

INTERNATIONAL REGULATION AND SUPERVISION: A SOLUTION TO BANK FAILURE IN LATIN AMERICA?

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I. INTRODUCTION

The assessment of Latin America's insertion into the globalization process is a very delicate question. The ECLAC (Economic Commission for Latin America and the Caribbean) described the 1980s as the “lost decade for development”. In spite of the sweeping political democratization, the depletion of an industrialization model based on import substitution and the debt crisis precipitated a fall in per capita income. During the 1990s, the move towards a more outward oriented strategy of industrialization and adjustment programs brought about economic progress, such as disinflation, productivity gains, and the diversification of national production capacities and the growth of per capita income. However, because of repeated financial crises and the absence of significant social progress we cannot say that it was a “victorious decade”.

Despite the introduction of wide reforms, financial stability in Latin America remains frail. The opening up of frontiers has rendered the subcontinent more vulnerable to international financial movements and to the economic changes in large developed nations. The Mexican, Brazilian and the recent Argentine crises are examples of the financial instability of the region. Like foreign exchange and financial crises, banking crises are outward signs of this instability. An investigation of the banking sector is therefore fundamental because of its specific and particular role in the economy of a country. The banking sector plays an essential part in raising and allocating capital in emerging economies where it intervenes more in financial intermediation than it does in developed countries. In Latin America, where financial markets are unevenly developed, banks are the only institutions able to give enough information to produce positive externalities.

However, banks evolve in an asymmetric information environment and are particularly prone to the imperfections of the market. They are intrinsically fragile. The fact that banking assets are less liquid than money balances makes their financial terms more burdensome and dependent on the confidence that savers have in the system. The slightest sign of trouble can lead to panic and push savers into withdrawing their funds from these institutions. Banking crises have repercussions in the real sector and are likely to impede economic growth. Thus, if an efficient banking sector can produce positive externalities and generate, or at least support, growth, an ailing banking sector can bring negative externalities to the rest of the economy.

Nearly all the crises that occurred during the last decade came from the emerging countries. One of the possible solutions to limit banking instability, as widely discussed today, is to improve the regulation of the banking sector in developing countries. Is this normative regulation, supported by a group of measures concerning supervision and control appropriate to deal with the mechanisms of crises (as in the Basel Accord, for example)? Is it suited to the economic and financial structures of emerging countries?

In order to answer these questions, we will first analyze the causes of the instability of the banking systems in Latin America. Then we will examine the framework of the Basel Accord to see whether it is applicable to the Latin American banking systems in order to limit their instability. We will particularly insist on the Basle II implementation impact concerning capital adequacy ratio (CAR), prudential supervision and market discipline.

II. CAUSES OF INSTABILITY IN THE BANKING SYSTEMS IN LATIN AMERICA

Banking crises are complex and different from one another. There is a lot of literature on this subject that tends to make distinctions between macro- and microeconomic causes. A number of researchers have worked on this distinction in order to find “predicative” indicators of crises; Caprio (1998), Demirguc-Kunt and Detragiache (1998), Evans *et al.* (2000), Hardy and Pazarbasioglu (1999). The study of factors that cause crises allows us to determine the typical behavior of certain variables during the period preceding the beginning of banking failure.

In this paper, we will present a non-exhaustive account of the different determining factors of the banking crises in Latin America in order to highlight the role of the “bank actor” in the outgrowth of crises.¹ We will start by looking at the macroeconomic causes over which banks do not really have control; and in this sense, we can consider them as being the

“victims” in a certain way. We then will expound the microeconomic factors where the banks involvement is much higher and where they become role-players in the fragility of the banking system.

Macroeconomic Instability and Banking Fragility

Very often, the deterioration of macroeconomic conditions precede banking crises. Among the macroeconomic factors that directly or indirectly contribute to the instability of the banking systems in Latin America, we can mention the volatility of monetary variables, the exchange rate system, financial deregulation, the structure of deposits and economic policy.

The Monetary Variables Volatility

Latin American countries are often subject to large variations in the terms of trade, which is the first source of external volatility. This diminishes the borrowers' ability to repay their debts. Gavin and Hausmann (1996) show that shocks affecting the terms of trade played an important part in the outbreak of the banking crises in Argentina, Chile, Columbia and Uruguay. Kaminsky and Reinhart (1996) identify the deterioration in the terms of trade as one of the stylized facts that precede banking crises, especially in mono export countries, or in countries where exports are concentrated on a few products (Venezuela or Ecuador), or in small economies that are not very diversified.

The volatility of international interest rates is another important external factor insofar as it can produce an induced effect on the flow of private capital. This volatility affects not only the cost of borrowing for emerging countries; it also calls into question the attractiveness of these countries for international investors. After a rise in interest rates, if banks were to find themselves in a situation where their money balances were too high, they could be tempted to grant more credit and would do this, at the price of poor quality.

A third source of external volatility is the evolution of real exchange rates that directly affects the banks' balance sheets (by causing a mismatch between assets and liabilities) and the banks' clients. Like the variation in the terms of trade, Kaminsky and Reinhart (1996) consider the evolution of exchange rates as a factor precipitating a banking crisis. This factor is particularly present in Latin American countries that are inclined to large fluctuations of their monetary variables. Furthermore, the volatility of these variables leads to “blurring” information or, at least, to reducing its quality and this could exacerbate the behavior of moral hazard and adverse selection inherent in bank loans and reduce the horizon for investments.

As for the domestic variables volatility, it is difficult for banks to evaluate credit risk when growth and inflation rates are very unstable. In general, research in this area shows that countries with an unstable macroeconomic environment are also the countries that have the highest banking disorders. Fluctuations in the real sector, especially in the business sector, have repercussions on the strength of the banking sector through the quality of portfolio loans. Indeed, the losses arising from bad debts reduce the level of reserves and banks' capital.

