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The Interactions between Macro and Micro Prudential Regulation: Some Reflections based on Latin America

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Introduction

In the recent international financial crisis Latin America was, for a change, not the epicenter of the problems and the region managed to surf the waves unscathed as it did not suffer severe problems in the domestic banking systems, nor any type of financial crisis. Why was this time different: strong macroeconomic policies, sound regulation of the financial systems or simply good luck?

The answer to these questions will certainly be a source of debate for many years, as probably each of the three elements is part of the explanation. By and large macroeconomic policies have been stronger than in the past, especially as countries had much better fiscal and external positions, large international reserves and less foreign currency debt. The Region also entered the crisis with sounder regulatory frameworks and improvements in the quality of supervision, as most countries restructured and upgraded these aspect in response to previous crises. Finally, good luck played a role, as the crisis was relatively short lived; the international financial institutions were more responsive and generous with their assistance than in the past while the commodity prices (which are critical for many countries) did not suffer significantly. Besides, the fact that the financial systems are relatively small this time was a plus for the Region.

The objective of this paper is to discuss some of the issues that have been recently raised in several proposals for regulatory reform and look at them from the perspective of the Region. This literature includes works at the US Treasury, at various regulatory institutions and at the multilateral and regional financial institutions and make proposals for reforming the financial systems. However, many of these proposals do not take into the specific features of the Latin American financial markets.

The paper will be organized as follows. In the next section we will analyze which are the distinctive macro- financial issues of the Latin American banking systems that one needs to take into account to design the prudential regulations. Among these features we highlight that there is a large degree of dollarization in the economies, the differences that exist in the credit risk between Latin American and industrialized countries in holding government securities, and this higher credit risk impairs the ability of the public sector to support their banking systems in a crisis.

In next section III we will discuss the principles that need to guide the regulatory changes because as discussed in de La Torre and Ize (2009), in Bunnermeier et al (2009), and in recent reports by the Treasury and the IMF the policy prescriptions could differ widely depending on whether the main concern is to deal with moral hazard and asymmetric information or with externalities and innovation. The fundamental issue is whether the emphasis should be on macro-prudential regulations to avoid systemic risk or on micro-prudential regulation to address individual bank problems. The philosophy underlying Basel is the latter as opposed to the former. A second and related issue that we will address in this section are the pros and cons of centralizing financial regulation, especially when the option is to place it under the orbit of the Central Bank.

In section IV we will discuss the importance of the overall safety net taking into account the likelihood that some of the rules such as the amount that is covered under the different deposit insurance schemes and the role of lender of last resort could change in a systemic crisis. It will also look at the issue of too big to save and too small to

regulate. The section will also analyze the controversial role of the credit rating agencies, for which there are many criticisms but few practical alternatives to address them. It will conclude with the analysis of some specific issues about regulation such as the pros and cons of alternative methods of asset valuation and about what can be done to make the regulatory environment less pro-cyclical. In this section we will also discuss the difficulties that we encounter in the so called " perimeter" of regulation, what are the specific issues in the Region and some criteria that can be use to address this issue.

The paper takes for granted that some general rules that are being proposed that are generally included as the micro-regulation such as those that argue in favor of stronger financial regulation, or the provision of better and more transparent information including items that are current off-balance sheet or those that favor closer cooperation among different regulators. In this respect we want to go one step beyond these generally accepted principles and ask more specific questions about issues for which it is more difficult to reach consensus.

II. Is Latin America Different?

The financial systems in Latin America have a number of features that differentiate them from those of industrialized countries. While there are differences across countries, and hence it is difficult to generalize for the Region as whole, some of the relevant features are.

