



ASSOCIATION OF SUPERVISORS  
OF BANKS OF THE AMERICAS

WORKING GROUP NO. 2

**Sound Management  
and Supervision Practices  
for Credit Risk  
in the Americas**

JUNE 2008



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# Sound Management and Supervision Practices for Credit Risk in the Americas

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## *Mission*

To develop, disseminate, and promote banking supervisory practices throughout the Americas in line with international standards. To support the development of banking supervision expertise and resources in the Americas, through the effective provision of training and technical cooperation services

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## EXECUTIVE SUMMARY

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The Association of Supervisors of Banks of the Americas established a Working Group to review credit risk supervision and regulation in the region. The overall objective of such group was to identify sound and solid credit risk supervision and regulation practices, so that these could serve as reference to supervision authorities in member countries in the application and assessment of their credit risk policies and management practices.

It was noticed that most of the countries in the region have a framework of credit risk supervision based on classification and assessment of debtors by risk, with a greater or lesser degree of relative development. Even though if the countries are not yet applying totally the Basel II concepts, some of them are in the process of preparation and adaptation, to apply approaches based on internal ratings (IRB).

There is no uniform system to classify debtors in the region; however, it should be noted that there are many similarities in the supervision approaches that are being applied by countries represented in the Working Group. Maybe most of the differences are in the way banks have reacted to regulatory requirements. Thus, while in some countries the bankers themselves apply sound management practices for credit risk, in others, sound practices must go through simple regulatory requirement to the full adoption on the part of supervised entities.

Additionally, differences have been found in the way countries reflect in accounting the result of integral risk management and, as a consequence, in the way in which the information is disclosed to the market.

To enhance credit risk management, it is indispensable to have adequate information systems, for financial institutions as well as for supervisors.



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## INTRODUCTION

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In the last years the Region has significantly advanced in credit regulation and supervision. Such progress is consistent with the evolution of the same financial entities of different countries that now have a more professional management of credit risk and of a proactive more demanding regulation. In this sense, it is important that supervision agencies evaluate their policies and practices for credit risk assessment and adjust them, taking as reference a series of good practices.

In light of this, the Association of Bank Supervisors of the Americas, committed to the enhancement of banking regulation and supervision in the region, and with the permanent objective of assisting in the adoption of better practices among its members, established a Working Group with the objective of identifying good supervision and regulation practices for credit risk and that these might be used by supervisory authorities in applying and assessing management policies and practices for credit risk.

Such group was formed with representatives of 12 member countries of the Association (see Annex No. 1), who responded a

questionnaire in which they stated the experience of their respective countries in the different subjects of credit risk. The responses to such questionnaire were the basis for the elaboration of the present report. .

The present document is divided in 4 sections. The first section establishes a conceptual framework of credit risk, including its definition and a description of the different credit portfolios. The second section describes the main tools and considerations in measurement of credit risk. The third section enumerates and describes good supervision practices in credit risk management. Finally, the fourth section describes the experience of countries in the region in core subjects for credit risk.

Without pretending to show a unique recipe for credit risk supervision, the document will allow each one of the banking supervision bodies in the region to make a self-assessment of their progress and achievements on the subject and, in some measure, will show the road already traced by whom now show greatly satisfactory levels in meeting with the Core Principles related to credit risk.



# Conceptual framework of credit risk

## 1.1. Definition of credit risk

**C**redit risk is the probability of incurring losses derived from noncompliance in time and/or form of credit obligations from one or several clients. This is due to the possibility that the cash flows committed for loans and securities may not be totally or timely repaid, as stipulated in a contract, which results in a financial loss for the bank.

Credit risk is not solely limited to loan operations, but it comprises a great number of assets and activities undertaken by financial institutions registered within or outside of the balance sheet. However, for most of the financial institutions, the credit portfolio represents the largest source and the most evident of credit risk.

For an adequate comprehension of credit risk, it is important to understand interrelationships of this with other types of risk (market, liquidity, operational, etc.). Frequently, risks are correlated, either positively or negatively. For example, the fact of reducing the level of problem assets should reduce credit risk and also liquidity and reputation risks. When there is a negative correlation between two risks, the reduction in one type of risk will correspond to the increase in another.

Granting of loans could involve a series of risks for the income and equity of a financial institution. Therefore, it is important to be acquainted with all risks incorporated in the credit portfolio and to assess their possible impact on the institution.

## 1.2. Definition of the types of credit portfolios

The credit portfolio of a financial institution has different types of credit, each one with different risks. Thus, in establishing risk rating schemes, it is useful to define

credit portfolios with common characteristics.

The following type of classification is the most common among countries in the region and will serve as a basis for portfolio segmentation at the moment of applying approaches based on internal ratings (IRB).

Credit portfolios are divided in two groups: wholesale and retail.

### a) Wholesale Portfolio

A wholesale portfolio is composed by:

- > Commercial and industrial loans, and
- > Loans to finance commercial real estate.

These loans could be a source of working capital for enterprises or serve to finance the procurement of industrial plants or equipment. Generally, it deals with short term loans, with collateral guarantee, personal guarantee of the borrower or without guarantee, and with flexible interest rate.

The wholesale portfolio can also be divided into credit to large enterprises and credits granted to Small and Medium Enterprises.

### b) Retail Portfolio

Retail loans are available to the general public. The retail banking is a high volume business which contrasts with the wholesale credit or corporate banking. Many traditional forms of retail loans have monthly predetermined payments –a fixed amortization plan- and are granted either at a fixed or at a variable interest rate based on an index.

Retail banking includes:

- > Loans with different destinations, reimbursable in installments;
- > mortgages on housing;
- > loans on the revenue over the value of equity ;
- > credit cards; and
- > microcredits.

## Types of commercial and industrial loans

### Seasonal Credits or Working Capital Credits

These loans provide short term financing for inventory, accounts receivable, procurement of commodities and other operational need that arise during the economic cycle. Frequently, these adopt the form of a notified line of credit or a roll over credit. A notified revocable credit line is a revocable commitment that the bank assumes in lending funds for a defined period of time, generally one year. A roll over credit is valid for a defined time period and does not have a fixed repayment schedule, but normally it does require payment of a commission.

Reimbursement of working capital loans should be made through the cash flow coming from the conversion of assets financed in cash.

In most cases, seasonal or working capital credits can be rolled over at expiration, are granted for one year and include an exclusion requirement (clean-up) for a period, sometime during the low point or the contraction stage of the economic cycle. The clean-up period is a period specified (generally 30 days) during the term of the loan, in which the borrower is forced to pay the totality of the loan.

### Commercial Installment Loans

Commercial installment loans are generally granted at a fixed or variable interest rate, have a maturity deadline of more than one year and pretend to provide the organization with funds needed to procure long term assets, such as plants and physical equipment, or to fund the residual balance of credit lines or the working capital in the long run. Installment loans are repaid through the cash flow of a company, according to a fixed repayment schedule.

In most cases, these loans are subject of a formal contract stipulating their conditions. Such contract has affirmative and negative clauses imposing certain conditions to the borrower during the term of the loan, thus fostering a continued communication between the parties. In the affirmative clauses, the borrower commits to meet specified requirements such as to maintain a sufficient insurance coverage, regularly repay the loan or guarantee the financial stability of the company. Negative or restrictive clauses prohibit certain practices, such as selling or transferring assets, default payment obligations, to fall below a minimum coefficient of debt coverage, to overcome a maximum relationship debt-capital or adopt any measure that could reduce the value of the collateral or the ability of the lender to collect the loan.

**Consumer credit:** Consumer credits are those granted to natural persons for the procurement of consumable goods or payment of services, home expenses, family and other personal expenses. Generally, are settled through a periodical system of installments and whose source of payment is the net average income of the borrower or the family unit.

**Housing mortgage credit:** All credit granted to natural persons exclusively intended for the procurement of land for housing constructions and procurement, construction, renewal, remodeling, enlargement and im-

provement of individual or horizontal housing property, occupied by the owner debtor, covered by mortgages duly registered. It is understood that housing mortgage credits are granted to the end user of the real estate.

**Microcredit:** All credit granted to a borrower, either natural or juridical person, or a group of borrowers with joint liability, intended to fund small scale activities for the production, commercialization, services, or others, whose main source of payment, duly verified, is the product of the sales or income generated by such activities.

# Measurement of credit risk

Credit risk is the main risk of the financial sector. Thus, the way a financial institution chooses and manages its credit risk is an important determinant for its profitability and soundness.

In this sense, the identification and rating of credit risk is the first component of the efficient risk management. Thus, financial institutions should have a credit risk management system that produces a proper and timely rating.

The rating system of a financial institution should reflect the complexity of its loan awarding activities and its overall risk level. Thus, larger institutions should have a sophisticated rating system, with multiple rating degrees to adequately reflect the differences among credits.

## 2.1. Importance of the credit risk rating system

Efficient credit risk rating systems, by facilitating grounded decision making, foster safety and soundness of a financial institution. Rating systems estimate the credit risk and differentiate the individual transactions and credit groups in relation to risk. This allows the senior management of the financial institutions and supervisors to make a follow up of the changes and trends in the level of risk.

Specifically, the adequate rating of credit risk contributes to the adequate performance of roles such as:

- > **Determination of loan interest rates.** Credit rating will guide the setting up of interest rate. The price of the loan should be sufficient to compensate the risk for the profits and capital of the institution.
- > **Management of the credit relation and administration.** Risk rating of a credit should stipulate the way a credit relationship is managed. Riskier credits should be subject to more frequent exam-

ination and analysis and riskier borrowers to more frequent communication. Problem relationships generally need more supervision on the part of superior management and from specialists on problem loans or rollover of loans.

- > **Reserve for losses on loans and sufficiency of capital.** Rating of individual credits sustains the constitution of the reserve. By attributing a rating to a credit, it is necessary to consider the inherent loss and create a provision, either individually or jointly. Reserve for losses on loans should be directly related to the level of risk indicated by the rating of the credit.
- > **Information systems for portfolio management and reports to senior management.** Reports on credit ratings add up and stratify risk and describe its trends within the portfolio. These are important for credit risk management and strategic decision making. Credit rating exerts great influence on the decisions of a financial institution in regard to procurement, sale, maintenance and protection of credit lines.

## 2.2. Desirable characteristics for a credit risk rating system

There is not a unique credit risk rating system applicable to all financial institutions. Every system should, however, possess certain features or meet certain roles, as follows:

- > Be the basis for the estimation, follow up and notification of credit risk.
- > Provide support to the decision making process of superior management.
- > Be integrated into the overall risk management of the portfolio;
- > Be approved by the superior management, who should additionally delegate clear responsibilities in respect to risk rating and receive sufficient information so as to oversee its implementation.

- > All exposures to credit risk should be subject to rating.
- > Assign an adequate rating number to guarantee that the risks of expired credits are differentiated in an appropriate way.
- > Produce proper and timely risk ratings.
- > Possess clear and well defined rating assignment criteria, based on objective and subjective factors.
- > Assign ratings that reflect risks in the performance of the borrower, as well as in the structure of the transaction.
- > Be dynamic, changing the rating when the risk changes.
- > Be subject to independent validation (aside of that of supervision authorities).
- > Financial institutions should specify, through a retrospective analysis, if the implicit assumptions in the rating definitions are valid, that is to say if they anticipate results correctly.
- > Rating assigned to a credit should be well documented in the credit file.

It should be mentioned that besides increasing the amount of rating definitions, some banks have instituted dual rating systems. These systems assign a rating to the credit quality of the borrower and a rating to each pending facility. The rating of the facility considers the protection offered by the collateral and other elements of the loan structure, aside from the credit quality of the borrower. The dual rating systems emerged because one rating only might not be enough to back up all the roles required by the credit risk rating.

### 2.3. Controls in the process of credit rating

Several interdependent controls are necessary to guarantee the good performance of a financial institution's risk rating process.

#### a) Personnel assignment and responsibilities

Superior management should guarantee the existence of an adequate framework to identify measure, follow up and oversee credit risk. Policies and procedures approved by

superior management should guide the risk rating process. These policies and procedures should establish responsibilities for the different departments and members of the staff of the institution. Executives and superior management personnel should create a credit culture that requires the timely recognition of risk and does not tolerate rating mistakes. If the superior management does not comply with these responsibilities, it will not be able to oversee the loans portfolio.

Staff in charge of credit rating should know the rating system of the institution in depth and the credit analysis techniques. This understanding should be part of a performance management system of the institution for credit professionals. Credit staff should be evaluated on, among other things, accuracy and punctuality of their risk ratings.

Some financial institutions assign their business managers the responsibility of rating exposures to credit risk. Managers maintain direct contact with the borrowers and have access to the most recent information on them. However, these same factors could affect their objectivity and, on the other side, the incentives they receive are more related to the generation of operations than with the accuracy of their ratings.

Other institutions choose to separate credit roles and business development. Even if this type of structure fosters objectivity, it should be considered that a manager or risk analyst might not be sensitive enough to subjective factors of a credit relationship as a business manager.

Many financial institutions find that accuracy in risk rating improved by demanding that the rating assignment is a product of a joint decision of the risk and business development areas (at least one person for each area).

#### b) Review of the ratings

It is important to mention that benefits of risk rating are totally obtained when ratings are dynamic. Institutions should review and update ratings every time they receive new relevant information. All credits should

be subject to a formal examination, at least once a year, to ensure that ratings are the right ones. Large credits, new credits, high risk credits in default, problem credits and complex credits require a more frequent examination.

#### **c) Information systems for management**

Information systems for management are an important control mechanism since they provide feedback on the risk rating system. Aside from statistical data, information systems for management of risks ratings should generate or allow the user to obtain the following information: volume of credits whose rating changed in more than one degree (reduced two categories), time that the credits stay in the same category, speed of the changes in rating, history of default and loans by rating category, the relationship between improvements and decays in category and rating changes by business line, loan official and location.

Management reports should contain data on monetary volume and amounts to avoid distortions caused by changes in only one large account.

#### **d) Credit examination**

An independent institution should verify loan ratings. In the case of credit examinations of many financial institutions, the same staff carried out this verification. Verification by other departments and outsourcing of this task are also acceptable. Verification helps to guarantee accuracy and coherence of ratings and increases knowledge of all the management processes of credit risk by the management. The scope and formality of the verification will depend on the complexity and risk inherent in the portfolio.

#### **e) Internal audit**

Internal audit is another control mechanism of the risk rating process. Normally, internal audit tests the integrity of risk rating data and reviews documentation. Besides, internal audit can verify internal processes and controls to implement value and administer the collateral; verify that other over-

sight roles, such as credit examination, are performing as corresponds and validate the input of risk rating data in the information system for credit risk management.

#### **f) Analysis of financial statements**

There is no substitute for rigorous analysis of financial statements of the borrower in the process of control of credit risk rating. The balance sheet, income statement, cash flow statement and financial projections provide essential information on the payment ability of the borrower. Quantitative analysis of profits, profit margins, income and cash flow, leverage, liquidity and capitalization, should be sufficiently detailed as to identify trends and irregularities that could affect the debtor.

The balance sheet merits the same attention as the income statement. In the balance sheet indications can be found of credit problems; for example, an amendment of the relative level of assets and liabilities. Commercial borrowers generate their profits, income and liquidity from their assets. Capitalization and liquidity also need a careful analysis, since they reflect the capacity of the borrower to resist an economic crisis or unplanned events.

Likewise, financial coefficients provide important information on the proportions of the balance sheet and of the income statement (indebtedness over net equity, sales income, etc.). In comparing financial coefficients of the borrower with the standard ones in the sector or with the coefficients of similar companies, it is possible to identify potential deficiencies. When the coefficient of the borrower deviates from that of its peers, supervisors will try to carry out a more detailed analysis to identify causes and assess the consequences of that difference.

While present and historic information helps to specify the financial situation of the borrower, projections estimate the expected returns. Supervisors should analyze differences among projections and the historic return and try to determine if the borrower will meet the projections. It is necessary to analyze projections in different scenarios (disadvantages, equilibrium, best case, most

probable case) and make stress tests periodically. Supervision conclusions in the sense that a borrower will not reach the projected levels of return should be incorporated into the risk rating of the loan.

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## 2.4. Experience on credit risk assessment in the Region

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While in some countries, mainly in North America, risk models are being applied, the application of such models in Latin America has not been so extensive. With the purpose of showing the diversity, cases of Colombia, Chile and Peru are reviewed.

### 2.4.1. Colombia

At present, credit risk in the consumer, housing and micro credit portfolios are assessed based on guidelines from the Basel I Agreement, with individual provisions for each credit and general provisions representing 2% of the total portfolio.

Concerning the commercial portfolio, supervised entities have the liberty, since July 2005, to apply internal models to set up provisions, as long as they obtain the no objection for their internal model from the Financial Superintendence of Colombia (SFC). In the event that the entities do not develop internal models, they will apply the Superintendence's model of reference. This model was built under the guidelines of Basel II but adapted to Colombian reality, in which the provisions system must be calculated in relation to expected losses resulting from the enforcement.

On the other side, the construction of internal models is being motivated by each entity, these should be approved and validated by the SFC, so that these be used to calculate provisions but not for capital assignment.

### 2.4.2. Chile

The guideline of provisions for credit risk establishes that the entity should keep a permanent assessment on the total of its credit portfolio, in order to timely build the necessary and sufficient provisions to cover losses for the eventual lack of recuperation of credits granted. To that effect, they should uti-

lize assessment models or methods that are more appropriate for the type of portfolios or operations they undertake.

In fact, the norms distinguish between individual and group assessments. Individual assessment of the debtors is necessary when dealing with companies that, due to their size, complexity or level of exposure with the entity, require complete understanding. Models based on individual analysis contemplate the use of distribution in risk categories for debtors and their credits, in relation to the analysis of risk factors. On the other side, group assessments are relevant to face a large number of operations whose individual amounts are low, and in which homogeneous features can be stipulated for a group of debtors or credits.

The Supervision Directorate created the Credit Risk Unit in 2004, whose main objectives are to get acquainted with the new credit risk models of financial entities and unify assessment criteria of the same by the Superintendence of Banks and Financial Institutions of Chile (SBIF) in front of the diversity of approaches and methodologies.