The Exchange Rates System and the Banks Vulnerability

The exchange market is one of the channels through which credit risk and market risk, normally separated, become interdependent. Taking the example of Latin America, Gavin and Hausmann (1996) highlight the fact that exchange rate differences, considered untenable, have contributed more to the outbreak of banking crises than strong variations in growth rates. It is true that the system of pegged or semi-pegged exchange rates makes currencies more vulnerable to external shocks, and this can cause a rise in interest rates or a balance of payments deficit. The Asian and Russian crises reinforced external constraints (world demand and raw material price shocks, redeployment of private capital ("flight to quality")). Unable to devalue, Latin American governments were forced to proceed with internal adjustments which put their economies into recession and caused a deterioration of the solvency of the banks clients. If the move to a system of floating exchange rates brought to a halt, in certain cases, the deterioration of solvability, the high level of external debt of Latin American countries and the partial dollarization of their financial systems, makes the depreciation of exchange rates as a dangerous weapon to fight external shocks.

Financial Liberalization and Banking Crises

Another important factor concerning macroeconomic environment is the idea that financial liberalization brings new risks for banks and increases their vulnerability to banking crises.² Indeed, the liberalization of interest rates has modified their structure by making short-term rates very volatile and often higher than long term ones. Salama (2001) states that keeping interest rates relatively high reinforces the banks vulnerability because, on the one hand, it diminishes the value of their assets and on the other hand, it incites them to augment their doubtful debts.

The fall in required reserves and, particularly, in the flow of foreign capital often attracted to recently liberalized economies, greatly increases money balances in a short period. In 1970, capital flows increased greatly, from USD 4.2 billion to 142.6 billion in 1998, the year when capital flows

reached their highest level (see Table 1). During the same period, official flows dropped (from 23% of total flows in 1970 to 0.4% in 2000), while private flows increased (from 76.4% of total flows in 1970 to 99.6% in 2000), principally in the form of foreign direct investments (representing 74.4% of the total in 2000) and portfolio investment (20.3% of the total in 2000). Liberalization allows new competitors (foreign and domestic) to enter the domestic market and puts banks under high pressure to engage themselves in more risky activities. All these factors, in conjunction with the inadequate preparation to financial liberalization, have promoted the emergence of banking crises especially in Brazil, Chile and Mexico. Kaminsky and Reinhart (1996) have observed that out of the twenty five banking crises that have affected emerging countries, the financial sector had been liberalized five years before the crisis in eighteen cases.

Table 1 – Latin America: Official and Private Capital Flows (billions USD)

	1970	1980	1990	1995	1998	1999	2000
Official flows *	1,0	5,3	9,2	12,6	12,3	5,2	0,4
Private flows :	3,3	24,6	12,6	62,8	130,2	111,3	102,0
Foreign direct investments	1,1	6,1	8,2	29,8	72,1	90,4	76,2
Portfolio equity flows	0,0	0,0	1,1	7,6	1,7	3,9	9,9
Bond financing	0,1	0,8	0,1	11,5	18,3	19,1	11,0
Commercial banking and other loans	0,1	0,8	0,1	11,5	18,3	19,1	11,0
Total	4,2	29,9	21,8	75,4	142,6	116,5	102,4

* Foreign aid plus debt financing from official sources.

Source : World Bank, Global Development Finance, 2001.

Credit Expansion, the Drop in the Assets Price and the Flow of Capital

Gavin and Hausmann (1996) point out the fact that, among the financial crises that hit Argentina (1981), Chile (1981-1982), Uruguay (1982), Columbia (1982-1983) and Mexico (1995), nearly all of them had been preceded by a strong growth of bank credit. For Mexico, De Luna Martinez (2002) observes that, between 1991 and 1994, bank loans grew eight times faster than the growth of real GDP. During this period, investment portfolios, attracted by high returns, brought important resources to credit institutions. Weak banking supervisory powers, opaque structures of governance, or sometimes the incompetence and corruption of local bank managers have encouraged financing speculative investment on real estate and stock markets (Minda 1999). The emerging countries that received the largest flow of private capital are also the countries where the expansion of the banking sector has been the fastest. This rapid expansion, however, has made it difficult for banks to distinguish between good and

bad borrowers because in periods of strong economic growth, many borrowers seem to represent a profitable and liquid investment but these characteristics are only temporary.

Changes in the Deposits Structure

Goldstein and Turner (1996) have shown that advances in information technology combined with financial liberalization have facilitated the changes in the composition of bank deposits in foreign currencies of residents of emerging countries. The restructuring of these deposits has often widened the gap between assets in foreign currencies and international reserves rendering banks highly fragile in the event of a “deposit run” or a liquidity crisis. Furthermore, the policies, and particularly those introduced to rescue the banking system, will be less effective in this situation of high exposure to foreign currencies. The structure of Latin American and Asian banks before the 1997 crisis amplified this problem. These institutions were highly dependent on foreign funds and their debts were therefore denominated in foreign currencies (particularly in US dollars). Moreover, these loans were issued with short maturities and the ratio of short-term debt to international reserves rose considerably during the years preceding the crisis, which is an important factor of illiquidity.

Banks as Economic Policy Instruments

As far as the economic policy is concerned, banks are often used as a policy instrument by authorities insofar as they can provide the means to implement monetary and fiscal policy or policies in support of certain industries. In Latin America, the high rate of required reserves combined with the possibilities of refinancing of the central bank, have put banks at the mercy of the policy of monetary authorities. Although, privatization was part of the financial liberalization program that many Latin American countries followed, in certain countries a large part of bank assets remained in the public sector during the banking crises of the 1990s. Thus, the loans of these banks are channeled to certain sectors of the economy without doing a thorough analysis of the solvability of clients because they benefit from state support. Furthermore, state controlled banks are also protected by the state and they sometimes operate in a low competitive environment. This encourages the use of rigid practices and limits the incentive to innovate and quickly identify doubtful debts or to control costs. For example, in 1994, one-third of the debts of state banks in Argentina were doubtful debts whereas the rate of doubtful debts of private banks was 10% (Goldstein & Turner 1996).

Increasingly Risky Banking Strategies

From a microeconomic point of view, banks have been directly implicated in excessive risk taking that has led to banking crises. If stockholders see their banks' profitability drop, they will be tempted to "play" with their profits to restore the situation. The Anglo-Saxon expression "gambling for resurrection" gives a faithful picture of this strategy. In an increasingly competitive environment, banks owners and managers take large risks in lending money to agents with unsound projects. Banks expose themselves to the insolvency of their clients and hold portfolios in which the share of doubtful debts is on the increase. When a bank is in a delicate position and desperately looking for liquidity irrespective of the costs and risks, it tends to be less responsive to interest rates and other market signals or gives false information to the market. Such behavior has important effects on other agents; especially other banks and can make fragility systemic.

