What Have We Learned from the Recent Crises:

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I would like to address two broad themes today: What have we learned from the recent financial crises and how has our thinking changed regarding bank regulation in both developed countries and in developing countries? At the start of the string of financial crises, the tendency was to blame the developing countries and to search for policy failures in these countries. As time has passed, views regarding the causes of the crises have become more balanced and the role that the developed nations have played in contributing to the crises has become more evident. The developed countries have pushed for increasing globalization of financial markets, maintaining that open capital markets would bring benefits to developing countries from improved resource allocation and better access to capital. They forgot the popular saying that in the increasingly integrated economy, "When the United States sneezes, Mexico catches cold". Emerging markets, at an intermediate stage of development are exposed to the dangers of catching a cold even when small changes occur in developed country markets. Policy actions and shocks in developed countries may have dramatic consequences for developing countries that are less capable of absorbing these shocks than the more developed countries.

The crises, particularly those in East Asia, have highlighted an important factor affecting risks in global banking: the excessive build-up of short term debt. In fact, the ability of this variable by itself to predict the crises of 1997 is remarkable. Recent theoretical and empirical work (Rodrik and Velasco, 1999) confirms that high or "excessive" levels of short term debt systematically increases the risks of a financial crisis and that countries which had higher levels of external short term debt have had more severe recessions. A question is what leads to such excessive borrowing and lending at rates which do not reflect the true risks of these transactions and in particular, what tilts maturity profiles in directions which increase risk for borrowers and lenders? Underlying today's discussion is an attempt to identify biases in the market which lead to less favorable outcomes. I would like to illustrate that there are a variety of such biases in developed countries as well as several problems in less developed countries.

Policies in Developed Countries

Recognizing that greater openness has led to greater dependence means accepting that bad policies in developed countries have consequences for developing nations. There are three key issues. First, weak bank regulation in developed countries increases the incentives to gamble which manifests itself in borrowers being charged lower than actuarially fair interest rates. Take the situation of a country at an intermediate level of economic development, which has a large financial sector relative to GDP. Thailand is one such country, which opened itself to capital flows and foreign banks. But opening of its financial sector meant mostly the entry of under regulated/ over protected Japanese banks, which leant aggressively to banks in Thailand without accounting sufficiently for the riskiness of their lending. Increased links meant that a financial contraction in Japan (whatever the reason) had severe implications for Thailand. Bank contraction in Japan led to credit contraction in Thailand. If Thailand had diversified its foreign banks by country origin it would have fared better: Japan's problems would have been balanced by the United States' strengths. But of course, a country cannot, or at least cannot easily, determine by policy the country composition of its banking sector.

Second, regulatory standards in developed countries and particularly the risk weights applied to short term loans in determining capital adequacy can have profound effects on lending patterns to developing countries. Because of the lower assessed credit risk associated with short term loans, the Basle capital rules weight cross border claims on banks based outside the OECD at 20% if these claims have residual maturity of less than one year and at 100% if they have residual maturity of more than one year. This requirement, it may be argued, has tilted the lending of developed country banks towards the short end. At cheaper rates, borrowers will also borrow more short term. The overall effect was an accumulation of large debt repayments in a given year. To be sure, weaknesses in the Basle standards have already been recognized, such as the failure to look at correlations, including those between market and credit risk. But we now see clearly how these standards can lead to increased instability. (The Basle rules have other perverse effects, some of which I discuss later. According to the Basle rules, domestic claims on the central government in all countries, for example, a Brazilian bank's claims on the Brazilian government get 0% weight in all countries. Developing countries, which are increasingly being pushed to adopt the Basle standards therefore weight their government's debt at 0% even though the true risk of this debt can be quite high).

Third, financial institutions are subject to fiduciary provisions, which can exacerbate financial crises in developing countries. For example, restrictions pertaining to the quality of assets which can be held by these institutions (for example, pension funds) can lead to forced sale of these assets over a relatively short period of time when for example, an independent rating agency changes a borrower's or country rating. Swift sales of assets can have large effects on asset prices in developing country markets, particularly since they tend to be thinner markets. Again, recent research at the World Bank has suggested that credit rating agency behavior contributed to the volatility in the recent crises.

In view of the strong dependence of emerging market outcomes on the situation in developed countries, I would like to pose three questions:

First, is there a new role for regulation oriented towards enhancing the stability of the international financial system? Financial regulation and supervision in the United States has traditionally been geared towards the adoption and implementation of policies which would reduce systemic risk within the domestic financial sector. In this context, the failure of hedge funds in the United States has never been viewed as threatening the stability of the domestic banking sector. So hedge funds are not regulated in the same manner, as are banks. While the United States could survive the failure of Long Term Capital Management (LTCM), failures of LTCM and similar institutions may pose systemic risks for the rest of the world (when these institutions shuffle and reshuffle their portfolios). Taking another example, bullet repayment clauses in loan agreements, which have allowed investors to call in loans, have also had dramatic consequences for developing countries, as the experience of Korea demonstrates. Regulation limiting these clauses would work towards increasing international stability.

Second, is there an argument for extending regulatory frameworks to incentive schemes for managers? Implicit and/ or explicit compensation schemes may exacerbate the normal consequences of herding behavior. Consider, for example, the case of the Latin American crisis. With all banks lending to Latin America, it is not surprising that few were punished for bad lending policies. When bad behavior is correlated, the scope for punishment is limited since our system "grades on a curve". There are two important levels of principal-agent problems. One is at the level of the organization and the other is within the organization. The question is, do we in the United States have a problem of corporate governance? Do we do a poor job of holding organizations and especially individuals within them accountable for failures? Currently, we focus on risk management systems and on organizational incentives but not on risk incentive systems for managers or how banks reward good or bad performance. We do not address the incentives for individuals within banks to do the right thing. Is there a role for the regulatory authorities?