A growing group of banks are developing at present more sophisticated tools to establish expected losses for credit portfolios in terms of the concepts that are part of the New Capital Accord of Basel II.

### 2.4.3. Peru

The banks of the Peruvian financial system with parent company abroad have adapted the credit risk assessment methodologies of those, implementing projects of quantitative rating systems on the basis of historic data of financial indicators of their commercial clients and qualitative information. In addition, local banks have internal rating systems based on expert models, on the basis of qualitative and quantitative parameters established according the criteria of analysts.

To date, banks do not possess robust credit models as to sustain provisions or capitals inasmuch as they do not yet use models that allow the probability of noncompliance associated to risk. Notwithstanding, some of the main banks are working in order to have sound credit models.

In regard to consumer credit risk, banks and financial companies of the system have the tool of credit scoring for granting and behavior in most of the cases, through which the applicants' personal are assessed, for the operation and interrelation between both, quantifying non compliance probability.

In the following years banks will be requested to build their own rating systems. In this sense, minimum Basel II rules would be enforced, maintaining the benchmark model of the Superintendence for internal purposes, as a support to supervision and not as a regulatory requirement. Additionally, it should be noted that a coordinated agenda has been designed with the industry including the project for new guidelines addressed to introduce the New Capital Accord (NAC) in Peruvian regulations.

**2.5. IRB framework (internal ratings) for credit risk management and categories for portfolio classification**

The Basic and the Advanced IRB Approaches are precisely based in the portfolio classification system based on borrowers' risk that the countries in the region have been applying since the late 80's.

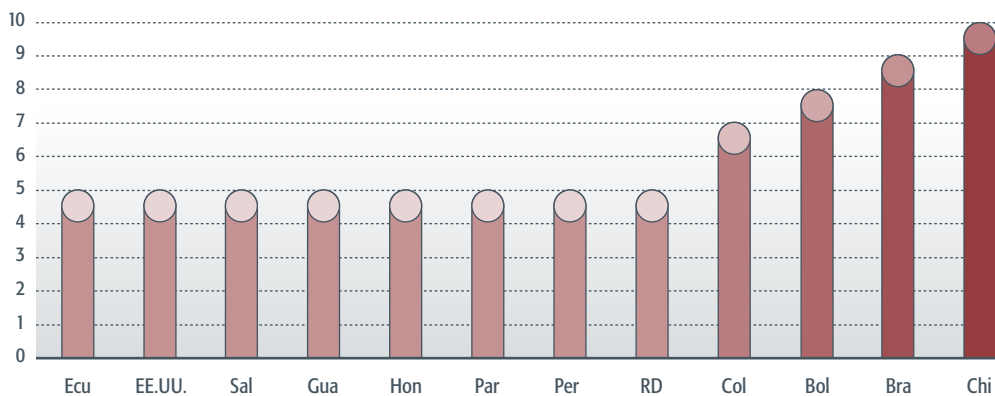
IRB approaches seek that entities estimate expected losses, as well as unexpected losses, in order to cover them up properly. Basel

II recommends that expected losses be covered with specific precautions and unexpected losses with generic precautions or capital.

In respect of IRB model, the New Capital Accord states that: *"banks that have received approval from the supervisor to utilize this method, subject to certain minimum requirements and disclosure obligations, could use their own internal estimates of risk components of a given operation at the time of stipulating the capital requirement corresponding to such position. Components of risk include probability calculations for non compliance (PD), loss in case of non compliance (LGD), exposure to credit risk (EAD) and effective expiration date (M). In some cases, banks will have to use a supervisory value instead of an internal estimate for one or more risk components."*

On the other hand, in the decade of the 90's, countries have consolidated and perfected the traditional ranking scheme of five categories. As can be seen in Figure 1, countries represented in the Working Group that still maintain this portfolio ranking scheme of five categories are: Colombia (in the micro credit housing portfolio), Ecuador, USA, El Salvador, Guatemala, Honduras, Paraguay, Peru and the Dominican Republic. Differences and similarities of ranking schemes adopted by countries represented in the Working Group that are still being enforced by late 2005, can be seen in greater length in Annex No. 3.

**Figure1: Portfolio Classification Categories**



A small number of countries have amended their ranking systems, preparing for the subsequent adoption of Basel II, establishing 7 (Colombia in commercial and consumer portfolios), 8 (Bolivia), 9 (Brazil) and 10 (Chile) risk categories. Basel II IRB approaches are based on schemes of 10 categories,

from lesser to greater risk, in order to normalize the calculation of expected losses (PE) and the Default Probability (PD).

The experience of the Superintendence for Banks and Financial Institutions of Chile in the risk portfolio classification, identified as the best practice to date, is described below.

### Portfolio Classification System used by the Superintendence for Banks and Financial Institutions of Chile

Debtors' analyses should be centered in their capacity to meet credit obligations, through sufficient and trustworthy information, analyzing as well their loans on what concerns guarantees, deadlines, interest rates, currency, readjustability, etc.

#### Risk Factors

For the relevant individual analysis effects, financial institutions should at least consider the following:

**Industry or sector:** Refers to the analysis of the degree of competition in the market where the debtor is inserted, the sensitivity of the sector to cyclical fluctuations of the economy and other risk exposure factors that go along with the industry in question.

**Partners and administration:** Refers to the knowledge of partners or owners of the company and, in some cases, of administrators as well. In this sense, it is relevant to get to know if they have experience validated in the business, their antiquity, business honesty and level of indebtedness, as well as the degree of commitment on their equity.

**Financial situation and repayment capacity:** Refers to the analysis of the financial situation of the debtor, using indicators such as: liquidity, quality of assets, operational efficiency, returns, leverage and indebtedness capacity, etc., whose relevant indicators should be compared with those of the industry in which the company is inserted. In regard to the repayment capacity of the debtor, global indebtedness characteristics are to be examined, its cash flow

estimated, incorporating different scenarios in relation to the key risk variables of the business.

Likewise, possible effects of financial risks to which the debtor is exposed should be explicitly considered, since those could influence in his/her repayment capacity, on what concerns currency mismatches, deadlines, and interest rates, as well as on what concerns operations with derived tools and commitments for guarantees or cautions granted.

**Payment behavior:** Refers to information analysis on the debtor that allows to get acquainted with the degree of compliance with his/her overall obligations, that is, the historic behavior for payments in the institution and in the financial system, as well as the compliance with the rest of his/her obligations; relevant background, would be, for example, labor, precautionary or tax infractions.

#### Normal risk debtor portfolio

Classification	Estimated Loss %
A 1	0
A 2	0
A 3	0
B	0

Categories with ranking "A" refer to debtors without any appreciable risks, whose payment capacity would still be good in front of unfavorable business, economic, or financial situations. Assignment in this rank will be done according to the relative strength of the debtors, set up in accordance with methods used by the financial institution. Not

withstanding, due to statistical reasons, category A1 of the table will be only used to assign those companies whose instruments in national currency have a private risk ranking equal or superior to "AA-". In the event that there exists more than one ranking for the same instruments, the lowest will be taken into account.

Category "B" refers to debtors that present some risk, but that would not stop paying any of his obligations, when faced with adverse business, economic or financial foreseeable situations. ,

Because these are categories that reflect the payment capacity of the debtor, only debtors whose strength makes examination of credit repayment related with guarantees unnecessary, can be included in them. Consequently, in no case, homologation allows to assign in these categories debtors that show bad payment behavior (with the institution or with third parties, and is reflected, for example in the expired portfolio, recurrent default, or renegotiations with capitalization of interests), even though credits are totally covered by guarantees.

### Portfolio of debtors with risk superior to normal

Ranking	Estimated
C 1	Up to 3
C 2	More than 3 up to 19
C 3	More than 19 up to 29
C 4	More than 29 up to 49
D 1	More than 49 up to 79
D 2	More than 79

Debtors with insufficient payment capacity in foreseeable situations will be assigned to this sector. Categories indicated correspond to an assignment based on the level of expected loss for commercial credits and commercial leasing operations of the client, quantified in accordance with the methodology used by the financial institution.

### Group assessments

Group assessments of debtors or credits are relevant to address a large number of operations whose individual amounts are low, in which homogenous characteristics can be specified for a group of debtors or credits. In general, massive assessment of debtors can be applied whenever it deals with natural persons (consumer credits or credit cards) or small size enterprises (microcredit).

# Best supervision practices in credit risk management

The Working Group through several meetings discussed good supervision practices in credit risk management, taking advantage of the experience of member countries of the Working Group, described as follows:

## 3.1. The Board should be committed to the adoption of oversight procedures

The Board has among its duties and attributions the definition of the financial and credit policy of the bank, control its execution and watch that these are properly implemented. In addition, it has the responsibility to oversee that the policies, systems and processes are maintained, for a proper management, assessment and control of risks; and watch that the active operations and contingencies do not exceed limits established by Law.

The Board is responsible for policy issuance that is to be observed in the credit process and the supervisory entity should demand compliance with the regulations applicable to management of credit risk.

In summary, roles of the Board related to management of credit risk should be to:

- a. Understand the credit risk profile of the bank and adapt it to strategic objectives of the same.
- b. Establish, approve, review and conduct follow up and oversight of strategies and policies related to credit risk and ensure that superior management complies with the same.
- c. Ensure that procedures and mechanisms directed to generating an adequate system of credit risk management are established and reviewed.
- d. Be permanently acquainted with the main credit risks, set up acceptable levels of concentration, risk tolerance and returns; likewise to ensure that the general management meets them.
- e. Approve the manuals for organization and roles, policies and procedures on credit risk management of the organization.
- f. Ensure the permanent revision of the updating of the organization and role, and policies and procedures manuals related to credit risk management.
- g. Nominate members of the Risk Committee.
- h. Conform a Unit for Risk Management and nominate the person in charge of such Unit.
- i. Ensure that the Unit for Risk Management performs its roles with absolute independence, through awarding it a hierarchical level at least equivalent to the immediate executive level below general management or making it directly accountable to the Board.
- j. Ensure that the Risks Committee and the Unit for Risk Management implement and enforce, as relevant, provisions established in policies and procedures.
- k. Assume a proactive and preventive attitude regarding risk management in all the organization, and guarantee the effectiveness of mechanisms for diffusion of the risk management culture in all the levels of the organizational structure.
- l. Ensure that internal audit verifies existence and compliance with the scheme for administration of credit risk in the institution.
- m. Approve the incursion of the institution in new businesses, operations and activities in accordance with business strategy, legal and statutory norms and in compliance with internal policies for credit risk administration.
- n. Enforce corrective measures in case that strategies, policies, processes and procedures for administration of credit risk are not complied with, or are partially or incorrectly complied with.

- o. Ensure that the institution has the human and material resources, and equipment that allow the efficient administration of credit risk.

An effective administration of credit risk demands that superior management understands and controls the risk profile and institutional credit culture. In order to achieve this objective, it should have a deep knowledge of the portfolio composition and its inherent risks. It should also understand the product mix, geographic and industrial concentrations, average risk rating, as well as other additional characteristics. In addition, it should also ensure that policies, processes and practices implemented to control risks in individual loans and portfolio segments are sound and that the staff in charge of loans knows them and adhere to them.

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### **3.2. The roles and responsibilities among the different bodies involved in credit risk management should be clearly defined (business, risks, registry, oversight, follow up, collection)**

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Financial entities should set up an organizational structure clearly defining obligations, roles and responsibilities of business, risks, operational and monitoring units, which should be adequately segregated. The credit manual should contain the organizational structure of the institution to carry on the administration of assumed risks, including the risks committee, as well as a delimitation of accountabilities in accordance with areas of competence.

In a financial institution, credit administration constitutes a group of functions that should be separated and parallel to the actual financing area. It is responsible for the oversight of the credit area and, among other things, provides a formal segregation of duties and responsibilities among its support activities. Credit administration will vary much from bank to bank from different perspectives – organizational, functional and philosophical.

At smaller institutions, the role could involve only two or three staff members, due to the smaller size of the portfolio, minimized credit risk and the lack of complexity of the financing role. At larger banks, credit administration could involve two, three or more separate divisions within one department – one division in charge of administration of credit policy, another addressed to review internal credit, both divisions with independent reporting attributions to the board and superior management. The other division has the responsibility for all the processing for the loan and disbursement, loan accounting, collection of the loan, the perfection of the collateral, credit and collateral documentation, valuing the collateral and all the rest of responsibilities of the “back-office”.

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### **3.3. Sound and prudent credit policies should be developed, in order to effectively manage and control credit risk**

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The purpose of the credit policy of a bank is to set up authority, rules and framework to operate and manage its loan portfolio efficiently, that is, ensure its profitability while managing risk. Policy serves as a framework to establish basic procedures and guidelines in a concise and clear way. Guidelines of the policy must be derived from a careful review of external and internal factors affecting the institution, such as the position of a bank in the market, historic experience, present and future commercial area, probable financing trends and future loans, credit systems, capabilities of the staff and technology.

Credit policy is the basic means through which superior management guides loan activities. Even when policy basically enforces guidelines, is also a statement of basic credit philosophy of the institution. It provides a framework to achieve income objectives and assets quality; sets levels of risk tolerance and guides loan activities in a way consistent with the strategic direction of the institution. Credit policy sets guidelines for portfolio composition, decisions on individual credits, reasonable loans, and administration of compliance, including internal is-

sues. There is no ideal format for credit policies on what concerns extension, organization, degree of detail and amplitude of issues.

Complexity and scope of credit policies and procedures should be adequate to the size of the institution and the nature of its activities, and must be consistent with prudent banking practices and relevant regulatory requirements. Inspectors should have in mind that a credit policy that is appropriate for a bank is not necessarily so for another. Each one of the policies of a bank will be different, in relation to strategic objectives and goals of the institution, together with factors such as economic conditions, experience and capacity of the loans staff, and competition. Policy should be reviewed at least annually to ensure that it is updated and is efficient, continues being flexible and continues meeting the needs of the community.

Changes in regulatory requirements should also be incorporated to policy. Policy should be broad and not too restrictive. If carefully formulated and managed by superior management, and communicated and clearly understood through every level of the organization, it helps in a substantial way the bank's management to (1) maintain sound underwriting credit guidelines; (2) control and manage risks; (3) assess new business opportunities; and (4) identify, manage and collect loans with problems.

Credit policy should define who will get the credit, what type and at what price. Other internal factors to be covered include to whom the credit will be granted and its amount, as well as which organizational structure will ensure compliance with the bank's procedures and guidelines.

Given that exceptions are important, policy should specifically cover them and state when these are acceptable and the way they should be identified, mitigated and documented. Some credit guidelines – such as those enforcing legal requirements or those whose violation turns quickly into losses – have greater importance than others. The

most important exceptions should generate more reporting requirements to superior management. Likewise, it should be mentioned that failure in the compliance with provisions of the credit policy in respect to exceptions is generally considered as a material weakness. A significant numbers of material exceptions should be a factor for the assessment of the performance of a lender.

### 3.3.1. Topics of credit policy

While the form and content of credit policies and procedures will differ from one bank to another, there are some issues that policy should cover in all cases, these are:

- > Authorization to grant loans
- > Limits on commitments (credit lines) and total loans
- > Distribution of the portfolio by product and loan category
- > Geographical and economic sectors' limits
- > Desirable types of loans
- > Underwriting criterion
- > Financial information and analysis requirements
- > Collateral and structural requirements
- > Margin requirements
- > Guidelines for price setting
- > Documentation guidelines
- > Collection and settled loans
- > Reporting requirements
- > Guidelines for loans' participation
- > Exposition of entries outside of balance sheet

Policy should also address important issues for sound management, such as: conflicts of interest, ethical codes, valuation requirements, relevant accounting issues (for example, loans rescheduling, upgrading of amounts and terms, etc.), and the establishment of adequate precautions for losses in loans. Administrative requirements for loan granting should be included in the policy. Policies and procedures should also ensure compliance with existing laws and regulations, applicable at each jurisdiction.

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### 3.4. Recommendations on attributions of risk units and committees

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#### 3.4.1. Credit oversight functions

Aside from credit policy, the main controls over activities in the credit area of a financial institution are: credit management, credit review and audit. Independent credit management, credit revision and audit roles are necessary to ensure the risk management process of the institution, and that accounting and internal controls are reliable and effective. The oversight role of a bank could provide superior management with a regular and periodic assessment on the form in which officials of the institution understand its credit culture and if their behavior is adjusted to the values and norms of the institution.

It is important to highlight that without independence, the effectiveness of the control units could be obstructed. Overall, independence requires separation of obligations and lines of reporting. However, independence of a control function is not limited to the presentation of reports; it also strongly depends on valuing corporate culture and promoting an objective oversight and constructive criticism.

#### 3.4.2. Management of credit policy

The management of credit policy role refers to frequent supervision of the policy. In this sense, decisions are made if credit areas are properly directed, if the employees are following the credit policy, violations to policy are reported and exceptions for financing are managed. If a credit policy needs to be complemented or amended, changes are formulated, submitting those to superior management for ratification and approval.

Likewise, managers can be assisted in the routine maintenance of accounts, as in monitoring compliance with financial clauses, and ensuring that financial statements are timely received, circulated and analyzed. Responsibility is assumed for the set of written documents – credit policy, loans procedures, and memoranda related with policies – that regulate the credit process.

The unit has generally established a formal process to develop, implement and review policy guidelines.

#### 3.4.3. Internal credit review

The internal function of revising the loans is generally in charge of an independent division of the bank, occasionally linked to the audit function or to the credit management function. This division normally reports directly to superior management. In a parallel way, to maintain the independence, the budget of this unit, its strategic planning and operation plans are reviewed and approved by senior management. Performance evaluation of the chief of the division should be under superior management or the board committee in charge of the audit oversight.

Internal review is the main support of the portfolio internal control. This unit undertakes regular reviews of the credit relations and risk levels and assesses the existence and quality of risk management processes, both essential for a good portfolio management. Internal review of credits, aside from its normal roles, includes a complete performance evaluation of the management of financing operations.