The technique of "ever greening" (giving a new loan to a borrower who is already late in the repayment of another loan) tends to raise the concentration of risk. Furthermore, the bank manager may be tempted to commit fraud to restore profitability. Granting loans to stockholders and managers or to entities directly affiliated to them is a relatively common practice in Latin America, even in countries where these procedures are regulated. Thus, if a bank is part of a larger financial group, it can expose itself to the risks taken by the group, even though the bank, considered independently, may be a source of potential profit.

The quality and quantity of information that clients have on their banks limit the amount of control clients could have on financial intermediaries. Clients are often too small, too dispersed and insufficiently aware of banking practices to be able to provide adequate discipline. At the same time, the potential intervention of public authorities diminishes the client's incentive to take action (the phenomenon of moral hazard). Moreover, the existence of initial margins can push banks into adopting risky strategies, the potential losses incurred by such investments being more or less mutualized. For Caprio (1998), the main cause of banking crises arises from the insufficient amount of financial liberalization. The excessive risk taking by banks has been encouraged by public authority guarantees (lender of last resort, recapitalization programs) which can give rise to a moral hazard problem and this prevents market discipline from working. Miotti and Plihon (2001) have brought this type of behavior to the fore in their analysis of the 1995 Argentine banking crisis. According to them, the defaulting banks were those that had a greater amount of

speculative market operations capable of realizing stock market capital gains.

The Weaknesses of the Regulating Framework

Latin American banking systems also suffer from the weaknesses of the legal environment and the inadequacy of accounting laws and norms of information disclosure. In many countries, accounting rules that allow classification of assets as bad debt are not precise enough to stop banks from over valuing this asset by giving a supplementary loan to this “bad” borrower (who will repay his first loan with the second loan). If bad debts are systematically minimized, provisions will be inadequate, and the net banking revenue and bank capital will be over valued. These distortions explain why these variables are not highly predictable regarding the identification of banking bankruptcies.

Authorities in charge of applying regulations should not only be independent from the banks which they oversee, but also independent from political power. Regulators, however, are sometimes under the pressure of bank owners who are politically well placed; in Latin America, where power is frequently concentrated in a few hands, regulators should have corrective powers to be able to punish fraudulent behavior.

More generally, throughout the 1990s, the supervision of bank aggregates was deficient, either at the level of each bank taken separately or at the level of the entire banking sector. The bad supervision of liquidity ratios, of bad debt rates or the structure of bank liabilities by private and public authorities led to an under valuation of risk which was highly harmful to the viability of the banking sector.

III. INTERNATIONAL PRUDENTIAL REGULATION: FROM BASLE I TO BASLE II

The banking failures are often the results of the combination of several factors just exposed. In addition to the monitoring of a certain number of macroeconomic variables, the setting of a regulation system for banking environment should make it possible to bypass some of these crises mechanisms. There is already an international framework of prudential standards represented by the Basle agreements and to which most of the Latin-American countries subscribe. The 1988 Basle agreement through the Cooke ratio allowed significant progress as far as bank capital is concerned. However, today, this ratio does not seem to be adapted to the new banking management techniques and the transformation of the international financial system. In order to remedy these maladjustments noted by the Cooke ratio, a reform was proposed in 1999 and must be put

in concrete form by the application of a new ratio starting in 2007 (Mc Donough Ratio or Basle II).

The Cooke Ratio and its Limits

Following bankruptcies (particularly in the network of the United States saving banks) in 1975, the central bank governors in the Group of the Ten Countries (G10) created the Basle Committee on Banking Control. This Basle Committee, created in 1988 and established in 1992, is oriented towards the credit risk prevention through an international solvability ratio, namely, “the Cooke ratio”. It requires a capital adequacy of 8% minimum compared to the weighted risks. This minimum ratio had a dual objective. First, to reinforce the banking system solidity and stability by a better credit risk covering (possible failure of a debtor). It also aimed to reduce the competing inequalities between banks. Its advantages were internationally recognized, and in the early 1990’s, this 8% standard was adopted by a hundreds of countries including some Latin American countries. It made it possible to minimize the illiquidity and insolvability of large international large as well as the bankruptcy costs for the creditors.

By the end of the 1990’s, however, this approach was outmoded because it took into account neither the new financial instruments nor the nature of the various types of risk supported by the bank. Particularly, it did not take into account safety measures on which the bank could rely on, and it put all the borrowers on the same level. Moreover, it treated government loans very favorably. Furthermore, the risk management improvement in the large international banks gradually resulted in developing sophisticated models for the measurement of their risks and in calculating an “economic capital” different from the required capital. Finally, this accord did not grant room enough to the mitigation risks techniques (cf the credit derivatives) and did not take into account the operational risks.

Basle II: A Three-Pillar Construction

Financial events such as the Barings bankruptcy, the Asian crisis and its spread to Russia, or the example of the hedge funds LTCM, showed the weaknesses of the existing agreement and obliged the Committee to propose a new and more flexible framework in June 1999, in order to create a new risk control instrument. This new device called the “Mc Donough ratio” will come into force in 2007. The agreement’s aim is to contribute to a better prevention of the bankruptcies, and thanks to capital standards, it is more flexible and adapted to the risks and their evolution. Although this agreement was initially made for the large international banks, its principles were conceived to be used by various complexity level banks. This accord offers a choice of differentiated measurements ranging

from a simple assessment to a much more advanced methodology. It gives a relatively flexible framework in which banks can adopt the most appropriate approach according to their sophistication level and their risk profile. It is composed of three pillars: the first is about the regulation on minimum capital; the second studies the prudential monitoring, whereas the third is interested in the market discipline.

The definition of capital as well as the 8% requirement is maintained in the first pillar. To ensure that the risks are taken into account for the whole of the banking groups, the revised accord will be extended with a consolidated basis, at the investment companies controlling them. The changes mainly deal with risk measurement – i.e. the capital ratio denominator which comprises the weighted components according to three types of risks: the credit risk, the market risk and the operational risk, whereas the 1988 agreement only integrated the risk of credit (it was revised in 1996 to integrate the market risk). Thus, three approaches of an increasing complexity have been proposed for the measurement of credit and operational risks.