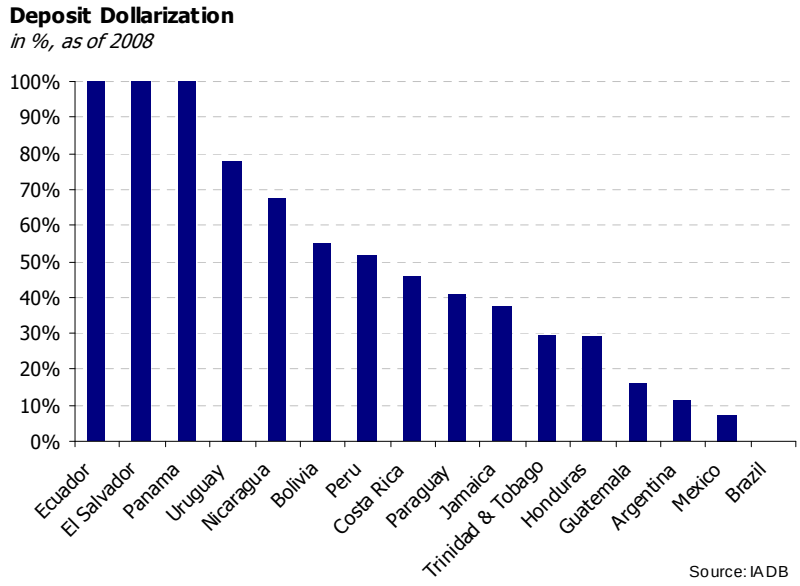
1. By and large, and with few exceptions, the financial systems tend to be small and they are dominated by commercial banks. The capital markets play a smaller role and the markets for derivatives and structured products are still in the process of being developed.

As can be seen in the ensuing graphs, most countries in the Region have relatively small banking systems compared to those of industrialized countries. Smallness can be an advantage these days when banks face problems and governments need to issue debt to assist them, as the size of a potential bailout is more manageable. But size was not the only issue. It was also important that most banks in the Region have had a more traditional commercial bank operations (i.e. taking deposits and granting loans), with less off-balance sheet and derivatives transactions.

Panama and Chile have the largest banking system in the Region, when measured using deposits relative to GDP, though Panama takes advantage of being an off-shore banking center. The Brazilian banking system was until very recently also small and similar to those of Argentina, Peru or Venezuela but it has been growing rapidly and is becoming much more important. Besides, today in dollar terms it is by far the largest and represents roughly two thirds of the deposits and loans of the Region, followed by Mexico (11%) and Chile (9%). On average, the banking systems measured as deposits to GDP are larger in Central than in South America.

2. The degree of dollarization in the financial sector is significant, as there are some countries that are fully dollarized while in others the share of dollar deposits in the banking system is significant. For countries such as Uruguay, Nicaragua, Bolivia, Peru and Costa Rica this is an important issue.

This structure of deposits has two important implications for the banking system. First, it implies that the Central Bank is limited in its ability to act as lender of last resort, which is a possible source of vulnerability especially if banks face a run on deposits or problems to obtain short-term liquidity. The second problem is a potential currency mismatch, as banks lend these deposits in dollars in many cases to firms and individuals that have earnings in domestic currency.



3. The sovereign credit ratings are below investment grade levels, and with few exceptions, those that have reached investment grade ratings are in the lower range of this group (in the BBB range) and many of them have only recently reached those levels.

Sovereign Credit Ratings

as of Oct-2009

Country	Local Currency	Foreign Currency
United States	AAA	AAA
United Kingdom	AAA	AAA
Spain	AA+	AA+
Chile	AA	A+
Trinidad & Tobago	A+	A
Mexico	A+	BBB+
Barbados	BBB+	BBB
Brazil	BBB+	BBB-
Peru	BBB+	BBB-
Colombia	BBB+	BB+
Panama	BB+	BB+
Costa Rica	BB+	BB
Guatemala	BB+	BB
El Salvador	BB	BB
Uruguay	BB-	BB-
Venezuela	BB-	BB-
Honduras	B	B
Paraguay	B	B
Argentina	B-	B-
Bolivia	B-	B-
Ecuador	CCC+	CCC+
Jamaica	CCC+	CCC+

Source: S&P

Only Chile, and Trinidad &Tobago have an A rating on their foreign currency debt and many countries that have been enjoying a good macroeconomic performance, such as Colombia, Uruguay and Panama, are still below investment grade levels.