Periodic revisions of the credit risk levels and risk management processes are essential for an effective administration of the portfolio. To ensure independence for the revision, the unit should report administratively and functionally to the superior management or to a committee with audit responsibilities.

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### 3.5. Recommendations on management and identification of existing credit risk

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#### 3.5.1. Management

In order to manage properly the loans portfolio, the institution should clearly define roles and responsibilities of management. Overall, one person or a group of persons are responsible and have the authorization to take measures needed in order to ensure that the portfolio risk is kept within acceptable limits.

### 3.5.2. Risk identification

Effective risk identification is initiated with the assessment of individual credits. Risk rating for each loan through timely credit assessments is fundamental for the management of the loans portfolio. Some institutions apply risk rating to clients, others choose to rate every credit system, and others rate clients as well as credit systems.

Credit ratings should be applied also to exposures outside of the balance sheet such as credit letters and credit lines already approved but not yet used. These assessments allow a timely detection of changes in the portfolio quality, allowing management to amend portfolio strategies and intensify supervision of weaker credits in a timely way.

Once each credit's risk has been rated, rating of individual credits should be reviewed and analyzed in the context of the portfolio segment and the total portfolio. The analysis should ensure that ratings are consistently applied and should consider trends, data migration, and average weighted risk. Risk ratings, used together with other information, could give as a result an illustrative chart of assets quality and credit risk. Risk ratings can also determine the underwriting to guidelines, asset diversification goals, and levels of price setting.

As a minimum, risk rating assessments should be undertaken every six months. All risk ratings should be re assessed when new significant information is received. Risk rating analyses should be coordinated with analyses for the reserve for losses in loans.

In a risk oriented inspection process, inspectors are constantly overseeing credit risk in banks. This is achieved through extra-situ oversight programs and at continuous meetings with bank management. Banks are requested to submit quarterly their standardized income statements and balance sheets, which contain credit information such as volume of loans by types, profitability and default. Therefore, analysts can discover adverse trends. Key credit risk ratios are calculated and compared with a group of peer banks (determined, in general, by the total size of assets) to highlight areas in

which the supervised bank has a better or worse performance compared to average.

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## 3.6. Recommendations on development and implementation of effective procedures for credit analysis, approval, disbursement, registry and follow up

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Each one of the stages of the credit process is of exclusive competence and responsibility of financial entities. These competences and responsibilities are implemented in relation to strategies, policies and procedures, within the framework of overall precautions in the law and regulatory guidelines on credit portfolios.

Banks should support the granting of financing through an analysis of the corresponding applications that will allow them to assess the risk of recovery of funds. For this, they should consider the payment and business capacities of the applicants, their moral soundness, their present and future economic and financial situation, for which they should mandatorily require their income statements, which should be audited whenever required by law; guarantees that are needed in each case; the list of partners or shareholders with their participation in the social capital and other elements and information considered relevant. They can also request other elements if deemed necessary. Refinancing should be sustained in the same way as financing.

Supervision is performed assessing in situ the credit process that entities carry out starting, from the analysis up to credit recovery, in a way that will allow to establish if the process sound. This is complemented with the review of a sample of credits in which, besides assessing the risk rating, observation is made if the process approved by management has been followed and stated credit policies have been applied.

### 3.6.1. Loans Management

This is a term that refers to various aspects of financing. It can be used to describe the total process for credit granting, the monitoring of diverse financing activities, as well as ensuring that loans are kept prop-

erly collateralized, properly rated and properly managed. Likewise, credit management could involve tasks that go from obtaining present financial information up to sending roll over notifications and preparing credit contracts. In addition to facilitating the complete financing process, individual tasks also serve as controls (weights and balances) over loans' activities.

Inspectors will find many different organizational structures for loans management. Therefore, in considering soundness and safety of a bank, they should determine if it has the proper and effective internal controls. Assessment of loans management and related internal controls involve assessment of the bank's operations through the review of:

- > efficiency and effectiveness of loans management operations;
- > capacity of the different components to safeguard assets, basically loans and leases;
- > sufficiency of the information management systems and the accuracy of its reports;
- > sufficiency and accuracy of its loans review role; and
- > compliance with management policies and procedures prescribed applicable laws and regulations.

In order for the components of the management of loans to function properly, management should understand and show that it recognizes the importance of controls. This includes not only the creation of adequate policies and procedures, but also to enforce them and ensure that the bank's organizational structure is adequate for its size and complexity. Managers should highlight ethical and integrity values, as well as hire competent personnel. Besides, the following factors positively influence in the control of loans management:

- > a management council or board and/or superior management taking an active role in loans monitoring;
- > appropriate policies and practices;
- > a reports system providing the bank with the necessary information to manage loans;

- > sound credit roles and decision making;
- > adequately defined approval for financing and a revision of the system including established credit limits;
- > limits and controls over types of loans granted and minimum collateral requirements (for example, ratios loan-to-collateral value); limits on loans expirations; and policies over interest rates, price setting and charges on commissions);
- > an independent loans' revision timely identifying and valuing existing and potential problem loans;
- > an independent reporting system that notifies the appropriate staff whenever financial information, insurance policies or other loan documentation are required;
- > a procedures system that corrects exceptions in documentation.

The loans management is responsible of mitigating operational risks associated with loans related to operations, such as credit approval, disbursement of loans' products, reception of collection on loans, registry of accumulated interests and income for commissions, registry in the auxiliary ledgers, and reconciliation of general and auxiliary ledgers.

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### 3.7. Recommendations on information systems used and oversight of credit risk

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All the levels of the organization, within their attributions, should make a systematic follow up of risk exposures and of the results of actions adopted, which implies permanent monitoring through an information system for every type of risk, prepared to meet the particular needs of the institution.

Information systems consist of processes to follow up assets and risks in a systematic way, so they can describe situations with established frequencies, in relation to behavior indicators of specific variables. Information should be permanent, timely and consistent.

Information systems used for monitoring and control of credit risk at financial enti-

ties should maintain sufficient data to support decision making processes and generate timely, objective, relevant reports, at least monthly, directed to the corresponding management levels to ensure that corrective actions are taken. Information systems should ensure a periodic and objective review of risk positions, as well as of eventual exceptions.

The bank supervisor should have total access to information systems of each one of the entities. Access to such information should be provided in two ways; the first, through on-site visits, and the second through monthly electronic reports from the banks over certain key information over credit portfolios.

The inspection commission could require, if necessary, the enlargement of the data base reported by the entities, a process for which there should be support from specialized informatics supervisors to have an efficient management of the data bases. These supervisors should periodically revise the files provided by the institution (and any time it's needed) and conduct integrity and consistency tests on the systems.

Once in possession of the total credit portfolio (all information on each operation) in a data file, the supervisor can select some operations for a sample to be evaluated at in-situ inspections. Risk indicators that can be considered can be:

- > large borrowers;
- > renegotiation signals;
- > relevant risky borrowers concentrated in that bank;
- > discrepancy between the credit rating and the number of default days for each borrower;
- > discrepancy between the credit ratings at the bank and the credit ratings at the total financial system for each borrower;
- > borrowers with negative information at credit departments;
- > borrowers with different ratings in two or more banks;
- > extreme variations in some parameters of the credit portfolio.

In-situ supervision, through a technological risk unit, should monitor the control systems' environment and its reliability. There are minimum technological demands related to the volume of operations and size of an entity. The assessment should ensure that the information systems:

- > allow a continuous follow up of risk exposures;
- > possess the needed coverage and depth to serve efficiently the decision making process; and
- > had been developed in relation to the volume and complexity of the businesses.

Assessments of information systems should address the following features: timeliness, accuracy, detail level and clarity in the report format and distribution channels. The following should be considered, among others:

- a. returns and measurements of risk capital;
- b. status of overdue payments and reserves;
- c. stratification of the risk rating;
- d. credit returns and returns data (by asset and portfolio);
- e. trend analysis;
- f. commitments, including type, amount, expected level of use and highest registered use;
- g. categories of maturity;
- h. information on liquidity of credits and portfolios that include data about quality and, maturity dates;
- i. exceptions made to the policy, underwriting and norms of documentation.

Supervisors should also have the capacity to:

- > Respond if the management carries out an assessment and periodic review of information systems with the sufficient frequency, considering the sophistication of the information, of the control systems and of the risk level.
- > Review the credit information system and specify if it provides sufficient detail on individual operations, portfolio segments, and the whole portfolio.

- > Develop the necessary tests to determine the accuracy of credit information systems. (If internal controls are satisfactory, accuracy tests could be unnecessary).
- > Assess the flexibility of credit information systems, in relation to:
  - a. distribution of credit information systems;
  - b. the amount and suitability of the information provided by each management level;
  - c. timeliness of credit information systems;
  - d. the reports of a data base that allows the managing of the data. Information can be expressed in a number of ways (for example, by industry, product, and by industry and product);
  - e. entrepreneurial development of their own reports to promote access to the type of information required;
  - f. the time devoted to send reports prepared to respond to a specific need;
  - g. the users, to learn if they are assigning adequate resources to information systems to avoid bottlenecks in the information flow.

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### 3.8. The functions of units in charge of assessing internal controls (internal audit, external audit) should be performed in an effective way

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The supervisor should include, within his in-situ verifications, the examination of the structure and quality of internal control. To do this, a sample of cases is selected, preferably recently granted credits, in order to determine compliance and adherence to credit policies of the institution; the credit manual should be considered for this. The study and assessment of a bank's internal control should cover the cycles of loans, investments and interest accruals, receivable as well as payable. Likewise, sufficiency and efficacy of roles' segregation, definition of limits and attributions and the existence of internal audit roles are a matter of review.

Audit activities at the credit departments are mainly focused in accounting controls of administrative support roles, in operational

procedures and compliance with regulatory aspects. While credit review has the main responsibility of assessing credit risk controls, audit is generally accountable for validating models related with financing (for example, models to set credit prices, set prices to transfer funds, software for financial analyses, software for credit rating, etc.).

The logic structure and assumptions, as well as data and mathematical algorithms used by the models, must be accurate. Audits should be performed at least annually and when the models and functional reports are revised or substituted they should be similar to those for the credit revision.

The supervisor should take care that the internal audits cover adequate identification, quantification and prioritization of the different risks related to issuance of instruments.

#### 3.8.1. Internal audit

Supervisors should assess the sufficiency of credit review and audit reports related to credits, considering:

- a. all relevant aspects are included in the report;
- b. timeliness regarding issuance of the report;
- c. knowledge and clear assignment of the "ownership" aspect;
- d. rationality and integrity of the management's replies;
- e. if there are time limits in the corrective action, if these are reasonable and if they are being met;
- f. the way in which corrective actions are monitored and assessed;
- g. if the reports contain sufficient information for superior management on the portfolio condition and efficacy of internal controls.

If any of the control roles are carried out by independent consultants (for example, subcontractors), terms of the agreement should be reviewed, considering:

- a. if responsibilities are clearly defined;
- b. access to information;
- c. guidelines for report submission;

- d. form of payment to the consultant;
- e. if the contract has a termination clause;
- f. the way in which the consultant submits his conclusions and how the institution acts in regard to the consultant's recommendations.

In addition, an internal audit should:

- > Stipulate if overall resources and the budget for the control role (credit review, audits and "back-office") have followed the rhythm of the changes in portfolio.
- > Know if credit or audit revisions have been postponed. If so, determine the causes. Verify that reviews were not postponed to avoid criticism.
- > Know if the distribution of any credit or audit revision report has been delayed. If this is the case, causes should be specified.
- > Ensure that the loan review schedule is being met and determine if audits related to credits have been undertaken in accordance to planning. If any of them has had a material delay in respect of programming, specify the cause.
- > Determine if control roles are independent, considering:
  - a. guidelines of report submission;
  - b. budget oversight;
  - c. performance evaluation;
  - d. compensation plans;
  - e. access to the Board.
- > In order to review the council's structure, bylaws and mission as well as those of credit management committees, it should:
  - a. determine if the committee's mission is clear and well defined;
  - b. assess the role of the committee in providing an efficient oversight;
  - c. evaluate the sufficiency of information provided to the committees;
  - d. assess attendance to meetings of the members of the committee.
- > Evaluate if superior management has established appropriate procedures to ensure compliance with applicable regulations and laws.

### 3.8.2. External audit

The external audit should submit copies of reports on the result of assessment of the internal control structure to the Superintendence at dates of issuance.

Reports on internal control structure should contain as a minimum the letter of recommendations for internal control, in accounting, management and administrative aspects, including assessment on the electronic data processing system.

The audit committee is mandated to respond to the external auditor over the corrective measures for observations and recommendations of internal control and he/she to verify the reliability of such responses.

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## 3.9. Effective use of the collaterals and guarantees in credit risk mitigation

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Credit risk can be mitigated improving the loans structure. The parties of a loan can arrange for mitigators such as collateral, letters of credit, credit derivatives, and insurance during or after the loan is underwritten. Even if these factors have similar effects, there are important differences, including the amount of protection for losses that have to be considered in assigning credit ratings. For example, a letter of credit could affect risk rating of a loan in a different way than a credit derivative. Credit mitigators mainly affect loss in case of loans default, and, with the exception of certain guarantees, do not reduce the non compliance risk in general.

Supervision should be alert of ratings that exaggerate how much of a credit risk is mitigated. In occasions, the institution assigns less severe ratings based on the existence of collateral or other mitigators instead of making a realistic assessment of the value that the bank can recover.

### 3.9.1. Collateral

Collateral is the most common form of credit risk mitigation, it is any asset that is pledged, mortgaged or assigned to the lender and that the lender has the right to take

possession of in case of noncompliance of the borrower.

The lender's rights should be perfected through legal documents that provide a real guarantee right, mortgage or other form of right pledged against the asset. The process of perfecting the lender's interest varies by type of asset and by location. Once the lender has taken possession of the collateral, losses due to loans, could be reduced or eliminated through the sale of assets.

The level of protection against losses is a role of the value, liquidity and tradability of the asset. The realistic valuation of the collateral is important at the beginning of the loan and through the life of the same, but it is even more important as the performance and financial condition of the borrower deteriorates. Collateral valuations should include analysis of the value under coercion – that is, what will the collateral value be when it has to be liquidated.

The appropriated value can be the fair value at market – systemic liquidation or forced liquidation – depending on the circumstances of the borrower. In a few occasions, the assessment of an ongoing enterprise will be appropriate when the loan depends on the collateral. Products of the sale will be reduced due to the costs related to recovery, possession and sale of the assets. Supervision should assess the validity of the bank's methods to assess the collateral and to determine if the resulting values are reasonable.

### 3.9.2. Guarantees of the loans

Loans can be guaranteed by individuals and businesses related or not related. The strength of the guarantor is, frequently, one of the main considerations in deciding if a loan is granted or not, especially for a new undertaking. The financial status of a guarantor should be analyzed to ensure that the guarantor can comply as requested, if necessary, and that the state recognizes the guarantee. Given that the internal regulations/social bylaws of some companies prohibit them to assume contingent liabilities, it may be necessary to determine if a guarantee is properly authorized.

Guarantee contracts should be as precise as possible, stating specific credit schedules being guaranteed, circumstances in which the guarantor is expected to comply, and the benefit perceived by the guarantor for providing the guarantee.

Guarantees could be unconditional or conditional. In general, an unconditional guarantee extends responsibility in the same terms as for the main obligor; meaning that the guarantor assumes the total accountability of the borrower. A conditional guarantee requires that the borrower meets one condition before the guarantor ends up as being accountable.

Guarantees can also be limited to a specific operation, an amount, to the interest or the principal. If a guarantee is used to increase a credit risk rating, the guarantor should demonstrate the capacity and willingness to back up the debt.

In many countries of the region, the lack of a legal base for the treatment of guarantees and the non existence of formal registration of other guarantees constitutes a limitation to enlarge the base of guarantees valid as credit risk mitigators. Likewise, the low level of development of the securities and insurance market also constitutes another limitation in the diversification of these mitigators.

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### 3.10. Contingent measures should be contemplated for continuity of operations in fortuitous events

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Entities should be in the capacity of preventing risks in an integral way. In this sense, within their credit policies, the fact that the entity should be in the economic capacity of building reserves for potential credit and investment losses should be considered. In the same way, entities should contemplate contingency measures to safeguard the integrity of their assets and guarantees received, such as insurance, bails, etc.

The effectiveness of contingency plans prepared by institutions should be progressively assessed pursuant the carrying out of in-situ inspection visits. Contingency plans that the institution has elaborated for op-

erational continuity, should mainly consider what has to do with information systems with clearly defined steps to follow, staff in charge of tasks, contacts, etc. As part of the inspection, inquiry is made about some sort of test on the part of the bank has been made to assess the functionality of the plan.

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### **3.11. Portfolio concentrations should be identified and monitored and limits to credit risk exposure set**

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Diversification is a core principle of portfolio management. Credit risk concentrations occur within a portfolio when not related loans are linked to a common characteristic. If this common characteristic becomes a common source of weakness for the loans, these can present a considerable risk for profits and for the capital.

#### **3.11.1. Identification of risk concentrations**

The basic aspect of any assets or liabilities concentration is the assessment of procedures of risk management to guarantee: 1) an adequate oversight by the Board and the front office, 2) adequate policies and procedures, 3) internal controls, 4) information systems for management, and 5) sufficiency of the audit or independent examination.

While assessing loan concentrations, loans extended to groups of related borrowers, loans guaranteed by one asset or by assets with common features and loans to borrowers with common features, within the same sector or geographic zone, could be included in homogeneous risk groups. Besides, a concentration could include the addition of all types of credits granted to a particular group of homogenous risk or of all investments in that group.

The objective of limits mandated by the different federal and state legal limits for loans granting, is to avoid that one person or a group relatively small gets a loan in an excessive amount from the bank's resources and to protect depositors, distributing the loans among a number relatively large of persons devoted to different activities.

The loans portfolio management includes the management of any risk concentration. By segmenting the portfolio in groups of loans with similar characteristics, management can assess them in accordance with risk tolerance and objectives of the institution's portfolio, and if necessary, develop strategies to reduce, diversify or mitigate in some way associated risks.