As far as credit risk is concerned, the simplest standardized approach takes back the 1988 agreement definition. The used weightings have recourse to the external appreciations of credit evaluation organizations (like rating agencies) which evaluate the credit quality. They are classified in various categories (governments, banks, corporates...) and a weighting, fixed by the agreement according to their quality, is allotted. The second approach is based on an internal bank rating using the bank's own evaluation of the borrowers solvability to estimate their portfolio credit risk. Compared to the standardized one, these internal evaluations integrate additional information on customers such as the monitoring of the client's account. This internal evaluation can also cover a wider range of borrowers. Therefore, the banks can bring their own evaluation of the debtors' failure probability. The third approach is a complex version of the preceding one insofar as a more important part of the risk elements are evaluated inside by calculating the capital requirement (borrowers' probability of default, losses given default, exposure of default and effective maturity). The two versions of the approach based on the internal rating do not rest on weighting categories determined by the prudential authorities, like in the standardized approach. Hence, they allow a greater risk differentiation.

The Committee also proposes three approaches with an increasing technicality for the capital requirements compared to the operational risk (basic indicator, standardized and advanced measurement). The "basic indicator" approach establishes a relation between the owners' funds

requirements for operational risks and the bank average of annual gross income for the last three years. To obtain the capital requirement dedicated to the operational risks you have to multiply this measurement by the 0.15 coefficient (also called factor α) determined by the Basle Committee. Concerning the second approach (the standardized one), the bank must calculate the funds requirements by trade and not at the firm level. The bank activities are distributed in standard categories that make its internal structure. For each category the gross income is multiplied by the corresponding specific factor (called factor β) and fixed at 0.12, 0.15 or 0.18, according to the category. Concerning the third category (the complex measurement approach), it uses banks internal evaluations to calculate the factors on the qualitative and quantitative criterion basis.

The second pillar defines the supervisors' work to ensure that each bank has set up safe processes to check the adequacy of its own funds based on a comprehensive assessment of its incurred risks. The new accord insists on the importance of a bank internal process, which would give them a sense of responsibility on their incurred risks. Four concepts have been established by the Committee with regard to prudential monitoring (BCBS 2003):

- banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels;
- supervisors should review and evaluate bank's internal capital adequacy assessments and strategies as well as their ability to monitor and ensure their compliance with regulatory capital ratios. They should take supervisory actions if they are not satisfied with the result of this process;
- supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum;
- supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum level required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

The third pillar aims at improving the market discipline by a better transparency – i.e. inducing banks to reveal their information. The market actors will be better able understand the bank profile risk and to judge its investment choices. The accord foresees that the banks expose the way in which they calculate their capital ratio and the risk assessment method they use. The Committee defined qualitative and quantitative joint information

more specific and invited the establishments to diffuse it in three fundamental fields: scope of application, capital structure and adequacy, risk exposure and assessment. Thus, information such as financial results, financial situation (solvability, liquidity) or accountancy policy must be made public. In the event of failure in these disclosure requirements, corrective measurement ranging from “moral suasion” and dialogue to financial sanctions will be set up.

This relatively complex agreement was subject to public consultation: each bank (central or otherwise), each institution (national, international, regulation or other), and even each private person can send a commentary to the Basle Committee (available on the BRI website). This three-round consultation gave birth to the final accord in June 2004: *International convergence of capital measurement and capital standards*. Reading this paragraph and the preceding one, one should think this new agreement could be applied to the maximum number of countries to promote the stability of the international financial system. However, we will show that its application can pose many problems to the Latin American countries, and raise some doubts on current world financial channels to the detriment of these countries.

IV. EXPECTED EFFECTS FROM THIS NEW CAPITAL REQUIREMENTS

Pillar I consists in improving risk calculation and the risk covered by capital. The expected effects of this new assessment method can be analyzed on five levels: *credit crunch* and pro-cyclic, the new credit allocation, external rating stakes, operational risk consideration and risk taking.

Credit Crunch and Pro-cyclic

Among the many debates raised by the Cooke ratio adoption (called Basle I), the most important is the *credit crunch*. This first accord also had implications on the financial resources allowance from the requirements it imposed. Firstly, the OECD banks profited from a lower weighting than those that did not belong to the OECD, regardless of its own quality. In addition, the less than one year credits obtained a very low weighting (20%) compared to the more than one year credits (100%) widely favoring the banking portfolio made of short term credit. For example, this weighting difference nourished short-term capital flows towards Asia until the 1997 crisis or towards Argentina.

As for Basle II, the ratio application would imply a rise in the necessary capital in Latino-American countries. Indeed, the banks in these countries will use the simplest approaches, at least for the coming decade.

However, these approaches do not make it possible for banks to measure their risks and corresponding capital requirements in the best possible way. Moreover, for emerging countries, the operational risk taken into account should result in a total increase in the capital requirements. Indeed, the solvability ratio calculation methods, close to Basle I, do not cover or only partially cover this risk.

The capital increase updates the debate on the possible pro-cyclical or *credit crunch* effects that the too constraining normative rules could imply. In the event of a recession, the fall in banking profits and the increasing risk would involve degradation in bank capital ratio. Then banks would be compelled to reduce the credit supply (credit crunch), reducing economic activity. Consequently, it would become difficult and expensive to raise capital, because of the economic situation shortfalls, whereas the capital requirements would increase. The Basle II pro-cyclical character depends on the quality of assets and on their ratings, provided it is aimed at taking into account the credit issuers' quality.

New Assets Allocation: Are the Emergent Countries the New Accord “Losers”?