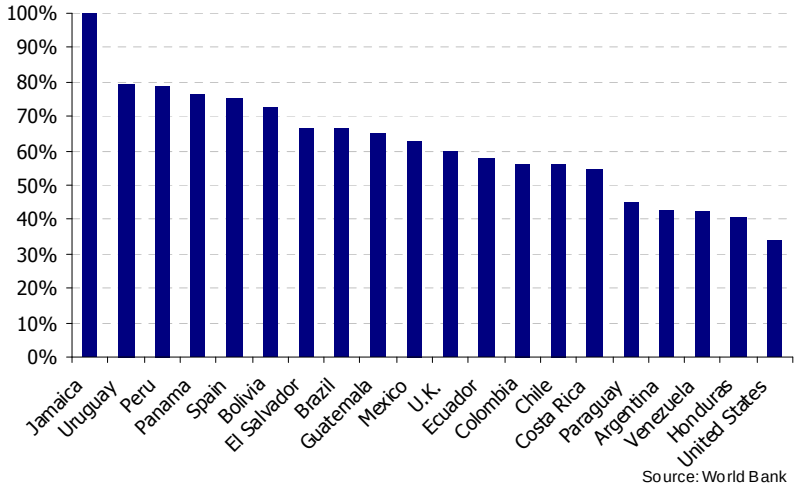
These relatively low credit ratings imply that the governments could face difficulties if they need to assist banks in a crisis. For instance, in the recent financial crisis in the industrialized countries the governments were able to restore confidence in the banking system by providing government guarantees on deposits and other liabilities while in many cases they capitalized the banks through purchases of subordinated bonds or by other transactions such as swapping government debt for bad assets. These government actions did help to restore confidence in the banking system largely because their credit ratings were high and hence the public assistance to banks was credible. The public sector guarantees on deposits were expected to be honored because they were issued by a government that was solvent and credible.

There are many instances in Latin America where the announcement of similar policies did not generate the same degree of credibility. For instance, in the case of the 2001 banking crisis in Argentina the government announced a law that stated that all deposits were guaranteed, but in the end it was violated because the government did not have the financial capacity to actually fulfill its commitment. In the case of Uruguay, when the banking system confronted a similar deposit run in 2002, the government could only stop the run once it managed to secure a large support package from the international community equivalent to almost 30% of GDP.

4. In most countries the systems are highly concentrated (i.e. they suffer the too big to fail, too big to save problems) and in several countries they are either foreign or publicly owned institutions. This concentration of the banking system where there are few systemic banks that share the market with a large group of small niche type financial institutions creates challenges as the systemic of these two of institutions are very different while the regulation does not differentiate among them. Should it? The difficulties are larger when the banks are public sector foreign institutions.

Bank Concentration

assets of three largest banks as a share of assets of all commercial banks



Source: World Bank

5. A fifth issue that has been extensively discussed in the literature is that the Latin American economies have shown much more macroeconomic volatility regarding the intensity of the business cycles, and the fluctuations in key financial variables such as interest rates, inflation or the exchange rate. This volatility has had significant effects on the banking system and has been at the root of many of the banking crises that the Region has suffered over the years.

These five issues have important implications effects regarding the potential strengths and vulnerabilities of the financial systems and for the design of the regulatory frameworks that need to be in place. It also raises questions about whether there should be limits on issues such as the market share of each individual bank, or on the amount of foreign currency deposits that an economy can have. We now turn to some of these issues, raising questions about the principles that need to guide the regulatory frameworks.

III. What principles should guide financial regulations?

The current prudential regulatory framework has essentially two basic building blocks: the first one, which is largely embedded in the Basel I and Basel II guidelines, is intended to maintain the soundness of "individual" banks by imposing different capital requirements to address various types of risks that individual banks face such as credit risk, market risk, operation risk, etc. This first component of the regulation is intended to address moral hazard and asymmetric information problems and places a significant part of the effort on capital requirements that are the main element to limit the amount of risk that banks can take.

The second building block can be summarized as the systemic safety net, which in includes important elements such as the characteristics of the deposit insurance system, the lender of last resort function of the Central Bank, the resolution mechanism for failing banks, and other elements that are intended to limit the systemic effects of individual bank failures. In the existing literature, this building block is intended to address the problem of externalities which in broad terms one could refer to as the potential contagion effect that could lead to bank panics.

One of the challenges for policy makers in the financial sector is that many of the issues would be addressed in different ways depending on whether one looks at the individual banks or at the banking system as a whole. One example is dollar deposits and loans. If one were to look simply at the individual bank, it is likely that the regulator would feel comfortable if the bank is fully hedged in its foreign currency position (i.e. if it is not short or long in foreign currency). It might even go one step further and attempt to ensure that those firms and individuals who borrow in foreign currency do not have a short position in that currency (as in the case of the exporters), and that they obtain the bulk of their revenues in dollars. But we know from the experience of many crises where there was not a lender of last resort that these prudential regulations are not enough to ensure the soundness of the financial system. There are systemic issues that go beyond the soundness of the risk policies of the individual bank that these prudential regulations are unable to address.

