Underpinnings for a Stable and Equitable Global Financial System
From Old Debates to a New Paradigm

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I. Introduction

What a long distance the political discussions of the global economic architecture has traversed in the past 24 months. At that time, the focus of discussion was on how to advance the agenda of capital market liberalization; today, it is recognized that certain restraints on the flow of short term capital may indeed be essential for economic stability, especially for small, less developed economies. In the immediate aftermath of the onset of the crises, attention was focused on the weaknesses in the borrowing countries; the suggestion was that, by pursuing unsound policies and indulging in "crony capitalism" these countries had brought the ills upon themselves. Today, we recognize that not only was that original indictment unfair, paying undue attention to the problems originating in the developing countries, and ignoring the fact that for every borrower there is a lender, and the lenders have as much responsibility for bad loans as do the borrowers; but that even countries with sound economic policies can be buffeted by the turbulence in international policies, though to be sure, countries with weaker economic policies, *ceteris paribus*, are, almost by definition, likely to suffer more.

But while policy discussions have thus moved in eighteen months by an amount that, under more normal circumstances, might take years, the intellectual foundations have not—and have not needed—to change as much, and in this there is an important lesson. Many of the positions taken earlier were not based on sound theory or econometric evidence, but depending on one's perspectives, either on ideological positions, economic models of a by-gone era, or positions reflecting the concerns of special interests. This, the eleventh Annual Bank Conference on Development Economics, which has sought over the years to narrow the gap between policy and economic science, provides an opportune occasion begin to address perhaps the most cataclysmic set of events to face the world economy since the Great Depression. The purpose of this paper is not to revisit old differences, but to put the entire debate in a broader perspective, linking it to on going strands in economics, focusing in particular on six key issues.

The Basic Framework

Two basic ideas should inform our thinking about these issues. The first is the modern theory of market failures, focusing on incomplete markets, incomplete contracts, and incomplete information. While the failure of the Communist regimes has reinvigorated confidence in the market economy, in some quarters there was a loss of perspective: the socialist experiment arose in part to address glaring failures in the market economy, its seemingly failure to deliver growth to vast portions of the globe, the periodic crises that had plagued capitalism, the last major one, the Great Depression, having had devastating effects on millions of people, and the poverty to which so many even in the seemingly successful countries seemed condemned. While even apologists for market capitalism have not--at least in recent years--suggested that the market system by itself would generate socially acceptable distributions of income (though some maintained, even against the evidence, a belief in the trickle down theory, the notion that a "rising tide raises all boats"), Adam Smith's invisible hand argument, contending that markets lead to efficient resource allocations, has had enormous influence. Yet, in the past fifteen years, we have seen how circumscribed are the conditions under which Smith's invisible hand theorem holds. In particular, whenever markets are incomplete and information is imperfect--that is, essentially always--markets are not even constrained Pareto optimal.

The second basic idea is that financial markets play a key role in allocating capital and monitoring its use; these roles are essentially informational; as such, market failures are endemic; and there is a large role for government, in regulating financial markets.

While these advances in economic theory make it clear that there should be a role for government, it is not always what that role should be. The debate that has occurred in the past eighteen months is not, for the most part, between free market advocates and those advocating a dirigiste regime. Rather, it is about the particular interventions governments and the international community should undertake. For instance, should the government intervene to try to stabilize exchange rates? Critics suggest that governments have spent, one might say wasted, billions of dollars trying to defend indefensible exchange rates. And even when those expenditures were sustain by loans from the international community, it is not taxpayers in the developed countries that bear the bill; they will be repaid; it is the taxpayers--especially the workers--in the developing countries that bear the burden, as free capital mobility ensures that capital can flow out to avoid the imposition of the taxes required to repay the billions of dollars of loans. There is today a growing consensus that managing exchange rates is extra-ordinarily difficult.

As a second example: consider the very words used to describe the crisis--contagion and illiquidity. Both of these are concepts which simply do not appear in the lexicon of perfect markets. Contagion says that there are externalities; and externalities need to be addressed by corrective taxation or regulation. Illiquidity suggests that there are borrowers who are good risks--but which the market does not judge to be so. Should government bureaucrats, at the international or national level, be able to substitute their judgment for that of the market? But if markets can make mistakes, in not lending when it should, isn't it conceivable that markets can make the opposite mistake, in lending when it should not? And if that is the case, isn't it possible that part of the problem facing many countries is a sudden change in sentiment, imposing high costs on a country, especially given that risk markets are imperfect? And if that is the case, isn't it possible that government actions should be more symmetric--both providing liquidity when the market does not, and restricting liquidity when the market demonstrates a dangerous level of irrational exuberance, or at least restricting leverage when such irrational exuberance can have macro-economic consequences?

As a third example, consider the by-now part of the mantra of reform: improved transparency, a call for government intervention to provide more information and to require more information be provided by the private sector, a seeming recognition that market mechanisms--in which all relevant information is conveyed by prices--are insufficient to attain efficient outcomes. But there is no theorem that asserts that when prices do not convey all the relevant information, the only interventions should be disclosure requirements. And, as we shall discuss later in this paper, there is not even a theorem that asserts that more information will either lead to less market volatility or less severity of credit rationing.

The most troubling aspect of interventions has to do with macro-economic impacts and conflicts among objectives. For sixty years, governments have taken upon themselves the responsibility of helping the economy maintain full employment. This is not the place to rehearse the arguments, and evidence, for the proposition that markets do not always quickly adjust to full employment--even most free marketeers recognize that there was a Great Depression, and that whatever the role of monetary policy in inducing the shock, markets failed to adjust. For most governments, the maintenance of full employment is seen as a first priority. To be sure, *eventually* the unemployment rate stabilizes, and *hopefully* it returns to the levels before the downturn. The role of government is seen as reducing the magnitude of the downturn and its duration. The most recent crises raises several questions about government policies:

- Did the governments choose policies which put that objective at the center of economic policy?
- To what extent were other objectives--such as preventing defaults on the part of firms within their economy on international debts--given equal or greater weight than that objective?
- To what extent do the different objectives conflict, and if they did, how did the political processes resolve these conflicts?
- Standard macro-theory has argued for loosening monetary and fiscal policy in the face of a threatened downturn in the economy. Did the fact that monetary and fiscal policy were both tightened reflect judgments that these economies were not going to face a decline in aggregate demand? Or was it based on priorities given to other objectives? Or was it based on new economic models, which argue that the way to maintain full employment in the faces of an economic downturn involves the reverse of the usual policy prescriptions?
- Is there evidence that for less developed countries, deeper economic downturns lead to better long term performance; note that such evidence would contrast markedly with evidence for more developed countries, which strongly suggests that any economic downturn has long and persistent effects; there is no or little detectable mean reversion, so that the best policy for maintaining long term growth is maintaining short term output.

II. Improved Transparency and Disclosure

Recent problems in East Asia have focused attention on the importance of transparency, with widespread call for increased transparency.[1] This includes calls for greater transparency on the part of international lenders, national authorities, corporations and financial institutions in recipient countries and international financial institutions. In this section, we review the theoretical and empirical underpinnings of transparency--interpreted more narrowly in terms of increased flow of timely and reliable information--rather than the broader meaning which it has sometimes assumed (and to which it is clearly related)--that is lack of corruption. Beyond *more* information, transparency implies *better* information as well, in terms of relevance, quality and reliability of the information.

The call for greater transparency on the part of corporations and financial institutions reflects a set of market failures that has been well recognized in the economics literature, market failures that relate to the provision of information. The importance of greater transparency has been buttressed by changes in the characteristics of financial markets, in particular, the substitution of bank lending by securitized instruments, the greater use of financial derivatives, the changing boundaries between institutions, and the growing integration of domestic and international financial markets. As a result, there is greater reliance on market prices in the allocation of risks, putting more emphasis on public disclosure of information rather than relying on the traditional bank-client flow of information. Systemic risks suggest that there are benefits to disclosure beyond the firms and financial institutions who are providing market information. These indirect benefits argue that more public disclosure may be appropriate and that disclosure by a much wider range of institutions is now needed.

The presence of externalities, including free rider problems, suggest that were will an under-supply of information by markets, and inadequate incentives for monitoring and enforcement. There is a role therefore for public policy, but such interventions need to balance carefully costs and benefits of increased information, and take into account the underlying environment. Even with well designed government interventions, though, information will remain imperfect. Greater transparency, while it *may* reduce the frequency and depth of crisis (though even this is somewhat problematic) will not eliminate them.

Governments are not subject to the discipline that the market provides in the production, dissemination, and processing of information. Thus, especial attention needs to be focused on openness in governments, at every level, from the subnational, to the national, to the international. Recent research has pointed out both that *lack of transparency is related to corruption and to poor economic performance.* There is thus a high return and a special responsibility for increased openness in the public sector.

Given the obvious virtue of increased transparency, how could anyone oppose it? There are, in fact, a number of categories of objections:

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[1] The most significant effort in the wake of the East Asia crisis is reflected in the work of G-22 Working Group, "Report of the Working Group on Transparency and Accountability" (1998)

1. Increased transparency (in the form of disclosure requirements) is not needed, since markets provide optimal incentives for disclosure, balancing out costs and benefits.
2. Increased transparency requirements are likely to be ineffective , unless they are made comprehensive, since they will simply induce markets to move transactions from venues where there are reporting requirements to those where there not, and since partial information (e.g., about the magnitude of short-term foreign indebtedness) is of little value in itself, unless one can show that there is a systematic relationship between the information observed and the information which is of relevance (e.g., aggregate exposure).
3. Increased transparency does not necessarily result in greater stability or in less credit rationing.
4. Increased transparency requirements may be counterproductive (especially if they are not comprehensive), since regulatory arbitrage may actually result in increased risk. Hence more transparency may result in even greater market volatility.
5. Increased transparency reduces the rents that those who gather information garner in return for their expectations on information acquisition.

The validity of these considerations are explored below.

Market failures and transparency

Markets provide incentives both for disclosing information (especially information which will be viewed favorably by the market) and for hiding information. While under highly restrictive conditions, market forces will balance the marginal benefits and marginal costs of additional information disclosure (acquisition)[2] , under more general conditions, markets by themselves will not generate efficient levels of disclosure (or for that matter, information production or acquisition.)[3]

Governments have responded to these market failures in a variety of ways. In some cases, they have recognized the public good nature of information, and engaged in information acquisition (monitoring); government supervision of banks can be viewed in part from this perspective. [4] In most countries, governments impose disclosure requirements, e.g. in the case of securities or product labeling.

Disclosure requirements by themselves do not suffice. They have to be accompanied by active government enforcement and fraud laws, to ensure that the information disclosed is not deliberately misleading. Just as firms may have an incentive not to disclose all relevant information, they may have an incentive to disclose information in ways which make it difficult to process. That is why it is essential to establish *accounting standards* which facilitate the interpretation of the information which is made available.