Capital indexed on risk rules can affect the management choices and banks' investments that will favor the risk categories, which maximize the capital profitability. As a whole, the emerging countries commentaries on Consultative Paper 3 (CP3) greet the disappearance of the simplistic system applied to Cooke ratio that assigns higher weightings to the assets of entities out of the OCDE countries. However, Basle II can lead to a portfolio composition that would penalize the assets whose default probability is high (SME, innovating companies, starting up businesses, high-risk countries). This topic is often referred to in the literature by an analysis in terms of reform “winners” and “losers”. The private individuals and the Western governments known to take few risks would be the “winners” whereas the small firms that are very dependant on bank loans, and the emerging countries would be the “losers”. Their only resource would be to turn to financial markets. The new Basle Accord adoption could deeply modify the world financing channels into a new allocation for financial availabilities. The high yield loans like the ones we can find the emerging countries will be penalized by this new accord. Banks' disaffection could benefit the bonds financing and thus strengthen direct finance. This could further increase the speculative character of emerging bonds markets. This would raise the unsoundness of such financing.

The new agreement implementation can create competitive distortions that worry some emerging countries. Supervisors will have to

avoid conflicts between the local banks, which will mainly use the standardized approach, and the international banks subsidiary that will develop their own rating systems. Thus, within the same country, there could be similar banks with very different capital requirements. This problem is even more important in a country where foreign presence is high, like in Mexico where more than 80% of the national banking structure belongs to foreign banks. Thanks to the internal rating approach, international banks that support a less heavy capital load are able to offer lower interest rates. Local banks will have a competitive disadvantage because the better-rated borrowers will be attracted to the most interesting market rates.

External Notation Stakes

Apart from the weightings fixed by the Committee, emerging countries' institutions discuss the notation principle by external rating agencies. This system raises many questions and several arguments advanced to criticize it. First, the 1997 Asian crisis cast doubt over these agencies. In fact, the agencies were unable to detect the crisis premonitory signs and even had a negative influence: the decision to lower the Asian banks' rating amplified capital flights, making the crises effective. Moreover, the number of private companies noted in emerging countries is still low (see table 2). In addition, a great number of the banks' customers, particularly private individuals and SMEs that do not evolve on financial markets, are clearly apart from the agencies' sphere of activity. Agencies' rating can only be an information source among others. Thus, the information access for the international rating agencies is, now, restricted in the emerging countries because of the lack of transparency and good governance principles. Finally, the external ratings used in the regulation process can dissuade the banks to improve their internal rating system and credit risk assessment.

Table 2 shows that the situation differs between countries. Apart from the atypical Venezuelan case, the situation improved a lot in many countries. We also note that several countries do not have national rating agencies (Guatemala, Venezuela, Honduras). Besides, there is a great disparity between the "large" Latin American countries (Argentina, Brazil, Mexico, and Chile) and the "small" Latin American countries which are less noted.

Table 2 – Number of National Banks Rated by International or Domestic Rating Agencies (among the top ten banks)

	Argentina	Bolivia	Brazil	Chile	El Salvador	Guatemala	Honduras	Mexico	Peru	Venezuela
International credit rating agencies (2001 Inquiry)	10	2	10	5	9	0	na.	na.	5	4
International credit rating agencies (2003 Inquiry)	10	10	10	9	10	0	1	10	4	0
Domestic credit rating agencies (2003 Inquiry) ^a	10	10	10	10	na.	*	*	na.	10	*

na.: not available. a: this question exists only for 2003

* There is no national agency in the country.

Source : World Bank, Database on Bank Regulation and Supervision (Inquiries 2001 & 2003)

The standardized approach dependence with regard to the external credit rating agencies creates significant problems. Taking into account the local market narrowness and reputation problems at the international level, it is rare to meet efficient domestic agencies independent at the same time from politics and financial powers. In addition, these countries often have the feeling that international rating agencies know little about their economic situation and so penalize them. Moreover, the external rating agencies' assessment by the supervisors represents a considerable cost whereas these resources could be allocated to the assessment of internal bank processes.

Taking into account operational risk

The operational risk identification is not an easy job because of its complexity. It can be the product of internal factors (material or personnel failures) or external ones (natural catastrophes, frauds or the recent "terrorist risk") or a combination of several factors. The treatment of the operational risk by the Basle Accord should increase the capital requirements; most of the Latin American countries use the basic indicator approach. For example, in its comments on CP3, Mexico's central bank stresses that the integration of the operational risk in the capital adequacy ratio could increase the capital requirements by 20% for some banks.

The emerging countries do not contest over taking into account the operational risk that appears essential to reach the agreement's ultimate objective, which is banking stability. On the contrary, they are very critical on the methods developed in the agreement. First, the retained

measurement of the banking activity is far from achieving unanimity. Indeed, for several banks (Brazil, Argentina and Peru) the average annual gross income for the last three years is not in relation with the risk incurred by banks. The criticism is that we generally highlight the emerging countries comments on CP3 relating to the factors α and β . All the banks without exception remark that the fixed percentage of 15% (α) used in the basic indicator approach, and the β indicators of the standardized approach, are much too high and arbitrarily defined. These factors partly explain the capital overload supported by emerging countries.

By integrating the operational risk in the capital adequacy ratio measurement, the Basle Committee proposes broader risk coverage. However, taking into account more risks does not automatically mean that the economic and financial environment is less risky. Will the new capital ratio encourage banks to take fewer risks?

New Capital Ratio and Risk Taking

As we have already explained, the new instrument's main objective is to obtain a higher level of international financial stability. The new capital adequacy ratio must help to achieve this goal by providing incentives for banks to manage their risks in a more prudent way. However, a standard regulating the capital level is not the only guarantee of sound practices, nor the quality of the mobilized capital. The technological innovations offer an important range of arbitrage techniques to the banks such as securitization. The possibility of dismantling and recomposing loans according to the will of the banks enables them to concentrate risks on some loans they sell to actors that are not subject to such a regulation. As Chavagneux (2004, p.46) underlines: "that can enable them to decrease their risks... but because they have sold them to other financial actors (pension funds...), often less monitored than banks". Thus, instead of stabilizing the financial sector the new accord would transfer the risk from compartment to compartment and, in this way, would reinforce the systemic character of instability.

The lack of capital is a frequent situation in emerging countries. Supervisors must ensure proper capitalization of banks with shareholders who really hold the concerned capital. A consolidated supervision and a specific regulation on bank holdings are necessary to prevent them from the risk of using conglomerates to transfer low quality capital towards banks. For de Krivoy (2000), the capital concentration increases the risks of connected lending and must be regulated, this practice being common in emerging countries where small groups or families often hold banks.