If an institution lacks adequate data on each loan and does not have a system to "cut and slice" the data to analyze it, the capacity of management to manage the portfolio is at risk. But identifying the concentration represents only half of the work. Understanding the dynamic of the concentration and the form it behaves in different economic scenarios is the other half. As the information over a particular concentration is refined; its effect on the risk profile of the portfolio can be better assessed.

#### **3.11.2. Assessment and management of risk concentrations**

Ideally, the overall composition of the portfolio and the level of risk of the different groups will be consistent with the goals and guidelines established by the senior management of the institution. However, it is usual that one or several groups are issues of concern, either due to risks associated to loans or due to the complete volume of loans with similar characteristics. Each group should individually self assess – that is as a risk differentiated group and as part of the whole – in the way in which it fits in the portfolio and supports the goals of the loans portfolio.

A large exposure to a type of borrower or industry could well be less risky than a small exposure to another type. The goal is to achieve the desired risk balance and revenue for the portfolio as a whole. Management should have performance guidelines, levels of tolerance to risk and business goals for each concentration, and should have the capacity to relate them to the overall strategy of the loans portfolio management.

#### **3.11.3. Limits of credit risk exposure**

Financial institutions have expanded more and more its capacities for the manage-

ment of information systems and strengthened their practices for credit risk management. There is a variety of techniques that institutions could use to manage portfolios and control the concentration risk. The most common tool is to establish exposure limits or ceilings in concentrations.

Financial institutions through their boards should define exposure limits for credit risk pursuant the equity level for backup of the entity and with the level of return expected under different scenarios. This policy should set up the initial and potential levels of risk for each target market, product, economic sector, industry, geographic zone, characteristics of the credit subject and of the economic group, population segment, destination of the credit, issuer, type of instruments, financial features and others that the controlled institution may consider.

Risk limits should take into consideration the historic experience of loss in the institution, its capability of absorbing future losses and the desired return level. Limits can be established in several ways, individually and in combination. For example, they could be applied to a characteristic of individual loans, to the volume of a particular credit portfolio segment and to the composition of the whole portfolio.

Entities should consider the analysis of the economic sector or the market in which the debtor mainly evolves, taking into account available official information, from qualified sources, or from labor unions or other sources at the criteria of the institution, identifying important factors that could negatively affect the debtor's capacity to meet the payment of all his/her obligations in the short and medium term.

Limits on loans to specific economic sectors or on specific portfolio segments should be established taking into account their impact over the total risk of the portfolio. That is, as some limits grow, it could be necessary to lower others thus maintaining the desired general risk level.

The institution should have a system to guarantee that senior management will be informed of exposures approaching the risk

limits. Exposures within as well as outside the balance sheet should be included in the system to measure the risk limit. It should be mentioned that to overpass or change an established limit, the explicit approval of the front office is needed. Besides, any proposed change in the insurance criteria should be assessed to specify the way in which such change will affect the overall risk of the portfolio.

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### 3.12. Elaborate an inspection report

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Regarding the type of document prepared as a result of the assessment process, it should be indicated that in the inspection report findings and observations should be included in detail on credit policies, credit process, portfolio risks and quantitative methodologies, among others. Likewise, the executive summary should state in a precise way the background, objectives, scope and general conclusions reached after assessment, a conclusion that constitutes an opinion over the risk management of the entity, which can be: 1) satisfactory, 2) acceptable, 3) needs improvement, or 4) weak. In addition, a summary of the most important findings and recommendations should be included.

The inspection report is designed to provide the bank's management with details of the concern areas observed by the inspector, as well as of areas where the bank can show improvement. The report is narrative and highlights the risk areas reviewed by inspectors (that is, credit, market, liquidity, operations, legal and reputational risk, if it is the case). Besides, in certain instances, the report lists the CAMELS classification components.

Overall, the index of contents should include:

- Mandatory Minimum Content
- > Scope / issues requiring the attention of the Board and the comments and conclusions of inspection
- > Analysis of financial factors
- > Risk management and administration
- > Summary of loans subject to adverse reclassification

- > Comparative statement of the financial condition
  - > Comparative statement of the income statement
  - > Signature of inspectors and supervision authorities.
- Optional content can include:
- > Compliance with execution actions
  - > Assessment of information technology
  - > Assessment of fiduciary activities
  - > Expired loans and leasings
  - > Unproductive loans and leasings
  - > Points subject to adverse classification
  - > Points listed for special mention
  - > Compliance with credit limits and concentrations
  - > Violations of laws and regulations
  - > Capital calculations
  - > Other issues.

# Experience of countries in the region in fundamental issues of credit risk

Experiences of some of the participating countries in five issues that the members of the Working Group consider important in the design of accounting systems and monitoring of credit risk, are registered in this part: (1) treatment of specific and generic precautions; (2) default; (3) value of guarantees; (4) penalization of credits; and (5) treatment of risk reclassification and reprogramming of operations.

Starting from the analysis of the questionnaire answered by members of the Working Group, diversity in schemes adopted by each one of the countries in regard with issues mentioned, can be noted. Thus, credit risk is reflected in a very diverse way in bank accounting at different countries, which rebounds in results and in equity.

Even if in the end, all schemes pursue timely recognition of problems in accounting and banking balance sheets, issues such as recognition of the value of guarantees at the moment of creating provisions, required percentages of provisions or the suspension of interest accruals for low quality assets are treated in different ways at each country.

## 4.1. Treatment of specific and generic provisions

Estimates for uncollectibles resulting from the application of assessment and rating of credit portfolios give way to accounting of specific or generic provisions.

Specific provisions are those arising from individual analysis of each credit subject such as loss estimates, or those that the banking superintendence commands to be established over one segment of the portfolio.

Generic provisions are those that arise as loss estimates established to cover non iden-

tified risks related to direct or indirect operations, generated in the process of credit risk management.

Treatment of specific and generic provisions in a selection of countries follows below.

### 4.1.1. Bolivia

Specific precaution is actually stipulated on the basis of rating categories established in the alternative system of assessment and portfolio rating. As a result of assessment and portfolio rating, financial intermediation entities should build specific provisions over the balance of direct and contingent credit of their borrowers deducing 50% of the value of mortgage guarantees and 100% of self-payable guarantees according to the following percentages:

Category	% of provision
A	1%
B	5%
C*	10%
D	20%
E*	30%
F	50%
G*	80%
H	100%

\*Does not apply to loans: house mortgage, micro-credits and consumer.

Generic provisions are stipulated on the basis of additional risk factors, as established in the alternative assessment system and portfolio rating, stipulated in relation to some method of estimation, applied in a consistent way. In the case of commercial credits, statistical inference is applied over the basis of a representative sample, and in the case of consumer credit, housing mortgage and micro credit, over the basis of an

assessment of risk factors related to credit management.

#### 4.1.2. Colombia

There are three ways of making individual provisions: those made with the traditional scheme (housing portfolio and micro credit), those made when entities use reference models from the supervisor (commercial and consumer portfolios) and those made by entities through internal “non-objected models.”

##### a) Provisions by risk rating

Portfolios that are rated through the traditional scheme are provisioned in the following way:

##### > Provisions for housing credits

Entities should always maintain provisions not inferior to percentages indicated, calculated over the balance pending payment:

Credit rating	Percentage of Provision Over the Part Guaranteed	Percentage of Provision over the Part not Guaranteed
A	1%	1%
B	3.2%	100%
C	10%	100%
D	20%	100%
E	30%	100%

If during two consecutive years the credit has remained in category “E”, the percentage of provision over the part guaranteed will rise to sixty per cent (60%). If an additional year elapses in these conditions, the percentage of provision over the part guaranteed will rise to hundred per cent (100%), unless the entity shows with sufficiency the existence of objective factors that can prove credit recovery and the actions undertaken to collect it, in this case identifying the use of the judicial or extra judicial means, and indicating the status of the respective process.

##### > Provisions for microcredit

Entities should always maintain, in relation to their microcredit operations, a provision

of no less than the percentage indicated, calculated over the balance pending payment, net of guarantees, according to what is established in the following chart:

Credit Rating	Minimum Provision Percentage
A	1.0%
B	3.2%
C	20.0%
D	50.0%
E	100.0%

In this type of portfolios, a general provision of 1% on the total gross portfolio is maintained.

##### b) Provisions through internal models or reference models

Provisions made through the supervisor’s reference models or through non-objected internal models should guarantee the following parameters:

The estimate of the expected loss within the framework of the SARC results from the application of the following formula:

$$\text{EXPECTED LOSS} = [\text{Probability of non compliance}] \times [\text{Exposure of the asset}] \times [\text{Expected loss on the value of the asset given non compliance}]$$

According to the methodology adopted, expected losses will increase in function of the amount of credit or credit exposure and the probability of deterioration of each asset. Losses will be less while the expected recovery rate is higher.

Therefore, the model or models adopted should allow, in respect to each portfolio, stipulate components of the expected loss in accordance with the following parameters:

- > The probability of debtors’ default in a period of 12 months.
- > An event in which a loan operation meets at least one of the following conditions:
  - Commercial credits with 150 days default.

- Consumer credits with 90 days default.
- Housing credits with 180 days default.
- Microcredits with 30 days default.

Likewise, the following situations are considered default:

- > When from the quarterly information coming from risk centrals consolidated with the system, or from any other information source, it is established that the debtor registers obligations that have been penalized, rescheduled, or their due dates extended for settlement of principal and/or interests.

To these effects, rescheduled obligations will not be considered in default if the existence of cash installments higher than 10% of the balance owed at the time of rescheduling or maturity extension are accredited before the SFC, when the probability of non compliance improves or the absence of grace periods for principal and interests or capitalization made by debtor's shareholders or associates and those reschedulings resulting from changes in interest rates due to market conditions or reductions in the installment periods.

Such exception will proceed as long as that these reschedulings are grouped in internal models and the history of these events (in the data base) demonstrates that the probability of default for these obligations, once the rescheduling is made, is inferior to the one specified at that moment in respect of the segment in question and according to the type of portfolio.

- > When a debtor is in a contest process, extraordinary reschedulings, agreements of rescheduling within the framework of applicable laws, or any type of judicial or administrative process implying the administration or forced liquidation of the debtor.
- > Those credits, in respect of which parties agree a rescheduling or the creditor executes the guarantee, without these events being reflected in risk indicators of the respective entity, are considered in default

without prejudice to relevant sanctions for such conduct.

The exposed value of the asset for the internal model is understood as the balance of the obligation at the moment of calculation of expected loss. Those entities that have historic information will be able to calculate the exposure of contingent rights through methods of recognized technical value.

Loss given non compliance is defined as economic deterioration that an entity would incur into en case any of the non compliance situations becomes material.

The methodology adopted for quantification of the loss given non compliance should take into account, at least, the following parameters:

- > The quantification of the loss in terms of recuperations made in cash over the group of non-compliant loans.
- > The non-compliant loans over the last three years at a minimum.
- > The existence and appropriateness of the guarantees supporting the loans.

### Reference model for commercial portfolio

The reference model for commercial portfolio (MRC) allows the stipulation of components of expected loss in accordance with the following parameters:

#### > Probability of non-compliance

It is the probability that in the period of twelve (12) months, debtors of a certain commercial portfolio incur in non-compliance. Non compliance probability will be defined in accordance with the following matrixes:

#### Big Company Matrix A

Commercial	Non-Compliance
AA	1.11%
A	2.04%
BB	7.35%
B	9.65%
CC	17.36%
Non-Compliant	100.00%

Matrix B

Commercial	Non-Compliance
AA	4.98%
A	6.17%
BB	17.52%
B	21.13%
CC	30.21%
Non-Compliant	100.00%

### Small Company

Matrix A

Commercial	Non-Compliance
AA	1.56%
A	2.50%
BB	7.52%
B	10.70%
CC	22.72%
Non-Compliant	100.00%

Matrix B

Commercial	Non-Compliance
AA	6.67%
A	7.93%
BB	16.19%
B	20.83%
CC	33.50%
Non-Compliant	100.00%

### Medium company

Matrix A

Commercial	Non-Compliance
AA	1.39%
A	2.42%
BB	8.50%
B	11.14%
CC	19.14%
Non-Compliant	100.00%

Matrix B

Commercial	Non-Compliance
AA	5.37%
A	7.04%
BB	19.06%
B	22.76%
CC	32.25%
Non-Compliant	100.00%

### Persons

Matrix A

Commercial	Non-Compliance
AA	1.13%
A	1.64%
BB	4.57%
B	8.39%
CC	23.33%
Non-Compliant	100.00%

Matrix B

Commercial	Non-Compliance
AA	5.57%
A	6.02%
BB	10.75%
B	14.99%
CC	30.47%
Non-Compliant	100.00%

Thus, for each debtor of a commercial portfolio, the probability of migrating between his current rating and the rating of non compliance during the next 12 months, given the cycle of general behavior of credit risk, is obtained.

#### > Loss given non-compliance (PDI)

Defined as the economic deterioration in which an entity can incur in case that any of the non-compliance situations becomes real. The MRC segments the PDI in according to the guarantee that supports in greater proportion the payment of certain obligation. The PDI by type of guarantee will be the following:

Type of Guarantee	P.D.I.
Non admissible guarantee	55%
Subordinated Credits	75%
Admissible financial collateral	0 – 12%
Commercial and residential real estate	40%
Goods given in real estate leasing	35%
Goods given in leasing other than real estate	45%
Other collaterals	50%
Collection rights	45%

Thus, for every debtor a different PDI will be obtained according to the type of guarantee supporting the operation.

**> Exposed value of the asset**

Within the MRC, exposed value of the asset is understood as the current balance of capital, interests, contingencies for interests and other receivables, of the commercial portfolio obligations.

Counter cyclical component of the reference model for the commercial portfolio

Provision policies should explicitly consider counter-cyclical adjustments of the models, in a way that at periods of improvement in credit quality, greater provisions are created over what would be necessary in such conditions, in order to compensate, at least partially, those that should be created in deterioration periods of credit quality.

The MRC incorporates the counter-cyclical component in the PI calculation, by using a methodology that allows the definition of the credit risk behavior for every year. Thus the SFC obtains migration matrixes for the different phases of credit risk and each year the SFC will inform the new migration matrixes to be applied for quantification of expected losses.

To generate the counter-cyclical component, entities should apply the matrix indicated (A or B for each segment), in accordance with instructions issued by the SFC. This will allow entities that have a reserve fund (counter-cyclical provision) that they will use in periods of credit quality deterioration to face the increase in provisions without having to impact the possible smaller revenues generated in an unfavorable environment.

When in virtue of the MRC application, counter-cyclical components are incorporated, entities could assign general provisions to the creation of individual and counter-cyclical provisions, with prior authorization of the SFC.

**> Rules on provisions:**

**- Total individual provision**

The total individual provision is the result of expected losses at multiplying the exposure of the debtor, the PI of the matrix indicated by the SFC and the PDI corresponding to the debtor's guarantee. For the year 2006, matrix B should be used to calculate the total provision.

**- Individual provision**

The individual provision is the result of expected losses at multiplying the exposure of the debtor, the PI of the matrix indicated by the SFC and the PDI corresponding to the debtor's guarantee. For the year 2006 matrix B should be used to calculate the individual provision.

**- Counter-cyclical provision**

The counter-cyclical provision is created to adequately cover expected losses at the moment of facing changes inherent to the risk cycle of the debtors. It is calculated as the difference between the Total Individual Provision and the Individual Provision.

**- Reference model of the consumer portfolio**

The reference model of the consumer portfolio allows specification of expected loss components according to the following parameters:

**> Probability of non compliance**

Corresponds to the probability that in a period of twelve 12 months, debtors of a certain consumer portfolio incur in non-compliance. The non compliance probability will be defined in accordance with the following matrixes:

Matrix A

Rating	Banks Autos	Banks Others	Cards	CFC Autos	CFC Others
AA	1.10%	2.10%	1.60%	1.00%	3.50%
A	4.00%	4.10%	5.10%	2.90%	7.20%
BB	9.70%	12.40%	10.00%	12.20%	15.90%
B	18.00%	19.60%	14.40%	24.10%	31.20%
CC	29.40%	35.20%	19.50%	42.90%	41.00%
Inc	100.00%	100.00%	100.00%	100.00%	100.00%

Matrix B

Rating	Banks Autos	Banks Others	Cards	CFC Autos	CFC Others
AA	2.10%	4.01%	3.05%	1.91%	6.68%
A	5.62%	5.76%	7.16%	4.07%	10.11%
BB	17.08%	21.84%	17.61%	21.49%	28.00%
B	26.52%	28.88%	21.21%	35.50%	45.96%
CC	42.07%	50.37%	27.91%	61.39%	58.67%
Inc	100.00%	100.00%	100.00%	100.00%	100.00%

Thus, for each debtor in the consumer portfolio the probability of migrating between his current rating and the rating corresponding to non compliance in the following 12 months, in accordance with the overall behavior cycle of credit risk, is obtained.

**> Loss given non compliance (PDI)**

Defined as the economic deterioration in which the entity would incur in case that any of the non compliance situations becomes material. The MRC segments PDI according to the guarantee that supports in greater proportion the payment of certain obligation. The PDI by type of guarantee will be the following:

Type of Guarantee	P.D.I.
Non admissible guarantee (co-debtors and guarantors)	55%
Subordinated credits	75%
Admissible financial collateral	0 – 12%
Commercial and residential real estate	40%
Goods given in real estate leasing	35%
Goods given in leasing other than real estate	45%
Other collaterals	50%
Collection rights	45%

Thus, for each debtor a different PDI will be obtained according with the type of guarantee that backs up the operation.

**> The exposed value of the asset**

Within the MRCO, exposed value of the asset is understood as the current balance of capital, interests, contingencies for interests and other receivables, of the consumer portfolio obligations.

**> Counter-cyclical component of the reference model of the consumer portfolio**

Provision policies should explicitly consider counter-cyclical adjustments of the models, in a way that in periods of credit quality improvement, greater provisions than needed in such conditions are created, so as to compensate, at least partially, those that should be created in periods of deterioration of credit quality.

