but that is not the point: moral-hazard problems arise whenever they do not bear the full costs, and this they clearly have not. Third, the IMF efforts to sustain the exchange rate (even if only partially successful), and the rhetoric that, otherwise, borrowers who have borrowed in foreign denominations will be hurt, have led to a “foreign exchange cover moral hazard.” Private borrowers have felt that they do not need to buy insurance against the risk of devaluation or as much insurance as they otherwise would, and in this they are right: when enough of them take that position, the IMF will use that fact to help support the exchange rate. They are willing to force small firms to

bear the costs through high interest rates to save those that should have purchased insurance. Doing so, it could be argued, is not only contributing to a moral-hazard problem but to a moral problem.

The arguments put forward for fixed exchange rate systems apply with equal force to controlled exchange rate systems, for example, where the exchange rate is allowed to move within a well-defined band. When it becomes apparent that the band cannot be sustained, there will be a speculative attack.

Dollarization. While capital market liberalization has thus made fixed exchange rate systems of the conventional kind untenable, it has enhanced the argument for dollarization, in which the country gives up control over its money supply. Under standard criteria, Argentina and the United States, or Ecuador and the United States, do not constitute an optimal currency area (see Mundell 1961). But Mundell (1961) wrote his classic article before capital market liberalization was the vogue. The shocks facing Ecuador and the United States are markedly different, and giving up conventional monetary policy instruments will impair the ability to stabilize the economy. But the alternative—allowing the country to be buffeted by speculative exchange rate movements—may be even worse, and even with dollarization, there may be some scope for monetary policy (see Stiglitz 2001b).

Volatility among the major currency areas. Dollarization, however,

is not really a viable solution for countries engaged in trade with many different countries, for example, Japan, Europe, and the United States, simply because of the huge volatility of the exchange rates among their currencies. Fixing the exchange rate to the dollar means that firms face enormous risks in the exchange rate with Japan and Europe. In short, there really is no such thing as a fixed exchange rate, only an exchange rate that is fixed in terms of one of the many currencies that the country interacts with. Stabilizing on a basket of exchange rates does not solve the problem of particular firms. It leaves a firm that exports in the dollar zone, or imports from the yen zone, or imports from one zone and exports to another, bearing enormous risk. It does a firm little good to know that on average, exchange rates are stable, if it faces bankruptcy, because imports have undermined it. Today, small countries around the world have to face this challenge in risk management: there is nothing they can do about this volatility. But given the high level of risk that they have to manage in any case, the burden of managing the additional risk posed by short-term speculative capital flows in the absence of capital controls is all the greater.

Flexible exchange rates

Some critics of Thailand suggest that the problems it faced in the East Asia crisis lie with the fixed exchange rate system, but that contention is wrong (See Furman and Stiglitz 1998a). Had the exchange rate been allowed to adjust, it would have

appreciated, increasing the trade deficit, distorting the economy through that channel. When the collapse came, it might have even been worse, simply because the fall in the exchange rate would have been from a higher, more overvalued level. Some argue that investors were lulled by the seemingly fixed exchange rate to take a more exposed position than they otherwise would have, but this argument is unpersuasive on two grounds. First, prudent behavior required the purchase of insurance, and insurance markets are particularly well designed (in principle) for handling the risks associated with fixed exchange rate systems—small probability events with large consequences. There never has been a truly fixed exchange rate system; fixed exchange rate systems only mean that adjustments occur in large steps but infrequently. If the market shared the investors' perceptions that the probability of an adjustment was small, then the insurance premium would have been correspondingly small. Thus, the failure to obtain cover, exposing themselves and the country to large risk, was as much, or more, a case of market failure than of government failure, of markets either being irrational (investors believing that they know better than the market, as reflected in insurance premia, about the future course of exchange rates) or inefficient, with the cost of cover being excessively high relative to the risk being divested. Second, there have been "crashes"—rapid changes in asset prices—in "flexible"-price markets as there have been in fixed-price markets.