Table 3 – Capital Adequacy Ratio and Non-Performing Loans (Inquiries 2001 & 2003)^a

	Argentina	Bolivia	Brazil	Chile	El Salvador	Guatemala	Honduras	Mexico	Peru	Venezuela
Minimum capital-asset ratio requirement (%)	11,5 (11,5)	10 (10)	11 (11)	8 (8)	11 (9,6)	10 (8)	10 (10)	8 (8)	9,1 (9,1)	12 (10)
Does the ratio vary with a bank's credit risk ?	yes (yes)	no (no)	no (no)	no (no)	yes (no)	no (no)	no (no)	yes (yes)	no (no)	no (yes)
Does the ratio vary with a market risk ?	yes (yes)	no (no)	yes (yes)	no (no)	no (no)	no (no)	no (no)	yes (yes)	no (no)	no (no)
Actual risk adjusted capital ratio (%)	14,7 (16,4)	14,6 (11,4)	10,1 (15,8)	7,25 (12,8)	8,6 (na.)	7 (13,3)	12,5 (12,3)	14,7 (13)	9,7 (12,7)	14 (14)
Ratio of non-performing loans to total assets (%)	12,3 (9,4)	9,4 (5,7)	7,9 (3,14)	1,62 (1,42)	4,2 (2,9)	na. (7,14)	7,3 (na.)	5,74 (17,5)	5,3 (33,6)	26,64 (1,62)
Loan classification ^b ?	yes (yes)	no (yes)	no (no)	no (no)	no (yes)	no (no)	yes (yes)	no (yes)	yes (yes)	no (no)

na: not available.

a: data between parenthesis correspond to the 2003 inquiry whereas the italic ones are from 2001 inquiry.

b: If one loan is non-performing, are other loans of a multiple-loan customer classified as non-performing ?

Source : World Bank, Database on Bank Regulation and Supervision (Inquiries 2001 & 2003)

Table 3 shows that, in general, the emerging countries impose on their banks a minimum capital ratio reaching at least the Basle level, and sometimes over 8% like in Argentina. On the other hand, in more than half of the countries, this ratio does not vary according to credit or market risks, and one cannot notice any improvement in this field since 2001. One notices a general degradation of the solvency ratio between 2001 and 2003 (except in Bolivia and Mexico) and, in several cases, it goes under the minimum requirement (Brazil or Chile). However, we cannot evaluate the soundness of the banking structure by only reading the capital ratio. Indeed, this ratio drop can be important like in Chile, where it goes under the

minimum requirement, but the level of non-performing loans in this country remains low and easily manageable for the banks.

On the other hand, Venezuela, which shows a 14% CAR since 2001, sees its non-performing loans exploding (from 1.62% to 20.64%). This situation appears much more alarming to us than the Chilean case, and shows that a quantitative standard does not always encourage banks to be prudent. In general, the Latin American situation is worrisome: the non-performing loans increase (except in Mexico and Peru) whereas the liquidity ratio drops. These few data analysis is undoubtedly insufficient to draw conclusions on the banking systems studied. It seems, however, that although all these countries apply a capital requirement often stronger than the one recommended in the Basle agreements, the Latin American systems weaken.

Thus, adopting a solvency minimum ratio does not seem enough to guarantee the assets quality and to impose a careful risks management. A closer monitoring of the non-performing loan rate and structure is necessary, even if this measurement is strongly related to the capital ratio. Indeed, if the non-performing loans problem is left unresolved, it can deepen the severity and duration of financial crisis. The Committee wants to encourage banks to have sufficient provisions to cover expected losses. However, as we have already underlined on several occasions, emerging countries will probably use the simplest approaches that do not contain any arrangements on provisions.

Moreover, the risk management like the one encouraged by the Basle Committee – i.e. a sensitive market approach – need not necessarily be more prudent. Since Keynes, we know that market actors show a particular herding behavior and imitate each other. Indeed, this tendency of the investors in general and banks in particular can increase markets' volatility and correlation. Thus, the day-to-day risk management techniques frequently used by banks can appear like prudent techniques, but they are rather destabilizing and can increase the crisis contagion phenomena. The Basle Accord that is based on the risk management can encourage banks to use this technique and to go against their initial objective. Maybe, these techniques are not as yet used on a large scale by banks in the emerging countries, but the fact they are used by large international banks is enough to destabilize emerging markets.

Thus, the first pillar implementation creates many problems to the emerging countries from the technical point of view than from macroeconomic effects. Moreover, as mentioned in the preceding paragraph, the CAR is not guaranteeing sound financial practices. The Basle Committee stresses the importance of the three pillars

implementation to guarantee a maximum effectiveness of the Basle II instrument and insists on the fact that without the application of pillars 2 and 3, the instrument remains incomplete.

V. SUPERVISION PROCESS AND MARKET DISCIPLINE

In future, the supervision authorities will have to play a broader role. However, this widening is likely to impose additional costs, particularly in emerging countries. In the same way, the essential independence of the supervisor authorities will require a deep reform of the institutional framework. In addition, the banks' requirement to publish a set of information is not without problems for emerging countries, particularly the Latin American ones.

Consuming Resources Process: Time, Money and Skills

For the emerging countries authorities, one of the major concerns of pillar 2 relates to the exorbitant requirement of resources. Indeed, the supervision imposes direct and indirect costs at the same time. The direct costs are necessary to the agency regulation activity and gather the employees' wages, the administrative overheads and the information technologies costs. The indirect costs of regulation are more difficult to quantify; they are the costs related to banking structure compliance to the requirements: qualified personnel, accountancy system or information treatment costs.

Moreover, like Béranger and Laurent (2001:10) underline; "the needs for the controlling authorities in qualified human resources could quickly become very important, at a time when banks will need many credit risk specialists for the development and the follow-up of internal models". Thus, in order to avoid bottlenecks, an intense training effort will certainly be necessary. The acute skills problem for supervisors and the banking sector specialists arises in emerging countries. Many emerging countries' supervisory institutions claim the settlement of an international cooperation system that would allow the sharing of skills and experiments of the G-10 countries' supervisors. It should, however, be pointed out that international institutions seem to be aware of these difficulties: BIS makes the agreement calendar more flexible and does not impose a precise date for emerging countries. Moreover, these institutions regularly organize international workshops and free seminars at a better price compared to private organizations' training.