The second challenge could go in the opposite direction of the previous one. A regulatory framework that places significant emphasis in trying to limit contagion, bank panics and externalities would certainly reduce the likelihood of systemic risk, but it could exacerbate problems at the individual level. This approach could lead banks to take excessive risk and depositors and other lenders to banks to overlook the quality of banks and just try to get high interest rates on their deposits, repos and other financial transactions.

The bottom line is that any approach that the regulatory framework takes entails trade-offs and there is not an easy way out. Given the swiftness and depth of the recent financial crisis, the pendulum regarding regulatory issues is shifting towards the systemic problems issues. And it is probably true that even if Basel II had been fully implemented it would not have been enough to avoid some of the episodes that took place recently.

Even if we accept that the pendulum is shifting once again, it seems pretty clear that there is a need to put more emphasis on systemic problems in at least three ways. First, redefining and enlarging the perimeter of regulation, because to a large extent the investment banks and other institutions that operate in the capital markets and were at the center of the recent crisis were not regulated by the Central Bank and hence they would not have been subjected to Basel II. Second, there are a number of players who had an important role in the institutional set-up (such as the credit rating agencies and the mono-line credit insures) whose role needs to be reconsidered.

Third, there are several issues that require more attention than in the past and that in many cases neither the Basel agreements nor most regulatory frameworks have managed to address in a satisfactory way. Among the issues that are important is the treatment of liquidity, which needs to be addressed both for individual banks and for the

system as a whole, the greater concern about how to take into account cyclical aspects such as the business cycle or possible bubbles in the prices of certain assets, and how to incorporate macro-financial risks (such maxi-devaluations, inflation or high interest rates), and finally the issues of too big too fail and too small to care.

We will now turn to the discussion of these issues and analyze their importance for the Latin American countries

IV. Macro- and micro- prudential regulation

i. The main issues

The history of Latin America suggests that in most instances banking and macroeconomic crises went hand in hand. The links have traditionally been from macroeconomic problems such as balance of payments problems in which attacks on the currencies led to maxi-devaluations, issues of public sector solvency that eventually led either to a restructuring of public sector debt or even to a default, or a combination of these issues. Examples of these events are the financial crises of the early eighties in several Latin American countries, the so called Tequila effect in Mexico in 1994, or the Argentine crisis in 2001. In all these events the causality clearly went from macroeconomic events to the banking system.

In all these cases the banking crises were probably all but unavoidable, because the banking system as a whole does not have the capacity to be able to withstand large macroeconomic shocks without facing severe liquidity and/or solvency problems. Regulation and bank risk management does matter, as it can limit some of the detrimental effects of a large macro-shock. However, in the absence of a reasonable safety net it is difficult to avoid important systemic impacts.

In the recent international financial crisis the prompt action from the monetary authorities and the treasuries of several countries to provide a blanket guarantee on deposits and to re-capitalize banks using public sector resources was essential to stop the run on the banking system.

One could argue that if the capital requirements would have been higher and would have had a wider coverage including some assets that had low capital requirements, the crisis could have been avoided. A similar argument could be made for tougher restrictions on the liquidity gap.

However, when a panic strikes, especially one that is related to liquidity issues, it is difficult to expect that individual banks will be able to cope with it without the assistance of a lender of last resource or with a some type of deposit freeze or of temporary gate that can stop the drain.

The main argument is that the prudential regulations imbedded in the Basel I and Basel II recommendations have been primarily designed to avoid individual bank failures and to address individual bank problems in normal or quasi-normal times. As we argued before, they are primarily intended to address issues of moral hazard and asymmetric information. However, if and when a panic strikes, they are unlikely by themselves to avoid contagion and the negative effects of externalities.

The Argentine banking crisis of 2001 can help to illustrate this issue. The Central Bank had developed a regulatory framework that was stricter than Basel I, as it had larger minimum capital requirements and it included large liquidity requirements that were introduced to address a potential run of deposits that Basel did not contemplate in its guidelines. In addition, the Central Bank bought liquidity insurance lines from international banks to supplement the liquidity accumulated by individual banks. However, when the panic started in mid–2001 none of these resources was sufficient. The financial system was dollarized and the lack of a lender of last resort proved an insurmountable obstacle to avoid a generalized run on the system.

If one agrees on the importance of externalities relative to moral hazard for the well functioning of a banking system as a whole, this implies a shift in the emphasis of prudential regulation towards the vulnerabilities that would affect the soundness of the overall banking system.[1] This is equivalent to the use of a top down approach in bank regulation, which starts analyzing systemic issues and ends with those that affect the soundness of individual banks.

