



*Inter-American Development Bank
Office of the Chief Economist*

International Initiatives to Bring Stability to Financial Integration

By

Eduardo Fernandez-Arias

Ricardo Hausmann

MARCH 1999

This paper belongs to the series of research on Financial Crisis and contagion at the Office of the Chief Economist, Inter-American Development Bank. The Authors thank marie Claude Jean and Laura Dos Reis for their valuable research support. The views expressed in this document are of the authors and do not necessarily reflect those of the Inter-American Development Bank or its Board of Directors.

International Initiatives to Bring Stability to Financial Integration

Eduardo Fernandez-Arias
Ricardo Hausmann

Inter-American Development Bank
March 1999

Introduction

Financial liberalization and integration have generated disappointing results. They were supposed to set up a win-win situation: capital would flow from capital-abundant, low-return, aging industrial countries to capital-scarce, high-return, young emerging countries. Growth in receiving countries would accelerate and both giver and receiver would be happier, while everyone's diversification opportunities improved. As a bonus, emerging market policymakers would be disciplined by losing access to a captive local financial market.

But things have not worked out as advertised. Emerging markets have been rattled by financial turmoil, especially over the last 20 months. Depending on the point of view, financial integration and globalization have either generated excessive volatility or run amok. Political support for liberalizing policies is harder to achieve. Moreover, long-run growth has not compensated for these new headaches. While growth in Latin America has accelerated from 1 percent per year in the 1980s to some 4 percent in the 1990s, it has not reached the levels of the 1960s when capital flows were an order of magnitude smaller¹. But it is the degree of financial volatility and the frequency of panics, crises and contagion that have made the current state of affairs socially costly and politically disappointing. As a result, reform of the international financial architecture has become a booming industry these days.

Several reports have been, are being, and will be produced by multilateral organizations, think tanks, free thinkers and G7 task forces, with n taking values between 7 and 30². The question is whether any of the initiatives will be implemented before a temporary cease-fire on the financial battlefield is interpreted as the end of the war.

This paper provides an opinionated overview of many of the initiatives currently on the table. We will structure the paper by discussing the different views about what is wrong with the world, or as economists would say, the principal distortions that are out there. This will clarify the logic behind the proposals and provide a means of assessing them.

¹ Rodrik (1998) finds no relation between capital account liberalization and growth.

² Eichengreen (1999) provides an interesting survey of the main proposals on the table, and The Economist, (1999) gives a very useful summary discussion on the topic. To name some of the initiatives on the table: Bergsten (1998), Bergsten and Hennig (1996), Calomiris (1998), Camdessus (1998), Edwards (1998), Fischer (1999), Garten (1998), Government of France (1998), Government of the United States (1999), G-7 (1998), G-10 (1996), G-22 (1998a,b,c), G-30 (1997), Kaufman (1998a,b), Kenen (1998), Lita et al (1998), Meltzer (1998), Naciones Unidas (1999), Raffer (1990), Sachs (1998), Soros (1997, 1998), Stiglitz (1998).

To some extent, the different views fall into two groups. The first group views the main financial problem as an excess of capital flows due to moral hazard, which causes private returns to exceed social returns. This generates too much lending and distorts its allocation. The solutions to this problem involve limiting moral hazard whenever possible but when it is not, then discouraging capital flows through sand-in-the-wheels policies is a second best. We label these views, Theories of Too Much.

The alternative views, which we label Theories of Too Little, posit that the fundamental problems are distortions that cause capital flows to be too small and unstable relative to certain benchmarks. Theories under this heading would help explain a nagging puzzle in economic theory. The standard theory of international trade predicts that capital should move from capital-abundant to capital-scarce countries so as to tend to equalize capital-labor ratios. However, after decades of capital mobility, capital-labor ratio differentials remain enormous and there is scarcely any perceivable tendency towards equalization. The volume of flows observed, e.g. 5 percent of GDP in the recipient countries, appears small relative to the requirements for achieving that equality in a reasonable time period. This puzzle has also appeared in a different context. Feldstein and Horioka (1980) found that investment is fundamentally financed by domestic savings in a manner inconsistent with the notion of an integrated world capital market.

Several theories can potentially explain why there is so little capital moving around. They can also explain some of the features of recent crises. We will explore theories based on willingness to pay problems such as sovereign risk; theories based on liquidity problems and those that blame structurally weak national currencies. These theories have the virtue of explaining why certain countries in certain periods received massive flows without generating crises. The policies based on them promise a future of more deeply integrated and stable global finance with much greater capital flows.

Theories of Too Much and Theories of Too Little are not mutually exclusive because they do not start from the same benchmarks. The former point out distortions that make the volume of capital flows larger *than they would otherwise be*. The latter point to distortions that make them smaller. Hence, each theory takes all other distortions as given. The question is what would the world be like in the absence of most distortions. If that first best world is one of smaller flows, restricting capital movements could be an effective shortcut. If instead the first best involves a radically larger flow of resources, then adopting policies that restrict the development of capital markets could be very inefficient. The ambitiousness of new architectural plans and the political importance that they deserve depend critically on the characteristics of that first best world. If the new architectural design does not address the structural problems and lay new foundations, it will have no chance of being more than interior decoration.

Table 1 summarizes the major distortions associated with the alternative theories and presents the policy initiatives associated with them. The Table does not pass judgement on them. We shall be somewhat more explicit with our preferences in the text.

To unearth the causes of financial turmoil it is important to review the salient features of recent crises. Starting with the Mexican crisis of 1994-95, financial turmoil in emerging countries has puzzled analysts of all stripes. Surprise is perhaps the most salient feature of recent crises. A graphic way to view this is to consider the six crisis countries in the period 1997-98 (Indonesia, Korea, Malaysia, Philippines, Russia, and Thailand) and the six largest countries in our region (Argentina, Brazil, Colombia, Mexico, Peru, and Venezuela). If we classify these countries into low and high risk according to market risk spreads and ratings in mid-1997, right before the crises, we find that except for Russia, crises occurred in the low-risk countries (Calvo and Fernandez-Arias, 1998).