The international cooperation in the field of competences is even more essential since the emerging countries' supervisory authorities will not only have to control their own national banking system, but also

international the banks which have higher levels of sophistication. Supervisors, and more particularly in countries receiving many foreign banks as in the big Latin American economies, will have to acquire a range of competences much broader than the one suggested by the development level of the domestic banks.

The supervisory authorities also need time. Apart from the time needed to acquire skills, they must constitute time series databases on which the risks assessment process rest. Moreover, like Pébureau (2004:138) highlights: “the results on the recent impact study show that the new requirements are very sensitive to the working hypotheses and the data quality. There are considerable uncertainty margins supervisors will have to reduce”. Hence, there is a great stake for emerging countries.

The new accord implementation thus requires time, money and skills; the three resources that emerging countries lack. Many Latin American central banks stress that it will be very expensive for a poor result. Moreover, except for the costs already discussed, the agreement implementation requires many reforms of the legal system, particularly to make supervisors completely independent.

Supervisors’ Independence and Corruption: Deepening Reforms of the Legal Framework

To be able to control banks and to quickly identify the problems, it is imperative for supervisors to act in complete independence from financial and political policies. For this reason, it is very important for managers to be protected against arbitrary dismissal by transparent laws. Budgetary autonomy must be ensured – i.e. the existence of a funding source intended for the agency and its capacity to allocate these funds according to its own priorities. In the case of Latin American countries, the argument concerning political pressure is very relevant. To illustrate this fact, Demaestri and Guerrero (2002) cite the dismissal of the Governor of the Argentine central bank as an example. According to the legislators report, the main argument for the dismissal of the governor and bank director was their inability to act out of political pressure over questions such as laundering or assistance to banks in difficulty.

Supervisors need incentives to carry out their task correctly. Indeed, very often, supervisor wages are lower than in the organizations they control; they are sometimes subject to penalties because they are liable for their official acts. Therefore, regulators are sometimes tempted to use fraudulent mechanisms to escape their agency reprimand for their bad performances or to protect their carrier via political influence. In the emerging countries, supervision is relatively inefficient against fraud

particularly when supervisors are themselves blamed in the fraud processes. Moreover, fraud is not only a supervisors question but the nature of the bank itself is exposed to fraudulent operations and laundering. These operations can take place at the bank's detriment but they can also implicate the bank staff.

Sanctions must be imposed when there are serious failures with the capitalization rules or when the bank is implied in criminal activities. These sanctions must be strong enough to be persuasive and prevent the moral hazard phenomena, but they must not disadvantage a financial institution already in liquidity crisis. The fourth principle of pillar 2 allows supervisors to intervene in prompt corrective action and to close a bank that is on the verge of bankruptcy. The Basle II Accord is not precise on sanction measures and leaves them to the discretion of national authorities. Thus, they can be gradual and adapted to each particular case.

Market Discipline: A Limited Effectiveness for Emerging Countries?

The actors who intervene in the third and last pillar do not belong exclusively to the banking world but to the wider sphere of the "market". Indeed, market discipline refers to the reaction of private debt holders to banks' actions. Investors observe the banks' characteristics related to credit risks and leverage. One can distinguish, as Flannery (1998) does, two aspects of the market discipline. On the one hand, investors exert a monitoring function for which they are able to understand with exactitude the evolution of the firm conditions and quickly incorporate them in the firm asset price. This action can be regarded as a complement to the action of the prudential authorities. In addition, investors have an "influence" on firm managers and force them to respond by thwarting unfavorable shocks, which is a substitute for prudential control. Mishkin (2000) stresses that there are monitoring evidences but few evidences of market influence. And, without market influence (via prices and quantities) on the primary market, the market discipline does not work.

Thus, the market discipline initially rests on the market operating conditions. Apart from a well-structured legal framework, it is necessary for the market to have a critical size at the same time from demand and supply sides so that competition can exist. Many emerging countries stress that their markets lack depth, which influences the price formation. Thus, the information transmitted by prices on emerging markets does not precisely reflect the listed firm's financial situation. For some observers, the last Latin American crises are related to the financial systems opacity, which prevents a reliable risks assessment and makes the financial actors supervision difficult.

The market discipline efficiency also depends on the transparency quality of financial markets. Inadequate transparency increases the risk of over-reaction to a market based on bad information or uncertainty. On the other hand, a good quality of transparency decreases the equities volatility and increases their market value. However, the constantly growing volume and complexity of disclosed information requires from financial investors, creditors and media that they understand what is communicated and know how to find the precise information in the financial statements.

Is Information Disclosure Always Welcome?

Beyond the rather technical problems a fundamental question remains. Let us recall that the supreme objective of the implementation of the new Basle accord is to obtain greater financial stability. Will more transparent information communication to the market help in achieving this goal within the emerging market framework? More precisely, will this communication really improve market discipline? The banking intermediation rests on private, abundant and confidential information and on bilateral relationships with customers (Plihon 2000). Necessary to market finance, transparency is thus incompatible with banking finance. Supervision must make it possible for banks not to disseminate their private information, which constitutes the basis of their business.

For Eichengreen (1999), it is unrealistic to expect too much from information disclosure initiatives. The ones who call upon them like a solution of financial crises underestimate the financial markets' nature. Even the most efficient financial markets are characterized by informational asymmetries. This reality is the key reason for the existence of banks in market economies. For the Basle II rule makers, more precise information lower information asymmetries between firms and investors and, consequently, contributes to reduce the capital cost. However, there are various situations where broader public information can be socially undesirable. First, Hirshleifer (1971) shows that public information can destroy risk sharing opportunities. Moreover, the information disclosure can profit to a concurrent firm and can consequently degrade the firm's position on the market and the associated cash flow. Furthermore, some investors lack the competence to analyze technical statements, whereas others have a comparative advantage on this subject.

In addition, if the comprehension of the banking communication by the market actors is essential, the receptivity of the financial institutions to the market discipline exerted by these actors is also essential. The market discipline is efficient if bank directors integrate in their strategies the message sent by markets through a fluctuation in assets prices. Moreover,

in emerging markets where bank holding is often concentrated and where capital markets are restrained, the money market generally gives more significant information than the bond and stock exchange markets.