The MRC incorporates the counter-cyclical component in the calculation of the PI, by using a methodology that allows definition of the credit risk behavior for each year. Thus, the SFC obtains migration matrixes for different phases of the credit risk.

Every year the SFC will inform the new migration matrixes to be applied for quantification of expected losses.

In order to generate the counter-cyclical component, entities should apply the matrix indicated (A or B for each segment), according to instructions issued by the SFC. This will allow entities to have a reserve fund (counter-cyclical provision) to be used in periods of deterioration of credit quality to face the increase in provisions without needing to significantly impact the possibly lesser revenues generated in an unfavorable environment.

When, by virtue of MRC application, counter-cyclical components are incorporated, entities could assign general provisions to the creation of individual and counter-cyclical provisions, with prior authorization of the SFC.

**> Rules on provisions**

**– Total individual provision**

The total individual provision is the result of expected losses multiplied by exposure

of the debtor, the PI of the matrix indicated by the SFC and the PDI corresponding to the debtor's guarantee.

For the year 2006, Matrix B should be used for calculation of the total provision.

**> Individual provision**

The individual provision is the result of expected losses multiplied by the exposure of the debtor, the PI of the matrix indicated by the SFC and the PDI corresponding to the debtor's guarantee.

For the year 2006, matrix A should be used for calculation of the individual provision.

**> Counter-cyclical provision**

The counter-cyclical provision created to adequately cover the expected losses at the time of facing changes inherent to the credit risk cycle of the debtors. It is calculated as the difference between total individual provision and the individual provision.

**4.1.3 Chile**

Rating of the debtors' risk differentiates those assessed individually taking into account their size, complexity or level of exposure with the entity, from those that can be assessed as a group, in the presence of a high number of operations whose individual amounts are low, and in which homogeneous characteristics can be established for a group of debtors or loans.

Debtors, whose credits are assessed individually, are classified as debtors with normal risk, or low risk, and debtors with risk higher than normal, or high risk. The first ones are those whose payment capacity does not deteriorate in the presence of unfavorable business situations. These debtors are grouped in four categories, according to probabilities of non compliance estimated by the same banks, which should be ratified by the Board.

Given that these categories reflect the payment capacity of the debtor, only credit subjects should be included whose strength makes the examination of credit recuperations unnecessary in relation with guarantees and collaterals that might support them. These arguments are equivalent to excluding

losses given non compliance in the formula (1), and thus expected losses in these loans depend only on the non compliance probability of their debtors (formula 2):

$$(1) PE = \pi \cdot \text{pdi} \cdot E$$

Where:

- PE = Expected loss in a loan or exposure
- $\pi$  = Debtor's non compliance probability measured as a percentage.
- E = Exposure to non compliance
- pdi = Loss given non compliance, measured as percentage.

$$(2) PE = \pi \cdot E$$

Provisions for these losses (normal individual credits) are equivalent to the general type in the Basel Capital Accords, referred to expected losses in a specific loans portfolio.

Debtors with risk higher than normal are defined as those whose payment capacity is insufficient in foreseeable conditions. Consequently, it refers to debtors that are or will be in non compliance given the deterioration of their payment capacity. Their loans carry expected losses that can be estimated taking into account guarantees and collaterals safeguarding their payment.

Provisions for these losses amount to those of the specific type in the Basel Capital Accord, since they refer to individualized debtors that qualify in non compliance and to loans that include identifiable or practically shaped losses.

**4.1.4. Ecuador**

The management of each controlled entity should proceed to create provisions whose amount can not be lower than:

Category	Percentage of Minimum Provisions (%)
Normal risk "A"	1
Potential risk "B"	5
Deficient "C"	20
Doubtful Caution "D"	50
Loss "E"	100

Notwithstanding estimates of expected losses that entities should make, to date the guidelines establish that specific provision are to continue being estimated through a case by case financial analysis for commercial credits with amounts higher than USD. 25.000 and through default ranges for commercial credits lower than USD. 25.000, microcredits, consumer credits and housing credits.

For microcredit and consumer operations, entities should create a generic provision when their credit activity shows risk factors of uncollectability additional to default. The Banking and Insurance Superintendence will determine the generic provision for each entity in relation to a statistical analysis of the frequency of cases in which deviations or non compliance with policies and procedures established by the granting and administration of credit risk exist. Financial entities can create voluntary generic provisions for all types of credit (commercial, consumer, housing and micro credit).

#### 4.1.5. El Salvador

The treatment of generic provisions to date is not normalized; however, in many occasions have been required through resolutions of the Executive Board of the Superintendence, more so when due to problems in the information provided by the institutions, it has not been possible to assess the credits portfolio or part of it.

Risk is the overall criteria on which the Norms to Classify Credit Risk Assets and Cre-

ate the Sanitizing Reserves (NCB-22) which is defined as the probability of not recovering certain amount of money loaned, guaranteed or endorsed, under certain conditions. Following this concept, each category of debtors has implicit the loss probability, according to the debtor's capacity to generate surpluses or income that will allow the timely compliance of its obligations.

Based on such criterion, the following are the risk categories and minimum reserve percentages that need to be created:

Classification	Percentage of Reserves
Normal	
Category A1	0%
Category A2	1%
Subnormal	
Category B	5%
Deficient	
Category C1	15%
Category C2	25%
Difficult recovery	
Category D1	50%
Category D2	75%
Unrecoverable	
Category E	100%

Debtors should be rated and respective strengthening reserves created, at the time of approval of the credit, by assigning them to one of the categories indicated.

#### 4.1.6. Peru

Financial system companies will create provisions as follows:

Risk Category	Table 1%	Table 2%	Table 3%
Normal Category	1.00	1.00	1.00
Category with potential problems	5.00	2.50	1.25
Category Deficient	25.00	12.50	6.25
Category Doubtful	60.00	30.00	15.00
Category Loss	100.00	60.00	30.00

In case that commercial or mortgage credits have prime guarantees of very quick turnover, the company will create provisions considering percentages not lower to those indicated in Table 3, for the amount covered. Likewise, in case those credits have prime guarantees, the company will create provisions considering percentages not lower to those indicated in Table 2 for the amount covered.

Companies should create provisions for the portion not covered by prime self liquidating guarantees, prime guarantees of quick execution or prime guarantees, as corresponding to the type of credit, considering percentages not lower than those indicated in Table 1.

When debtors, independently of the type of credit and their guarantee, remain ranked in the doubtful category for more than 36 months or in the loss category for more than 24 months, provision should be created in accordance with the rates indicated in Table 1.

#### Provision regime based on internal methodology

Credits granted to debtors meeting the following requirements could be considered for the regime of generic provisions based in an internal methodology.

- > To maintain a Normal classification permanently during the last thirty six (36) months; and
- > To have issued corporate debt instruments that are rated by any risk rating company in category AAA, AA, A for long term instruments or CP-1 or CP-2 for short term instruments. Such classification must have been maintained during the last consecutive twelve (12) months.

In this special regime, the requirement for generic provisions can be estimated on the basis of internal methodologies for the calculation of statistical probabilities of expected losses that each company of the financial system develops. Thus, the provision rate could vary between 0.5% and 1% of the amount of direct and indirect credits and

financial leasing operations to debtors that qualify to such regime.

Methodologies used should consider detailed information of the debtor during the last five years and will be reviewed annually, with the objective of ensuring an adequate calculation of the provisions requirement. These methodologies, as well as generic provision rates resulting from its use, should be reported to the Superintendence.

## 4.2. Treatment of default

The treatment of default in a selection of countries is as follows:

### 4.2.1. Colombia

In order to rate the portfolio different schemes are used depending on the type of portfolio and that the entity is using reference models of the supervisor or internal models.

#### a) Rating for the housing and microcredit portfolios

**Category “A”: Credit with NORMAL credit risk.** Credits rated in this category reflect appropriate structure and attention. The debtors’ financial statements or cash flows of the project, as well as the rest of credit information, indicate an adequate payment capacity, in terms of the amount and origin of debtors’ income to attend the required payments.

**Category “B”: Credit with ACCEPTABLE risk.** Credits rated in this category are acceptably attended and protected, but there are weaknesses that could potentially affect, temporarily or permanently, the debtor’s payment capacity or the cash flows of the project, in such a way that, if not timely corrected, could affect the normal caution of the credit or contract.

The following are objective conditions sufficient for a credit to be classified in this category:

Credit Modality	N° of Months in Default (Range)
Housing	More than 2 up to 5
Micro credit	More than 1 up to 2

**Category “C”:** **Deficient credit, with SUBSTANTIAL** risk. Credits or contracts that show insufficiencies in the payment capacity of the debtor or in the cash flows of the project that compromise the normal caution of the obligation in the terms agreed upon are rated in this category.

The following are objective sufficient conditions for a credit to be classified in this category:

Credit Modality	N° of Months in Default (Range)
Housing	More than 5 up to 12
Micro credit	More than 2 up to 3

**Category “D”:** **Credit of difficult collection, with SIGNIFICANT risk.** Is the one that has any of the characteristics of the deficient one, but in a higher degree, in such a way that the probability of caution is highly doubtful.

The following are objective sufficient conditions for a credit to be classified in this category:

Credit Modality	N° of Months in Default (Range)
Housing	More than 12 up to 18
Micro credit	More than 3 up to 4

**Category “E”:** **IRRECOVERABLE credit.** Is the one that is assumed to be uncollectable.

The following are objective sufficient conditions for a credit to be classified in this category:

Credit Modality	N° of Months in Default (Range)
Housing	More than 18
Micro credit	More than 4

b) Rating for the commercial portfolio reference model:

Contracts of the commercial portfolio should be classified in one of the following credit risk categories:

Category “AA”: Credits rated in this category reflect excellent structure and attention. The debtors’ financial statements or the cash flows of the project, as well as the rest

of credit information, indicate an optimum payment capacity, in terms of the amount and the origin of income of the debtors to attend the required payments.

The following are objective sufficient conditions for a credit to be classified in this category:

- > New credits with “AA” rating assigned at the moment of award.
- > Credits already granted that do not show a default greater than 30 days in their contractual obligations.

Category “A”: Credits rated in this category reflect adequate structure and attention. The debtors’ financial statements or the cash flows of the project, as well as the rest of credit information, indicate an adequate payment capacity in terms of the amount and origin of the debtors’ income for the attention of required payments.

The following are objective sufficient conditions for a credit to be classified in this category:

- > New credits with “A” rating assigned at the moment of award should be classified in this category.
- > Credits already granted that do not show a default of more than 60 days or less than 30 days in their contractual obligations.

Category “BB”: Credits rated in this category are attended and protected in an acceptable way, but there are weaknesses that could potentially affect temporarily or permanently, the payment capacity of the debtor or the cash flows of the project, in such a way that, if not timely corrected, would affect the normal caution of the credit or contract.

The following are objective sufficient conditions for a credit to be classified in this category:

- > New credits with “BB” rating assigned at the moment of award should be classified in this category.
- > Credits already granted that, as a minimum, do not show a default of more than 90 days or less than 60 days in their contractual obligations.

Category "B": Credits or contracts that show insufficiencies in the payment capacity of the debtor or in the cash flows of the project, that would compromise the normal caution of the obligation in the terms agreed upon, are rated in this category.

The following are objective sufficient conditions for a credit to be classified in this category:

- > New credits with "B" rating assigned at the moment of award should be classified in this category.
- > Credits already granted that, as a minimum, do not show a default of more than 120 days or less than 90 days in their contractual obligations.

Category "CC": Credits or contracts showing serious insufficiencies in the payment capacity of the debtor or in the cash flows of the project that significantly compromise the caution of the obligation in the terms agreed upon are rated in this category.

The following are objective sufficient conditions for a credit to be classified in this category:

- > New credits with "CC" rating assigned at the moment of award should be classified in this category.
- > Credits already granted that, as a minimum, do not show a default of more than 150 days or less than 120 days in their contractual obligations.

Category "non compliance": Objective sufficient conditions for a credit to be rated in this category are the events defined as non compliance.

It should be mentioned that in each one of the cases the assigned rating at the moment of award, will be valid only for the first rating report, period after which the credit will maintain this category if a default, different to the one defined in this category, did not show in its obligations.

#### 4.2.2. United States

Unproductive loans are generally recognized when the borrower has not met his obligation for more than 90 days and the loan is well guaranteed and also in the process of collec-

tion. Non compliance of 90 days is computed as of the contractual payment date. Once a loan is put in the non-cumulative status, the bank should make an assessment to stipulate any amount of exposure (loss) through the determination of the future cash flow or the value of the collateral. The loss of the principal should be recognized immediately. The balance remaining will be an unproductive asset using future payments to reduce the principal. Reserve expenses as well as loans considered as losses are submitted to the management board at its monthly meetings for approval.

Accounts receivable for financing of leases or loans should be put in the non cumulative status if (1) the principal or the interest have had a delay of 90 days or more, except if the loan is well guaranteed and in process of collection; (2) total payment of the principal or the interest is not expected; or (3) these are kept in a cash basis due to the fact that the financial condition of the borrower has deteriorated.

In accordance with instructions in the payment requisition report, the restoration to the accrual status is allowed when (1) the loan has been updated in respect of the principal and interest, and (2) the bank expects that the total contractual balance of the loan (including the penalized amounts), plus the interest, will be totally collectable in accordance with the terms of the loan. Therefore, to restore to the accrual status a loan partially penalized totally updated, the bank should specify if it expects to receive the total amount of the principal and interest demanded by the terms of the loan.

#### 4.2.3. Guatemala

The manual with accounting instructions for banks and financial societies states that the credit portfolio will be classified in terms of accounting in current to date, current in default, expired in the process of extension, expired in the process of administrative recovery and overdue in judicial settlement. To these effects, the receivable credit balance will be identified as current in default with one or more installments on principal or interest in default.

For purposes of valuation, according to the Regulations for Credit Risk Management (RARC), credit assets of minor entrepreneurial debtors and housing mortgage credits will be classified according to default, considering the following deadlines:

Category of the credit asset	Payment situation of the credit asset
A	Updated or up to 1 month default
B	More than 1 up to 3 months default
C	More than 3 up to 6 months default
D	More than 6 up to 12 months default
E	More than 12 months default

In the case of microcredits and consumer credits, the criterion for the classification of credit assets will be default, considering the following deadlines:

Category of the credit asset	Payment situation of the credit asset
A	Updated or up to 1 month default
B	More than 1 up to 2 months default
C	More than 2 up to 4 months default
D	More than 4 up to 6 months default
E	More than 6 months default

#### 4.2.4. Dominican Republic

##### a) Current and overdue credit portfolio

Currently, specific provisions are accounted but not the generic ones, given that the accounting manual for financial institutions does not contemplate them.

According to the accounting manual, 31 to 90 days are considered as expired portfolio, taking into consideration only the proportion overdue. If it is an expired portfolio with more than 90 days delay, the total of the pending balance is registered.

Accrual of a current credit return should be suspended after 90 days from the date the correlated principal has become demandable. Returns generated as of the 90 days should be registered in a memorandum account, and the balance that is registered in the assets account up to 90 days, should be provisioned in a 100% charged to the expense account.

#### Classification of Minor Commercial Debtors

**A:** Current or with delays between 1 to 30 days.

**B:** 31 to 60 days.

**C:** 61 to 120 days.

**D:** 121 to 180 days.

**E:** longer than 181 days.

#### Classification of the Consumer Portfolio

**A:** installments up to date or with default of not more than 30 (thirty) days.

**B:** delays between 31 and 60 days in payment of installments.

**C:** delays between 61 and 120 days.

**D:** delays between 121 and 180 days.

**E:** delays longer than 180 days.

#### Classification of the Housing Mortgage Credits Portfolio

**A:** installments up to date or with a delay of no more than 30 days.

**B:** delays between 31 and 60 days.

**C:** delays between 61 and 180 days.

**D:** delays between 181 and 270 days.

**E:** delays longer than 270 days.

### 4.3. Value of guarantees

Following is the treatment of the value of guarantees in a selection of countries.

#### 4.3.1. Bolivia

Guarantees are an integral part of the credit process, becoming the alternative source for repayment of the borrower's obligations to the entity of financial intermediation; in this understanding, financial intermediation entities should keep an updated registry of the same and the necessary background to demonstrate its existence, protection and valuation.

Financial intermediation entities should have specific policies for the valuation and updating of the value of real estate or movables received in guarantee, be these perishable or not.

In regard to valuation of guarantees, this is done pursuant what is indicated in the Accounts Manual for Banks and Financial Entities, in the following way:

- > Mortgage securities: will be stipulated deducting from its estimated sale value 15% for risks of fluctuations in prices, obsolescence, implementation costs and commercialization costs.
- > Guarantees in instruments: registered in their commercial value, their nominal value, their real value, or the Equity Proportional Value VPP, of the instrument with less value.
- > Pledged guarantee: its net realization value or current value is registered, stipulated by an independent valuing expert or based on properly documented quotations.
- > Pledged bonds: these guarantees are registered at their value of instrument endorsement, which should not be higher than the draft value of the deposit certificate, determined by an independent valuing expert or through documented quotations.
- > Deposits at the financial entity: registered at the nominal value of the document.
- > Guarantees from other financial entities: registered at the nominal value of the document. The expiration term of letters of stand by credit should be subsequent in fifteen days at least, to the expiration of the credit operation.

#### 4.3.2. Peru

In regard to the value of guarantees, it is important to highlight that permanent updating is demanded and that these are registered at the least value between the realization value and the accounting value. This value is the one used for the calculation of provisions and can serve as impact mitigator. However, the actual registry of guarantees does not allow relating them to each operation but rather

er these are registered by debtor given that the current risk classification system falls on the credit subject, that is, the debtor; a reason why guarantees that endorse several operations of a debtor are registered.

Guidelines on guarantee valuation contained in this section are applicable to the calculation of the part of risk not covered by the guarantee as a basis for the calculation of provisions, as well as to determine excess in individual legal limits.