Some stories attribute this lack of predictability to the fact that crises have come in a variety of flavors, each time triggered by yet-to-be-discovered factors. In fact, many of these flavors were quite novel. The Mexican Tequila crisis of 1994-95 came as a surprise because the key causal factor of the 1982 debt crisis—namely a high fiscal deficit—was not an issue. Instead, many authors blamed a large current account deficit and low savings for the 1994 Mexican crisis, neither of which played a role in the subsequent Asian crises. Furthermore, Asian crises differ among themselves; for example, some involved banking problems, others did not. Then the Russian crisis again changed the pattern, returning to a traditional public debt crisis story. And, very importantly, the strong financial contagion associated with these crises infected countries enjoying strong fundamentals that had essentially no economic linkages with crisis countries, most notably the effect in Latin America of the Russian crisis.

We are more persuaded by the argument that lack of predictability is largely rooted in problems of multiple equilibria, rather than misunderstanding of the workings of economies. In this kind of crisis, the existence of a potentially “bad” equilibrium may trigger a self-fulfilling financial panic, in which the collapse validates the state of panic that causes it. These problems resemble bank runs and are associated with liquidity problems.

We shall keep in mind some of these features when discussing different theories about what is wrong in the world and how to fix it.

Theories of Too Much

Theories of Too Much usually assume that moral hazard encourages excessive lending. Somebody is providing an implicit guarantee so that the parties to the transaction are not internalizing all the risks. Too much lending and too much risk-taking occur. Resources are also misallocated because they are apportioned to risky projects without internalizing the costs involved³. Eventually, the guarantee is called and a crisis emerges.

³ Dooley (1997), Krugman (1998), and Corsetti, Pesenti and Roubini (1998) provide formal models of this intuition.

Implicit Guarantees in the Banking System

Such stories differ in the source of the implicit guarantee. The most traditional one is government guarantees on the banking system, but the same logic would apply to any corporation perceived as being “too big to fail.” However, banks are special because they play a critical role in the payments system. Because of that, governments cannot afford to let banks simply go broke, triggering a catastrophic sequence of defaults as otherwise solvent firms go bust because their clients are unable to deliver payment because deposits are frozen in problem banks. Anticipating the protection provided by a government bailout, bankers may assume too much risk.

The lower a bank’s capital is, the more extreme its behavior. If a bank is very highly capitalized, it will pay its losses with its equity. When the bank has no more capital it will want to adopt a strategy referred to as “gambling for resurrection” since depositors or the government will pay for any additional losses, while the banker retains any of the upside potential of the risky projects he has undertaken.

The standard solution to this problem is to impose through regulation a capital adequacy requirement and supervise to check that it is being met. Since capital is the difference between many assets and many liabilities, proper valuation of each component is critical. Hence, accounting standards are also central to this strategy.

The story of moral hazard in the domestic banking system can become international when domestic banks borrow abroad. Here, financial liberalization may exacerbate the problem. Therefore, some would argue in favor of restrictions on foreign borrowing by banks or other forms of capital controls until financial regulation and supervision is upgraded. We would argue that the principles of prudential regulation and supervision should be applied to international financial transactions, just as they apply to domestic intermediation. In particular, liquidity requirements may be imposed on the foreign borrowing of banks for the same reasons they are applied on domestic liabilities. This has become an increasingly common practice in the region.

Latin America has made very significant progress in improving banking supervision and regulation⁴ especially after the Tequila crisis in 1995. During the past two years, Latin American banks withstood quite well a very adverse external and natural environment given the Asian and Russian financial shocks, the decline in the terms of trade and the effects of El Niño and of Hurricanes Georges and Mitch. Domestic banks have been able to weather the storms without generating a banking crisis in any of the major economies of the region. At the same time, financial turmoil has been at a peak and access to world capital markets has been closed for long stretches during the last two years. Hence, while nobody should question the importance of adequate regulation and supervision of the domestic financial system and of its international transactions, it is unlikely that failures in this area are at the root of the current financial turmoil or that further progress in supervision and regulation will alleviate the problem in any significant way.

⁴ See IDB (1997) for a country-by-country assessment of how much progress has taken place and for an analysis of its contribution to growth in the region.

Implicit International Guarantees

Another Theory of Too Much follows similar lines but blames the International Monetary Fund and multilateral development banks for providing rescue packages that shield either foreign investors or governments from the fallout of excessive risk-taking. This would lead to excessive lending by foreign investors who expect to be paid back out of the resources provided through future rescue packages and not necessarily out of the real returns to the investments made.

Believers in this story propose eliminating rescue packages from the arsenal of international financial institutions. This theory has received much currency, especially among economists (see Sachs, 1998). Just as with nursery rhymes, it has the attraction of sounding like stories we all heard in school: the world would be a better place, were it not for these public sector interventions. However, given the massive losses stock and bondholders have been subject to and the enormous political costs paid by governments in crisis countries, it is hard to imagine that moral hazard could be serious enough to constitute a significant cause of financial turmoil.

Theories of Too Little

For all the impressive growth in capital flows to emerging markets, they are surprisingly low relative to what one would expect given the dominant trade theories and the way we usually model open economies. In fact, current capital flows are low compared to those observed prior to World War I and more recently in some particularly telling countries. In this section, we will review stories based on sovereign risk, on liquidity problems and on weak national currencies.

Willingness to Pay

The first story is based on the willingness-to-pay problem. Loans are not self-enforcing contracts. They are often secured by collateral, and problems that arise during the life of the contract are adjudicated by courts. After receiving a loan, only coercion or the promise of future loans makes people want to pay back. If the contract environment is not adequate and judicial enforcement is weak, borrowers may not want to repay, discouraging creditors from lending and leaving the credit market inefficiently small⁵.

Willingness-to-pay problems affect the size of the market through several channels. First, as lenders try to compensate for these risks with a higher spread they increase the incentive for non-repayment. After all, borrowers are asked to compensate lenders for doing something they could have done, but didn't. They will have reason to feel that they are overpaying. This will aggravate the incentive to pay problem. Secondly, the higher spread may affect the borrower's ability to repay, making loans riskier and profitable projects more scarce. Finally, the perception of excessive risk may prompt depositors to

⁵ This problem is discussed in the domestic context in IDB (1998, Chapter 7). Japelli and Pagano (1998) present evidence of the effects of the institutions that affect willingness to pay on the performance of credit markets for a selection of mainly Latin American and European countries.

park their money in a foreign country where these problems are less severe, making the overall supply of funds smaller.