It is generally admitted that an efficient market discipline constitutes an essential element in the risks reduction of financial instability. But it is also accepted that market pressures particularly have the potential to be destructive when the markets over-react to unfavorable events and create speculative bubbles, multiple banking bankruptcies and high volatilities of the equity or exchange markets, as in the case of the last crises in the emerging countries. The information disclosure on a bank temporarily in difficulty, but which has the capacities to recover, should not cause panic that would irremediably make it fail. Too frequently, the available information (monthly or quarterly) can worsen this phenomenon by adding distortion. The markets actors can react in an unjustified way to a cyclical situation which would be smoothed and much less visible in annual financial statements (because this institution will have had time to restore the situation), which increases the markets volatility.

Other factors can influence the investor's disciplinary behavior, especially in emerging markets where data quality does not reflect the real bank situation. Thus, macroeconomic factors can influence market discipline. These factors do not represent any longer the only risk specific to banks but a systemic risk. This phenomenon seems particularly important for Latin American countries. Levy-Yeyati, Martinez-Peria and Schmukler (2004) show its existence in a study carried out in Argentina and Uruguay. Whereas Gonzalez-Hermosillo (1999), shows in the case of Argentina and Mexico that traditional banking fundamentals tend to become less significant during crises times than during tranquil times. Thus, for the emerging and more particularly Latin American countries, market discipline definition could be widened to take into account the investors' reactions not only to banking fundamentals but also to macroeconomic factors. Therefore, investors seem much more sensitive to the systemic risk than in the Western markets.

This broader approach of market discipline questions the third pillar efficiency. Indeed, banks managers are supposed to correct their strategies when confronted with market reactions. But which strategy do they have to adopt when the market actors' decisions are influenced by actors that are not under their control? The only possible answer, in this case, is to limit as far as possible the banks exposure to systemic risk.

Table 4 – Banking Information Disclosure (Inquiries 2001 et 2003)^a

	Argentina	Bolivia	Brazil	Chile	El Salvador	Guatemala	Honduras	Mexico	Peru	Venezuela
Are off-balance sheet items disclosed to supervisors ?	yes (yes)	yes (yes)	yes (yes)	yes (yes)	yes (yes)	yes (no)	yes (yes)	yes (yes)	yes (yes)	yes (yes)
Are off-balance sheet items disclosed to public ?	yes (no)	yes (yes)	yes (yes)	yes (yes)	no (yes)	yes (no)	no (yes)	no (no)	yes (yes)	no (no)
Must banks disclosed risk management procedures to public?	no (yes)	no (yes)	no (no)	no (no)	no (no)	no (no)	no (no)	yes (no)	no (no)	no (no)
Are directors legally liable for erroneous or misleading information ?	yes (yes)	yes (yes)	yes (yes)	yes (yes)	yes (yes)	yes (yes)	yes (yes)	yes (yes)	yes (yes)	yes (yes)

na. : not available.

a : data between parenthesis correspond to the 2003 inquiry whereas the italic ones are from 2001 inquiry.

Source : World Bank, Database on Bank Regulation and Supervision (Inquiries 2001 & 2003)

Concerning the application of the third pillar, several emerging country banks require greater flexibility to national supervisors in order to comply with the local market conditions. However, in spite of these reserves, Table 4 shows that banks' balance sheets disclosure to supervisors is part of the regulation in all but four countries (El Salvador, Honduras, Mexico and Venezuela) do not disclose their balance sheets to the public. On the other hand, with regard to the procedures of risk management, only Mexico reveals this information. Thus, if market actors can assess the institutions current financial situation, thanks to the statements, it is difficult for them to anticipate the results of the strategies developed by banks with respect to the risk. Let us remember that bank directors are liable for the information they disseminate and incur various financial and penal sanctions in the event of erroneous information.

VI. CONCLUSION

The regulation aim, of course, is not to put an end to all banking crises – which would be impossible – but the implementation of prudential regulation in the banking sector can be an efficient way to prevent banking crises. Thus, this type of regulation seeks to put a better control on the causes of causes, particularly the risk exposure of banks. On the one hand,

regulation tries to reduce shocks created by some macroeconomic factors. For example, banks have to reduce their exposure to exchange and interest rate fluctuations. On the other hand, microeconomic factors are directly taken into account by prudential supervision and monitoring because each bank has to comply with precise quantitative and qualitative criteria and non-compliance can lead to legal sanctions. Thus, financial instability caused by the erroneous comprehension of banks' balance sheets leading to non-viable bad debt rates can be reduced. Furthermore, microeconomic supervision may push banks into acting more rationally when faced with macroeconomic shocks.

This kind of analysis would be appropriate for the 13 Western countries that signed the accord adoption for 2007. Nevertheless, the adoption of constraining prudential standards can be problematic, and even counter productive, in the case of Latin American countries. On the one hand, it can create competitive distortions between international and local banks; while on the other hand, it can lead to more risky behavior.

Even if the Committee defends itself against it, the new agreement gives a predominant place to the quantitative standard. As Powell (2004:145, 17, 15) underlines, it is enough to compare the ratio measurement and its many technical details on the agreement against the second and the third pillars. In the same way, the final title of the agreement is mainly centered on the existence of the quantitative standard of capital rather than on a relatively comprehensive regulation and supervision instrument. We actually consider that in the emerging countries' case pillars 2 and 3 are more important to implement insofar as they imply an in-depth change of the legislative and accounting framework. These reforms are necessary for the CAR efficiency. That is why these two pillars are regarded as a prerequisite to the first pillar introduction. However, emerging countries are encouraged (by the BIS and other international institutions) to apply the new ratio as soon as possible.

The international banking prudential rules application seems to be an important step towards a better international financial stability. However, we should take care that it is not made at the emerging countries' detriment that could modify world-financing channels.

Notes

- 1 For a review of the different causes of banking crises, see Goldstein & Turner (1996). This article also has plenty of references and a relatively thorough survey of studies on the subject dating before 1996.
- 2 Among the empirical studies examining the role of financial liberalization in banking crises, see Kaminsky & Reinhart (1996), Demirguc-Kunt & Detragiache (1998) and Gonzales-Hermosillo, Pazarbasioglu & Billings (1997).

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