The design of the deposit insurance system is perhaps one good example that can illustrate the differences between the two approaches (this view coincides with de la Torre and Ize (2009). When the main concern is moral hazard, the policy recommendation would be provide as little deposit insurance as possible, because the objective is for depositors to share the risk and to deposit their funds in sound institutions as opposed to those that pay the higher interest rate. Some amount of deposit insurance might be necessary to protect the "widows and orphans", but this would be a small amount. In contrast, when the concern is systemic risk that could arise from a run on banks that could be triggered simply by contagion effects, the policy recommendation would be to cover a relatively large amount through insurance.

ii. Are Latin American countries different?

There is always a temptation to argue that each country is different, or that this time the financial boom is different and will not end in a crisis. In most cases these arguments are just wishful thinking, though there are always times when there are actual and important differences that can explain the diverse outcomes that are sometimes observed (the exception that confirms the rule).

In the case of the Latin American countries we have already argued that there are some differences between the financial systems in the region and those in industrialized countries that affect the systemic stability of the banking system, and the capacity of the regulators and policy makers to respond to possible crises.

In the rest of this section we analyze some of the recommendations that various institutions and government agencies have recently proposed to improved the regulatory frameworks and discuss their relevance of applicability to the Latin American economies. By and large our approach will look at the issues assuming that externalities

[1] De la Torre and Ize (2009) argue that in addition to the moral hazard and asymmetric information and the externalities paradigms, there is a third one, that they call the innovation-uncertainty paradigm. In that paper they try to endogeneize the causes that can trigger a banking crisis instead of simply assuming that it is caused by an exogenous macroeconomic shock.

have been a critical aspect of the banking problems in recent years in the Region, and that large macroeconomic shocks have been one of the main causes underlying these crises.

Among the issues that we will discuss are policies to avoid systemic shocks such as how to address the large degree of dollarization in the region and the potential need for a lender of last resort or alternative policy measures; the problems associated with governments that have only a limited capacity to issue debt to assist banks and/or to provide deposit insurance, and issues relate to the "too big fail".

Large financial dollarization. The vulnerabilities that financial dollarization imposes on the banking system have been widely discussed in the existing literature[2]. By and large the main problems need to be dealt with at a systemic level, as individual banks cannot be expected to be able to internalize the problems associated with the inability of the Central Bank to act as lender of last resort. This is an issue that is central to the economies that are fully dollarized as well as for those in which there is a large share of dollar deposits in the system.

What does it imply about the regulatory framework? To the extent that dollarization can be viewed as a source of vulnerability for the banking system, the regulatory framework needs to include it in at least two ways. First, at a micro-prudential level, it should impose stricter capital requirements on foreign currency loans and higher reserve (or liquidity) requirements on foreign currency deposits and short-term liabilities.

Second, from macro-prudential level, it would probably need to enhance the ability of the Central Bank to act as lender of last resort, and impose regulations to limit dollar loans within the country so that banks can have a large pool of foreign currency liquidity to back their deposits. One alternative that can supplement these measures is the possibility of imposing gates or circuit breakers similar to the ones that we used for money market funds as a way to stop a panic.[3]

Low sovereign credit ratings. The second difference is that Latin American countries are less credit worthy than most industrialized countries and hence the scope of the public sector to assist banks in a crisis is more limited. As a result, deposit insurance mechanisms that are to a large extent dependent on government guarantees could face problems of lack credibility, especially when the deposits are in dollars. For this purpose, having small banking systems is an advantage, as it could make it easier for the public sector to support it in case of systemic problems.

The implication for the regulatory frameworks is that the capital and liquidity requirements also need to be larger, because if the government has less capacity to assist banks in a crisis, then the banking system needs to be more conservative.

Size of financial institutions matters. A third characteristic is the large degree of concentration of the banking systems in many Latin American countries. This feature has not necessarily been a disadvantage in the recent financial crisis, as some of the countries that suffered the most (such as the USA) had a relatively low degree of bank

[2] See for instante Levy Yeyati (200x), Armas, Ize and Levy Yeyati (2006).
[3] As proponed in Ize, Kiguel and Levy Yeyati (2006)

concentration, while others that had a concentrated banking system, such as Canada, did not face significant problems. Is being big a problem?