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[2] See, e.g. Grossman
[3] The discrepancy between private and social returns has been recognized for a long time; see, e.g. Hirschleifer [1971] or Stiglitz [1975].
[4] See Stiglitz [1994]

By the same token, there are considerable advantages to establishing international standards. Any standards will impact different firms in different ways. In the U.S., while the government enforces standards, the standards are actually set by an independent board. However, *even in the United States, governments in recent years have taken actions--under political pressure--to reduce the level of transparency in accounting standards.*[5]

Governments and firms have at their disposal a variety of mechanisms for obfuscating relevant information. In the United States in the 1980s, for instance, in order to forestall dealing with an impending crisis in the Savings and Loan industry, phantom capital was, in effect, created, by allowing firms to treat "good will" as capital. *Thus, the desire to hide information--the desire for lack of transparency--is evident even in advanced industrial economies with sophisticated institutions.* Indeed, such economies may be in even in a better position to hide what is really going on than less developed countries, precisely because some of their greater sophistication in accounting and finance. Another example of how firms seek to obfuscate information is to provide "information overload," that is not only to provide the relevant information, but also irrelevant information. Many market participants will find it difficult sifting through the plethora of information for the relevant nuggets.

New financial instruments have made it more difficult to provide accurate and timely assessments of the net worth of firms and financial institutions. Not only are many derivatives not regularly reported on the balance sheet, but their market value can change markedly in response to small changes in external circumstances. There may be, in many cases, no agreed way of valuing a derivative position

There is a striking inconsistency between the current emphasis on improved information and the dogmas of financial market and capital account liberalization based on pure free market principles. According to the standard theorems of welfare economics which underlie such doctrines, all the relevant information is conveyed in prices. *If the models which underlie the calls for financial and capital market liberalization were correct, then there would be no need for government intervention in information disclosure.* Such calls reflect a recognition not only that information is imperfect and that all relevant information is not reflected in prices, but also that market mechanisms deal with information problems only imperfectly. There is no theoretical or empirical basis to the argument that government intervention should, in such situations, be limited to disclosure requirements.

`The kind of information which is now being called for--for instance, information about aggregate levels of short term debt--is not normally collected by government, even in the process of tax collection. (In those cases where there is interest deductibility of taxes,

[5] For instance, in the reporting of off balance sheet items. The most recent controversy centered around the disclosure of stock options. While there is some uncertainty in the valuation of such options, implicitly setting a value of such options at zero is clearly wrong. FASB (the Financial Accounting Standards Board) proposed a more transparent form of disclosure, but was eventually forced to retreat under political pressure. There exist ways of providing minimum estimates of the value of the outstanding options.

there is no requirement for disclosure of the term of the loan). Many firms would require that the disclosure of such information represents an intrusion into their private transactions. *There may be a compelling case for such intrusion, based on the presence of externalities associated with the aggregate levels of, say short term indebtedness; but the recognition of the presence of such an externality provides a rationale for taking actions which go beyond information disclosure. Disclosure may be desirable, but in those cases where it is desirable, there is a prima facie case that government actions should go beyond just information disclosure.*

Even with information disclosure requirements, information is likely to be at best highly imperfect, simply because there are a myriad of forms that intertemporal obligations (the effects of which are similar if not identical to short or long term indebtedness) can take. The development of sophisticated derivatives, referred to earlier, complicates matters significantly.

Information on a significant portion of formal short term indebtedness--that incurred by or on behalf of financial institutions, especially banks--can be had at relatively low marginal costs, since such information should be of relevance to bank regulators. But the fact that such information will not suffice is evidenced by the fact that in Indonesia, a significant part of the "problem" is foreign corporate short term indebtedness.

Consequences of improved disclosure

Even imperfect information may have a significant effect in improving the functioning of markets. It improves resource allocation, enhances efficiency and is a crucial foundation for better corporate governance and accountability. As such, greater transparency can play an important role in promoting more resilient financial systems and avoiding the buildup of vulnerability by encouraging more rigorous discipline in risk taking by lenders and borrowers and inducing more prompt adjustment in government policies.

In the recent crisis in East Asia, one of the problems faced by many suppliers of funds is that they could not distinguish between good and bad borrowers, and thus restricted credit to and/or charged extremely high risk premiums for all borrowers. In effect, they grouped all borrowers together. More generally, improved information may facilitate the functioning of capital markets, convincing suppliers of capital that they are operating on a level playing field. Improved information/auditing standards has been an essential part of the development of modern capital markets. (Greenwald and Stiglitz, 1992.)

Improved information may also reduce contagion effects, as lenders are able to distinguish the financial circumstances facing different countries. While such discrimination typically does occur in the weeks and months after the onset of a crisis, better ex ante information might speed the process along.

On the other hand, it should be recognized that much of the relevant information was available prior to the onset of the crises in East Asia. Even more so, most of the factors upon which current discussions have focused do not represent "news." Thus, much, if not most, of the relevant data concerning Thailand was available in the months preceding the onset of the crisis. The factors that are now cited as more fundamental--the excess building of real estate, financed out of short term foreign borrowing, was well known. Indonesia's corruption was well documented. The high debt equity ratios of Korea's firms were well known.

The problem seems to be the lack of ability to process currently available information. Thus, outside rating agencies did not downgrade the debt of many of the East Asian countries until well after the onset of the crisis; the discrete revisions are inconsistent with most models of Bayesian updating, and the timing of such revisions does not coincide with the release of what would appear to be significant news warranting such large revisions. The large discrete revisions, of course, itself contributed to the exacerbation of the crisis itself. Similarly, forecasts, both by allegedly reputable forecasting sources (some of which had access to private information) did not reveal good assessments of the risks, at least as they developed.

The fact that credit rating and international agencies attached caveats to their ratings and forecasts has limited value, since such caveats are attached to their ratings and forecasts for many countries which did not experience a crisis. The forecast or rating represents the best "summary" statistic, and as such did not accurately reflect the circumstances as they evolved. Part of this inability reflects the difficulty of forecasting crises. This is especially true of exchange rate crisis, since economic theories predict that movements in such variables should behave according to a random walk (though there may be systematic factors which can affect the variance, and in particular a large downward movement.) Presumably only variables that are systematically related to crises would provide information relevant to predicting and preventing crises, and the lack of consensus that there are such variables such make us modest in our hopes of the likely improvement of information about variables that do not appear to be systematic predictors.

Evidence that transparency by itself may be of only limited help is provided by the fact that the major crises prior to those in East Asia and Mexico were in Scandinavia, countries with the highest ratings on transparency. To the extent that currency crises are simply "runs" on a country's currency (analogous to bank runs), one cannot look to an understanding of *fundamentals* for insights into when they might occur, though research into social behavioral psychology might be instructive, that is, there may be systematic patterns, even if those patterns are not related to economic fundamentals.

Information disclosure can, under such circumstances, exacerbate fluctuations and precipitate crises, even when such information might have little intrinsic value. Crying fire in a crowded theater may create a crisis, whether or not there are problems with the "fundamentals" (that is, whether or not there is a fire, or a fire sufficiently large to warrant a crisis evacuation.) Calling attention to some variables may serve to create a coordinating mechanism (what is called in the technical literature a sunspot equilibrium) which leads to the occurrence of a crisis. This is especially true if market participants do not fully understand the structure of what is going on. Thus, focusing attention on a variable like the ratio of short term indebtedness to reserves may lead to that variable being a trigger for a crisis, since whenever that ratio exceeds a particular level, all will believe there will be a crisis, or believe that others will believe that there will be a crisis, and those beliefs will be self-fulfilling.

Some have claimed that the crisis in East Asia was aggravated, if not precipitated, by repeated announcements concerning aspects of the economy which were, in some cases, well known before; the announcements led many to believe that those aspects were far worse, and had contributed in far more important ways, to the occurrence of the crisis, than had been previously recognized.

As a general proposition, information disclosure may lead to more, not less, variability in the price of an asset. Lack of information serves to "average" good and bad events. Some concern has been expressed that improved capabilities of processing and transmitting information may actually lead to increased volatility of asset markets. Empirical evidence on this remains inconclusive.

Similarly, direct empirical link between transparency and financial stability is difficult to establish because transparency is hard to measure (Vishwanath, 1999). The empirical literature has developed some proxy indicators. In an empirical study of data from developed and developing countries, Demerigue-Kunt and Detragiache (1997,1998) identify many factors associated with banking crises. They find that institutional factors, as measured by inefficient bureaucracy, weak rule of law, or contract enforcement, and an index of corruption, increase the likelihood of banking crises. However, their correlation is weakly significant. In addition, extending such a finding to transparency is valid only to the extent that achieving transparency requires enforcement.

A high degree of corruption, associated with a lack of transparency, has been cited as an important contributory factor in the East Asian crisis. Evidence linking corruption (as measured by perception surveys conducted by Transparency International, ICRG, World Competitiveness Yearbook) to crises in East Asia is weak: there is little justification that it may have caused the crises. (Furman and Stiglitz, 1998). Furthermore, low corruption is not sufficient to avert crises. As noted, Scandinavian countries that are among the least corrupt suffered banking crises at the beginning of the decade. Also, countries with no corruption may have little transparency in their banking systems if regulations do not require disclosure. While it is plausible that corruption, lack of rule of law make it difficult to achieve transparency, they do not measure transparency, per se.

On the whole, present evidence, subject to the imperfections that attend measurement of transparency, does not support the hypothesis that a lack of transparency caused the crises. But the lack of transparency may exacerbate the crises. Accordingly bank runs may be averted by better disclosure if investors could discern healthy banks from insolvent ones. In general, the evidence suggests that more information strengthens market discipline, provided the information is reliable and that other regulatory instruments are employed to improve the incentives to use information and enforce compliance.

The Environment

The economic and political environment affects both the costs and benefits of improved disclosure. Less developed countries are typically in more volatile situations, have less capacity for auditing and monitoring, and less capacity for processing relevant information. Hence there may be a greater role for the state in the provision of information. Economic policies can affect both the information available and the information required for economic stability. *Financial market and capital market liberalization may increase enormously the informational requirements for economic stability.* For instance, asset price volatility, especially associated with real estate lending, means that reducing restrictions on real estate lending increases not only the potential for financial fragility, but also the information required to ensure financial viability. Capital account liberalization increases the potential for large short term capital flows, with concomitant changes in short term debt to reserve ratios. This again contributes to financial fragility and increases the information required to ensure stability.

Economic reforms which eliminate rents can temporarily result in significant increases in uncertainty (e.g. about the net worth of various enterprises). In the absence of good information systems that allow ascertaining the magnitude of these effects on individual enterprises, this may have significant adverse economic impacts which have to be weighed against the long term benefits. The adverse informational consequences are likely to be significantly higher in circumstances where firms and financial institutions are already at the brink of survival.

Government Policies

The Government has an important role to play in the regulation of disclosure and in the provision of information, including about its own policies. In general, disclosure regulation, which either mandates or encourages transparency, may be justified when there are externalities and information is costly. However, the very decision to introduce disclosure regulation, as well as the specific implementation of such regulation, warrants careful consideration (Vishwanath, 1999).

First, an assessment should be made as to whether more transparency would necessarily improve economic outcomes. There are instances where more information may cause speculation and hence greater market volatility, whereas there may be none in the complete absence of any information (Hirshleifer: 1971). For example, in the context of financial markets, a recent empirical study (Bushee and Noe: 1999) indicates that firms with improvements in disclosure practices[6] experience subsequent increases in their level of stock market volatility.

Disclosure may also undermine the effectiveness of policy. Arguments in favor of secrecy of central banks in matters of monetary policy are well known, but seldom subject to theoretical and empirical scrutiny. Recently authors have argued that greater transparency of central bank policies makes the bank's reputation and credibility more sensitive to its actions and thus improves social outcomes (Blinder: 1998). However, there are also extreme examples where transparency can worsen outcomes; if the central bank's reputation is independent of its actions it loses an important constraint on its behavior. The results may be higher than average inflation and more variable inflation and unemployment (Faust and Svensson: 1998)[7].