- > Valuation of guarantees will be based on the net realization value, which should appropriately reflect their sale value in the market less additional expenses incurred in for that purpose.
- > Net realization value in the market is understood as the net value the company expects to recover as a consequence of the eventual sale or execution of the good, in the situation how and where it is. Thus, this value should consider penalties and charges for sales taxes, commissions, freights, leakages, etc. This value should be based on a referential commercial value calculated from reliable data.
- > In the case of mortgages and pledges with judicial delivery, including the global and floating pledge, it should be verified if these have been duly written in the corresponding registries. If not, they will not be considered as constituted, unless there is a registry blockade to what will be considered as guarantee for a period of not longer than sixty (60) days from its underwriting. Likewise, the existence of insurance will be indicated and if it is endorsed in favor of the company.
- > When dealing with moveable goods, valuation should be done through commercial valuing with sufficient backup background referred to prices utilized. Preferably recent sales of similar goods, sources that originated the calculation of these prices and considerations based on which the final value of the good was specified, will be taken into account. Such background should remain in files available to the Superintendence.

### 4.3.3. Paraguay

Guarantees are considered subsidiary and do not intervene in the process of debtors' classification. In order to create provisions, these are deducted –for indefinite time- from the value of the debt up to the computing amount according to the following table:

Type of guarantees	Computing Value
Bank guarantees – Deposits	100% of their value
Mortgages	70% of the appraisal value
Warrants	60% of the value of certificate
Machinery, automobiles, others	50% of the appraisal value

To be efficient, there are some requirements such as insurance coverage, updated valuations done by experts enrolled in a registry of the SBP.

The fundamental change given in the new regulations –Res. 8/2003 being enforced as of 2007 – is their deduction only up to 50% of the loan's value. Besides, these do not neutralize precautions on credits classified "6" with more than one year in such category.

### 4.3.4. Dominican Republic

As a factor of safety in the recovery of credit operations, guarantees are considered as a secondary element that is why in spite of being an integral part of the credit process, are not taken into account in the debtor's classification, but in computing the coverage of the necessary provisions. Each financial intermediation entity should keep an updated registry of the same, with the necessary background demonstrating their existence, location and valuation as corresponds.

Guarantees provided by a debtor for safeguard of its operations, should be composed by real estate or moveable goods, as well as public securities issued by financial entities and stand by credit letters meeting the following requirements:

- a. That these be irrevocable letters of credit payable upon presentation;
- b. That the issuing bank is classified in an A or superior degree of investment granted

by a rating entity approved by the Banking Superintendence;

- c. That the issuing bank is subject to supervision on a consolidated basis;
- d. That the issuing bank is not bound to or combined with the local intermediation entity;
- e. Branches of foreign banks operating in the country are not included within this rating, and
- f. That the authenticity of the document had been verified.

In these cases, the sufficiency of such guarantees should be demonstrated to cover the principal and the returns receivable of each obligation.

Mortgage guarantees should be backed up by the duplicate title certificates of the mortgage creditor issued by the Titles Registry within a deadline not longer than 1 (one) year after having made the deposit for the mortgage underwriting in the corresponding Titles Registry.

Guarantees will be valued at market price, that is at realization values which will be demonstrated through valuations or certifications granted by experts in the area, with an antiquity no longer than 12 months when it is about moveable goods, excluding fixed rent securities.

## 4.4. Treatment of credit penalties

The treatment of credit penalties in a selection of countries is as follows:

### 4.4.1 Ecuador

Financial institutions are compelled to penalize the value of all loans, discounts or any other obligation whose debtor is in default for three years. For micro credit and consumer operations, granted under the *scoring modality*, these would be penalized at 180 days of default of any dues or dividend, as long as 100% is provisioned and the operation is not binding. At any rate, institutions could penalize any expired operation for a period of less than three years as long as they have the due authorization from the Superintendence of Banks and Insurance.

#### 4.4.2. United States

It is expected that a bank has a well defined loans policy on settled loans and cumulative interest.

Assets classified as losses are considered uncollectible and of such a low value that its continuity as negotiable assets is not justified. This classification does not mean that the credit does not have absolutely any rescue or recovery value, rather that it is not practical or desirable to defer the cancellation of this asset basically without any value, even if the partial recovery could be made in the future. Amounts classified as losses must be immediately settled.

For loans guaranteed by residential real estate, an actual assessment of the value must be done within 180 days after the date of contractual expiration. Any balance of the loan pending of payment higher than the value of the property, less the cost of the sale, should be classified as a loss and annulled.

Loans with collateral pending collection according to policy can be adjusted to the value of the collateral, less the sale cost, instead of being totally settled. To put an asset in the non accrual status does not require total or partial settlement of the principal of the assets. However, any *identified loss* should be settled. Accrued interest over settled loans is also settled against the reserve account or is reversed against the income for interests, as appropriate.

Loans' failure should be classified as loss and be settled within 60 days of receiving notification of the submission of the demand to a failure court or within the time limits specified in this classification policy, whichever results lower, except if the institution can demonstrate and clearly document that payments will probably be made. Loans with collateral can adjust to value, less the sale cost. Any loan balance not settled should be classified as substandard until the borrower reestablishes its capacity and willingness to pay within a maximum period of six months.

Fraud loans should be classified as loss and be settled within 90 days of having been found out within the time limits adopted in this classification policy, whichever results less.

#### 4.4.3. Brazil

Any operation classified in risk level H (the highest) should be transferred to a compensatory account, with the corresponding debt to reserve, after six months since the first classification of such operation in risk level H, not allowing the registry in a shorter period. Any operation thus classified should remain registered in the compensation account for a minimum term of 5 years and until all procedures for its collection has been exhausted.

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### 4.5. Treatment of reclassifications and reprogramming.

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The treatment of reclassifications and reprogramming in a selection of countries is as follows:

#### 4.5.1. United States

In the restructuring of debt in problems, a bank grants the borrower some concessions (for example, a reduction in payments of the principal or interest) related to its financial difficulties, which otherwise would not give due to legal or economic reasons. The rolled over "problem" debt includes those loans or accounts receivable with financing of the restructured or rolled over leasing to provide concessions to the borrower. An extended or rolled-over loan at a rate defined equal to the present interest rate for a new debt with similar risk is not considered rescheduled debt.

A bank should develop a policy for rolled over problem debts to ensure that such items are identified, monitored and properly registered and controlled. These restructurings should be frequently made or the bank will probably face significant problems. Before making concessions over problem debts to a borrower, it is a good practice that operations be previously approved by the management board or by a committee of the board. Once approved, all these operations should be reported to the Management Board.

Bankers could be involved in formally restructure loans when the borrowers confront financial difficulties or in virtue of the condition of the borrower and payment prospects. These actions, if consistent with supervision practic-

es and prudent financing principles, could improve the collection prospects of a bank.

#### Formally rescheduled credit extensions

The rescheduled problem debt should be identified in the credit internal revision system of the institution and constantly monitored by management. In analyzing a formally rescheduled extension of the credit, the inspector should focus in the capacity of the borrower to pay the credit in accordance with the *amended terms*. In the case of formally rescheduled loans, it is frequently necessary to settle one portion of the principal due to the difficulties of the borrower to meet contractual payments. Under these circumstances, the same credit risk assessment given to non-rescheduled credits with partial settlements would also be appropriate in general for a credit not formally restructured. This means not identifying the remaining registered balance as special mention or classified if it is not guaranteed. The assignment of the special mention status to a formally rescheduled credit would be appropriate if, after rescheduling, the potential weaknesses continue. It would also be appropriate to classify a formally rescheduled credit extension when there are weaknesses well defined that obstruct the orderly payment of the credit, based on its reasonably amended terms.

#### 4.5.2. El Salvador

##### a) Debt rescheduling and refinancing

The extension of the payment deadline of an obligation will be understood as a deferment, without issuing a new contractual document and without a change in the credit reference. Reprogrammed credit is understood as the amendment in the conditions of payment of the original credit with or without amendment of the deadline, without issuing a new document and without changes in the credit reference.

Credits having been deferred, reprogrammed, or subject to any other judicial or financial arrangement that amends the conditions originally agreed upon will be denominated restructured credits.

Exception is made from the previous concepts of those amendments that due to macroeconomic conditions and problems not attributable to the debtor; take the entity to adjust the interest rate. As a consequence of the above, the entity could amend the credit deadline to maintain the amount of the installments.

Rolled over credit is understood as that credit granted that settles totally or partially other credits with default or payment capacity problems and that changes conditions of the previous credits.

Debtors whose original credits are restructured or rolled over will maintain their risk category in accordance with criteria defined in Guideline NCB-22 as long as the debtor satisfies with his/her own means, before restructuring or rolling over, the total of the accrued interests at the date of the transaction, without the latter being a product of new direct or indirect financing.

Debtors with refinanced or rescheduled credits that do not meet the previous condition will be classified in category C2 or in a category of higher risk, in accordance with symptoms that they present.

If the refinanced or rescheduled operation that does not meet with payment of the total of interests accrued continues with delays in the payment of established dues, for reasons of a prudent and sound risk assessment practice, will be classified as D1 or a category of higher risk, in accordance with symptoms presented, as long as:

- a. A fifth part of the new deadline agreed upon in credits for enterprises had not elapsed; or
- b. Six months of the new deadline agreed upon on housing or consumer credits had not elapsed.

Likewise, for rating effects, the accumulated default for such credits, at the date in which the restructuration or rescheduling is made, should be recorded in the files of these debtors.

##### b) Debt consolidation

Debt consolidation will be understood as credits granted to pay obligations that the

client has with the awarding entity or with another entity of the financial system, to take advantage of better market conditions. When one or more of the credits to be consolidated had been granted by the same entity and show a default of more than 30 days in the last 90 days, the consolidation will be considered as rescheduling.

#### c) Reclassification of rescheduled or rolled over credits

Debtors with rescheduled or rolled over credits can be reclassified to a lesser risk category if they meet the conditions of such category and besides:

- a. In the cases of credits to companies, the debtor:
  - i. Makes evident a regular service to his/her debts during at least one fifth of the new term agreed upon; and
  - ii. Settles at least 5% of the principal.
- b. In the case of housing and consumer credits, up to when the debtor shows normality in its payments of principal and interests, during the last six months.

“Regular debt service” and “normal payments” are considered the debt service, principal and interests, with a delay of no more than seven calendar days.

The above conditions will be required in the first reclassification effected to the risk category corresponding to the debtor, as per criteria described in Guideline NCB-22.

### 4.5.3. Peru

#### a) Refinanced operations

A refinanced operation is a credit or direct financing, no matter its modality, from which variations in the maturity and/or amount from the original contract are made, following difficulties in the debtor’s payment capacity.

Refinanced operation also occurs when the novation assumptions in article 1277 and subsequent of the Civil Code, take place, as long as they are product of difficulties in the debtor’s payment capacity. When a debtor’s payment difficulties motivate a subjective novation by delegation, such operations

will not be considered as refinanced, except if the debtor in substitution has linkages or belongs to the economic group of the substituted debtor.

All refinanced operations should be sustained in a credit report, duly documented, and analyzed individually taking into account essentially the debtor’s payment capacity, stating that the new credit being granted will be recovered in the interest conditions and term agreed upon.

Credits or financings granted originally under the modality or characteristics of revolving credit lines duly approved by the board, executive committee or credit committee (as corresponds) as long as its credit development does not imply that repayments, settlements or payment of services under such lines correspond to new financings, are not considered refinanced operations.

#### b) Restructured operations

A restructured operation is a direct credit or financing, whichever its modality, subject to reprogramming of payments approved in the process of rescheduling of ordinary or preventive contest, as the case may be, pursuant the General Law of the Competition System (*Ley General del Sistema Concursal*) approved by Law No. 27809.

#### c) Classification

At the moment of signing the refinancing contract or when approving the payments schedule for a refinanced or restructured credit the debtors previously classified as “Doubtful and Loss” should be classified in the Deficient category, as long as the debtor had demonstrated payment capacity in respect of the new credit schedule, through the punctual payment of agreed upon installments during two (2) consecutive quarters. The remainder of risk classifications should be maintained in their original categories with exception of debtors classified as Normal, which should be reclassified as “With Potential Problems”.

The new classification assigned, or that that kept its original classification, can be improved in one (1) category as long as the

debtor had demonstrated payment capacity in regard to the new credit schedule, which can be validated, among others, through the punctual payment of agreed upon installments during two (2) consecutive quarters, meeting the goals of the refinancing plan after a period equal and/or in accordance with classification criteria. However, if the debtor shows non compliance in the payment of agreed upon installments, non compliance with the goals agreed upon within one (1) quarter and/or deterioration of his/her payment capacity in accordance with what is stated in the regulations, the supervised company should proceed to reclassify the debtor.

In case refinancing or rescheduling contemplates a grace period, what is indicated in the previous paragraph will be applied as of the conclusion of such grace period. Companies in the financial system will follow up debtors subject to reclassification, and should incorporate quarterly reports in the debtor's file in respect of its credit behavior and the operational development of the same.

If as a consequence of the revision of the classification of a refinanced or rescheduled credit, non compliance with the new conditions established in the refinancing or rescheduling are determined, the risk control unit of the company will proceed to the corresponding reclassification.

#### d) Unit in charge of refinancing and restructuring

Supervised companies should assign a unit to be in charge of assessment of refinancing and rescheduling processes.

The referred unit should control and follow up operations mentioned in the previous paragraph. Such unit will be independent of business units. Its functions could fall in an existing division, as long as the staff in charge of granting the original financing (business unit) is not in charge of assessment and follow up of the refinanced or rescheduled financing.

Likewise, it corresponds to the Board to establish refinancing and rescheduling pol-

icies, and the referred unit should report quarterly to the Board or to an equivalent body, with information regarding assessment of operations analyzed.

#### e) Accounting registry of refinanced and restructured operations

Refinanced and rescheduled operations should be accountably registered in the corresponding accounts according to provisions in the Accounting Manual. Such operations can be accountably registered as current credits, if all the following conditions are met:

- > That the debtors of the credits are classified as Normal or With Potential Problems, as a consequence of the assessment of the payment capacity;
- > That the original credit had not gone through changes in contractual conditions that obey to difficulties in the payment capacity, for more than once;
- > That the debtor had paid at least twenty per cent (20 %) of the restructured or rescheduled debt's principal; and
- > That the debtor had demonstrated payment capacity in respect of the new credit schedule through punctual payment of the installments during the last two (2) quarters. To this effect, meeting the obligation in the date established by the contract will be considered as on time payment.

In case any refinancing and/or restructuring contemplate a grace period, what is stated in the previous paragraph will be applied at the conclusion of such grace period.

Interests, commissions and other charges generated by refinanced and restructured operations, once reclassified in the current category, will be accounted for according to the criterion applied to current credits established in the Accounting Manual.

Companies in the financial system should keep a permanent registry in control accounts of the rescheduled and refinanced operations that have been reclassified in the current category.

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## ABBREVIATIONS

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EIFs	Financial intermediation entities	OTS:	Office of Thrift Supervision (EE.UU.)
FASB:	Financial Accounting Standards Board	SEC:	Securities and Exchange Commission (EE.UU.)
FDIC:	Federal Deposit Insurance Corporation (EE.UU.)	SB:	Superintendence of Banks (Guatemala)
FFIEC:	Federal Financial Institutions Examination Council (EE.UU.)	SBEF:	Superintendence of Banks and Financial Entities (Bolivia)
FRB:	Federal Reserve Board (EE.UU)	SBIF:	Superintendence of Banks
IF:	Financial Institution	SBP:	Superintendence of Banks of Paraguay
LB:	Banking Act (El Salvador)	SBS:	Superintendence of Banking, Insurance and AFPs (Peru)
LBEF:	Banks and Financial Entities Act (Bolivia)	SFC:	Financial Superintendence of Colombia
LBGF:	Banks and Financial Groups Act (Guatemala)		
OCC:	Office of the Comptroller of the Currency (EE.UU.)		

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## ANNEX NO. 1

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### MEMBERS OF THE WORKING GROUP

#### **Association of Supervisors of Banks of the Americas (ASBA)**

##### **President: Alejandro Medina Moreno**

Superintendence of Banks, Insurance and AFPs of Peru

##### **Members:**

Peru	Superintendencia de Banca, Seguros y AFPs	Alejandro Medina Moreno
Bolivia	Superintendencia de Bancos y Entidades Financieras	Carla Ritha Solares Pareja
Colombia	Superintendencia Bancaria de Colombia	Fabio Andrés Villalba Ricaurte
Ecuador	Superintendencia de Bancos y Seguros	Rodrigo Mora Guzmán
Dominican Rep.	Superintendencia de Bancos	Luis Andrés Montes de Oca
El Salvador	Superintendencia del Sistema Financiero	Sigfredo Gómez
Honduras	Comisión Nacional de Bancos y Seguros	Jorge Antonio Flores Padilla
Guatemala	Superintendencia de Bancos	César Enrique Marroquín Fernández
Chile	Superintendencia de Bancos e Instituciones Financieras	Myriam Uribe Valenzuela
Brazil	Banco Central do Brasil	Wagner Soares de Almeida
Paraguay	Superintendencia de Bancos	Fernando Herrero Portillo
USA – FED	Federal Reserve System	David M. Wright
USA - FDIC	Federal Deposit Insurance Corporation	John Di Clemente

Technical Secretary of the Working Group: Rafael Diaz Wild (ASBA)

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## ANNEX NO. 2

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### PRESENT APPLICATION OF SOUND PRACTICES FOR CREDIT RISK MANAGEMENT IN THE FINANCIAL SYSTEMS OF NINE COUNTRIES IN THE REGION

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#### 1. Bolivia

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Sound practices of credit risk management of financial intermediation entities in the Bolivian market are framed in the internal policies of each entity, which should consider as a minimum the guidelines and provisions contained in the current regulatory framework. The LBEF contemplates the following limits and prohibitions:

- > Limits to credit concentration, such as:
  1. Limit up to five per cent (5%) of the bank's net equity, for credits with personal guarantee or without guarantee, granted to a borrower or group of borrowers, except if the credits are duly guaranteed. At non-banking entities, this limit is restricted to one per cent (1%).
  2. Limit up to twenty per cent (20%) of the bank's net equity, for credits with only one borrower or group of borrowers, duly guaranteed. At non banking entities this limit is restricted to three per cent (3%).
  3. Housing credits at non banking entities cannot exceed five per cent (5%) of the financial intermediation entity's net equity, with the possibility of reaching ten per cent (10%), with prior authorization from the Superintendence.
  4. In no case, the banking entity risk will exceed the net equity of the borrower.
- > Prohibitions:
  1. Implement credit operations with borrowers linked to the entity.
  2. Execute operations with guarantee of their own shares.
  3. Grant credits with the objective that their product be intended, through any means, to procurement of shares of the same bank.
  4. Execute operations with their managers and/or with borrowers or groups of borrowers linked to them; except their non executive employees, in which case the total of such operations cannot exceed one and a half per cent (1.5%) of the financial entity's net equity, or individually ten per cent (10%) of such limit.
  5. Give bails or guarantees or support in any way money obligations or mutual among third parties.