In the past the main concern about too big to fail was mainly that the large banks enjoyed an implicit benefit and as it creates some discrimination in reverse for depositors, as they would generally feel safer in large banks which the authorities would not allow to fail; as large banks could have a systemic effect on credit and on the payment system. In the recent crisis the policy makers realized that too big to fail in many cases also implied too big to save. In other words, banks that are too large relative to GDP could imply a large fiscal burden in case they face solvency problems. The approach nowadays appears to be to restrict the size of banks, in order to limit problems in a potential need to bail them out.

Brunnermeier et. al (2009), classify banks in four groups, depending on their systemic effects:

1. Individually Systemic
2. Systemic as part of a herd
3. Non-systemic large
4. Tinies

In Latin America there are some individually systemic banks. In some countries they are foreign or domestic private banks (e.g in Brazil, or Mexico) while in others they are public sector banks (such as in Argentina or Uruguay). Brunnermeier et. al argue that for groups 1 and 2 macro-regulation is required, and that for groups 3 and 4, probably minimal regulation can do it. The main difference between those banks in the first two groups and those in the last two is whether they would have macro-spillover effects.

While by and large the experience of the Region indicates that this classification is appropriate, there is some concern about the treatment of the "tiny institutions". It is clear that they do not have a systemic effect as they cannot affect the clearing or the payment systems nor they have a significant impact on overall credit. However, in a fragile situation, the mismanagement of the failure of a tiny institution could have macro-effects. This was the case in the 1994 bank panic in Argentina, where the run on deposits was triggered by the failure of three very small financial institutions that the authorities did not rescue and where depositors lost their money.

A related feature is that with very few exceptions (such as Brazil and to some extent Chile and Mexico), the Latin American countries do not have important derivates and futures markets or sophisticated structured products that are securitized. This has been an advantage in this crisis, as most of the problems were with capital markets instruments. It is also an opportunity as the developments of these markets can take advantage of the lessons from the recent international financial crisis.

Large macroeconomic and financial volatility. A fourth characteristic of the Latin American economies is the large macroeconomic and financial volatility that has experienced over the years. Latin America is by the far the most volatile Region, as it has suffered recurrent balance of payments, debt and banking crises and very large swings in GDP which in many cases included deep recessions. This volatility certainly affects banks through a number of ways, such as very unstable funding, both from deposits as well as from the capital markets, large increases in non-performing loans

during recessions and large fluctuations in the prices of the bonds and other liquid instruments.

This high volatility is one the main reasons why the domestic banking systems in the region have remained small. From a macro-prudential point of view this has been a blessing in disguised, because the banking system has been easier to monitor while it did not magnify as much the effects of this volatility on the real economy. At the same time it helped to reduce the fiscal costs of the banking crisis as they took place in smaller banking systems.

In terms of the consequences for the regulatory framework, this volatility implies that the regulations need to be stricter than in more stable economies and that the argument for countercyclical policies is stronger. From a micro-regulation perspective this volatility implies that there should generally be higher capital requirements than in industrialized countries, more conservative rules for provisioning and more attention to liquidity requirements. It also means creating rules that incorporate in some way the point in the business cycle in which the economy is at given point in time as well as using prudent rules that take into account large fluctuations in asset prices.

One aspect that becomes important in this discussion is the different alternatives that have generally been considered for the valuation of assets in the banks' portfolios. The traditional approach has been to include loans and bonds that are held to maturity in the so called bank book, which implies that they appear in the balance sheet at face or at purchase value, and their accounting values do not fluctuate with changes in market prices. This valuation practice has been accepted for a long time for loans (even long term ones such as mortgages), though in the case of bonds it is only accepted for those that are held in the so called investment account.

A second group of assets is valued on a different criterion which is based on mark to market prices. Within this group there are bonds which financial institutions typically hold for short periods for their trading book or buy for sale book. In the Latin American countries, where the prices of government bonds have been very volatile, these holdings have inflicted significant changes in the banks income statement and in a few instances they have led to losses that were big enough to threaten the solvency of some banks.

The losses created by the mark to market of assets were critical in the recent international financial crisis, as many investment banks saw that their capital had evaporated when the assets were valued in this way. The concern about mark to market has been that it tends to put the banking system in a vicious cycle that typically worsens the intensity of the crisis. When banks face liquidity problems and they need to raise funds they can only sell the liquid bonds, which are subjected to the mark to market rule. If every institution behaves in a similar manner (the herd behavior), then the prices of these assets would collapse and the liquidity problems would very quickly turn into solvency ones.

These criteria generate some inconsistencies in valuations, as two identical government bonds bought originally at the same price would appear in the balance sheet at different prices depending on whether they are in the bank or in the trading book.