Explicit in laws of privacy, and confidentiality agreements that limit full disclosure of information, is the notion that there is a judicious balance between transparency and privacy. Such a balance is struck by the U.S. Federal Reserve Board policy to release minutes of open market committee meetings with a six-week lag, after deleting confidential information like names of individuals, foreign banks and so forth. This forces governors to provide a rationale for their decisions.

So even in cases where disclosure regulation is justified, articulation of appropriate disclosure policies requires a careful weighing of costs and benefits. We need to understand what information should be disclosed and with what precision, when it should be disclosed, who provides the information and verifies the quality, what are the enforcement requirements and so forth.

Governments can use a variety of mechanisms to induce self-revelation of information. For example, requiring the use of subordinated, uninsured debt has been used to improve private incentives to acquire information and monitor banks. Also, involving local communities in monitoring government services has been shown to foster transparency and lower corruption.

Uncertainty about government economic policies itself is one of the major sources of information failure in the economy today. Some of this uncertainty is an inherent consequence of democratic governments not being able to make commitments that are binding on successive democratically elected governments.

This uncertainty which is inherent in democratic processes can be reduced by ensuring that policies and policy reforms have widespread domestic ownership and represent a consensus in society, one which is not likely to be upset by a change in Administration. Accordingly, policies imposed from the outside without such ownership and that are not

[6] Transparency or disclosure is measured by the annual ranking of a firm's disclosure published by the Association of Investment and Management Research (AIMR). This ranking has been used by several authors to proxy for overall levels of disclosure.
[7] This result is based on a theoretical model, and has not been empirically tested.

based on a foundation of consensus building not only may undermine democratic institutions, but may increase economic uncertainty, thereby undermining some if not a substantial part of the desired welfare gains Indeed, without such a consensus building process, there will inevitably be widespread criticism within the country, which will be interpreted negatively abroad, and perhaps rightly as suggesting that such policies may not be sustainable. But the answer is not to suppress democratic discussion but to engage in an active process of consensus building.

But while much of the policy uncertainty is inherent in democratic processes, some of it is unnecessary. Thus, central banks routinely do not disclose fully and in a timely way the nature of the policy discussions and votes on key policy matters.   As noted, there is no scientific evidence that such discussions would substantially increase market volatility, while there is some theoretical analysis that more regular disclosure of such information would actually stabilize markets. Even if it should turn out that the disclosure of more information in a more timely way did lead to more market instability (a proposition which would undermine current calls for more disclosure and transparency), societies need to balance the possibly small economic costs of such instability with the possibly large costs in undermining open democratic processes The changes in the practices of the Bank of England represent a marked step forward, with no evidence of untoward consequences.

It has long been recognized that there is a link between corruption and transparency. Lack of transparency on the part of governments provides an opportunity for hiding corrupt practices; and corruption has been shown to be systematically related to lower levels of investment and slower economic growth.

But the economic incentives on the part of bureaucrats and government officials for secrecy goes beyond the desire to hide corruption. It extends to the desire to hide mistakes, and perhaps most importantly, to create *information* and *political* rents. Lack of information creates a barrier to meaningful entry into the political process; it restricts competition. Lack of information creates information rents which can and are regularly exchanged, not only for political favors, but also (even in seemingly less corrupt societies) for favorable news coverage, which is of immeasurable value to politicians and bureaucrats.

The changed presumption that citizens should have a right to know what their governments are doing represents a marked step forward. Just as governments have imposed disclosure requirements on the private sector, they need to impose such requirements on themselves. The Freedom of Information Act stands in marked contrast to the "official secrets" act restricting public disclosure in many countries.

The necessity for such disclosure requirements is even more imperative in the context of public than private institutions, because of the lack of availability of the "exit" option; voice takes on a more important role, and voice can only be meaningfully exercised with information. Information is an essential part of public accountability. But just as there are a variety of ways by which the private sector may try to obfuscate information, so too in the public sector. Many governments have demonstrated a proclivity for levying taxes in forms in which the total tax burden is not transparent, or in forms in which the incidence of the tax burden is not evident.

International institutions have a special burden for transparency, because they are typically not even directly accountable to electorates. They report indirectly, through governments, which themselves may not be totally transparent. There should be a strong presumption, if not an outright prohibition, against secret concordats between governments and international organizations. Such secrets undermine democratic processes. If they are agreed to because the government does not want to disclose the agreement to its people, then they are likely not to be sustainable. If there is not the popular support for some particular action, the government should undertake a program of consensus building behind the action. If it is believed that, say, a loan cannot be justified without a particular action, and the government is unwilling to make public a commitment to take that action, then the loan should not proceed.

Without a firm commitment not to engage in secret agreements, a climate of distrust grows. Participants in the political process do not know whether an agreement has been made, which commits the country to a particular course of action. Even if one or the other party denies that there are secret agreements, such denials are routine in the presence of a pattern of secrecy.

Conflicts of interest may arise when government operating agencies are also involved in producing and analyzing statistical data. Thus, the close affiliation of Departments of Labor with workers may make them less attune to correcting biases in cost of living indices. Operating agencies may attempt to shift blame to others in the event of failed policies, and the interpretation and analysis of data may be an essential part of such shifting of blame. That is why many governments have established independent statistical agencies, not linked with any operations. The advantages of such separation outweigh the disadvantages arising from potential economies of scope between data gathering, analysis, and operations. More broadly, the organization of the provision of information is a question that requires careful scrutiny, given the potentially large consequences of information disclosure and the obvious incentive issue that those consequences raise.

Governments and international agencies need to take into account the fact that the data which they gather and highlight will affect behavior. Thus, simply making available data on short term debt to reserve ratios may result in investors focusing on that variable, and that variable may then serve as a coordinating mechanism for crises. The fact that market participants will respond to such data (whether they represent fundamentals or not) implies that governments will need to pay attention to these variables. Thus, there are important consequences of choices of variables to highlight. The data may distort behavior, as well as improve economic performance.

In the event of a crisis, market participants will always claim that they have insufficient information; almost by definition, if they had known that the crisis was coming, they would have behaved differently. They are not likely to take the blame on themselves, e.g. that the failure arose from their analysis of the data. Thus, governments cannot use as a criteria for the adequacy of their data collection and dissemination efforts either the occurrence of crises or the prevalence of complaints about data adequacy.

In the previous discussion we have delineated roles for government in establishing information (auditing) standards, in imposing disclosure requirements, in enacting and enforcing fraud laws, and in promoting transparency in its own operations. Information is a public good, or at least many aspects of information partake of key properties of pure public goods. This implies that in some areas, the role of government needs to extend beyond the roles delineated above. For instance, there is a role for government in monitoring financial institutions, in establishing and enforcing risk adjusted capital adequacy standards, in restraining certain types of behavior, such as insider lending, accumulating excessive foreign exchange denominated liabilities, and in excessive speculative real estate lending or lending on margin for the purchase of stock.

While recent research has helped delineate the relationship between transparency, corruption, and economic growth, in most of the areas discussed above there has been little or no research, either theoretical or empirical. The recognition of the importance of transparency and disclosure suggests that there is an important role for further research, for instance in identifying the likely consequences of increased disclosure requirements and alternative information standards.

III. Reducing Incentives that Encourage Excessive and Unhedged Borrowing

There seems agreement that “excessive” unhedged short term foreign denominated borrowing was an important contributor to the crises, and leaves a country vulnerable to shocks. The question is, what causes these excessive unhedged positions, and what can government do to address the problem?

Two of the lessons commonly drawn illustrate the dangers of an incomplete analysis. For instance, cone commonly drawn conclusion focusing on the need to allow greater nominal exchange rate flexibility even if the government wishes to target real exchanges rates over the medium term. The argument is that government commitments to exchange rate stability encourages the private sector to take unhedged positions. Government policy is to blame. But a moment’s thought reveals the fallacy in that reasoning: insurance is designed for low risk events, with large consequences; no government has ever maintained an exchange rate forever; government exchange rate policies may make changes in exchange rates less frequent, but possibly larger, that they would be without intervention. If “markets” believe that there is a smaller probability of a change, then the “premium” that is charged for the insurance will accordingly be smaller. Exchange rate policy is no excuse for a firm not having cover-other than in those instances (such as financial institutions) where government has, implicitly or explicitly, offered cover itself. Thus, the failure to obtain cover is evidence of market irrationality or market failure; the blame should not be placed on government. (Moreover, has Thailand let its exchange rate in the aftermath of the crash or its real estate bubble.

Another often drawn lesson is the importance of ensuring a better balance between monetary and fiscal policy in dealing with overheating and/or large capital inflows in order to avoid high domestic interest rates. But again, one must interpret this lesson with care: had Thailand, for instance, relied more heavily on fiscal policy, it would have had to contract its needed public expenditures on education and infrastructure, thereby harming further its long run competitive position; or it would have had to raise taxes, cutting back consumption, which already was an unusually small fraction of GDP. Both of these points do not mean that there is no role for macroeconomic policies, but that it is erroneous to put the blame on "wrong" macroeconomic policies. The source of the problem lies with market failures to which macroeconomic policy needs to adjust.

A third lesson focuses on corporate governance: Improved corporate governance presumably would reduce the scope for "excessive" borrowing. But this allegation, too, needs to be looked with some care. The intuition behind the result is that "bad" managerial decisions-bad corporate governance-lies behind the excessive borrowing. But one needs to distinguish between bad decision making, caused by incompetent managers or irrational behavior, from systematic weaknesses arising out of inadequacies in underlying *incentives* associated, say, with corporate governance. The irony is that traditionally corporate governance issues arise from separation of ownership and control; in Korean firms ownership(as defined as residual rights to income flows) and control were not separated; corporate governance problems arising in the United States, with disperse ownership and weak legal structures, such as the Czech Republic. There is no evidence that the lack of protection of minority shareholders, for instance, played a significant role in the crisis, through worries about such minority shareholder rights may indeed have played a role in limiting the growth of equity markets. At the same time, it needs to be recognized that relatively few countries, outside of the United States and Britain, have sufficiently strong legal systems that equity ownership has proved to be a major source of raising new funds. On the other hand, in other countries, growth has been limited, so that it could be funded largely by retained earnings; as a result, debt equity ratios have been kept at much lower levels. Given the apparent difficulty in establishing legal structures which provide sufficiently strong protection to minority shareholders, it is not apparent that Korea, for instance, made a mistake in pursuing a high leverage strategy: while it entailed high risk, it also facilitated how growth; overall, looking at its performance over three decades, the "gamble" paid off. Still, a strategy strengthening the legal structures to facilitate more debt financing could facilitate growth with stability.

A final lesson focuses on transparency; since this is a subject we discuss extensively in a later session, we shall have nothing more to say about it here. There are some policies that would likely have reduced the excessive unhedged position: a) Removing tax bias that may encourage financial institutions or firms to rely on foreign funding, as was the case with Thailand; b) Changing banking regulations, including the design of capital adequacy standards which discourage uncovered positions and which impose greater risk weights on short term lending; c) to moderate asset and spending booms associated with periods of large capital inflows, authorities may want to raise capital gains taxes, adjust bank regulations (e.g. on collateral or capital adequacy requirements) or introduce luxury or other surtaxes. In addition, bankruptcy laws, bond provisions, and practices concerning standstills all effect the incentives of lenders to engage in due diligence in their lending. We shall discuss these provisions in a later section of this paper.