The new guidelines for credit risk management, which established general principles and minimum required guidelines for credit risk management, demand that entities establish a system that allows identification, measurement, monitoring, control and disclosure of exposure to this risk, the Board and superior management being in charge of this process. Therefore, each entity must adopt their own methodologies sustained in the best prudential management practices for credit risk, being able to use external or internal information or a combination of both, as stated in their methodology and that they are adequate to the nature of their business and efficiently contribute to the achievement of long term objectives.

Strategies, policies and procedures should include stages of analysis, processing, approval, disbursement, follow up and recovery of credits, for national as well for foreign clients, and be based on sound and prudent banking and credit practices, for which they should take into account, among others, the following general considerations:

- I. The execution, development and result of each one of the stages of the credit process is of exclusive competence and responsibility of the EIF.
- II. The EIFs should see that asset and liability operations keep the necessary correspondence between them, in order to avoid financial imbalances.
- III. Before granting a credit, the EIFs should verify that the applicant is in the capacity of meeting obligations in the conditions to be agreed upon.
- IV. The EIFs should grant their credits only in the amounts and terms necessary to implement the operations to which financing is directed.
- V. Funds lent should be disbursed to the debtor in an adequate way to the end purpose of the credit.
- VI. The amortization or payment schedule of credits granted by the EIFs should adapt to the productive cycle of the financed activity, the nature of the operation and the debtor's payment capacity. In medium and long term credits, periodic payments should be stipulated which under no circumstances should be for periods longer than one year.

VII. The policy of credit reprogramming established by each EIF should not be directed to delay the recognition of a bad situation in relation with the debtors' solvency.

On the other hand, the EIFs should have specific policies for valuation and updating of the value of real estate or moveable goods received as guarantee, be these perishable or not.

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## 2. Brazil

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It is important to highlight that Brazilian supervision has introduced an integral risk assessment model to estimate and classify risks and controls of financial institutions. It is a rating model that offers an overall framework to evaluate those financial and operational factors that is imperative to analyze in order to express, in a sole rating, the opinion of the supervisor about an authorized financial institution. Therefore, this model is used as well to assess operational and credit risks.

The integral risk assessment assumes separation of the institution in significant Commercial Activities. Each activity is assessed in relation to commercial risks, internal structure and control, based on a series of specific criteria. A score corresponds to each assessment criterion. Individual scores and results of the assessment are aggregated at the next superior level to finally reach to a definitive score or result for the banking institution or the group. This is the rating of the institution.

The model has two components:

- a Examination of the financial return or quantitative analysis that uses the established coefficients to determine a unique rating for the institution;
- b The risk assessment framework, that allows assessment of the inherent risk level and the quality of institutional controls. The assessment should be made on the basis of specific risk and control groups that will support the analysis of the risk profile of the institution. The assessment is carried out at the level of Commercial Activity, adding up ratings at the institutional level using an algorithm.

The rating process is directed by in situ inspectors, who are based on their own supervision criterion. Specialized teams give support to the in situ inspector at the time of rating their respective

spheres of competence, expressing, when pertinent, their disagreement with a rating assigned. The process also includes a program of quality control, with a Rating Committee in charge of giving their clearance to each rating.

The qualitative risk assessment is directed to specific risks such as credit and operational risks. Its objective is to specify the inherent risk level and the efficiency of controls of each Commercial and Functional Activity significant to the institution. When assessing risk groups, the inspector should assess the level of inherent risk without consideration of controls. In the rating model, controls are assessed separately.

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## 3. Chile

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The Superintendence uses an assessment risk based model to classify financial institutions, which is based in sound practices.

The approach of the assessment considers the following subject groups:

- a. Administration of credit risk and global management of the credit process.
- b. Management of the financial risk and treasury operations.
- c. Administration of operational risk.
- d. Administration of risks to exposures abroad and control on investments in societies.
- e. Administration of the business strategy and capital management.
- f. Quality management of service to users and transparency of the information.
- g. Prevention of assets laundering and financing of terrorism.
- h. Management of the internal audit role and role of the audit committee.

Subjects indicated in letters a), b), c) d) are mainly related to the timely follow up of risks. Those marked with letters e) and f) are especially related to the capacity to address contingency scenarios and finally those mentioned in letters g) and h) are related with internal control, even though this last aspect is also inserted in those subjects incorporated to risk timely follow up.

In regard to information systems for decision making mentioned in the law, these are present, in general, in all the subjects.

Regarding the specific subject of credit risk, the assessment includes examination of credit risk man-

agement and risk factors of the credit process that go from the definition of target market up to the recovery of the loans.

The importance of the assessment, in the first place, is the compatibility between policies and procedures established by the entity in regard to the volume and complexity of its operations and its commercial strategy. Along with this, the manner in which policies have been established and the way in which the front office of the company participates in their approval and supervises its compliance, as well as quality and effectiveness of controls directed to ensure compliance with policies and procedures inherent to **issuances**.

Sufficiency and efficacy of functional segregations are also a matter of examination, especially those that should exist among commercial areas and those in charge of the role of risk administration and internal audit. It is essential, on one hand, that the credit risk administration be an effective counterpart of the risk taking areas, and on the other, that the independent position of the internal audit role allows an adequate coverage and deepness in revisions and the timely adoption of corrective measures on the part of audited areas.

On what concerns credit risk administration, the mechanisms and techniques for detection, setting of limits and timely recognition of risks assumed by the entity in the development of its credit activities will be assessed. In this context, it is the capacity of the entity to maintain its portfolio permanently well classified, its control over risk factors associated to its operations and its disposition to recognize in its results, and in a timely way, individual credit risks to which it is exposed, as well as its capacity to limit concentration risks or those of the portfolio in general.

Associated to the above, a relevant aspect of assessment is the examination of coverage and deepness of information on debtors, regarding their payment behavior as well as that of their overall financial conditions.

In relation to what has been described above, a good management can be demonstrated, for example, in circumstances such as:

- > The entity maintains policies for risk administration approved by the board or superior management, that take into account the importance of risks considering the volume and complexity of operations, growth projections and development of new businesses.

- > Approved policies for risk administration consider especially identification, quantification, limitation and control of large exposures in clients, groups or economic sectors.
- > The structure of limits, on what concerns individual risk of operations as well as portfolio risk, is consistent with a tolerable level of exposure to risk according to its overall financial conditions.
- > Policies and procedures related to risk administration are known and enforced by all the staff involved. Likewise, procedures established for the different stages of the credit process are deeply rooted in the institution.
- > The entity has mechanisms that allow measurement and timely follow up of risk assumed, fully compatible with the volume and complexity of the operations.
- > Operations with related parties are subject to prudential criteria on risk administration and are granted in the same conditions of the rest of the credits.
- > The role of credit risk administration is developed independently of the business areas. Opinions issued by the officials in charge of that role are acknowledged and considered by the relevant different levels of the organization.
- > Information systems allow making a continuous follow up of risk exposure. They have the coverage and deepness necessary to serve in an efficient way the process of decision making.
- > Internal audits cover adequate identification, quantification and prioritization of different risks related to issuances.

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## 4. Ecuador

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Ecuadorian regulations frame credit risk within an integral risk management, for which it is stated for an appropriate risk management, phases of identification – measurement – control – monitoring, have to be met, indicating that this system should be in accordance with the nature, complexity and size of each entity. Besides, responsibilities in risk administration are stipulated; thus each entity should have:

- 1. Board or an alternate body** - in charge of the strategic definition of the business and the knowledge of the risks to which it is exposed; in charge of approval, implementation and control of policies and procedures; in charge of the proper implementation of a risk management system

that allows to identify, measure, control and monitor all risks.

2. **Integral Risks Committee** - in charge of advising the Board in all aspects referred to risk management and of overseeing compliance of provisions issued by the Board; composed by: one Representative of the Board, General Manager (commercial and business vision), Responsible of the Risks Unit (business risk vision).
3. **Integral Risks Unit**- in charge of overseeing and ensuring that the business areas are implementing the strategy, policies, processes and procedures of risk administration properly. It becomes the executing body of the Risks Committee in the daily and permanent tasks.

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## 5. El Salvador

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The following are part of sound practices of regulation and supervision of credit risk:

- a. There are precise provisions in the Banking Act (LB) to regulate credit risk, such as criteria for granting credits, credit policies and procedures, limits of financing, linked credits. The Superintendence for the Financial System empowers its Board to norms and regulations for the management of such risk, and Article 21 empowers the Superintendent to carry on supervision of such risk and others through the means that may be necessary.
- b. Article 63 of the LB establishes that banks should have policies and procedures for the management of credit operations, the same that are assessed and compliance with verified in inspection visits.
- c. The Superintendence has issued Guidelines to Classify Credit Risk Assets and to Constitute Sanitizing Reserves (NCB-22), which contain practices to be followed by banks to assess the quality of credit assets and the sufficiency of provisions for losses.
- d. Article 197 of the LB has set limits that should be met for the granting of credit to individual debtors and economic groups linked with each other. Likewise, Article. 202 and 203 limits the granting of credits to persons related by administration and property with the banking institution.
- e. Norms on the Award of Credits to Persons related to the Banks -NPB3-09, have been issued with the purpose of regulating this type of credits.
- f. Norms on the Application of Limits in Risk Assumption of the Banks -NPB4-36, have been is-

sued to regulate limits of financing to individual debtors and economic groups linked among them.

- g. There is a system of Risks Central that is updated monthly by all banks, which provides sufficient information for the analysis extra situ; likewise, there is a linked credits system that is fed with information monthly reported by banks, with which related credits are permanently monitored.
- h. Norms on the Creation of Provisions for Country Risk NCES-02 that require that banks to have policies and procedures to control the country risk and the transference of credit operations have been issued.

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## 6. Guatemala

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Title VI (articles 50 to 58) of the Law on Banks and Financial Groups (LBGF) contemplates the minimum aspects financial entities should observe to control risks being assumed.

In this sense, issues such as the following are regulated: granting of financing (payment capacity and soundness of the credit operation); treatment of guarantees; aspects that banks should observe in the granting and enforcement of operations; valuation of their credit assets; goods received as payment; integral processes of risk management (credit, market, interest rate); administrative policies; and internal control systems adapted to the nature and scale of their businesses.

Article 53 of the LBGF establishes that banks and companies of the financial group are required to value their assets, contingent operations and other financial instruments that imply risk exposure. The regime for assets and reserves or provisions classification should take into account payment capacity and compliance of the debtor.

On its part, the Regulation for the Credit Risk Administration (RARC), contained in Resolution JM-93-2005 of the Monetary Board, regulates the issues that banks should observe in relation to the credit process, to the minimum debtors' information and what concerns the valuation process of their assets and the registry of provisions.

Likewise, the RARC considers, among other issues, that the banks should identify their target market; have policies to assess financial and qualitative information submitted by applicants to financing, for subsequent classification and valuation in accordance with their risk.

Additionally, articles 55 and 56 of the LBGF state that, in order to support a proper administration of the credit risk, banks should have policies, practices and procedures that allow an adequate control of their credit process at the scale of their businesses. For this reason, in order that financial statements reasonably reflect financial situation, banks should keep their credit assets properly classified and valued.

On the other hand, the Superintendence of Banks (SB), in accordance to what is stated in article 58 of the LBGF, implemented a risk information system, which contains information of loans granted through the regulated financial system. Access to this for credit analysis purposes, is allowed only to banks and financial groups and other financial intermediation entities that, upon request of the SB are approved by the Monetary Board.

### Exposure Limits

Limits of investment and contingencies concentration are regulated in article 47 of the LBGF. In such article it is stated that , with exception of financial operations that can be carried on without any limit with the Bank of Guatemala and with the Ministry of Public Finance, operations implying direct and indirect financing of any nature cannot be carried out, regardless of the judicial form adopted, such as but not limited to, bonds, promissory notes, obligations and/or credits, neither give guarantees or collaterals that in total exceed 15% of the computable equity to an individual or juridical person and the 30% to two or more persons related among them.

To the effects of what the LBGF has provisioned, the following definitions are established:

- a. Related persons: are two or more individuals or juridical persons independent from the banking institution to whom the credit is granted, but that maintain a direct or indirect relationship among them, for equity or administrative reasons, or of any other kind as defined by the Monetary Board.
- b. Linked persons: are individuals or juridical persons related directly or indirectly to the banking institution granting the financing, by equity or administrative reasons or of any other kind as defined by the Monetary Board.
- c. Risk unit: constituted by one or more related or linked persons that receive and/or maintains financing from a bank.

## Supervision Process

The review of issues mentioned previously is covered through the application of procedures of in-situ and extra-situ supervision. At the moment, banking practices are in a modernization phase, and their policies are being adapted to risk management. Later, as part of supervision procedures, a revision of the same will be conducted.

A credit asset that, according to the supervisor's judgment, presents additional risk factors, in accordance of what is stated in article 53 of the LBGF, and that had not been considered by the supervised entity, will be subject to additional provisions or reserves to those set by the bank.

Aggravating factors could include the following aspects: loss of more than 60% of the principal paid, lack of trust in financial information and deficient financial situation.

Notwithstanding the above, the supervision approach is still in evolution towards a risk based supervision focus, which would include with greater emphasis the verification of compliance with guidelines issued by the Basel Committee.

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## 7. Honduras

The following guidelines are being applied:

- a. Publication of financial statements (Circular CNBS No.17/2001).
- b. Capital adequacy (Circular CNBS No.56/2004). Credit risk based capital requirements are applied as established in the accord of 1988.
- c. Credit portfolio classification (Circular CNBS No. 37/2004 and No.57/2004). Types of credit are established: Large commercial debtors, small commercial debtors, and personal (consumer and housing). The first ones are the ones that owe 1.5% of the minimum social capital stipulated by the Central Bank for each type of financial intermediary. These are assessed, classified and provisions are required using the payment capacity, credit experience criteria, and as a last factor the existence of guarantees. Banks are requested to keep legal, financial, credit experience and guarantees information that for these debtors, which should be updated periodically. The rest of credit types are assessed by antiquity of the default. Five classification categories apply to all, which require provisions starting from category II.
- d. Registry and suspension of interests in credit operations (Circular CNBS No. 38/2004). Loans with

default of more than 90 days do not accrue interests and interests registered during the first 90 days are reversed from income. Credits category IV and V do not accrue interests.

- e. Guideline of Banks' guarantees and fixed assets valuation (Resolution CNBS No. 23/2003). Provides outlines to be followed by valuers of guarantees to make assets valuations that banks accept as guarantees in the granting and updating of the same during credit enforcement.
- f. Regulation for credit operations with economic groups (Resolution BCH No. 319-9/2003). The Financial System Act establishes a limit of 20% of the capital of the financial institution to be lent to a debtor or economic group. This could increase to 30% if banks demonstrate the Superintendence that flows of those that integrate the economic group are independent and up to 50% if the credit has sufficient guarantees rated by the Commission, understanding as such titles of the Central Bank of Honduras, from the State of Honduras and deposits kept in the institution when these are pledged.
- g. Regulation for credit operations with related parties (Resolution BCH No. 320-9/2003). The LSF establishes a limit to lend related parties up to 30% of the capital of the financial institution. All credits to related parties require authorization from the Central Bank of Honduras. The LSF and the Regulation define the types of relationships with the financial institution for property, management and presumption.
- h. Regulation on corporate government (Circular CNBS No. 16/2005). The LSF establishes a deadline ending in September 2006, for financial institutions to meet the provision on corporate government established in article 73 of the LSF, for which they should follow a plan of activities already submitted to the Commission. The corporate government system should include, among others, the following: corporate strategy, clear assignment of responsibilities and authority, internal control system, integral risk administration processes, adequate information systems and a management committee for such risks; appropriate mechanisms for risk identification, measurement, follow up, control and prevention; written policies for the concession of credits, investments, quality assessment of the asset, sufficiency in provisions and administration of the different risks; to have an internal written manu-

al for procedures and policies that the clients know.

- i. Article 30 of the LSF states that directors are accountable for: approving the financial and credit policy of the institution and oversee its implementation and instruct its proper functioning and execution; the policies, systems and processes that are necessary for a proper administration, assessment and control of risks inherent to the business; meet and have others meet at all times applicable provisions, laws and guidelines, especially article 73 of the LSF. Independent internal and external audits are required and that it meets requirements set by the Commission.
- j. Article 28 of the LSF states that directors should be competent and solvent persons with acknowledged credibility. Most of the directors should accredit to the Commission knowledge and experience in the financial and banking business and at least one fifth part of the members of the board or management council should be capable of performing such position properly and with professional independence in respect to the management and large shareholders. Article 34 of the LSF states that member of the Executive Board, the general manager and the rest of officials and employees of a financial institution will be accountable for their actions and omissions in the civil, administrative and criminal jurisdictions.

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## 8. Paraguay

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The Paraguayan banking system is not characterized by sophistication in its credit management processes. Its operations are rather traditional, the market is small and in this context, it has not deepened credit risk measurement models –there are exceptions, mainly Branches of Foreign Banks. It should be acknowledged besides that the Superintendence of Banks in Paraguay shows important weaknesses referred to prudential guidelines, organizational structure, human, budgetary and technological resources.