Several episodes of financial stress in Latin America as well as the recent international financial crisis have led to new controversies about different possible ways of the valuation of liquid assets. The literature basically recognizes four methods of valuation:

Book value
Market value
Fair value
Mark to funding

Book value is the traditional way in which banks have valued loans, and if bonds are included in this category it implies equating bonds to loans. The main advantage of this criterion is that it gives more stability to the value of assets; the main disadvantage is that it could severely misrepresent the value of the assets in a stress scenario, and could allow an "insolvent" bank to continue to operate.

The mark to market criterion takes the opposite approach, as all liquid assets are marked at market values, which forces the bank to show the actual values of all liquid assets and could lead to large volatility on the asset side. In an extreme case in which all assets were marked to market, most banks would become insolvent at one point or another. So the consensus is that only liquid assets are marked to market. In practice, the supervision agencies have been lenient and allowed banks to change their valuation criteria towards something similar to a book value in times of crisis, as otherwise it would have led to widespread solvency problems in the banking system.

The problems that we have discussed with book value and mark to market have led the regulators to look for a third option, which has recently been proposed during the international financial crisis, which is the fair value criterion. This would be an intermediate methodology, which allows the banks to value the assets at prices that would reflect a medium to long run scenario. This approach helps in a crisis when asset are sold at fire sale prices as there are no buyers and all the financial institutions are trying to sell any liquid position in order to raise cash. It helps to stabilize the asset side of the balance sheet, and to correct for the effects of a financial crisis. It should also help in a boom, as price tend to rise excessively, and this criteria will moderate the impact on the balance sheet.

While this approach seems the most reasonable one, the main difficulty is the choice of a valuation model which is not always easy to devise in a crisis and the main risk is that the fair market value ends up overestimating the long term assets prices and hence the bank's net worth. Despite this drawback, it seems that this methodology is the most promising for crisis prone countries.

Finally, Brunnermeier et al (2009) have proposed a mark to funding approach which is variation of the book value and the mark to market that can be a useful alternative in most cases to the fair value method. It basically argues that banks can only include in the banking book loans or bonds for which they have funding of similar maturity or duration. This approach is reasonable, because the bank has the funding to maintain those long term assets to maturity.

iii. Specific Issues

There are two important issues that we want to analyze that do affect the working of the financial system and that at some points have or will be important for Latin American countries: the role of rating agencies, and the perimeter of regulation. In what follows we provide some preliminary thoughts about theses issues.

Credit Rating Agencies. The rating agencies have been criticized for their failure to rate properly some of the complex structured products in the US, and there are number questions that have been raised about how to correct the problems in this area.

There seems to be some consensus that this is a difficult to issue to tackle, and that many of proposals that are being considered have large drawbacks. For instance, the option of changing the choice of credit rating agency (CRA) from the issuer to the investors as a way to avoid "inflated" ratings to one in which credit ratings would be "deflated". This alternative does not ensure an improvement in the quality of ratings. Likewise, the proposal to increase competition and try to bring more players could eventually lead to lower the credit standards as the CRAs will try to gain market by "promising" better credit ratings.

One of the main proposals that have so far been put on the table is to reduce their role in the regulatory frameworks. In Basel II and in many domestic regulations, financial institutions rely on the ratings from the CRAs in order to be able to purchase some financial instruments or to determine the capital requirements on certain loans. While this path seems a reasonable way to go, it would put more weight on internal credit rating models which in many cases could be weaker. he alternative on this front is not clear, and certainly requires more thinking.

A second proposal, which in the case of Latin America seems appropriate, is to make a more comprehensive rating, that not only includes the individual rating of the financial instrument, but that in addition it also considers some additional features such as its liquidity, and the macroeconomic risk. One example might help. If a CRA has to rate a pool of adjustable interest rate mortgages, it not only needs to consider the capacity to pay in the initial interest rate scenario, but also the macroeconomic risk of a sharp increase in interest rate that could impair the loan or of a drastic fall in property prices that induces the borrower to default. From this perspective a pool of fixed interest rates mortgages would carry a smaller macroeconomic risk than one of adjustable rates. To some extent this is what CRAs do when they use the sovereign ceiling on issues of private sector debt. A further move in that direction is probably the way to go.