Lending transactions (and the terms of loans) are affected by incentives and circumstances facing lenders and borrowers. Bail-outs, inadequate and misguided regulatory structures in lending countries can result in lenders offering terms to borrowers that are “too good” for them to refuse, and which encourage short term lending at the expense of long term loans. Thus, even if there were no distortions in the borrowing country, there can be a bias arising from distortions in the lending countries willing, or distortions arising from bailouts. Given the willingness of lending countries to address the problems that arise from their practices, borrowing countries-who bear the brunt of the cost of any crisis-must adjust their regulatory structures to offset the distortions arising in the lending countries.

In the discussion below, we focus on three issues facing developing countries-the regulation of their financial institutions, the regulation of corporate borrowing and capital controls and taxes. We focus our attention not on the measures that can be taken in the very short run-when a crisis has already occurred-but the medium term measures that should be undertaken now, that hold open the prospect of a smaller likelihood of a crisis in the future.

Regulation of Financial Institutions

Misguided policies focusing on deregulation are at the center of many of the weaknesses in East Asia and other developing countries. Indeed, such policies have been shown to be systematically related to the occurrence of crises. The focus should have been not on deregulation, but on achieving the right regulatory structure, on that would encourage safe and sound financial institutions and competition, while providing a modicum of consumer protection[8]. The former requires a robust, portfolio approach-one that entails both incentives and constraints and is tailored to the circumstances of the country and its supervisory capabilities. It is clear that developing countries typically face greater risks and have less regulatory capacity. Moreover, the very process of liberalization exacerbates these problems: it increases the incentives for risk taking (since it may reduce franchise value), at the same time that regulatory capacity actually decreases, as the private sector bids away the few highly trained individuals. Accordingly, developing countries may need to impose greater restraints than these imposed undeveloped centers (especially when accounts practice at adjustable risk and default, e.g. a failure to mark and evaluate). Especially given the deficiencies in risk adjustment and accounting practices in developing countries, such a portfolio approach will be far more effective than excessive reliance on capital-adequacy standards and excessively rigid implementation of such standards. A strategy focused

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[8] A further objective of regulation may be to ensure that underserved groups have access to capital (e.g. the so-called CRA requirements in the United States).

excessively on capital-adequacy standards is inefficient[9] and may actually increase risk again; increases in capital requirements decrease bank franchise value, and may actually lead to more, not less risk taking. The rigid enforcement of capital adequacy standards in the presence of systemic risks is especially problematic, as the attempt by each bank to meet its requirements leads to increased incidence of non-performing loans; the strategy may turn out to be counterproductive.

Weaknesses in the financial system in developed countries can contribute to the problem in the developing countries, by inducing banks in the developed countries to make loans at terms that are "too good to be turned down". Similarly, inappropriately designed regulatory structures can encourage short term lending. If these are not adequately addressed, developing-country governments need to take even stronger measures to reduce foreign borrowing (especially short-term borrowing) both of banks and corporations.

In addition to the removal of distortions noted above, reductions in the taxation of the financial system and improvements in the efficiency of financial intermediation more generally will help lower the costs of domestic funding and thus further reduce the bias towards off-shore funding. Financial restraint-limiting deposit rates-- may also serve this purpose[10].

Measures for financial institutions on foreign exchange exposures

There is a growing belief that authorities should adopt more stringent measures on the degree of foreign exchange exposures by financial institutions. There are a number of specific steps to manage foreign exchange exposures:

- Limits on the net open positions financial institutions can take in the foreign currency market and limits on the amount of gross foreign currency liabilities (as a fraction of total liabilities or as a ratio to equity). (Many developed countries also limit the maturity mismatches on foreign exchange liabilities and assets)
- Requiring banks to hold more liquid foreign exchange assets relative to total foreign exchange liabilities that they are required to hold on domestic currency liabilities. Not only will this reduce indirect foreign exchange exposure; it will also provide banks with a source of liquidity, which is less likely to dry up during periods of stress in the domestic financial markets.

[9] See Hellman, Murdock, and Stiglitz (1998) and Stiglitz (1999).
[10] Financial restraint needs to be distinguished from financial repression. The former has been shown to have positive (or at least non-negative) effects on growth and investment. Implementation financial restraint requires careful attention to provisions for opening capital accounts and opening up markets to foreign financial institutions.

- Improved guidelines on internal risk management systems and tight monitoring of the internal risk management systems of financial institutions, providing sanctions for poor systems.

Tighter supervision of those to whom the banks make loans, ascertaining, for instance, that their borrowers have the capacity to repay foreign exchange loans or otherwise put in place a hedge, important as these steps are, we should be aware of their limitations. Ascertaining the extent of exposure (particularly of those to whom banks have lent) is difficult. Some Korean banks, for instance, believed that they had purchased "cover," only to find out that when they needed it, the counterparty went bankrupt. Those, ascertaining the risk exposure require information not only about contracts, but also about the risk profile of those providing cover, including knowledge of the correlation of credit and market risks to which the financial institution is exposed. This is a heavy burden, one which banks even in more developed countries and their regulators seem to have had a hard time meeting.

Measures for financial institution on other exposures

In addition to foreign exchange exposures, there is merit in strengthening the prudential regulation of banks on their overall exposures. In particular, there is a strong case cyclical adequate of risk based capital adequacy, during periods of capital inflows-, that would take into account the higher risk to sectors such as real estate, leveraged firms. But this may not be sufficient, and may need to be complement sectoral lending limits for lending to real; estate for consumer finance and stock market related lending. Governments may also want to consider speed limits that would automatically restrict excessive credit growth at the institutional level; rapid credit growth has been shown to be systematically related to the likelihood of financial weakness[11].

Restricting real estate exposures can take various forms: caps on share of portfolios or on credit growth rates, maximum loan-to-value rations, maximum individual loan sizes, prohibitions against certain forms of real estate lending, minimum requirements for the share of equity finance for developers, etc. Many of these limits are in place, but several can be strengthened, both in terms of the relative levels of the limits and in the degree of disclosure, and importantly in the implementation and monitoring of rules.

Margin-lending, lending against stock and other assets, consumer lending and connected lending are other areas where lending limits, (re-) valuation rules (e.g., the frequency of marked-to-market of investment), and disclosure requirements can be tightened over time. And concentration rules (single lending limits and group lending limits) also need to be strengthening in many Asian countries, particularly in the supervision of compliance.

Other measures

[11] reference

While well-designed, risk-based capital adequacy and deposit insurance premia may induce banks to adjust interest rates to discourage such exposure and leverage, not even advanced countries have regulatory structures that are equal to this

Requirements of tranches of subordinated debt may provide helpful information to the regulator, enhance bank incentives, and provide further buffer against default.

The argument that deposit insurance is the source of the problem, rather than part of the solution, is misguided. Without such insurance, runs can (and frequently have) occurred. Furthermore, incentives for gambling can arise even without such insurance, governments typically ball out large banks, even when there is not formal insurance[12] and the public-goods nature of monitoring implies that reliance on private monitoring is inefficient theoretical propositions: lenders returned relatively, quickly even after the massive defaults that have periodically plagued Latin America.

Measures to Curtail Excessive Borrowing by Corporates

The fact that two thirds of the short term foreign denominated borrowing in Indonesia was by corporates suggests that "excessive" borrowing needs to be addressed in that sector directly, not just within the financial sector. In the same way that putting a finger in the hole of a dike will simply redirect water pressure toward other weaknesses, misguided incentives to borrow from abroad are likely to show up elsewhere in the system. If one worries about banks borrowing from abroad and imposes restrictions, those restrictions can be evaded if corporations are set up which borrow from abroad and lend on to the banks. And the impact of high levels of foreign short term indebtedness by firms to which the banks has lent money can be as devastating as direct borrowing by the bank itself.

What are the market failures that might lead to excessive borrowing by corporates, or more generally, to excessive cross-border capital flows? And what are the policies that can address the problem? Note that the often told basic argument for excessive borrowing in the financial sector—deposit insurance—does not apply here. Still, three arguments that were used to justify government intervention in the financial sector apply with almost equal force here:

a) The too big to fail argument: systemic borrowing, or even borrowing by a few large firms, places the entire economy in jeopardy, in the face of a potential currency crisis; in particular, by tying the hands of the government—by forcing it, for instance, to attempt to defend the currency by raising interest rates, at great costs to others—such borrowing has huge potential externalities.
b) The cost of prudential actions: we noted that under current perceptions, countries must maintain reserves equal to aggregate short term foreign denominated liabilities, if they are to be viewed as pursuing prudential policies. But there are high opportunity costs to maintaining such reserves, and those borrowing should be made to pay for those costs.

[12] As my colleague Jerry Caprio has put it, there are two kinds of countries: those that have formal deposit insurance, and those that have deposit insurance, and don't know it.

c) The externality in borrowing rates. If markets view the country's aggregate foreign denominated short term liabilities as a risk factor in determining interest rates, then additional borrowing by one party exerts a negative externality on others, for which they should be made to paid.

We discussed more broadly the systemic risks imposed by cross border capital flows earlier in this paper—risks which have had enormous social consequences and which by themselves argue for intervention. There is another class of arguments that has also recently been put forward, based on *information externalities*. The recent crisis has made it evident that information problems in cross-border lending are severe, and that lending in the form of highly-liquid claims is susceptible both to bandwagon effects – both euphoria as well as panic. In this context, portfolio allocation decisions made by individual investors can have large and adverse external effects through the implications of their actions on the decisions made by other agents and thus on the magnitude of the financial shocks experienced by small capital-importing countries. Because these information spillovers are likely to be especially severe in an environment in which information is scarce - and the recent crisis has even destroyed much information that was previously thought to exist with respect to short-run macroeconomic management in these economies and about individual firms, asset values have fluctuated greatly.

In recent discussions, another argument has been put forward: there are failures in corporate governance. To be sure, failures in corporate governance—inefficiencies in management—can result in poor business decisions, including excessive corporate borrowing. We already noted one such instance—the failure of many corporates to obtain cover—a decision which could not be justified simply on the basis of a quasi-fixed exchange rate, as some analysts have attempted to do. The charge of weak corporate governance however is usually levelled by those who have faith in the market system; the seeming contention is that there is something wrong with the underlying legal or institutional structures which systematically gives rise to mistakes, e.g. as a result of misguided incentives. The usual corporate governance problem is that between ownership and control, a problem emphasized, for instance, by Berle and Means, and more recently by Stiglitz [1982, 1985] and others. Ironically, in Korea and many other East Asian countries, this corporate governance problem does not arise; firms are often family controlled. In the case of Korea, weak legal structures may have inhibited the development of stock markets, which would have enabled expansion without such heavy reliance on debt. But it should be noted that only in the United States and the U.K. does it seem that the legal structure is sufficiently secure so that a significant fraction of new capital is raised via equity markets. To be sure, in countries with widely diversified share holdings, Berle and Means [ ] and Stiglitz [1985] have argued that banks play an important role in corporate governance, so that were Korea (or some of the other East Asian countries) to have had widely diversified stock ownership, it would have had a corporate governance problem—simply because of the problems in the financial sector to which we have already alluded.