Willingness-to-pay problems can be addressed through the use of collateral. In the simplest example, Mary lends John money to buy a house worth 100 quarks. The loan is for 80 quarks and the house is the collateral. As long as the value of the house minus the judicial costs of repossession exceed 80 quarks, John will always be willing to repay. The availability of assets with liquid secondary markets that can act as collateral and the judicial costs of repossession are important determinants of the ability of financial systems to address the willingness-to pay problem⁶.

When non-payment occurs or is possible, bankruptcy procedures are set in motion. These allow ability-to-pay problems to be separated from willingness-to-pay problems. They also provide a mechanism to secure the cooperation of the different creditors, to remove management, if found necessary by creditors, and to transfer the ownership of assets to creditors⁷.

Absence of an adequate bankruptcy law and court system can have deleterious effects on the financial system. It makes coercion less credible, worsening the willingness-to-pay problem. It also increases the cost of crises because it precludes concerted action to provide additional financing needed for the company's survival. This increases the social costs associated with bankruptcies and makes too-big-to-fail arguments relevant even for relatively small firms. This may prompt governments into providing rescue packages to the corporate sector, as were traditional in Latin America's public enterprises and as just happened in East Asia.

Hence, bankruptcy law and the court system are an important area of domestic financial policy in which the region is still far from where it could be.

Sovereign Risk

In cross-border finance, the willingness-to-pay problem is aggravated by the involvement of a sovereign government. Since sovereigns do not need to abide by the rulings of any foreign court, the problem may be serious and difficult to resolve. Sovereign risk may explain why cross border lending is so small. In the standard model (Bulow and Rogoff 1989) sovereigns will pay until it is in their interest to do so, given the "punishment" they may receive for non-payment. However, the incentive not to pay goes up with the volume of debt owed. This theory, originally developed in reference to public debt, can be extended to apply to private sector borrowing under the "protection" of the sovereign,

⁶ Notice that it is important for the collateral to have a liquid market. If it does not, the threat of repossession is unlikely to be credible. A banker will not want to repossess a widget-making machine from a borrower if he cannot do much with it. Better to leave it with the borrower who can at least get some cash flow out of it. We will study other effects of illiquid markets in the next section.

⁷ La Porta and López-de-Silanes (1998) provide an empirical analysis of creditor and shareholder rights for a large set of countries and establish their importance as determinants of the level of development of financial systems.

who may suspend convertibility, nationalize assets or otherwise interfere in the payment process.

Sovereign risk will cause markets to impose a credit ceiling on countries so as to keep the volume of debt below the level that would create incentives for non-repayment. The lighter the “punishment” the world can impose on the country, the lower the credit ceiling will be. Economies that are more integrated into the world are more easily “punished” and hence should get a higher credit ceiling.

The credit ceiling itself may be a source of crisis. First, the determinants of that credit ceiling might change, perhaps because of a deterioration in the terms of trade of the country, causing the current debt level to exceed the ceiling and causing a sudden stop in new lending. Second, even if the credit ceiling does not move, it may be destabilizing. As discussed in Fernandez-Arias and Lombardo (1998) since the ceiling applies to the country as a whole but borrowing is decentralized, there is an externality. Every borrower will have incentives to get his loan before his neighbor does, prompting temporary over-borrowing followed by crisis⁸.

Sovereign risk helps explain the experience of some countries that are fortunate outliers in the history of international capital flows. A first example is Puerto Rico, a country where capital flows averaged about 15 percent of GDP between 1960 and 1994 and where payments to foreign capital account for 32 percent of GDP (see Hausmann 1996). These numbers are striking when considering that crises were touched off elsewhere well before capital flows reached these magnitudes. For example, in Mexico 1982 and again in 1994, the crisis erupted when the current account reached 7-8 percent and when payments to foreign capital were less than 7 percent of GDP. Puerto Rico’s peculiar political structure implies that it does not have a sovereign to restrict payments or suspend convertibility, thus eliminating sovereign risk. The other two countries with a similar history are Australia and Ireland at the turn of the century.

Clearly, we are not here proposing Puerto Rico as a political model. We are only using it to illustrate the magnitude of potential effects of sovereign risk on the volume of capital flows. The countries that are outliers in the history of capital flows had peculiar political structures that significantly limited or eliminated sovereign risk. They also used the same currency of the country that constituted the principal source of capital, a point we shall return to below.

Notice that sovereign risk is a commitment problem. If the sovereign could somehow tie his hands and force himself to pay in the future, the problem would disappear. Lending

⁸ George Soros’ proposal for an international debt insurance scheme is a way to make explicit the debt ceiling and administering it. One problem with this proposal is that it is not clear how the ceiling would be determined, changed, etc. In addition there is the issue of how to allocate it among different borrowers in a competitive market. If the ceiling is exceeded and/or if the guarantee is called, the financial support will be used in a solvency crisis, made more likely by the moral hazard that the sunk insurance would generate. It appears that this initiative would work only if the ceiling cannot be exceeded, which would amount to capital controls.

would be more ample and stable and the sovereign might well be better off choosing to commit. But the commitment technology may be absent.

From this point of view the multilateral development banks such as the World Bank and the Inter-American Development Bank have a peculiar technology. By charter, their policy requires them to suspend operations in countries that run into arrears. Since they are a cheap source of future credit and are committed to stop lending in case of arrears, sovereigns have always repaid, giving these institutions their preferred creditor status. In a world where such commitment devices are scarce there is a question as to whether these institutions are making adequate use of their technology⁹.

Solutions to the sovereign risk problem in private markets have usually involved relatively rigid contracts lacking clauses that could be exploited to justify non-payment. This solution to the sovereign's willingness-to-pay problem may make crises triggered by ability-to-pay problems more difficult to manage and more costly. They usually make debt workouts quite messy. Hence, some authors have been proposing mechanisms to make such workouts more orderly without worsening the sovereign risk problem and without requiring the use of new public resources to take out the old creditors (see Eichengreen and Portes 1997, Eichengreen 1999).

Liquidity Crises

Markets did not predict either the Tequila or the East Asian crises. Russia and Brazil were less surprising given that market concerns were clearly expressed in high interest rates months before the crisis erupted. Still, lack of predictability is one of the elements that make multiple-equilibria liquidity stories plausible. The second element is that ex post the crisis often appears justified. If a major economic collapse was about to happen, investors have good reason to flee. Obviously, the collapse may well be the consequence of the investor panic itself.