With flexible exchange rates, there are high costs of the absence of capital controls, especially given the imperfections of risk markets.²² Changes in speculative attitudes, say, toward the exchange rate, can force the exchange rate up or down, imposing huge problems for exporters and those in import competing sectors, or even to domestic producers relying on imported inputs. Typically, neither the producers nor consumers can divest themselves of the resulting large risks. Especially in the presence of imperfections of capital markets,²³ the costs of such risks can be enormous: workers, underprotected by social safety nets, cannot borrow against the prospect of future income; firms may be forced to shut down, with an enormous loss of firm-specific human capital and organizational capital. And the anticipation of such costs will make investment in the country less attractive. Even when there are futures and forward markets, they extend only to a limited extent into the future, not enough to deal with the risks associated with long-term real investments.

Macro-stability. The huge volatility in exchange rates provides real challenges (to put it mildly) on those responsible for macro-stability, especially if traditional IMF/central bank responses are employed. A loss of confidence in the currency will lead to depreciation. If true free-market principles were adhered to, so that the government simply allowed the exchange rate to be whatever the market determined, then the govern-

ment would simply have to apprise the adverse real balance effect of firms and households that were net foreign debtors, the positive real balance effect of those who were net creditors, and the positive effect on net exports (taking into account the dynamics of adjustment). Fiscal and monetary policy could freely be used to adjust the level and composition of output, either increasing or decreasing the extent of devaluation. (To be sure, the calculations of the appropriate policies would be complicated not only by the dynamics of adjustment but also by the complexity of expectation formation. But these are details that need not detain us here.)

In practice, the IMF has seldom allowed governments the freedom just described. It has worried that devaluations would lead to inflation, it has inveighed against what it describes as competitive devaluations (never mind that such devaluations are effectively typically aimed at changing the exchange rates against the dollar, not just at gaining a competitive edge over similar countries), and it has worried that with devaluation, those who owe money abroad in dollars would not be able to meet their obligations or lead to contagion. While in other spheres, it has taken a strong pro-market line, in this area, it has talked about overshooting,²⁴ but it has never provided a coherent explanation for why overshooting should be more prevalent in this market than in other asset markets, why government intervention—and, in effect, government subsidies—should be more acceptable in this market than in other markets, or

why the interventions should be limited to the particular kinds of intervention (high interest rates, fiscal contraction, direct exchange rate support) that it favors. Their arguments have rung an increasingly hollow note: the large devaluations associated with the global financial crisis did not set off inflationary spirals; Brazil's large devaluation did not lead to contagion; the bankruptcies that marked East Asia were as much a result of the high interest rate and contractionary fiscal policies put in place to stave off a devaluation than to the devaluation itself (though to be sure, the devaluation had a greater impact on the foreign creditors, the clientele of the IMF, while the high interest rates had a greater impact on domestic creditors, which seemingly were of little direct concern). Adjustments in exchange rates in other noncrisis countries, like Taiwan, followed along the lines of the crisis countries: there was no competitive devaluation, just an exchange rate adjustment. Most tellingly, careful micro-studies, for example, of Thailand, showed that the seeming worry about the impact of devaluation on the economy was largely bogus and certainly of second order compared to the adverse consequences of the high interest rates and excessive fiscal contraction. Those with large foreign indebtedness were largely in the real estate sector and already dead; further devaluation would not make them any deader, and arresting the devaluation would not lead to a revival of this sector. The second most heavily indebted group were exporters, who would, on the whole, gain more from

the devaluation in terms of exports than they would lose on their balance sheets.²⁵