There are several policy instruments to address the issue of excessive corporate borrowing:

- Inflow taxes, such the Chilean tax on capital inflows
- Limitation on tax deductibility of foreign-denominated, short-term debt[13].
- Exit taxes: while it is too early to reach a definitive judgment concerning the Malaysian exit tax, the international community should be open to learning from this and other experiments aimed at stabilizing capital flows, especially when such experiments are "market friendly," i.e. take the form of tax interventions rather than outright controls, and when they pay due attention to the needs of long term capital, as they attempt to dampen short term speculative flows.
- Bank regulations, e.g. on the exposure of the firms to which the bank has lent money
- Appropriate risk adjusted capital adequacy standards, where loans to firms with high foreign exchange exposure would be given a higher risk weight. This would provide banks an incentive to charge higher interest rates for firms with such exposure, and this would reduce their incentive to undertake such exposure.

All of these measures can be imposed in flexible ways, directed at stabilizing the flows, and in ways which need not interfere with long term capital movements, and especially foreign direct investment, or with trade credit. When imposed in this adaptive way, the arguments that over the long run they become evaded, or that in the short run, they are imperfect, are unpersuasive: such interventions may still stabilize the flows. While the existence of derivatives makes the implementations of interventions more difficult, it also highlight the need for such interventions, since such instruments can themselves contribute to volatility; requiring registration of such derivatives (e.g. in order for them to be enforceable in courts) would be an easy way both to increase transparency and enhance stability.

Some have argued that there may be a need to go further than these relatively "market friendly" measures, to more extensive interventions. Such proposals take several forms. One can be to limit the class of firms that are allowed to raise funds off shore. Firms raising funds off shore could be required to be rated by an international or domestic rating agency and/or to be listed on the domestic stock exchange. One potential drawback is that such measures may discourage off shore venture capital funds from investing in small but promising small firms. Second, and more controversial, would be to impose prudential ratios for borrowing firms, such as a minimum equity to liability ratio, a maximum foreign to domestic currency liability ratio, and a maximum net and/or gross foreign exchange open position (or that the firm can show that it has foreign exchange revenues). These criteria can be combined and differentiated according to the type of off shore funding and sector. In addition, minimum criteria can be set for terms of loans.

[13] The enforcement of such limitations may actually be easier than the implementation of the Chilean scheme. Again, attention has to be paid to attempts to evade these provisions through derivatives; but with appropriate transparency (which can be enforced by making unregistered derivative contracts unenforceable in courts), these problems can almost surely be addressed.

In addition, issues discussed elsewhere in this paper—transparency, bankruptcies, and standstills—have an important bearing on corporate lending.

Again, actions need to be taken in both developed and less developed countries. We have already noted how well *designed financial regulations* can contribute to excessive *short term* foreign borrowing, and how *inadequate enforcement of regulations* can lead to loan terms that are too good to pass up. Abrupt changes in financial regulatory stances can contribute to the volatility of short term flows; such changes may in fact in the past have played an important role in instability, e.g. policies which induce a credit contraction in a developed country can have spillover effects on developing countries to which its banks have lent money.

Contract provisions that contribute to the instability of capital flows (such as the put provisions I discussed earlier) should be discouraged. And fiduciary requirements imposed in developed countries, which require the immediate sale of assets when they are downgraded by rating agencies, need to be changed, as such provisions clearly contributed to market volatility in the recent crises.[14]

III. The Role of Liquidity

A set of issues which has moved front and center in the policy debates in the last few months--from lender of last resort to contingent finance--involves the issue of liquidity. This is a concept which, while frequently referred to, is seldom well defined. Emphasis is often placed on the distinction between liquidity and net worth. Central banks are told: bail out illiquid firms, but not insolvent firms. Ignoring the difficulties of empirically distinguishing between the two, the distinction itself, as we noted earlier, is evidence of the belief that markets do not work in the manner described by the neoclassical model, in which any firm which had a positive net worth could gain access to credit.

There are at least sets of circumstances in which liquidity issues may arise:

1. For some commodities, like housing, in which heterogeneity is important, selling an asset quickly results in a lower price than if there is a more extended time for sale; the asset is said to be illiquid. The problem here is associated with the time that search takes to match the asset with a buyer; this is typically not the case for the financial assets which are at the center of recent crises.

2. When there is a probability of default, then there may be credit rationing (Stiglitz-Weiss). Thus, some borrowers may not be able to gain access to funds, at any interest rate. This is a real liquidity problem. Though the borrower's net worth is positive, the problem arises from

[14] In addition, it would be desirable if credit rating agencies did a somewhat better job of providing information in advance about the deteriorating state of a country's economy, rather than the large, discrete changes in ratings just before or as the country plunges into crisis.

the inability, given the available (enforceable) contract forms, for the supplier of credit to appropriate large enough returns to compensate for the risk being borne.

3. When there are large differences in beliefs, e.g. between lenders and borrowers, then at the interest rate which is required to compensate the lender, the borrower believes that he is paying an usurious return. This is strictly not a case of liquidity--except to the extent that the borrower believes that, over time, information which the borrower has, but which he cannot credibly make available to the lender, will become available. The belief that there are large asymmetries of information may also, itself, cause a liquidity problem of the second type, as lenders believe that borrowers will only accept the loan if advantageous terms are offered (though these Akerlof-Greenwald-Stiglitz "adverse selection effects closing market" arguments seem more persuasive in the context of equity markets than in the context of debt markets.)

4. Multiple equilibria--such as those exhibited in the Diamond-Dybvig model--may give rise to illiquidity. Individuals, believing that others are going to withdraw their money, do so; thus, a bank that *would have* been solvent becomes insolvent; and the provision of temporary funds can then restore it to solvency. Even better, the belief that there are funds available eliminates the incentive to withdraw funds, and thus the liquidity crisis is avoided altogether.

What are the implications of these different forms of liquidity on interventions? First, note that most of the interventions recently seem to be based on the third form--the belief by international bureaucrats, say, that they have better judgments concerning the country's ability and willingness to repay (or that of companies within the country) than does the market. We have already commented on the profound implications that such a perspective has on market interventions more generally.

Secondly, many of the more recent proposals, focusing on liquidity, on premised on a slightly different "market failure"--namely the inability of the private sector to make credible commitments to make credit available under certain circumstances at prescribed interest rates (or interest rate-formulae), e.g. a crisis. One of the reasons for this is presumably the reason that markets cannot provide business-cycle insurance more generally: these are systemic shocks, and many of the firms that might provide such insurance will themselves go bankrupt (or face liquidity constraints) in the event of a crisis. The liquidity constraints facing many of the suppliers of funds to the emerging markets in the aftermath of the Russian default bears testimony to the importance of this possibility. (In some cases, the issue is one of the price at which such insurance is made available--in which case this argument then is equivalent to the third argument--a difference in views about the appropriate price.)

There is, however, one reason that international financial institutions may be in a different circumstance than private sector borrowers with respect to the second set of liquidity problems--the enforcement of claims. As senior creditors, the IFI's have evidenced greater compliance than private sector creditors. There are two questions: the impact of the provision of such credit on the supply of credit by private lenders; and the possibility that such credit could precipitate a crisis itself. Modigliani-Miller type of analyses suggest that if the source of illiqudity is credit rationing, then the provision of credit by the IFI's may reduce the return on non-preferred credit; the amount of lending that they will make available will be reduced--perhaps by an even greater amount. Moreover, the anticipation that a preferred creditor loan will be made could lead to credit rationing at an earlier date: the availability of such a credit line could thus lead to crises occurring at an earlier date (and possibly with greater frequency) than otherwise. Moreover, it can (indeed would be anticipated to) lead to higher interest rates on the non-preferred creditor. (To be sure, if the IFI's interventions were believed to lead to better policies, or in any case, policies which reduced the risk of default, then all of these effects could be reversed.) That such contingent lending leads to earlier or more frequent crises may not by itself be an argument against such loans: the adverse consequences of crises are highly non-linear in their size, and delay may lead to crises of greater magnitude.

The multiple equilibria model raises the most interesting prospects for contingent loans; for the belief that funds are available in the event of an attack against a currency may actually stave off the attack itself. Among the key questions here is whether the magnitudes of funds available are likely to be sufficient, especially once it is recognized that pressure on a currency may come from domestic capital flight as well as a direct speculative attack. If funds are insufficient to stave off an attack, the availability of more funds to defend a currency actually enhances the incentives for an attack. Remember, to a first order approximation, speculative attacks represent zero sum games. Speculators gain at the expense of others. Who are these "others"? Presumably, rational market players do not systematically lose money. In the past, government support of exchange rates has provided a large supply of funds to speculators; by increasing the "food" available to feed the speculators, the profitability of speculation is increased. To be sure, recent rhetoric has focused on governments allowing their exchange rates to fluctuation; but such talk is somewhat hollow: for if exchange rates were really left to fluctuate completely freely, then there would be no need for stabilization funds. What is meant today is that government should limit itself to ensuring that exchange rates do not overshoot--whatever that means, and however such policies could be implemented in practice! But any such intervention provides food for a speculative frenzy.

In this section, we have explored some of the meanings of the concept of illiquidity--and their policy implications. This discussion is not meant to settle the issue; indeed it is intended to be unsettling--and to emphasize that once one evidences a willingness to discuss the issue of liquidity, one is admitting not only that there are market imperfections, but that they are of first order importance. But once one admits that, one needs to broaden the discourse: what are the full range of desirable interventions, not only once a liquidity crisis occurs, but before; and not only to address the most disastrous consequences of these market imperfections, which manifest themselves in crises, but the less disastrous but non the less real consequences which may occur, in more subtle forms, in more normal times.

V. Dealing with Systemic Distress

Systemic Bankruptcy

It is by now widely recognized that the successful recovery from the crises that struck East Asia in 1997 will require much more widespread corporate reorganizations than have thus far occurred, and in particular, the resolution of the massive bankruptcies--by some accounts 50% of Indonesia's firms, 30 percent of Korea's firms, and 40 percent of Thai firms are now effectively in bankruptcy. Indeed, without addressing the bankruptcy issue, it will be hard to fully resolve weaknesses in the financial sector, so essential if the flow of credit that underpins a healthy economy is to be restored. If firms remain in bankruptcy, the incidence of non-performing loans will remain high, and it will even be difficult to ascertain the full magnitude of capital infusions necessary to restore these institutions to viability. Moreover, inadequacies in bankruptcy law have often been cited as one of the underlying institutional weaknesses in the Asia economies.

As economies in Asia and elsewhere thus approach the task of designing bankruptcy laws, they need to think carefully about some of the basic underlying principles, which all too often have been ignored, both in the popular press and the visiting firemen from the developed countries proffering their advice and counsel. First, the central role of bankruptcy in modem capitalist economies needs to be recognized Modern capitalism could not have developed without limited liability corporations; limited liability implies bankruptcy. Bankruptcy should not, accordingly, be viewed as "letting borrowers off the hook" or "allowing debtors to unilaterally abrogate contracts." Indeed, so important is bankruptcy for the functioning of modern capitalism that firms are typically not allowed to write contractors the "override" the provisions of the bankruptcy code.