The traditional example of liquidity crises is a bank run. Banks typically have a term mismatch: they receive short-term deposits, even sight deposits, and lend them at longer maturities. Assume all borrowers are doing just fine. If there is no attack, the bank will do just great. But if suddenly depositors all want their money at the same time, the bank will go bust. In fact, in its attempts to collect loans too quickly, even borrowers may get into trouble due to the credit crunch. Hence, expectations may be self-fulfilling: both optimism and pessimism can be justified ex post.¹⁰

The standard solution to bank runs is a lender of last resort. If someone, e.g. the central bank, is willing to take out depositors and substitute itself temporarily as the source of funding for the bank's balance sheet then pessimism is no longer justified and depositors

⁹ Below, we propose using this technology to bail in the private sector for crisis prevention.

¹⁰ Currency devaluation may put in motion a similar mechanism, triggering either liquidity or solvency problems (See Fernández-Arias and Lombardo (1998b), Chang and Velasco (1998), Krugman (1999)).

have good cause to keep their money in the bank. Following Bagehot (1853) last resort lending should be ample, automatic, collateralized, relatively short term and expensive so as to reestablish confidence but not lead to abuse or to moral hazard problems by bankers.

Liquidity Crises in the International Arena

Capital account imbalances, especially in the presence of high levels of debt, raise the spectre of bank-run style payments crises if market financing dries up. This market reaction may be based on a loss of confidence in a particular country or simply reflect global financial contagion. In an extreme case, creditors will seek to minimize their exposure in certain countries and refuse to refinance debts, provoking a grave short-term liquidity problem. The ensuing credit crunch can cause a serious contraction, high real interest rates and payments problems in the corporate sector, thereby deteriorating the health of the financial system and justifying the attack.

In fact, a temporary disruption in financial flows, due for example to a prolonged bout of contagion, may cause enough real damage to generate a full-blown crisis. If the financial interruption is not justified, i.e. if with adequate financing the economy would be perfectly capable of servicing its debts, then these types of crises are unnecessary and a strong effort should be made to prevent them.

In some recent crises, fundamentals were consistent with the required capacity to pay, but a sudden lack of liquidity severely damaged the economy leading to an unexpected change in sentiment. The unnecessary nature of the run that provoked the liquidity crunch can account for the failure of the market to anticipate the crisis. More recently, and especially in the wake of the Russian crisis of August 1998, most emerging markets in the world have lost much of their access to external financing, even though their economies do not present any great inherent weaknesses.

Liquidity crises are different from solvency crises in two respects. First, they are not easily predictable, because they arise from a movement to a bad equilibrium that is neither necessary nor inevitable. Secondly, they are preventable with sufficient financing. By contrast, additional funds injected into a solvency crisis would only postpone the moment of reckoning.

From Whence Come Liquidity Problems?

So far, we have just stated that liquidity crises exist. Creating a last resort lender or mimicking one through the use of existing institutions would constitute an improvement over the current situation, as we will argue below. However, where do these liquidity problems ultimately come from and what can be done about them?

A company or a country is solvent if the net present value of its future cash flow is positive. With complete markets there would never be a liquidity problem. One could always find someone willing to trade the future cash flow in exchange for cash today. Hence, illiquidity implies the lack of such markets.

One important example is the market for assets to serve as collateral. If such markets are liquid, then in times of crisis a firm should be able to find someone willing to provide it with a collateralized (i.e. practically riskless) loan. However, if the market for the asset is not liquid then its use as collateral is severely limited.

What might cause illiquidity in the market for such assets? A market is liquid when there are many agents on both sides of the market, buying and selling. There are several potential explanations why a market may not be liquid, including an inadequate business environment in terms of property rights and judicial enforcement. But one important factor is the presence of large aggregate shocks to the economy. Aggregate shocks imply that the market is likely to be unbalanced and hence illiquid. In good times, people are mainly on the buy side. In bad times, they move to the sell side. Since you need people on both sides to make a market then very few transactions will take place and prices of the asset are likely to be very volatile and hence not very useful as collateral. In particular, falling asset prices during generalized downturns facilitates the occurrence of liquidity crises.

Problems Caused by Weak National Currencies

We will argue in this section that the presence of a weak national currency is likely to accentuate the problems of illiquidity and cause serious financial fragility in capital-importing countries. This illiquidity and fragility, caused by weak domestic currencies make emerging markets riskier and smaller, thereby helping to explain their excessive volatility and the puzzle of too little international lending.

But, what is meant by a weak domestic currency? A currency is weak when:

- Local money is not a reserve currency. There is very little demand by foreigners for assets denominated in pesos.
- There are no liquid long-term markets denominated in that currency
- Residents hold significant financial assets denominated in foreign currency, whether domestically or abroad.

From the point of view of this definition, all Latin American currencies are weak. There isn't a single country in the region with a liquid market for long-term bonds denominated in the domestic currency. Most long-term markets are dollarized. A few are denominated in a price index (e.g. Colombia and Chile). In most countries, currency substitution has led to high de facto dollarization of assets.

This has two important consequences. First, countries in our region are net importers of capital and foreigners do not want to hold peso denominated assets, the country in net terms will have an exchange rate exposure problem. Avoiding this problem by holding sufficient reserves means essentially foregoing the importation of capital (in net terms). Hence, the too-little-financing puzzle. If instead, the country decides to let the capital in, then a currency mismatch will grow with the amount of foreign capital that is imported.

Because of this aggregate mismatch, there will not be a sufficiently large derivative market in which to hedge all this exchange risk. This means that a significant devaluation in such a country is bound to generate great internal dislocation.

Secondly, the fact that all long term lending is available only in dollars creates a mismatch problem.¹¹ On the one hand, the absence of long-term markets in the domestic currency forces borrowers who need long-term financing to choose either to accept the currency risk involved in dollar loans or to go for a maturity mismatch instead by borrowing short-term, but in the domestic currency. Either alternative will generate financial fragility through term or exchange rate mismatches.

Thirdly, since much of the financial intermediation in the economy is dollarized, much of the supply of short-term loans is also in dollars, thus aggravating the currency mismatch problem.