But those who come under the sway of the IMF have to respond to the devaluation by interest rate increases and fiscal contractions, which lead to recession and, in some cases, depression. Indeed, the basic framework, which has come to be called "beggar-thy-self policies," is designed to bring about an economic downturn—and to bring with it adverse contagion to neighbors. A common (but not universal) characteristic of the precrisis situation is a trade deficit.²⁶ Countries are told to redress the deficit; the resulting surplus facilitates the ability to repay its creditors. But given that devaluations are discouraged, tariff and other barriers to imports are not allowed, and exports cannot be increased overnight; the only way to do so is to decrease incomes—cause a recession—which reduces imports. Trading partners, of course, do not care much about why their exports are down; all they know is that they have fallen. The downturn in one country is thus transmitted to its neighbors, just as in the beggar-thy-neighbor policies that played such an important role in the propagation of the Great Depression. But these policies do not even have the saving grace of helping the domestic economy as they hurt those of trading partners. Thus, countries with capital market liberalization (under fixed or flexible exchange rates) that have their responses to large variations in capital flows dictated by the IMF are likely to find themselves

confronting the consequences of large economic downturns.

In short, with fixed exchange rates and full capital market liberalization, the government absorbs some of the costs that the huge movements in short-term capital impose under flexible exchange rates; but the government's ability to do so is limited. If it wishes to do so, it must bear huge costs, both in terms of the size of reserves that have to be maintained and in terms of its loss of ability to maintain macro-economic stability. But with flexible exchange rates, full capital market liberalization imposes enormous risks on firms, and while there are macro-policies that may do a reasonable job of offsetting the effects, ensuring a modicum of macro-stability, in practice, countries are likely to face significant macro-instability under these exchange rate regimes as well.

CONCLUDING REMARKS

Developing countries differ from more developed countries in many ways, besides the lower level of incomes. In particular, they face greater economic volatility and a lower ability to manage that volatility, even though they may have more flexible wages and labor markets than more developed countries (see Easterly, Islam, and Stiglitz 2000). Capital market liberalization increases the risks they face—under any exchange rate regime, although it may enhance the arguments for flexible exchange rates. Given the absence of evidence that it promotes growth, given the compelling theoretical arguments that it may

actually have adverse effects on growth, and given the theory and evidence that it enhances economic instability, one might well ask, how could an international body, the IMF, founded to promote global economic stability be so active in promoting it, going so far as to seek a change in its charter to mandate it?

A full answer to this would take us well beyond the scope of this article: a mixture of bad economics (using old macro-economic models that simply failed to incorporate in a meaningful way finance, although this has been one of the major areas of advance in economic theory in the past quarter century²⁷), ideology, and special interests: financial markets would gain from the opening up of new markets, and American financial markets wanted them to be opened up quickly, before others were in a position to take advantage of these new opportunities; and the free-market ideology served these interests well (even if there was a note of intellectual incoherence in free-marketers asking the government to use its power to force others to open up their markets and in defending multi-billion dollar bailouts for Western creditors). But the lack of transparency with which the IMF operates exacerbates these problems: its policies were not subject to the kinds of intensive scrutiny that should be the hallmark of democratic processes, simply because much of what it does goes on behind closed doors, with public announcements coming too late for meaningful inputs from other stakeholders. Secrecy is the hallmark of financial markets, and the IMF has borrowed its culture from

those it has sought to serve, with whom it interacts constantly, and from whom it draws so much of its personnel.

But underlying all of these problems is governance: to whom the institution is accountable. With voting rights allocated according to market power at the end of World War II, with some adjustments since then, with finance ministries and central banks speaking for the governments, with other stakeholders precluded from having a seat at the table, the policies pushed by the IMF become understandable but no more acceptable.²⁸

Capital market liberalization represents a major change in the rules of the game. It was a change in the rules that did not serve the interests of the developing countries well. The fundamental problem facing globalization is how these rules of the game are made. Dissatisfaction with the current system is well deserved.

Notes

1. Interestingly, many in the International Monetary Fund (IMF) claimed that they never had really pushed for capital market liberalization for countries that were unprepared. At best, this was a semantic quibble: although they had often accompanied their demands for capital market liberalization by demands for other reforms, they had never said not to go forward with capital market liberalization until those other reforms were made.

2. With even the U.S. secretary of treasury joining the attack, it was not left just to the normal bureaucratic processes.