Secondly, it should be recognized that there is not a single bankruptcy code, to be packaged and sold around the world. Bankruptcy provisions need to be tailored to the situation of the country and the circumstances in which it finds itself, though countries should recognize the great advantage of adhering to widely accepted standards. Different bankruptcy provisions do have different consequences for debtors and creditors in different situations; issues of equity and efficiency are central. But there is no single bankruptcy code which unambiguously is better for everyone in society (there is no single "Pareto dominant" bankruptcy code), though badly written codes may actually make both debtors, creditors, and others all worse off. (i.e. some codes are "Pareto inferior.") That is why bankruptcy codes typically are the subject of such intense political debate--as witnessed the recent furor over revisions in the U.S. bankruptcy code. This has strong implications: Bankruptcy codes cannot be imposed from the outside, and one should be suspicious of bankruptcy codes designed by one party (e.g. lenders) or those representing their interests.

Bankruptcy affects not only lenders, but also other "stakeholders"--most importantly workers. (There is thus an important "externality": the resolution of bankruptcy disputes between lenders and borrowers affect innocent bystanders.) But it is not just that workers are affected: workers have rights that need to be recognized at the bargaining table between lenders and borrowers: There is typically an implicit commitment between workers and the firm. If the worker continues to work effectively, the firm will continue not only to employ him, but to pay wages commensurate with his abilities and effort. There are, of course, limitations to this commitment: if the firm's sales decline precipitously, the worker, as well as the firm's shareholders bear some of the risk. The commitment is typically not explicit, simply because it is impossible to write down all the relevant conditions, Anglo-American common law recognizes these implicit commitments. In bankruptcy proceedings, payments due to workers for work already performed has seniority even over senior creditors. But there are broader, and typically unresolved, issues concerning other "obligations" towards workers (those embedded in the implicit contract) and other creditors.

Thirdly bankruptcy law typically provides a backdrop against which bargaining between creditors and debtors take place. It is worth noting that bankruptcy law does not provide a simple formula which can automatically be invoked. Judges--in the U.S. specialized in handling the intricacies of such matters--are called upon to make rulings interpreting the bankruptcy law in different circumstances. Often there is ambiguity in the priorities of different creditors, and often interests of other stakeholders are taken into account. While in simple models of bankruptcy, when the firm cannot meet its obligations, all residual value is turned over to the creditors, in practice the original equity owners generally retain a significant share. (There is often a disagreement about the “equity” value of the firm, and therefore the adequacy of compensation of the creditors, with the original owners claiming the market has simply temporarily undervalued their shares. Thus, while equity owners may believe that the creditors have received more than the value of their claims, creditors may believe that they are inadequately compensated. Of course, if markets worked perfectly, there would not exist such disparities--but neither would there exist liquidity problems, which are often at the root of bankruptcies.) Because bankruptcy law affects the likely outcome if a dispute has to be resolved by the courts, bankruptcy law affects the outcome of the bargaining process that is typically designed to avoid the uncertainty and delay of relying on court mandated resolutions.

Fourthly, and most importantly, it is imperative to distinguish between systemic bankruptcy and "isolated" bankruptcy--where one or a few firms in a country cannot meet their liabilities. Today, the countries of East Asia face systemic bankruptcies, and bankruptcy codes designed to deal with isolated bankruptcy simply will not do. Some of the reasons for this should be obvious: are not fully satisfied, simply because doing so will erode the management structure, and hence, efficiency, of the firm. This was brought home forcefully by the reorganization of LTCM, the U.S. hedge fund which had an exposure of more than $1 trillion, and thus presented (at least in the view of some precipitants in the private bail-out) a systemic risk to the global financial system. Even as the firm was being bailed out by lenders, the principal equity owners (which "straight" bankruptcy proceedings should have received nothing unless creditors were fully satisfied) retained a 10% equity share.

Chapter 11 is designed for a quick resolution of bankruptcy disputes, but even under Chapter 11, proceedings typically take a year or more. To protect against wastage or mismanagement of assets in the interim, courts typically take a strong “trusteeship” role, with systemic bankruptcy, not only is the cost of monitoring is reduced, there simply is not an adequate supply of bankruptcy trustees - even in the United States, with its wealth of experience in sophisticated bankruptcy law - could not meet the challenge.

What is required is a *Super Chapter 11* modeled after Chapter 11, but addressing the exigencies when a country faces systemic bankruptcy, particularly brought on by huge macro-economic disturbances, e.g. major economic contractions, huge increases in interest rates, and massive devaluations. As in Chapter 11, the presumption would be that management would stay in place and that there would be a debt-to-equity conversion. There would be three major differences: Given the importance of speed of resolution, the time within which the Courts would have to rule would be shortened considerable; there would be a favor of the management staying in place, and on management proposals which, in the reorganization, give management/old shareholders enough of an equity industry to have adequate incentives. In other words, a higher burden of proof would be placed on creditors to demonstrate that the management proposal was "grossly inequitable". Thirdly to facilitate quick resolution, a wider set of default guideline provisions would be specified. These would be aimed at enduring fairness in the protection of other claimants (such as workers) and in balancing the claims of creditors with claims denominated in foreign currency and those in domestic currency, in an environment of rapidly changing exchange rates.

Such a Super Chapter 11 might be an effective way out of the seeming impasse, which is costing everyone in the countries facing systemic bankruptcy so much. To be sure, which a bankruptcy code might lead to somewhat higher interest rates, especially by short term foreign lenders. But that might all be too good, as they focussed more clearly on the risks inherent in such lending - risks which extend well beyond the parties to the transaction, to the innocent bystanders, the workers and small businesses that have been repeatedly hurt so badly under the current financial regime. Such a bankruptcy regime would accordingly be "fairer" than the current one, especially if it were known in advance. Adjustments in interest rates charges would compensate lenders for any changes in risk assumed- but even under the current circumstances, it could be argued that a movement to this new code would be fair, since so much of the burden of the delay is being borne by third parties, and the current regime gives too much power to the creditors, who frequently have already been well compensated for the risks which they bore in terms of the high interest rates received.

Even ignoring the systemic benefits, the quick resolution provided by such a provision would have distinct efficiency advantages: it would end the wastage, and even stripping of assets, that is currently occurring. (There are even advantages of such a provision in terms on incentives prior to bankruptcy: there is now considerable evidence that firms face a high probability of imminent bankruptcy may engage in value-decreasing risk taking behavior, which enhances equity values in the event the disaster does not occur, but decreases asset values in the event it does occur. Typically, while at the time loans are made, the macroprospect of a firm may look good, especially the world or rapid financial movements and changes in investment sentiment, these prospects can change dramatically, providing considerable scope for these perverse incentives. A Super Chapter 11 provision would reduce such perverse incentives).

A change of bankruptcy code along these lines would also reduce the need for public funds in the corporate reorganization process. Once reorganized, once the economy has restarted working, capital markets would once again be willing to provide funds to those firms that have good projects with high returns. It should be remembered: corporate reorganizations are simply a rearrangement of claims of the assets of the firms. To be sure, such rearrangements, if not done or done badly, have strong implications for the performance of firms. But the reorganization process itself does not require funds -except when costly and litigious bankruptcy proceedings are resorted to, and the Super Chapter 11 would, by design, reduce the agencies to prove a "carrot" to induce faster reorganization. Such discussions (if taken seriously) are themselves counterproductive; for they provide an incentive for a delay in reorganization in the hopes that such delay will reap some part of the public largesse. There are far better ways to spend scarce public funds - focusing on high multiplier, job creating programs with benefits targeted especially to the poor. Incentives for faster bankruptcy resolution may be needed, but these should take the form of “sticks” rather than “carrots”. The fear that such sticks will dry up a future supply of capital, especially from abroad, are almost surely unfounded. First, with its high saving rates, East Asia does not need a foreign supply of capital; And secondly, lenders are forward looking: they look at prospects of the future, not the results of employment, a lack of the kind of social and political unrest that inevitably accompanies extended periods of unemployment - all of these are of first order importance, and all these would be enhanced by the new bankruptcy code. Given these enhanced opportunities and increased certainties, creditors would be able to ascertain better the interest rates to be changed to adequately compensate themselves for the risks they face. The historical experience has confirmed these.

Financial Sector Restructuring

Even before the complexities relating to the nature of financial sector vulnerabilities and the dynamics of their likely evolution in East Asia were adequately appreciated, the attention of governments and the international community focussed on the financial sector as the highest priority among structural issues to be addressed as part of the crisis response. The concentration on the financial sector was surely justified. Unfortunately, while there is a now a general awareness of some of the problems in the policy responses, in order to avoid similar mistakes in the future, we need to ask why they occurred. One hypothesis is that the policy responses on these interrelated fronts were hampered by the absence of a coherent up-to-date analytical framework based on requisite microfoundations, one of which integrates effectively for instance the financial and real sectors. As a result of these lacunae even some of the existing knowledge about lags and irreversibilities, about persistence and asymmetries and about the relationships between financial markets and economic activity could not be effectively brought to bear on the design.

In East Asia, as in other developing countries that have suffered from systemic financial distress, a large proportion of financial institutions are illiquid, and many potentially insolvent. The strategy for dealing with financial restructuring has to be designed to mitigate, not exacerbate the economic crisis. A key goal here must be the maintenance of credit flows. Typically as an economy faces a crisis, credit flows are impeded. There can exist a bankruptcy chain: a bankruptcy of one firm will have adverse effects on suppliers and customers, they curtail the availability of normal trade credit. Similarly, banks facing declining net worth and worsening prospects reduce the flow of credit. These normal reactions in an economic downturn are obviously exacerbated in financial crises. Weak banks-banks that fail to meet the basic capital adequacy standards and are on the verge of insolvency (or beyond)-often need to be restructured. But this can be done in better ways or worse ways. In particular, they can be done in ways that impede the already limited flow of credit.

The way financial restructuring was conducted in the cases of United States in the S & L crisis and recently in Indonesia provide examples of such success and failure. In the United States relatively few banks were closed down and most were merged with stronger ones-typically over a weekend so that customers of the bank barely notice the change in management. In Indonesia by contrast, sixteen private banks were closed down, there were intimations that there were still more weak banks that might be shut down, and depositors were put on notice that they were at risk. The resulting run on the remaining private banks was no surprise, especially as there were safer alternatives: state banks (which many believed had the government's implicit guarantee) and foreign

East Asian banks' behavior and this very weakness in the financial sector was one of the causes that precipitated the crisis. Thus, restoring sound banking seems crucial to reestablish the confidence of markets in these economies and attract fresh capital from foreign investors; capital adequacy is a major item to achieve this goal.

Whatever the merit these arguments have under normal circumstances, their relevance in crisis conditions becomes questionable. Under most circumstances in crisis affected countries, capital markets are likely to have dried up and obtaining private capital injections might be extremely hard even for those banks that are willing to move on this direction. As a result, the probability is high that those banks able to comply would be those that can obtain capital injections from the government. In this respect, enforcing more stringent capital adequacy criteria might further crowd out private banks while boosting state ownership of banks with possible permanent negative consequences on the long-term allocation of credit. More fundamentally, the basic rationale in terms of incentives for the owners and managers is called into question: how is government-as-owner better than government-as-regulator?