Given this structure, exchange rate flexibility is unlikely to deliver any of the benefits usually assumed. Hausmann et al (1999) find that compared to fixed regimes, more flexible exchange rate arrangements in Latin America have not delivered a more anti-cyclical or stabilizing monetary policy. They have amplified, instead of sheltering the economies from movements in foreign interest rates. They have generated smaller financial systems and higher real interest rates. Central banks have tended to shy away from allowing the exchange rate to fluctuate much, even in formally floating regimes, because of concerns about generalized currency mismatches.

It is important in this context to ask what would happen to financial turmoil if countries were to abandon their weak domestic currencies in favor of a strong supra-national currency. One would expect the sudden elimination of significant exchange rate and maturity mismatches throughout the balance sheets of households and firms in the economy to facilitate financial integration and lead to safer, deeper markets.

Evidence in favor of this hypothesis comes from the fact that capital flows were proportionally much higher prior to World War I than ever since. One explanation is that at the time there was a global currency system: the gold standard. Panama is better rated than other Latin American countries with stronger fundamentals. It is the only Latin American country with a highly liquid and competitive market of 30-year mortgages at about 9 percent. Its domestic interest rates are the least rattled by international contagion.

Major Debates of the New Financial Architecture

The stories or theories discussed above provide justification for some of the initiatives that are on the table in the current debate on financial architecture.

In this section, we shall mention a few of the debates on the new architecture that we consider central. These are the choice of monetary arrangements, the lender of last resort function, rescue packages and workouts. We leave out many other initiatives, not

¹¹ Indexed instruments are also sometimes used.

because we do not find them useful or important but because they are either not controversial or belong more to the field of interior decoration than to architecture, i.e. they take too many walls and windows for granted.

Monetary Arrangements

A major issue of the global architecture is the nature of the monetary arrangements that countries will adopt. Views here depend on whether there are reasons to suspect that weak national currencies (as defined above) are important players in the financial turmoil story. The alternatives on the table can be classified into five. The first is to maintain the status quo, with a system of weak national currencies. The second is to adopt currency boards linked to the dollar. The third is to adopt unilateral dollarization. The fourth is to join a monetary association with the United States. Finally, the last option is the creation of a regional currency a la Euro, as a substitute for the current set of weak national currencies.

Obviously, the willingness to abandon current monetary arrangements will be related to the degree of frustration they generate. Hausmann et al (1999) provide evidence that the costs associated with current policies may be quite large. However, the four other alternatives have different attributes whose relative value is not easy to establish (see Table 2). A currency board linked to a strong currency fortifies a weak currency, but does not completely eliminate the risk of devaluation. Unilateral dollarization implies substituting the weak currency with a strong currency that is already widely used both in trade and finance, thus eliminating the risk of devaluation. But this alternative, in contrast to a currency board, implies losing the seignorage revenue that is generated by printing fiat money. This makes the proposition quite expensive, especially at the beginning when the domestic currency needs to be exchanged for dollars. In addition, it does not provide for a last-resort mechanism. Finally, it does not permit political participation in the determination of monetary policy.

By contrast, a monetary association with the United States would presumably include some understanding over the distribution of seignorage revenue. If this can be done, seignorage revenue and other assets can be used as prime collateral to secure last resort lending. Even if the Fed refuses to play a lender of last resort role, the market could provide the regulatory arbitrage through collateralized contingent lending.

Finally, a regional currency a la Euro that is issued in substitution of a set of weak currencies could permit sharing the seignorage, providing a lender of last resort and securing political participation in decision-making. However, it would probably not reduce existing dollarization, nor would it be easy to develop long-term markets denominated in that currency. Hence, there is the risk that the new currency would be weak and thus not eliminate the problems that existing currency arrangements generate.

Right now, neither a regional currency nor monetary association is on the table. However, the raging debate on international financial architecture is an occasion to discuss whether they should be.

Lender of Last Resort

We have argued that liquidity crises may be behind financial turmoil. This is consistent with the characteristics of recent crises such as their unpredictability and their ex post justification. Moreover, liquidity crises are usually addressed through the provision of last resort lending. In fact, the sole existence of the lender may be sufficient to prevent destructive runs and panics.

From this point of view, a central problem in the world may be that the globalization of financial flows has overwhelmed the capacity of national central banks in emerging countries to credibly provide enough last resort lending to prevent liquidity crises. The challenge then is to recreate that function at an international level.

However, critics would argue that the problems are not associated with liquidity crises and that the provision of last resort lending would exacerbate moral hazard problems, thereby aggravating and not solving the situation.

The provision of last resort lending at the international level could proceed in three different ways. First, it could involve the creation of a global lender of last resort or more specifically, the reform of the IMF so that it could better play this role. Second, that function could be created within the bounds of a monetary association. Finally, the alternative would be to mimic last resort lending by using existing institutions and bailing in the private sector.

A Global Lender of Last Resort

Making the IMF a global lender of last resort is an idea that was discussed at the time of the Bretton Woods conference in 1944. In spite of the eloquence of John Maynard Keynes, the American representatives were not willing to provide the institution with the ability to print money. After all, the world was adopting a dollar standard and the United States was not about to renounce its sovereignty over the management of their currency.

Since then, the political economy problems of providing a global lender of last resort have been insurmountable, but for other reasons. First, there is reticence to create a powerful global institution that may not be fully accountable. Second, there is the fear that taxpayers in industrial countries would be asked to pay for bailouts in emerging countries. These fears could probably be addressed through the right governance structure and the use of collateral to protect taxpayers from undue risk. The idea has gained the support of Stan Fischer (1999), the No.2 in command at the IMF. However, as *The Economist* (1999) concluded in its recent review of global architectural initiatives, there is very little support for anything ambitious at the global level.

Last Resort Lending in a Monetary Association

Last resort lending may be more easily provided at the regional level in the context of a monetary association, where the political interests of the parties are less diluted and where some technical aspects are easier to address.

First, a monetary association with the United States would imply the disappearance of exchange risk, which together with the increasing internationalization of the domestic banking system would probably be less susceptible to liquidity crises. More importantly, if the monetary association shares the seignorage revenues with member countries, that revenue could be used as prime collateral to assure access to liquidity in times of crises. In fact, even if there is no formal access to the rediscount window of the Federal Reserve System, banks with access to that facility would be willing to provide the regulatory arbitrage, provided their lending is adequately collateralized. Said differently, within a monetary area it is not possible to provide last resort lending to one part of the market without having a major stabilizing influence over the other.