Third, are developed countries setting bad examples in their posture towards transparency? In order for transparency to have the desired effects (reduce rent seeking and increase stability and accountability), it has to be comprehensive. It has to include not just banks but all financial institutions and corporations and developed countries must participate. Without comprehensiveness, the information disclosed will have limited value and there is even a chance that transactions might well migrate to venues with weaker disclosure requirements – and weaker regulations—thereby increasing the instability of the system itself. In the United States, mark to market accounting standards were turned down. If the United States is viewed as not wanting too much transparency then these views may reverberate elsewhere. If too much transparency is viewed as an undesirable thing then developing nations may use similar arguments to arbitrarily determine their individual level of desired transparency. (This may end in leading to a richer source of barriers).

Policies in Less Developed Countries

The second set of issues I would like to address is how to think about financial regulation in developing countries. Developed countries may bear some of the responsibility for the crisis in developing countries through the bad advice we have given. Many countries have been encouraged to engage in excessively rapid financial market liberalization. The focus was placed on deregulation, not on finding the right regulatory structure. For developing countries, the approach to financial regulation which I have advocated is what I call the Dynamic Portfolio Approach. I approach financial sector regulation from the perspective of risk management—managing the incentives *and* the constraints which affect financial institutions' exposure to and its ability to cope with risk. I argue that in order to have effective financial regulation, a number of instruments may need to be combined to complement each other. Underlying this approach is a recognition that financial institutions are both a source of risk to and are affected by risks from, the rest of the economy. And the best way to manage risk management in developing countries may differ markedly from that in developed countries, simply because they face larger risks, with poor information and typically have weaker risk management capacities.

The deregulation strategy focused on reliance on a single regulatory instrument, capital adequacy standards, in the belief that this entails minimal interference with the workings of the market. But research has shown that this reliance on capital adequacy standards is inefficient and is even counterproductive in certain circumstances. While it is true that high enough capital adequacy standards may discourage gambling behavior, there is a cost to imposing such stringent requirements and there are policies which are more efficient. It is important to remember that (a) behavior is affected by franchise values as well as standard capital, increasing capital requirements will lower franchise values and lower franchise values will increase risk taking, (b) high capital requirements by themselves can even increase risk taking, especially given the crude and imperfect risk adjustments made (e.g. they do not take into account correlations between assets and do not uniformly take account of the correlation between credit and market risks).

Problems in measured capital can aggravate the problem. Capital can be very hard to measure, particularly in developing countries where the true value of assets is hard to ascertain or where there are very nontransparent lending and ownership patterns. Accounting standards used can aggravate these measurement problems. As an example, failure to "mark to market" can induce serious distortions in the balance sheets of financial institutions. Information problems are also endogenous to the regulatory regime. Without mark to market accounting there is always an incentive to realize gains on assets whose value has increased and retain assets whose value has declined. Strictly enforced capital adequacy standards can exacerbate the distortionary policies. Worse still, banks have an incentive to invest in high variance assets (with any given risk rating) since it expands the scope for such manipulation. In such situations, regulatory regimes which are less information intensive, which complement and use information bases provided by markets (such as requiring an uninsured tranche of debt, as in Argentina) and which do not undermine the quality of information provided, should be favored.

Given these limitations, regulatory authorities may wish to pursue policies which impose constraints on *processes* or on *categories of loans*, on *entry* or on *interest rates*. For example, countries may impose limits on the portion of the portfolio which can be lent for real estate. While countries are increasingly turning their attention to supervising risk management systems in financial institutions, there are limitations to such an approach even in the developed countries. In the absence of sophisticated risk management systems within institutions, cruder approximations, such as relying on foreign exchange exposure (mismatches between assets and liabilities) and imposing speed limits on the growth of financial institutions, may be desirable. To be sure, such constraints may also be imperfectly monitored, but still, implementing such schemes may be easier than implementing a more sophisticated risk management system.

An important lesson that has emerged forcibly out of the recent crises is that dealing with banking distress when *one* bank is illiquid is very different from dealing with banking sector distress when there is *systemic*

countries when they have faced banking crises, it has not uniformly been the case in developing countries. In systemic crises, the objective of the authorities should be to maintain the flow of credit in the economy in order to prevent an output collapse. Let me take the example of a minimum collateral requirement on real estate loans. A problem is that the value of the collateral is highly correlated with the circumstances in which the borrower cannot repay. In an economic downturn many borrowers are unable to pay and as collateral value falls many may decide to default. In both cases, the sale of assets leads to further declines in asset values and exacerbates the problem. But policies such as rigid enforcement of capital adequacy standards in a systemic crisis can in fact worsen the depth of crises. As lending institutions call in loans to raise their capital, they force other firms to go bankrupt and to sell assets. This has second round effects on banks; thus an economy-wide attempt to raise capital in order to meet capital adequacy requirements can be counterproductive and exacerbate economic distress.

In conclusion, I would like to reiterate three points:

- While developed countries have encouraged developing nations to open up to international financial markets, they did not take account of the devastating effects that actions emanating from their financial systems could have on emerging markets. In this new integrated world, the more advanced countries need to ask whether, in their regulatory frameworks, they should take account of these spillover effects in order to limit the risk of international systemic crises. It is clear that there are several problems in developed countries that have probably contributed to international financial market instability.
- Policy responses in systemic crises need to be designed differently from those, which address an individual institution's distress.
- Given the difficulties of implementing capital adequacy standards in less developed countries, and given the less sophisticated risk management systems present in these countries, financial regulation needs to be geared towards affecting both the incentives and the constraints that banks face.