Two further observations about financial restructuring are worth noting at this juncture. First, the costs of restructuring can be divided into two parts. One arises from the fact that due to the high level of bad loans, the net worth of many banks is negative as what is owed to depositors exceeds the value of the assets. With deposit insurance, the government must fill the gap. This represents a redistribution - from taxpayers in general to depositors - which has a fiscal cost but is a transfer payment. It does not use real resources, and in that sense, is not inflationary. Moreover, while the government may have committed itself to repay depositors, it typically has not made a commitment on the interest rates it must pay. It may, for instance, contemplate restricting loan withdrawals and limiting the interest rate paid on deposits; alternatively, it can allow deposit withdrawals but restrict transfer of capital abroad. These are examples of ways in which the costs of fulfilling the government's commitments may be contained - ways which are less distortionary than the perhaps more traditional ways of inflating away the value of monetary claims.

The second part of the cost of restructuring consists of the finance required to "restart" the banking system. Again this can be funded in ways which entail low interest costs, e.g. by borrowing from the banks at low interest rates and investing back in the banking firms. To be sure, as noted earlier, while such financial transactions may serve to meet standard capital adequacy standards, they do not resolve incentive issues. However, they may serve to restore confidence. It is also important to note that in term of the government's budget, these financial transactions rightly belong in the capital account, no the recurrent account and therefore, should not crowd out other output-, growth-, or equity-enhancing forms of public expenditure, Unfortunately, if costly ways are employed for financing the restructuring the banks and if the distinction between capital and recurrent banks (which many believed were sounder). But even of these safe havens had not been available, depositors could, as a result of the open capital account, have take out their money and put it into foreign banks (thereby avoiding at the same time the downside risk of devaluation). As private banks this was weakened, the supply of credit was further contributing to the downward spiral of the economy.

The way in which financial policies are typically implemented can contribute to instability. When a crisis hits countries which are at their limit, if capital adequacy standards are rigidly enforces then as defaults rise and bank net worth declines, either new capital sources have to be found or lending must decrease. But the midst of crisis is hardly an ideal time for raising new capital, and as a result, lending typically will be forced to contract. This naturally further weakens the economy, leading to more bankruptcies, and lower net worth, and perhaps an even greater shortfall in capital adequacy. This emphasizes dramatically the difference between systemic policies and policies affecting an individual institution. Rigorous enforcement of capital adequacy standards in the case of an isolated bank facing troubles is markedly different from the rigorous enforcement of those standards in the case of a systemic crisis. In the latter circumstance, a better alternative is to accept lower capital with, more stringent supervision and tighter regulation of lending. The objective is restructuring the financial system in ways that do not interrupt credit flows but rather which lead to better quality of lending, One must acknowledge the fact that it is difficult if not impossible to restore the strength of the financial system in the middle of a recession; sustained recovery requires simultaneous progress on corporate and financial restructuring as well as reflation of the economy. Indeed in view of the large exchange rate devaluation's in East Asia, the necessary redeployment of economic resources between sectors requires between sectors requires substantial availability and flow of credit.

In this regard, it is important to not adopt an overly rigid approach on capital adequacy standards. Insisting on higher capital adequacy standards, especially under highly uncertain circumstances, may even lead to less prudent behavior by banks because of adverse effects on franchise value (Hellman, Murdoch and Stiglitz, 1999). Proper risk adjustments are essential but in practice, they are very deficient. Furthermore, and of particular relevance to developing countries, there need to be cyclical adjustments, because without them capital adequacy standards result in built-in destabilizers which is especially problematic in countries without safety nets and tax systems which have automatic stabilizers.

To be sure, this suggestion will be controversial: forbearance can be a risky and costly policy. The argument for enforcing stringent capital adequacy standards usually rests on two grounds. First, letting banks operate with a weak, or sometimes non-existent capital base enhances the moral hazard that banks will venture into riskier lending and eventually the problem will become worse: in this respect, the paramount example is the US S&L crisis. Second, many believe that low capitalization and poor loan classification produced a major weakness for budgets is not made, then there is a real danger that restructuring expenditures will crowd out others to the detriment of economic recovery. Thus a careful analysis, balancing of the benefits of alternative ways of spending scarce public funds is necessary. The second observation relates to the phenomenon economy goes into recession and lending is discouraged. The second observation relates to the phenomenon that sometimes as an economy goes into recession and lending is discouraged by its seemingly weak prospects, there is an increase in liquidity of the banking system among banks which do not face massive withdrawals. Some economists, worried about inflation, naively argue for mopping up the liquidity. However, governments typically only have blunt instruments for doing so and hence banks, finding their constraints tightened further, decrease their lending and the downturn is exacerbated. More generally, worries about inflation - in the face of massive excess capacity - are likely to be misplaced, In this regard, it is also worth noting that the relationship among aggregate economic variables (including that between monetary aggregates and output) may be greatly disturbed in an economy with a disrupted financial sector. This was a lesson that the U.S. Federal Reserve in the early 1990's at significant expense to the economy.

VI. Strengthening Social Safety Nets

The disruption and very large social costs that we have witnessed in the aftermath of economic crises, even for middle-income countries have highlighted the extent of social vulnerability of developing countries in the new financial environment. The recent crises have also shown that the impact can be extremely diverse, across countries, across spatial location, amongst sectors of employment, gender, and between levels of wealth and income.

The greater social impact of financial crises compared to other macroeconomic cycles can be attributed to four interrelated factors: very large swings in exchange rates, interest rates and asset prices; sharp declines in aggregate demand; banking and corporate sector distress; and cuts or breakdowns in public services. The immediate and dominant impact of these factors on households is through reduced labor demand. Unemployment doubled in Thailand and tripled in Korea in just a year during the recent crisis. In Indonesia and Malaysia, and to some degree in Thailand as well, most of the adjustment appears to have taken place through falling wages and the movement of workers into low-paying informal sector jobs (Manuelan Atinc and Walton, 1998). The loss of jobs and falling wages, in turn, led to extraordinarily large declines in standards of living: 25 percent in Indonesia, 14 percent in Thailand and 22 percent in Korea (Jiminez, 1999).

While income inequality generally tends to rise during periods of economic contraction, the incidence and severity of the impact in this recent crisis has been quite varied. For instance, among the crisis affected countries of East Asia, Korea saw the largest proportional increase in poverty, largely among the urban unemployed. In Thailand, suburban and rural populations have been more affected including in the traditionally poorer areas of the North. Those most affected by unemployment or lower wages have tended to be the lower skilled working in small and medium scale enterprises. The SME sector accounted for almost half of the increase in unemployment in Thailand and for 60 percent in the case of Korea. Although the crisis has had the most severe and broad based impact in Indonesia, it was the urban non-poor that bore the brunt, and poverty has increased by far less than originally expected. To effectively design programs to contain the social costs of crises, these differential impacts and the underlying attributes of income sources, wealth distribution, consumption patterns and access to public services have to be taken into account.

In addition to its short-term impact, financial crises can have long-term and irreversible impact on the poor. Many of the children who are being pulled out of junior secondary schools in Indonesia will lose out permanently on educational opportunities. The increased prevalence of malnutrition at crucial stages of childhood can have permanent effects on the physical and mental development of children. And social and political strife and the loss of social capital can have long-lasting effects in terms of increased crime and violence as evident from the experience of Latin America following the debt crisis of the 1980s. Although it has complex roots, the downward social spiral in Indonesia was triggered by and is being exacerbated by the ongoing financial crisis.

A lesson that has been underscored by the recent Asian crisis is that minimizing the risks and severity of economic downturns is probably, the most important step that the international community, and developing countries, can take to contain the social costs of the crises. This, in turn, has two implications. First, there is a high premium to avoidance of vulnerability, including through appropriate management of volatile capital flows. Second, policy responses to crises need to be designed in a way that does not lead to large declines in aggregate demand and unemployment.

The Role of Macroeconomic Policies

Macroeconomic policies are the most important determinant of the level of economic activity, and hence constitute the most important tool to support employment and incomes in the aftermath of crises. Designing appropriate macroeconomic responses in crisis situations is a complex and difficult task because the usual uncertainty about impact and lags is greatly heightened, and because effects are inherently asymmetric and non-linear. A relatively small shock to the economy may be self-correcting, but a larger shock may plunge the economy into recession. Hence wrong policies can result in virtually unbounded harm, while the right policies will only keep the economy operating normally.

There is abundant evidence that a period of bad economic performance can be translated into a prolonged period of higher unemployment and slower growth, This can occur because of a dissipation of physical and organizational capital, and because firms respond to bad times by reducing their investment in research and development. Furthermore, long-term unemployed workers lose their job-searching skills and become stigmatized by employers - an effect economists have called hysteresis. Many economists place at least a share of the blame for high European unemployment in the last fifteen years on hysteresis.

The social consequences of a downward economic spiral can be highly uneven. Even if everyone shares the losses, the effects on the poor, who have just enough to survive, are enormous compared to the effects on those who are better off. But typically the burden of adjustment is not shared equally. A disproportionate share of the increase in unemployment or underemployment is concentrated among the least well off. As a result, these "innocent bystanders," who played no part in the causes leading up to the crisis, are the ones that bear the greatest burden." There is much merit therefore in avoiding large downturns, and in ensuring equitable burden sharing of losses, between external creditors and domestic nationals, and between taxpayers and owners of banks and firms.

These considerations have an important bearing on the balance of risks and on the design of macroeconomic policies. There are three other aspects that are important. First is the role of expectations. The macroeconomic policy response needs to be designed to restore confidence in the economy in the face of a crisis. In this regard, austerity measures are not necessarily appropriate. If there is a prospect of a collapse in private demand, more expansionary macroeconomic policies geared to maintaining the strength of the economy will help preserve confidence.

Second is the recognition of the growing importance of macrofinancial linkages. Theory and empirical evidence over the past two decades has established the importance of financial markets, their links with the macroeconomy, the role that financial crises play in economic downturns, and the fact that economic downturns that are precipitated or accompanied by banking and currency crises are deeper and longer than, say, downturns associated with inventory cycles. Macroeconomic policy needs to be formulated therefore to take into account the close linkages with the financial sector, and in particular, the effects of macroeconomic swings on financial structures of banks and corporations and the associated risks.

Third, macroeconomic policies need to take into account their distributional impact and the adequacy of coping mechanisms. For example, devaluations have been shown to have a positive impact on the poor in sub-Saharan Africa because they tend to be net producers of tradeable goods. But if the poor relied on imported food, the effects would be the opposite. Similarly, the net effects of monetary policy on different groups vary from country to country depending on institutional practices both in the private sector and in the public sector. In most economics, high interest rates tend to restrict borrowing and investment by small and medium-sized enterprises much more than by large firms Also, substantial evidence from several countries has documented that higher interest rates can have a large adverse effect on farmers' access to credit. The distributional effects of changes in interest rates, however, depend on the degree to which different credit markets are segmented and the existence of government programs to help different groups gain access to credit. In Brazil, for instance, government programs and financial market practices have, to a large degree, delinked the interest rate faced by many farmers from the key monetary policy interest rates. In contrast, Indonesia's credit markets are tightly linked, and an increase in policy interest rates rapidly translates into higher interest rates across the board.

The design of policies and the analysis of risks must also take into account the ability of the economy - its workers and others within society - to absorb various shocks, including unemployment and underemployment. The East Asian countries lacked social safety nets, suggesting that they faced grave risks: the social costs of an economic downturn were of an order of magnitude greater than in Finland, where the country experienced a huge increase in unemployment as a result of its financial crises, but had in place a strong social welfare system. In countries with social and political fragilities, the risks of contractionary policies are obviously much greater.