Mimicking Last Resort Lending with Existing Institutions

In the absence of a global or regional lender of last resort, the IMF and the other International Financial Institutions face a daunting task in dealing with potential liquidity crises. Current rescue packages may not be adequate because, as opposed to last resort lending, they are not committed *ex ante* but are negotiated after a crisis has occurred.

Once a financial crisis erupts, experience shows that it quickly develops into a meltdown with enormous output losses. Reasons for this may reside in the incomplete financial markets and hard-to-enforce contracts in developing countries. For example, as argued above, inadequate bankruptcy laws can lead to socially costly disruptions when activity is suspended until property rights are re-established. These distortions are intensified by the breakdown of “implicit” contracts across firms (inter-firm credit and supply/demand relations) and between employer and employees at times of crises.

An interesting implication of the above diagnosis is that a financial crisis sets off a chain of destructive events that would not be undone if financing returned to its original level. Although such a development would be beneficial, it would not restore the broken network of relations that the market requires.

To some extent, this pessimistic outlook may explain the relative failure of the rescue packages arranged to support most of the crisis countries in recent years. Generally speaking, these packages were very large, coming close to offsetting in size the initial negative financial shock, but did not come close to erasing its devastating real impact.

This calls into question the traditional rescue package strategy. Typically, once a crisis occurs in a country, the IMF and other official entities examine the situation and provide support in line with circumstances of the moment. Experience with recent crises, from

Mexico to Russia, suggests that this strategy is insufficient to avoid enormous damage to the well being of the countries involved or to prevent the contagion from spreading internationally, even if there is ample financial support.

The principal limitations of this traditional *ex post* strategy of crisis management, can be summarized as follows:

- Prevention is better than cure. Once a crisis breaks out, the economic fundamentals swiftly deteriorate through its impact on financial channels in all sectors of the economy, and internationally through contagion. The damage caused to the economy is not easy to reverse or repair.
- Emergency support will probably be uncertain and come too late to prevent the market from focusing on the bad equilibrium in a liquidity crisis. Here, it is important to act before the crisis-induced lack of financing causes irreversible damage to economic fundamentals. However, with current emergency procedures, the IFIs need time to analyse the situation and arrange for disbursements. This leads to delays and uncertainties that exacerbate the damage.
- Conditionality would probably be too hastily conceived and ineffective. The pressure to come up quickly with effective rescue support would put at risk the quality of the technical analysis underlying the loan recommendations, and conditionality would likely be weakened by the need for swift disbursement.
- Private investors would benefit without shouldering any of the burdens. At times of crisis it is unrealistic to think that the private sector will cooperate in defraying the costs of an emergency package. On the other hand, the implicit guarantee that such a rescue package represents for private investors may undermine market discipline, and by inducing less caution in lending would lead to more frequent crises.

An alternative strategy that uses existing institutions to mimic an international lender of last resort would be based on the following principles:

- *Preventability.* The governing principle is to strengthen mechanisms designed to prevent a liquidity crisis or lack of financing. This means that these programs must be applied only when the economic fundamentals are sufficiently sound or are being adjusted so that there is a reasonable expectation that market confidence and access can be restored to a level that will forestall a crisis. It also means that financial support should attain sufficient critical mass to be an effective remedy or deterrent commensurate with the liquidity crunch that could trigger a crisis.
- *Certainty and speed.* There must be certainty that the support provided, whether in the form of a guarantee, a loan or a line of credit, will be available immediately when funds are needed. Otherwise, uncertainty as to whether the support will be forthcoming, and indeed any delay in providing it, may frustrate the possibility of preventing a crisis. Consequently, the conditionality applied in such operations must

not impede disbursements as and when required; disbursement conditions must be replaced by conditions of approval, as explained in the following paragraph.

- *Preconditions.* Support should be offered selectively to countries that meet a series of preconditions: their economic fundamentals and their economic policy commitments must be compatible with warding off a crisis and conform to prudential standards and efforts to reduce financial vulnerability. Such preconditions for approval must be reviewed regularly to ensure compliance over time, when the commitment of support comes up for renewal. (If conditions are not met, a delayed exit mechanism needs to be implemented.) In all cases, the IMF would certify that these conditions are being fulfilled.
- *Catalytic effect.* Official support in this program will be more effective if it is supplementary to market mechanisms and can be leveraged through the private sector, so that this initiative is designed to bail in the private sector. In addition to the private catalytic effect, official international cooperation is essential to achieve the necessary critical mass.
- *Short-term and hard-term loans.* Loans disbursed in the implementation of this strategy, including those resulting from guarantees that have been called, should be relatively short-term and repayable early without penalty. These loans should carry sufficiently high interest rates upon disbursements to ensure an incentive to draw upon them only when there is a financing shortfall. On the other hand, the loans' commitment fee, whether in the form of a guarantee or a line of credit, should be priced to only reflect the financial cost of such commitment; in fact, low fees would provide further incentives to drawdown the loan only if the need is clear. IFIs would like to facilitate the use of these facilities as prudential planning tools: abstention from disbursement under this strategy is normal and should not be discouraged with artificially high pre-disbursement fees.

While this “lender of last resort” role may be risky for IFIs and entails costs if applied to solvency crises, the alternative of responding to crises with rescue packages is also costly and of limited effectiveness. This is the counterfactual benchmark to judge the merits of preventive operations.

The main risk in this strategy is that the financial support will be applied in a potential solvency crisis situation. In that case, financial support will fuel the inevitable crisis, diluting the market discipline that would otherwise be exerted when fundamentals turn riskier and in extreme cases cause the postponement of required policy reforms in the expectation of a major bailout. The anticipation that liquidity support will be available in insolvency cases would cause moral hazard in investment (in Fernández-Arias 1996, the program may even turn counterproductive depending on the frequency with which it is misapplied; “constructive ambiguity” would also have a deleterious effect). Thus, it is important to screen out insolvency cases

The implication is that support in these programs be available only for those countries with sufficiently sound economic fundamentals and policies that will contribute to strengthening, rather than undermining the strategy's aim of preserving market confidence. This risk is minimized by restricting access to this kind of program to healthy economies that meet a series of preconditions regarding sound and prudent management. Importantly, private participation in the program would add a critical element of assurance that these conditions will be fulfilled. In particular, discriminating official pricing consonant with private sector pricing would impose market discipline to beneficiary countries and at the same time protect the financial sustainability of the programs.