3. The most notorious example involved the newly appointed managing director giving a speech in Bangkok, in which he reflected some of the new thinking in the fund concern-

ing the risks of capital market liberalization. By the time he reached Jakarta, the Indonesians already were discussing ways by which the new thinking might be reflected in practice. But by then, the IMF staff had reportedly gotten to their new managing director, and there was quick backtracking: it was put to the Indonesians in no uncertain terms that going back on capital market liberalization was not to be part of their economic agenda.

4. See below for a more extended discussion of the Thai case.

5. The only possible justification might be that banks in the United States do a better job at allocating scarce funds in the developing country, so much better that income in the country is higher than it would otherwise have been. There is no evidence in support of this position.

6. See Furman and Stiglitz (1998a) and Rodrik and Velasco (2000). To be sure, other factors played a role, some of which are described below.

7. There were deeper failings in their arguments: they seemed to believe that a temporary intervention in the market would lead to a permanent shift in the demand functions, for example, for investment. The mechanism by which this might occur, other than through some vague appeal to the intervention resulting in a restoration of confidence, were never spelled out. There was no systematic analysis of investor psychology (with empirical support for the maintained hypotheses), nor was there any appeal to rational expectations models that are the normal staple of much of modern macroeconomics. Krugman (1998) criticized the IMF for playing the role of armchair market psychologists, a role for which they were eminently unqualified, with a commensurately weak track record. Stiglitz (1999) provided a more detailed critique of the underlying theories.

8. For an econometric analysis for the United States, see Furman and Stiglitz (1998b).

9. In the jargon of standard economics, low-income individuals have a high level of risk aversion and have little access to mechanisms with which to divest themselves of the risks they face. This can be viewed as an important instance of market failure.

10. That is, taking into account the imperfections of information and the costs of transactions, for example, associated with creating markets. See, for example, Greenwald and Stiglitz (1986).

11. But even this needs to be qualified. Newbery and Stiglitz showed that when risk markets are imperfect—which they always are in practice—free trade may actually make everyone worse off. See Newbery and Stiglitz (1984).

12. In particular, Murdock and Stiglitz (1993) and Hellmann, Murdock, and Stiglitz (1996, 2000) showed that restrictions on financial markets may be welfare enhancing.

13. This is the essential point of the large literature on “local public goods.” See Tiebout (1956) and Stiglitz (1983a, 1983b).

14. For an analysis of the Latin American case, refer to Galvin and Hausman (1996).

15. See, for example, Weitzman (1974) or a standard public sector textbook, such as Stiglitz (2000b).

16. See Kaplan and Rodrik (2001). To be sure, its downturn was somewhat longer than it might otherwise have been because Finance Minister Anwar at first tried the standard IMF recipes (in what was called an IMF program without the IMF), raising interest rates and cutting back on public expenditures. Recovery only began when these policies were reversed.

17. There remains some controversy over whether in 2000 Thailand was more successful in attracting foreign investment than Malaysia, with disputes both about data and their interpretation. What matters for growth, of course, are greenfield investments, not simply foreigners buying already existing assets, unless the funds they provide to the country in doing so are themselves turned into investments. Large fire sales in Thailand might temporarily succeed in diverting funds from Malaysia but are hardly indicative of a better “strategy.”

18. There are certain practical problems in the implementation of such provisions, which can easily be overcome. Because firms will be tempted to use derivatives to subvert the intent of these tax provisions, there will have to be netting provisions, with full disclosure of derivative positions (enforced, e.g., by laws that limit the enforceability of derivative posi-

tions that are not disclosed, or giving them junior positions in the event of bankruptcy). Similarly, debt covenants making debt immediately callable in the event of certain circumstances (such as those associated with a crisis) should either be made not enforceable or bonds with those provisions not be given favorable tax treatment.