Finally, the solution does not seem to be a government agency that takes over the CRAs role, as there no guarantee that government official would do a better job than private ones, while there is a big risk of ratings becoming "politicized". Nevertheless, there might be some role for a regulatory agency to monitor closely the rating procedures of the CRAs and even to impose some type of sanction (such as temporary suspension of certain types of ratings) if they find that there has been negligence.

The Regulation Perimeter. The recent international financial crisis has generated a new wave of claims to enlarge the spectrum of who needs to be regulated. The temptation is to regulate in every possible manner any type of financial intermediary including not only the traditionally regulated institutions but also investment and money market funds, hedge funds and even large corporations that operate in the futures,

forwards and derivatives markets. There is some debate though, regarding what type of regulation should be imposed, as in some cases the request is simply to disclose information on the financial positions, while in others it is to impose stricter restrictions (including capital requirements or limits on the maturity or liquidity gaps).

The guiding principles should most likely be based on rules that try to ensure a macro-regulation prudential framework whose objective is to limit externalities, namely financial panics that can arise by depositors and suppliers of short term liquidity (i.e. in the repo market or in commercial paper).

Our proposal is that from a macro-prudential point of view the first criterion is to argue that the institutions that need to be regulated are those that can be subjected to runs, or those whose failure can have an effect on systemic liquidity or solvency. It is clear that commercial and investment banks are part of this group, as both have important liquidity gaps. In addition, there is a need to regulate those entities, such as money market funds, whose liabilities are set in *nominal* terms while its assets can experience variations when valued at mark to market prices.

From this perspective, investment and hedge funds appear to be less problematic, especially those who have assets that are marked to market. What needs to be monitored in these cases is whether all assets in the portfolio are liquid (in the sense that there is a market that sets a price at which they can be sell), and whether the shares of the funds reflect those prices. The problem, though, is that many of these funds hold some illiquid assets and that when there are redemptions they would almost inevitably take place at values that do not fully reflect the actual prices of assets. For these cases the bulk of the effort needs to be on disclosure of asset prices and establishing rules for pricing the shares of the funds that do not penalize either those who ask for redemptions or those who stay in the fund.

The main guiding principle from a liquidity perspective is that any institution that has assets that are not marked to market, either because there is no market in which they can be sold or because accounting rules allow them to hold them in their books at prices that are different (say to reduce the volatility of the assets) there needs to be some form of regulation because in a panic these institutions could be subjected to runs.

In addition, there is no question that financial intermediates need to be regulated to avoid the typical moral hazard and asymmetric information issues, but the foundations of that regulations does exist today and the main difficulties in this area are to catch up with innovation and market changes.

IV. Final Reflections

This paper has reviewed some of the possible reasons that explain why the banking systems in the Region did not suffer during the recent financial crisis as well as some of the ideas that have been put forward regarding the proposals for changes in the regulatory framework.

Regarding the first issue it seems that the main explanation is that the countries entered the crisis without significant macroeconomic imbalances and that as a result that there were not required large changes in policies that could destabilize the banks balance

sheets. For instance, while the countries that have been following inflation targeting did depreciate their currencies, but the effects on the banking system were relatively small because most of they do not have highly dollarized economies (the exception being Peru which is still a dollarized economy, but did not depreciate the currency as much). Besides, the Central Banks were able to provide liquidity assistance without worrying about run away rates of inflation, because the initial rates were already very low.

In the countries that have a large degree of dollarization or of currency substitution were able to depreciate less their currencies, thanks to the large level of international reserves that they had initially and to the stronger external accounts.

At the same time the public sectors had been reducing their public sector and their exposure to the banking system. As a result, the all in government bond prices fell during crisis did not have a large impact on the banks balance sheet.

The improvements that have been taking place over the years in micro-prudential regulations also helped, as at the time of the crisis the banks were well capitalized (exceeding the requirements of Basel I), the level of non-performing loans was small and was well provisioned, and the banks had more than adequate levels of liquidity.

Regarding the macro-prudential regulatory frameworks, the Latin American countries were not in much better shape than the industrialized ones. However, the smaller banking systems helped to reduce the potential side of the problem, while the smaller levels of public sector debt had helped to a reduction in the banking exposure to the public sector. Last, but not least, the central banks were in a better position to provide liquidity and to successfully perform their roles as lender of last resort.

The financial markets are likely to grow in Latin America, especially if macroeconomic policies remained checked and the countries can maintain an environment of low inflation and with improvements in the countries credit ratings. As this process takes place the discussions about the appropriate financial frameworks will increase and the need to establish a solid macro-prudential frameworks.

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