Workouts vs. Rescue Packages

Another area of major debate in the field of financial architecture concerns the relative weight of workouts to rescue packages. Workouts are mechanisms that permit a country that is unable to pay to suspend payment. They are attractive in the context of solvency crises because they do not generate moral hazard. Instead, investors are asked to share the burden of crisis. The problem is whether the determination of inability to pay is subject to abuse; if so, this scheme would increase sovereign risk and lead to less financial integration. By contrast, they may be highly counter-productive in the context of liquidity crises. Despite the fact that a suspension of payments in the context of an orderly workout restores solvency, in practice the anticipation of a suspension can be expected to contribute to the likelihood of panic.

One initiative is crisis burdensharing. On the extreme, forced burdensharing is an openly non-voluntary way of bailing in the private sector. In this process, there is clearly a positive coordinating role to be played by IFIs. The question is to what extent the application of pressure is appropriate. Obviously, in a crisis any financial room for maneuver is very valuable. The concern is that if forced burdensharing becomes part of the “implicit contract,” lending in the future will become more costly. This would not necessarily be a bad tradeoff if the conditions under which burdensharing is sought are clear and not subject to abuse; in that case they would define a standard of “excusable default” that would ensure flexibility when needed. However, the case by case, secretive approach usually followed makes this proposition doubtful. It also aggravates the distortions associated with sovereign risk, as investors view non-payment as just one more acceptable decision that a sovereign can make.

Another proposal is the creation of an *international bankruptcy court*, which would mimic the equivalent institution at the domestic level. This court would authorize sovereigns not to repay or to prevent domestic borrowers from repaying when the country is deemed unable (not just unwilling) to pay. By transferring the power to authorize non-repayment to an independent court that does not have a willingness-to-pay problem, this arrangement provides more flexibility while keeping sovereign risk under control. Obviously, the sovereign could still decide to violate the decisions of the international court, but presumably it would have less incentive to do so.

One question regarding this initiative is whether it is possible to gather sufficient political support from sovereigns to effectively grant these powers to this body. Another problem is that the court would not be able to replace management the way domestic courts do. It has also been argued that since realistically speaking this court would at most be able to impose a stay on payments, it does not add to what sovereigns can already do unilaterally. However, there may be a difference in terms of the country's reputation as a borrower between "excusable default" as sanctioned by an independent body and the unilateral decision of a sovereign.

This proposal helps reinterpret some of the functions the International Monetary Fund already performs. When a country gets in trouble, the IMF determines the amount of adjustment that is feasible or reasonable, calculates a financing gap and coordinates with official creditors and commercial banks a financial plan to make the program consistent. By deciding how much the country can pay it differentiates between ability and willingness to pay, thus solving the problem in a way that is similar to the bankruptcy court.

An alternative arrangement to give additional flexibility to workouts without aggravating sovereign risk problems is through *Loan Restructuring Provisions*. The trend towards securitization makes it increasingly difficult to restructure debt because of collective action problems. This problem applies with particular force to sovereign bonds. As a result, the options become extreme: either default or full payment. Whether this is good or bad is not entirely clear: ex-post it is better to have flexibility, but lack of flexibility may provide better terms ex-ante, especially if you do not plan to default.

It is interesting to note how the conventional wisdom is changing in this regard. It used to be argued that the problem with the 1980s debt crisis was that too much flexibility to renegotiate bank debt led to endless renegotiations. But now, in the face of crisis, many analysts favor the re-introduction of flexibility. Specifically, a proposal is to modify the standard debt contract to include provisions to facilitate renegotiations, such as majority voting, as opposed to unanimity, sharing clauses, and collective representation.

Each emerging country could re-design its contracts along these lines. However, just as with pre-nuptial agreements, an individual move may provide a negative signal of lack of commitment to repay. In contrast, a more collective approach would provide cover to governments and fiancées alike. Hence, an international agreement on loan restructuring provisions would be called for.

Rescue packages heighten the risk of moral hazard that may be present in preventive contingent packages because it may be difficult to deny assistance during a crisis if non-eligibility has not been clarified beforehand. Relative to rescue packages, workout initiatives require fewer public resources and imply less moral hazard, since investors must internalize the prospect of non-payment. However, they may increase default risk, thus reducing financial integration, and would disrupt many private contracts, thus increasing the economic costs of crises.

In Conclusion: Too Much or Too Little?

The debate on the new financial architecture is prompted by dissatisfaction with the world as we find it. Financial turmoil is generating enormous social costs in all emerging market countries. Contagion has made the problem more difficult and costly to address through the exercise of national virtue. It has transformed it into an international problem that needs international solutions. But it is critical to reach agreement on what the problem is. Paraphrasing John F. Kennedy, theorists of too much see all these capital flows and ask why? Theorists of too little imagine a world in which each household and firm in this world would have access to the same financial opportunities and ask why not? How much of current social suffering is attributable to an inadequate financial architecture is an open question. But it is clear that the costs of this inadequacy are borne mostly by emerging countries while any decisions on how to change international institutions inevitably involve the industrial countries. In this context one is reminded of Ortega y Gasset's remark that the pain of others is so much easier to bear than one's own.