19. A situation analogous to that encountered in the United States in the savings and loan debacle.

20. Proponents of capital market liberalization (including those in the IMF) underestimated these distortions, simply because they did not understand the functioning of capital markets and the ways that such markets differ from ordinary markets for goods and services. In their simplistic models, capital in a well-functioning economy (which most developing countries are not) is allocated (as if) by an auction process to the borrower offering the highest interest rate, just like any other good is allocated to the buyer offering the highest price. Thus, the fact that real estate was offering the best interest rates meant that that had to be the highest return activity. And it was simply assumed that if there were mistakes in judgment, only the lender would bear the cost of such mistakes. In fact, capital is not allocated by an auction process (see Stiglitz and Weiss 1981; Greenwald and Stiglitz forthcoming) but by a screening process, and for an obvious reason: those offering the highest interest rates may not be those most likely to repay. Moreover, we have seen that when large numbers of debtors cannot repay the loans, there are macro-economic consequences, with others besides those who have borrowed and lent having to bear the costs.

21. Although not necessarily: the availability of new sources of credit can increase the demand for imports, even if relative prices remain relatively unchanged. This seems to have been the case recently in Iceland. See Stiglitz (2001a).

22. Many advocates of capital market liberalization, especially those that appeal to the analogy of the benefits of free markets for goods, fail to appreciate these market failures and their consequences.

23. Themselves explicable in terms of imperfect information. See Stiglitz (2000b).

24. That is, if the initial exchange rate is 140 to the dollar, the true equilibrium is 190 to the dollar; in the initial adjustment, the exchange rate may overshoot to 210 to the dollar.

25. Moreover, while the IMF tried to characterize there being a trade-off, as we saw earlier there was none: the high interest rates intended to prevent a devaluation simply pushed the economy deeper into recession, weakening confidence in the country and its currency.

26. For instance, Korea, at the time that the crisis struck, did not have a balance of trade deficit. In the old world, before capital market liberalization, the link between trade deficits and crises was closer.

27. Highlighted by the fact that in the typical macro-models employed by the IMF, bankruptcy and default were not modeled, although bankruptcy and default were at the center of the global financial crisis.

28. For a more extensive discussion of these points, see Stiglitz (forthcoming).

References

- Caprio, Gerard, and Daniela Klingebiel. 1996. Bank insolvencies: Cross-country experience. Policy research working paper no. 1620. Washington, DC: World Bank.
- Collier, Paul, and Anke Hoeffler. 1998. On economic causes of civil war. *Oxford Economic Papers* 50 (4): 563-73.
- Demirgüç-Kunt, Asli, and Enrica Detragiache. 1997. The determinants of banking crises: Evidence from industrial and developing countries. World Bank working paper no. 1828. Washington, DC: World Bank.
- . 1999. Financial liberalization and financial fragility. In *Annual World Bank conference on development economics 1998*, edited by Boris Pleskovic and Joseph E. Stiglitz. Washington, DC: World Bank.
- Diamond, Douglas W., and Philip H. Dybvig. 1983. Bank runs, deposit insurance, and liquidity. *Journal of Political Economy* 91 (3): 401-19.
- Easterly, William Russel, Roumeen Islam, and Joseph E. Stiglitz. 2000. Shaken and stirred: Volatility and macroeconomic paradigms for rich and poor countries. Michael Bruno Memorial Lecture. Washington, DC: World Bank.
- Furman, Jason, and Joseph E. Stiglitz. 1998a. Economic crises: Evidence and insights from East Asia. *Brookings Papers on Economic Activity* 2:1-114.
- . 1998b. On the economic causes of inequality. Paper presented at Income Inequality: Issues and Policy Options, a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, 27-29 August, Kansas City, Missouri.
- Galvin, Michael, and Ricardo Hausman. 1996. The roots of banking crises: The macroeconomic context. In *Banking crises in Latin America*, edited by Ricardo Hausmann and Liliana Rojas-Suarez. Washington, DC: Inter-American Development Bank.
- Greenwald, Bruce, and Joseph E. Stiglitz. 1986. Externalities in economies with imperfect information and incomplete markets. *Quarterly Journal of Economics* 101 (2): 229-64.
- . Forthcoming. Towards a new paradigm for monetary economics. Mattioli lecture, Milan.
- Hellman, Thomas F., Kevin C. Murdock, and Joseph E. Stiglitz. 1996. Deposit mobilization through financial restraint. In *Financial development and economic growth: Theory and experiences from developing economies*, edited by N. Hermes and R. Lensink. London: Routledge.
- . 2000. Liberalization, moral hazard in banking and prudential regulation: Are capital requirements enough? *American Economic Review* 90 (1): 147-65.
- Kaplan, Ethan, and Dani Rodrik. 2001. Did the Malaysian capital controls