All of this suggests that the downside risks of inappropriate macroeconomic policies are considerable. Given the high degree of uncertainties in a crisis environment, macroeconomic policies need to be flexible and adaptable, taking into account the specific circumstances of a country, the balance of risks, and new information. If capital outflows are very large, a combination of new money and voluntary or involuntary "bailing-in" of the private sector may be needed to create the room for macroeconomic maneuver. In extreme circumstances, temporary capital controls or interventions to tilt incentives against concerted withdrawal of capital may be the only course.

Better balance in Structural Policies

Many of the same considerations that apply to the macroeconomic policy responses to crisis situations also apply to the structural policy responses. Indeed, we are increasingly recognizing that there is no clear separation between macroeconomic and structural issues. Structural weaknesses - such as weaknesses in financial systems or widespread corporate bankruptcies - have macroeconomic consequences, and mistakes have profound effects on economic structure that will take years to undo. Unlike macroeconomic policies, structural policies entail a more complex balancing of different objectives. Policies need to be designed with four interrelated considerations in mind: (i) ex ante incentives, (ii) ex post incentives, (iii) distributional equity and fairness, and (iv) macroeconomic consequences. To give one illustration, financial regulation needs to ensure that borrowers and lenders have the ex ante incentive to behave prudently. After a crisis, however, the financial structure of banks and corporations changes, and policies will imply a different set of ex post incentives. Furthermore, financial regulation can have a large impact on credit flows, and thus on the macroeconomy. Finally, the considerations of equity - including who continues to have access to credit as well as whose money bails out whom - should also be important.

The balance of these considerations depends on the circumstances. In good times, the macroeconomic implications of structural policies may be less important since any contractionary consequences may be easy to offset with more expansionary macroeconomic policies. As the economy shifts from downturn to recession to depression, the balance of these objectives shifts. The ex post incentives and the macroeconomic consequences become the overriding objectives.

In recent years, wide-ranging, long-term structural reforms have been at the heart of many of the crisis programs. There are two possible justifications. The first is that crises may present a unique opportunity to undertake reforms whose desirability has long been recognized but for which there is little political will in non-crisis periods. The second justification is that to the degree that there is a perception that these structural weaknesses caused the crisis, then even reforms with only long-run economic benefits might immediately improve confidence and thus help to restore economic strength.

Not all long-term structural reforms, however, make sense in the midst of a crisis. In particular, there are three reasons that we should be cautious. The first is simply that responding to a crisis is extremely difficult and often requires the full attention of the scarce personnel of both the crisis country and the international institutions working with it. "Overloading" the reform program may distract scarce attention away from the immediate problems. Second, some reforms that are beneficial in the long run may actually harm the economy in the short run. Eliminating distortions that create "rents," that is returns above the normal level, although beneficial in the long run, may exacerbate the problem of bankruptcy. Similarly, improving transparency in the midst of a crisis, under some circumstances, may reveal that the problems are much worse than anyone had realized, thus exacerbating the crisis. Third and finally, to the degree that unnecessary structural reforms are pushed into the programs by outsiders, domestic political support for the entire program may be undermined, including the parts that are essential for addressing the crisis at hand. As an aside, there was an especial reluctance in the US to move to more transparent, more efficient bank accounting standards and risk adjustments in the midst of our banking crises in the 1980's.

The arguments for and against structural reforms that go beyond those directly related to resolving the crisis help us to understand when they are and are not justified. Perhaps the most important test is that they are genuinely desired by the crisis country, and not imposed from the outside. The second requirement is that there has long been agreement on the need to make this structural improvement. The third is that it should be related, at least in terms of perception, to the actual crisis. And the fourth is that the reform will not have directly contractionary effects in the short run.

Building Better Social Safety Nets

Even with the best efforts toward sound macroeconomic and structural policies, a country is unlikely to escape a serious balance of payments or banking crisis without a period of slower growth or even economic contraction. Experience also shows that income inequality tends to rise in periods of economic crises, structural adjustment, and output contractions. Both the lower overall incomes and the shift in its distribution increase the number of people living in poverty.

We must recognize, however several attributes of developing countries that make establishing social safety nets inherently more difficult, and that have an important bearing on their design. Developing economies, due to their smaller size and less diversified structure, are inherently more susceptible to shocks, so will experience much more variability in incomes and real wages in the wake of crises. The most extreme is the case of Indonesia, which has seen possibly the largest decline in growth and incomes as a result of financial crises. At the same time, the informal sector tends to dominate, so that formal social insurance, even if well functioning, will cover only a small proportion of the population, especially of the poor. Demographic structures of developing countries are also typically quite different, with children constituting a much larger proportion of the population. Moreover, few households will have easy ways to cushion their expenditures. Large reversals in rural-urban migration following economic downturns such as seen in Thailand and Indonesia act as buffer in some respects, e.g. against destitution, but also have important implications for policy response and program design.

Developing country governments are also much more constrained in their ability to respond to crises. The ability to use budgets countercyclically in the face of downturns is much more limited and the insistence at early stages of the crisis on balanced budgets only made matters worse. Constrained budgets suggest tight targeting but the difficulty of measuring household incomes in developing countries make means tested programs very difficult to implement, and hence it is difficult to separate the poor from the non-poor. As a result, indirect indicators have to be used but even this is compounded but the general paucity of information. Food subsidies, therefore may indeed be critical to avoid malnutrition and these could be confined to foods consumed mainly by the poor, Education subsidies can also be key to avoid interruptions in schooling - some reports indicate success in this regard with the program in Indonesia. Nevertheless, institutional structures and delivery mechanisms are likely to pose greater constraints in shaping an effective response to deal with the social consequences of crises.

In certain countries, especially those at middle income levels (e.g. Korea), it may make sense to develop or expand the unemployment insurance system, especially if large number or workers in the formal sector remain without coverage. Such programs are often criticized for their adverse incentive effects (e.g. on job search effort) but these may be negligible in periods of severe recessions. In general, though, limiting of social costs and improving resilience to crises will require a much broader approach in developing countries than just the establishment of formal safety nets.

We are also learning lessons of how to design better interventions to mitigate social costs. Public expenditure programs should not only protect core social and poverty oriented programs (vis-a-vis for example the fiscal outlays for bank recapitalization), but also geared to increasing expenditures where multiplier effects are likely to be the greatest (construction of rural roads, low-income housing or small-scale environmental infrastructure are some possibilities). Other elements to fix the "supply side" should also focus on high multiplier, e.g. by relieving bottlenecks in export credit especially for small and medium enterprises.

Fiscal policies that protect spending on basic education and health can prevent cuts in services which the poor use, and protect their ability to build up human capital. The elimination of unproductive expenditures may help keep social spending at its pre-crisis levels. Tilting education and health expenditures towards activities, which are more beneficial for the poor, such as basic education or primary healthcare, or with high externalities such as vaccinations and vector control, will have greater impact on poverty and social objectives. In Indonesia, expenditures on primary education have been increased by more than 50 percent in real terms, while subsidies on secondary and tertiary education have been cut by 24 and 45 percent respectively. The result is that school dropouts have been much lower than feared at the outset of the crisis.

Beyond health and education, other public investments that affect the productivity of the poor - most notably, investments in *rural infrastructure* and the provision of *micro-finance* - should also be protected. Wherever possible, such price *subsidies* as are deemed consistent with macroeconomic efficiency should be targeted to the poor - but evidence from Latin America suggests that a crisis may not the best time to reform existing subsidies, as resistance from those hurt by the change may stop reforms.

In addition to modulating and protecting core public expenditures, a well-designed safety net can substantially mitigate adverse effects. Such safety nets can provide both a development and insurance function, and should be established before a crisis to be effective. The key principles which should guide the design of effective safety nets are: they should ensure the poor against the risk of loss of income; the safety net should respond flexibly to the needs of the poor; it should not provide perverse incentives that could contribute to dependency; and it should be efficient and well governed, meaning money spent at the margin should be as effective as raising welfare as other programs (Ravallion, 1999).

Experience from a number of countries suggests that a combination of programs satisfy these principles and have proved effective in protecting the poor during crises: programs that provide employment for those who are able to work, along with targeted transfers for those who cannot, or should not, work. There is also a case for special credit programs, though design issues are particularly important here for efficiency and effective targeting.

Workfare programs, targeted to geographic areas that are most adversely affected, can benefit the poor through the positive spillovers of the project, and through direct employment benefits for the poor. Maintaining the purchasing power of vulnerable households is critical not only to avoid malnourishment, which often has irreversible consequences, but also to reduce the level of school dropouts especially among gifts and the deterioration of health conditions. In the design of such workfare programs, it is often necessary to set wages at levels that lead to self-selection by the poor. Good models for this type of program are the Argentinean *Trabajar* scheme for middle income countries and the Maharashtra Employment Guarantee Scheme for low-income countries.

Workfare programs may need to be complemented by even more carefully targeted programs to provide educational grants, basic health support, food and even cash. The key and difficult tasks, of course, are to set up systems that can be scaled up and down, and design programs that can be targeted, e.g. through self selection mechanisms. These programs could be turned on and off, or expanded, based on indicators of crisis - and the demand for work in the workfare program could be used as such an indicator. A good example of a scheme to keep children in school is the *Bolsa Escola* scheme in Brazil, which offers a scholarship to families who send all their children to school. Such targeted programs would, for example, mitigate the impacts of increases in the cost of education and prevent long-term losses in educational attainment and earning potential.

There are two other overarching lessons. First, the administrative difficulties should not be ignored, nor should the potential for waste and even corruption be minimized. For policies and programs to be effective and equitable, they must be based on sound governance. Second, good policies must rest on good information, both in terms of identifying the vulnerable and support mechanisms before a crisis, and being able to assess and monitor development in the aftermath's of crisis. Information can also play a crucial role in national and local politics of design and implementation. At a national level it is of great importance that well-informed debate on issues, impacts and alternatives be supported. At a local level, provision of public information on intended public action - and the rights of potential beneficiaries - can help reduce leakage's and corruption.

VII. Concluding Remarks

This paper has touched on a wide range of issues concerned with international financial markets. There is a common theme: the problems which have arisen are evidence of market failures and irrationalities, interpreted in the broadest sense. The paper is a plea for intellectual consistency and integrity: some might say that by admitting the existence of these market failures, a Pandora's box has been opened, and the strategy of the market conservatives has been to do all that they can to sit on the lid of the box. Their objective is to narrow the scope of government actions as much as possible. If government regulation of financial markets is required--if free banking is no longer acceptable--then let it be the most rule bound and simple form of regulation, e.g. rigidly enforced capital adequacy standards. Governments should either not intervene in the exchange rate at all, or pursue a blinding commitment to a fixed exchange rate regime. Governments should force information disclosure, but not impose further restrictions. ...

By contrast, we would argue that that is the wrong way to approach the issues. The question should be, given the market failures, as well as the limitations of government, what is the best set of interventions--by developed countries, by less developed countries, and by the international community--taking due account of the distributional consequences of different forms of interventions. Even the term interventions is perhaps inappropriate: Policies, institutions, and laws are all important; every economy needs to have bankruptcy laws and financial market regulations; thus the question is not whether there should be such laws and regulations, but the form that they should take.