References

- Bergsten, C. F. 1998. "How to Target Exchange Rates." *Financial Times* (20 November).
- Bagheot, W. 1873. "Lombard Street: A description of the Money Market". London: William Clowes and sons.
- Bergsten, C. F. and C. R. Henning. 1996. "Global Economic Leadership and the Group of Seven". Washington: Institute for International Economics.
- Bulow, J. and K. Rogoff. 1989. "Sovereign Debt: Is to Forgive to Forget?" *American Economic Review*. 79: 43-50.
- Calomiris, C. 1998. "Blueprints for a New Global Financial Architecture". Photocopy. Columbia University.
- Calvo G. and E. Fernández-Arias. 1998. "The New Features of Financial Crisis in Emerging Markets". Presented at Conference on Crisis and Contagion in Emerging Financial Markets: The New Policy Agenda, October 1998, Washington D.C. Inter-American Development Bank.
- Camdessus, M. 1998. "Toward an Agenda for International Monetary and Financial Reform". Address to the World Affairs Council, Philadelphia (6 November).
- Chang, R., and A. Velasco. 1998. "The Asian Liquidity Crisis". NBER Working Paper No. 6796 (November). Cambridge, MA: NBER.
- Corsetti, G., P. Pesenti., and N. Roubini.. 1998. "Paper Tigers? A Preliminary Assesment of the Asian Crisis". Photocopy. Yale University, Princeton University, and New York University.
- Dooley, M.. 1997. "A Model of Crisis in Emerging Markets". NBER Working Paper No. 6300 (December). Cambridge, MA: NBER.
- Edwards, S. 1998. "Abolish the IMF". *Financial Times* (13 November): A1.
- Eichengreen B., 1999. "Toward a New International Financial Architecture". Washington, D.C.: Institute for International Economics.
- Eichengreen, B., and R. Portes, with Francesco Cornelli, Leonardo Felli, Julian Franks, Christopher Greenwood, Hugh Mercer and Giovanni Vitale. 1995. "Crisis? What Crisis? Orderly Workouts for Sovereign Debtors". London: Centre for Economic Policy Research.
- Feldstein, M., and C. Horioka. 1980. "Domestic Savings and International Capital Flows". *Economic Journal* 90 (June): 314-29.
- Fernández-Arias E. 1996. "Balance of Payments Rescue Packages: Can They Work?" Working Paper 333. Inter-American Development Bank.
- Fernández-Arias E. and D. Lombardo. 1998a. "Private Overborrowing in Undistorted Markets". Working Paper 369. Inter-American Development Bank.
- Fernández-Arias E. and D. Lombardo. 1998b. "Market Discipline and Exuberant Foreign Borrowing". Presented at the Second Annual Conference of the Central Bank of Chile: "Banking Financial Integration, and Macroeconomic Stability", September 1998, Santiago, Chile.

- Fischer, S. 1999. "On the Need for an International Lender of Last Resort", International Monetary Fund, Washington D.C., mimeo.
- Garten, J. 1998. "In This Economic Chaos, a Global Bank Can Help". *International Herald Tribune* (25 September): 8.
- Government of France. 1998. "Facing International Instability: Twelve Proposals for a European Initiative". Paris: Government of France.
- Government of the United States. 1999. "Economic Report of the President". Washington, D.C. Government of the United States.
- Group of Seven (G-7). 1998. "Declaration of G-7 Finance Ministers and Central Bank Governors".
- Group of 10 (G-10). 1996. "Resolving Sovereign Liquidity Crises". Washington: G-10.
- Group of 30 (G-30). 1997. "Global Institutions, National Supervision, and Systemic Risk". Washington: G-30.
- Group of 22 (G-22). 1998a. "Report of the Working Group on Transparency and Accountability". Washington: G-22.
- Group of 22 (G-22). 1998b. "Report of the Working Group on Strengthening Financial Systems". Washington: G-22.
- Group of 22 (G-22). 1998c. "Report of the Working Group on International Financial Crises". Washington: G-22.
- Hausmann, R. 1995. "On the Road to Deeper Integration with the North". *Crecimiento Economico*. 221-254.
- Hausmann, R., M. Gavin, C. Pages-Serra, and E. Stein. 1999. "Financial Turmoil and the choice of Exchange Rate Regime", IDB, Washington DC, mimeo.
- Inter-American Development Bank. 1996. *Economic and Social Progress 1996. Part II*. Washington, D.C., United States: Inter-American Development Bank.
- Inter-American Development Bank. 1997. *Economic and Social Progress 1997. Part II*. Washington, D.C., United States: Inter-American Development Bank.
- Inter-American Development Bank. 1998. *Economic and Social Progress 1998. Chapter 7*. Washington, D.C., United States: Inter-American Development Bank.
- Kaufman, H. 1998a. "Preventing the Next Global Financial Crisis". *Washington Post* (28 January): A17.
- Kaufman, H. 1998b. "Proposal for Improving the Structure of Financial Supervision and Regulation". Outline of remarks before the Brookings Institution Symposium on Limiting Moral Hazard in Financial Rescues (4 June). Washington.
- Kenen, P. B., ed. 1998. "Should the IMF Pursue Capital Account Convertibility?" Essays in International Finance No. 207 (January). Princeton, NJ: International Finance Section, Department of Economics, Princeton University.
- Krugman P. 1998a. "What Happened in Asia". Photocopy. MIT.

Krugman P. 1999. "Balance Sheet, the Transfer Problem, and Financial Crises". Conference in Celebration of the Contribution of Robert Flood, January 1999, Washington D.C.: International Monetary Fund.

La Porta, R., and F. Lopez-de-Silanes. 1998. "Creditor Rights". Photocopy. Harvard University.

Litan, R. et. al. 1998. "Statement of the Shadow Financial Regulatory Committee on International Monetary Fund Assistance and International Crises". Statement No. 145, Shadow Financial Regulatory Committee.

McKinnon, R., and H. Pill. 1996. "Credible liberalizations and international capital flows: the overborrowing syndrome", in T. Ito and A.O. Krueger, eds., *Financial Deregulation and Intergration in East Asia*, Chicago: Chicago University Press.

Meltzer, A. 1998. "Asian Problems and the IMF". Testimony prepared for the Joint Economic Committee, US Congress (24 February). Washington.

Naciones Unidas. 1999. *Hacia una Nueva Arquitectura Financiera Internacional*. Washington D.C., Estados Unidos: Naciones Unidas.

Jappelli, T., and M. Pagano. 1998. "Information Sharing in Credit Markets: International Evidence". United States. Mimeo.

Raffer, K. 1990. "Applying Chapter 9 Insolvency to International Debts: An Economically Efficient Solution with a Human Face". *World Development* 18: 301-11.

Rodrik, D. 1998. "Who Needs Capital Account Liberalization?" *Should the IMF Pursue Capital Account Convertibility?* ed. By Peter B. Kenen. Essays in International Finance No. 207 (January). Princeton, NJ: International Finance Section, Department of Economics, Princeton University.

Sachs, J. 1998. "Global Capitalism: Making it Work". *The Economist* (12-18 September): 23-26.

Soros, G. 1997. "Avoiding a Breakdown: Asia's Crisis Demands a Rethink of International Regulation". *Financial Times* (31 December): 12.

Soros, G. 1998. "The Crisis of Global Capitalism". New York: Public Affairs Press.

Stiglitz, J. 1998. "The Role of International Financial Institutions in the Current Global Economy", The World Bank Group, Washington D.C., mimeo.

The Economist. 1999. A Survey of Global Finance (January 30).