- work? NBER working paper no. W8142.
- Krugman, Paul. 1998. The confidence game. *The New Republic*, October, 5.
- Lindgren, Carl Johann, Gillian Garcia, and Matthew I. Saal. 1996. *Banking soundness and macroeconomic policy*. Washington, DC: International Monetary Fund.
- Miller, Marcus, and Joseph E. Stiglitz. 1999. Bankruptcy protection against macroeconomic shocks: The case for a "super chapter 11." World Bank Conference on Capital Flows, Financial Crises, and Policies, 15 April.
- Murdock, Kevin C., and Joseph E. Stiglitz. 1993. The effect of financial repression in an economy with positive real interest rates: Theory and evidence. Mimeo, Stanford University.
- Mussa, Michael. 2000. Factors driving global economic integration. Paper presented at Global Economic Integration: Opportunities and Challenges, a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, 24-26 August, Kansas City, Missouri.
- Newbery, David M. G., and Joseph E. Stiglitz. 1984. Pareto inferior trade. *Review of Economic Studies* 51 (1): 1-12.
- Rodriguez, Francisco, and Dani Rodrik. 1999. Trade policy and economic growth: A skeptic's guide to cross-national evidence. NBER working paper no. W7081.
- Rodrik, Dani. 1998. Who needs capital-account convertibility? *Essays in International Finance* 207, 55-65. Princeton, NJ: Department of Economics, Princeton University.
- Rodrik, Dani, and Andres Velasco. 2000. Short-term capital flows In *Annual World Bank Conference on Development Economics 1999*, edited by Boris Pleskovic and Joseph E. Stiglitz. Washington, DC: World Bank.
- Sachs, Jeffrey, and Andrew Warner. 1995. Economic reform and the process of global integration. *Brookings Papers on Economic Activity* 1:1-118.
- Stiglitz, Joseph E. 1983a. Public goods in open economies with heterogeneous individuals. In *Locational analysis of public facilities*, edited by J. F. Thisse and H. G. Zoller, 55-78. Amsterdam, the Netherlands: North-Holland.
- . 1983b. The theory of local public goods twenty-five years after Tiebout: A perspective. In *Local provision of public services: The Tiebout model after twenty-five years*, edited by G. R. Zodrow. New York: Academic Press.
- . 1999. Knowledge for development: Economic science, economic policy, and economic advice. In *Annual World Bank Conference on Development Economics 1998*, edited by Boris Pleskovic and Joseph E. Stiglitz. Washington, DC: World Bank.
- . 2000a. The contributions of the economics of information to twentieth century economics. *Quarterly Journal of Economics* 115 (4): 1441-78.
- . 2000b. *Economics of the public sector*. 3d ed. New York: Norton.
- . 2001a. (with Sebago Associates). Monetary and exchange rate policy in small open economies: The case of Iceland. Paper prepared for the Central Bank of Iceland, February.
- . 2001b. The role of the central bank and monetary policy under dollarization. Paper presented at the Central Bank of Ecuador, March, Quito.
- . Forthcoming. Democratizing the IMF and World Bank: Governance and accountability.
- Stiglitz, Joseph E., and Andrew Weiss. 1981. Credit rationing in markets with imperfect information. *American Economic Review* 71 (3): 393-410.

- Tiebout, Charles M. 1956. A pure theory of local expenditure. *Journal of Political Economy* 64 (5): 416-24.
- Weitzman, M. L. 1974. Prices vs. quantities. *Review of Economic Studies* 41 (4): 477-91.
- World Bank. 2000. *World Development report 2000/2001: Attacking poverty*. New York: Oxford University Press.