Notwithstanding, starting in 2002, through technical assistance of the IMF and the support of the Superintendence of Banks of Chile, the Paraguayan Superintendence of Banks is in the process of training and developing an improved credit risk supervision integral approach. Through these processes, a series of recommendations have been formulated to the financial system in order to implement better practices in core issues as: existence of well defined credit poli-

cies; appropriate procedures for credit approval, disbursement, management and follow up; existence of the risk role; and reasonable internal controls. Likewise, work has been done in the management of some informatics tools to improve credit risk supervision.

The present Paraguayan regulation -Resolution 8/96- is one of the main weaknesses that counteract the application of sound practices, in spite of making administrators accountable for an adequate risk management. Its main deficiencies are:

- > An operation enters in default only as of 61 days of expiry.
- > The accrual for payable credits is interrupted only when it is considered in default, and for credits with sole expiry date, the day after its expiration.
- > There are 5 classification categories. No precautions are demanded for credits classified in 1. Categories 2, 3 and 4 demand precautions of only 1%, 20% and 50% respectively. Generic precautions are not contemplated.
- > Real guarantees – even if considered collateral for the analysis of payment capacity – these can give total and indefinite coverage to credit operations. That is, the entity is not required to create precautions when it has sufficient guarantee, whose value – up to 70% in cases of real estate, and 50% moveable goods – is greater than the debt.
- > Operations of the same client are weighted – “minor risks” to 4% of the capital demanded for Banks – and operations among linked parties. A weighting resulting in 1.99 is considered category 1.
- > Deficiencies in writing of the criteria to analyze payment capacity of “major risks” – superior to 4% of the capital required for
- > “Minor risks” are only classified by the default factor.

It can be noted that the Banking Act establishes limitations in relation to maximum amount to persons linked to the Banking Entity (20% of the effective equity of the Institution) and for the rest of debtors (the previous percentage can rise according to collaterals).

In 2003, the Board of the Central Bank of Paraguay issued Resolution 8/2003, which improves in an important way several of the aforementioned aspects, being it a positive step towards the application of better prudential regulations to classify assets. How-

ever, this will be enforced only starting 2007 (in 2008 what concerns the application of generic precautions according to the establishment of internal policies and procedures appropriate to credit entities), at present there are strong pressures from different sectors for its amendment and/or suspension.

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## 9. Peru

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In order to implement the New Capital Accord (NAC) important actions are being undertaken on the basis of peculiarities of the Peruvian supervision and the local reality of the credit process, on issues related to definitions and impact estimates and in the organization of automated information. In April 2003, the SBS decided to conform the Basel II Special Committee (CEB), which was created as a coordination and technical assistance unit, with the representation of Assistant Superintendence of Banks, Legal Advisory and Risks’ as well as the Economic Studies Management.

To date the impact evaluation of NAC on each one of the banks of the Peruvian financial system has been completed. At present, the setting up of regulatory core principles needed for migration to Basel II, are being evaluated, together with the definition of preparatory steps for the new type of supervision that the internal models validation will imply. In effect, as part of this preparation initial visits will be done to these entities, in order to assess in-situ in an integral way the internal rating and scoring systems.

Additionally, it is important to highlight that one of the tools of greater power in extra-situ supervision in Peru is the Risks Central, whose objectives are to consolidate and classify credit risk information of entities in the financial sector and provide such information to supervised entities and the private information centrals. Since the SBS has at present a risks central and that it is valuable for supervision under the present regulatory framework, studies are being undertaken with the purpose of adapting it to the NAC.

### Credit Exchange Risk

On what concerns credit exchange risk, the Superintendence established guidelines in January 2005 for the adoption of minimal criteria for the administration of this risk on the part of supervised companies. Through this regulation, companies are required to elaborate their own methodologies to identify, quantify and monitor debtors of the financial system in regard to a possible impact in their payment capacity

due to exchange risk. This criterion is present since the first guideline for the debtor's assessment, now its incorporation into internal policies, its periodic quantification and the necessary corrective measures are being demanded. This resolution constitutes the first step of a series of measures of prudential character that seek to measure, monitor and resolve the mitigation of this risk in the financial system. It should be noted that the proposed supervision scheme for this risk is concurrent with supervision proposed in the New Capital Accord and will allow the SBS to acquire experience in supervision of internal methodologies at supervised companies before the implementation of the NAC.

Currently, follow up plans for the adjustment of regulation and methodologies for identification of this risk are being elaborated by, entities, with particular emphasis in the consistency of criteria for identification, on internal policies and procedures to rate, grant and monitor credits in foreign exchange, and in verifying the existence of internal studies of the impact in case of exchange shocks.

### Country Risk

On what concerns country risk, it should be mentioned that a regulation has been issued for administration of this risk, which includes minimum prudential criteria. According to this guideline, companies should have systems and models for measurement of country risk that are in accordance with the volume of their international operations, their complexity and with the level of risk faced. It should also be highlighted that it has been decided that the country risk should be incorporated into the assessment of the integral risk of every ongoing financial operation, inside and outside the balance sheet, with persons not residing in the country, in such a way that in financial operations in which the credit risk and the country risk do not concur, the most stringent criterion is applied.

### Indebtedness

Another of the issues that should be particularly highlighted is the recent assessment on indebtedness that arises when the debtor assumes credit obligations above his/her payment capacity. In this sense, the need of companies to adopt a control system on indebtedness has been identified; this would allow them to identify, measure, and control and adequately report their exposure levels. Considering that problems in payment capacity could

be associated with an intensive use of the credit line or a growing exposure of the entities, a regulation has been issued recently requiring companies to establish within their commercial policies, as well as those for granting, amending and reviewing revolving credit lines, explicit criteria and measures incorporating the risk of indebtedness of retail debtors.

In this sense, companies should take into account, at the time of granting new detail credits, or amending the amounts of credit or existing lines, the payment behavior and the total and potential indebtedness (personal guarantees, lines not used, etc.) of the debtor in the financial system as well as all available updated information that allows to assess the payment capacity and global indebtedness.

Likewise, companies should be provided with systems and procedures that allow an adequate follow up of the level of total and potential indebtedness and the payment capacity of debtors. Thus, companies should be in the capacity of identifying those debtors that, according to their own credit policies, are in a situation of over indebtedness and take the corresponding corrective actions.

### Classification of Banks

Finally, it should be mentioned a project initiated in 2005 and that at present is being tuned up referring to the development of an internal classification methodology for financial system companies. This methodology, under uniform criteria but with a certain degree of flexibility, allows assessing particular conditions or situations at each entity and collects information obtained during inspection visits. The process implies to supervise companies and determine if they are identifying, measuring and adequately administering all their risks. Results of this process are evaluated by a Classification Committee to define the final classification of an entity. The classification of entities will allow prioritizing supervision resources towards those companies presenting a higher risk rating.

The classification methodology is based on risks and assesses the following seven aspects or items of risk of the banking entity: soundness, credit risk, liquidity risk, market risk, operational risk, profitability and efficiency and management and control; through a matrix that analyzes the following factors for each one of these items: internal environment, setting up of objectives, identification, risk assessment, response to risk, control activities, reporting and monitoring.

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## ANNEX NO. 3

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### PORTFOLIO CLASSIFICATION SCHEMES IN NINE COUNTRIES IN THE REGION, WITH EMPHASIS ON “ANALYSIS FACTORS”.

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#### 1. Bolivia

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##### Risk Management

Financial entities should have policies formally approved by all of the Board stating principles on which they manage credit risk in all its stages and aspects. These policies should respond to the complexity and volume of operations that characterize their business model and the risk profile being assumed; in a way that an adequate relationship between risk and profitability is achieved. Likewise, policies should be designed in accordance with the mission, vision and strategy of long term businesses of the EIF.

##### Assessment of debtors

Each EIF should have debtors' assessment policies, which should contain at least the following assessment criteria:

- > General factors: Referred to risk factors affecting indistinctly a group of borrowers:
- > Macroeconomic indicators: Each EIF should have procedures that allow the effective inclusion of this type of indicators in its assessments.
- > Sector analysis: Each EIF should have information that allows assessment of the industry to which the debtor belongs during all the stages of the credit cycle.
- > Group analysis: In the case of housing mortgage credits, consumer or micro credits, the behavior of the subject being assessed should be measured and evaluated in relation to groups of similar relevant characteristics.
- > Individual Factors: Referred to risk factors that are particular to each debtor, and that should be considered besides as criteria for clients' selection:
- > Assessment of the payment capacity: the payment capacity constitutes the core principle for debtors' assessment.
- > Define criteria to allow making decisions on the basis of financial analysis, the capability to generate positive cash flows, stability, trends, sufficiency of those in relation to the debtor's structure of liabilities adjusted to the productive cy-

cle of the business and the internal and external factors that could motivate a variation in the payment capacity in the short as well as in the long term.

- > In the case of debtors with massive credits, each EIF should have criteria that allows making decisions on the basis of stability of the repayment source, risk factors that could reduce income and the analysis of the global indebtedness.
- > The historic payment behavior of the debtor should be analyzed in the EIF as well as in other EIFs.

##### Rating and provision

The EIFs should permanently assess the total of their credit portfolios, including contingent assets that could materialize a credit risk in the future.

Each EIF should determine methodologies to assess and rate their debtors, based on their policies and procedures for risk management. Such methodologies can be based on a basis of mathematics, statistics or of any other nature that allow the EIF to achieve the global objective of efficient credit portfolio management. The Board should approve methodologies to be used, as well as any subsequent amendment.

The EIFs, on the basis of their methodologies will estimate the precautionary amount, through the estimation of the expected loss. The expected loss is composed by the probability of non compliance (PI), the loss given non compliance (PDI) and the exposure at the moment of non compliance (E).

Each EIF should adopt methodologies sustained in the best practices of risk management, using external or internal information or a combination of both, according to what their methodologies establish and that is appropriate to the nature of their business and contributes efficiently to the achievement of long term objectives of the EIF.

The Board should approve the methodologies, types of credit, internal risk categories, and make a statement on the sufficiency of the precautionary level.

Within the process of credit risk management, constant and periodic tests should be considered

that will allow measuring the efficiency of the model through contrast between results effectively achieved and results estimated by the methodology used by each EIF.

The Guidelines for Credit Risk Management state that the EIFS can define their own risk categories and establish for each of them the methodology to specify the necessary precautionary levels. While the internal methodologies mentioned are developed, the alternative system included in the portfolio guidelines, contemplates the following parameters to classify loans in the different risk categories:

For commercial credits:

Categories	Description
A	Cash flow in excess to cover financial obligations.
B	Cash flow in excess to cover financial obligations, but late payments could happen given transitory reasons.
C	Weaknesses in payment capacity. Insufficient cash flows only enough to pay interests and up to 80% of capital.
D	Weaknesses in payment capacity. Insufficient cash flows only enough to pay interests and between 60% and 80% of capital.
E	Weaknesses in payment capacity. Insufficient cash flows only enough to pay interests and up to 60% of capital.
F	Without payment capacity, do not have ongoing business. Cash flows generated by other parties and own assets allow the recovery more than 50% of the remaining obligation.
G	Without payment capacity, do not have ongoing business. Cash flows generated by other parties and own assets allow the recovery less than 50% of the remaining obligation.
H	Insolvency. There are no alternative sources to cover financial obligations.

In the supervision process implemented by the SBEF (in situ) it has been established that the portfolio review is made considering the type of credit, applying specific programs and using supervision tools required to that end.

In Commercial Credits, the borrowers' review by the SBEF is made with a tool denominated CEDULA, which rests on the assessment of borrowers considering a subdivision for commercial short and long term credits. CEDULA contains an analysis factor,

that is the object of the loan, in which it should be specified if the loan is intended for working capital (short term) or for investment capital (long term). The assessment of the financial situation of the borrower on what refers to the relation between the term and the object of the loan, allows to establish if the capital requirements of the borrower are in accordance with the structure of the loan, with the operational flow generated by their activities and with the cycle of operational capital (for short term credits or operational capital); likewise, the amount of time (in accordance with the term of the loan) in which, with the present flows, would be able to settle its debts.

For consumer, housing mortgage and microcredits:

	Housing Mortgage	Microcredit / Consumption
A	Timely payment or default no later than 30 days.	Timely payment or default no later than 5 days.
B	Default between 31 and 90 days.	Default between 6 and 30 days.
C	Doesn't apply	Doesn't apply
D	Default between 91 and 180 days.	Default between 31 and 60 days.
E	Doesn't apply	Doesn't apply
F	Default between 181 and 360 days.	Default between 61 and 90 days.
G	Doesn't apply	Doesn't apply
H	Default greater than 360 days.	Default greater than 90 days.

For housing mortgage, consumer and microcredits, it is stated that SBEF supervision, in field inspections, assesses the credit administration of the EIF in order to verify if there are risk factors of uncollectability in addition to default and inappropriate policies for reprogramming operations and, consequently, the need to create generic precautions due to additional risk.

Policies, practices and procedures for granting and credit management and for control of credit risk are assessed, verifying the existence of adequate credit technologies for the borrowers' selection, stipulation of the payment capacity, administration and recovery, as well as for an appropriate internal control system; the existence of policies for the treatment of reprogramming and the existence of an informatics system.

Whenever it is determined, based on a review of a representative random sample of borrowers and

under statistical criteria, that the policies, practices and procedures for credit granting, administration and control are not adjusted, as a minimum, to guidelines established in the present article, the EIF will be forced to create and maintain a generic precaution of 3% of the total of its credit portfolio.

#### Microcredit specialized supervision:

A supervision model in relation to most relevant risks immersed in the activity of micro financing entities was developed with the intention that all of the entities are supervised and controlled under the same standards without creating inequalities in the supervision task. The mentioned model contemplates two components that are related between them, which are described as follows:

1. An analytic component (extra Situ), whose objective is to stipulate the financial and equity situation of the entities through examination of the areas considered of greater importance in the financial structure of one micro financing entity, through monitoring key financial performance indicators such as liquidity, soundness and profitability, becoming a tool for monitoring and early warning of the potential deterioration of the financial position of the EIFs.
2. One for In Situ verification, that is constituted by periodic inspection visits to supervised institutions, with the purpose of verifying:
  - > Quality of information through verification of reasonability of the accounting practices carried out by entities.
  - > EIFs governance quality, representativity of members of the Board, control by the firm, management and powers assigned to it. This analysis responds to associative characteristics of the structure in this type of firms, where non-profit entities or multilateral organizations prevail, that do not permit a clear identification of the owner group.
  - > The quality of the credits portfolio. According to particular characteristics of the EIFs credit portfolio, a method to measure credit risk has been developed, that is also supported by the portfolio guidelines. Credit risk or the deterioration in the micro credit portfolio quality originates in two sources: a) default in the credits portfolio; b) risk of uncollectability in addition to default. Given that the microcredit portfolio risk originated in default is a risk declared by the entity and for which specific precautions are created for losses due to uncollectability, the additional risk

gets greater relevance within the analysis of global risk of the portfolio.

- > The analysis and specification of the additional risk have the objective of quantifying or estimating the potential portfolio losses attributable to internal factors, to weaknesses in the structure for internal control of the entity, as well as to external factors. For the determination of the additional risk, work is done based on three elements:
  - The risk of deterioration in the micro credit portfolio quality, contrary to what occurs with the commercial portfolio, originates in deviations and non compliances with credit policies, and in the deficient application of credit technologies. The identification of deviations, non compliances and deficiencies is done through the review of a representative sample of credits.
  - Verification is made to see if the entity carries out an analysis on the degree of adjustment of its credit technology to its target market, considering new market trends and changes in the context with the purpose of identifying threats and opportunities in the sector.
  - Another factor that determines the presence of additional risk is the potential loss due to contagion, meaning the incidence of shared clients indebted with more than one entity and with greater risk in other financial entities, could determine the quality of the portfolio. With that purpose, a model was developed to measure the over indebtedness of the micro finance sector at present being used by the SBEF.

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## 2. Brazil

Banks and other financial institutions authorized to operate through the Central Bank of Brazil, rank their credit operations in ascending order by risk, according to the following levels:

- I - level AA;
- II - level A;
- III - level B;
- IV - level C;
- V - level D;
- VI - level E;
- VII - level F;
- VIII - level G;
- IX - level H.

Classification of the operation at the level of the corresponding risk is a responsibility of the institu-

tion that maintains the credit and should be done on the basis of verifiable and consistent criteria supported by internal and external information, including, at least, the following aspects:

- I - in regard to the debtor and its guarantors:
  - (a) economic and financial condition;
  - (b) degree of indebtedness;
  - (c) capacity to generate results;
  - (d) cash flow;
  - (e) management and quality of controls;
  - (f) payment timeliness and delays;
  - (g) contingencies;
  - (h) economic activity sector;
  - (i) credit limit;
- II. - in regard to the operation:
  - (a) nature and purpose of the operation;
  - (b) characteristics of the guarantees, in particular what refers to sufficiency and liquidity;
  - (c) value.

The classification of credit operations carried out by physical persons should as well take into account, income and the condition of assets, and information that identifies the debtor.

Classification of credit operations of the same client or economic group should be defined taking into consideration the one that shows greater risk, exceptionally admitting a different classification for a specific operation.

The operations' classification should be reviewed, at least:

- I. once a month, at the time of making inspection of the balance sheet and temporary balance sheets, as a result of any delay in partial payments of the principal or interests, observe the following rules:
  - (a) delay between 15 and 30 days: level of risk B, minimum;
  - (b) delay between 31 and 60 days: level of risk C, minimum;
  - (c) delay between 61 and 90 days: level of risk D, minimum;
  - (d) delay between 91 and 120 days: level of risk E, minimum;
  - (e) delay between 121 and 150 days: level of risk F, minimum;
  - (f) delay between 151 and 180 days: level of risk F, minimum;
  - (g) delay greater than 180 days: level of risk H;

II once every six months, for operations of the same client or economic group, whose value exceeds five per cent (5%) of the corresponding shared capital adjusted:

III. once every twelve months, in all situations except credit operations contracted with a client whose total responsibility is less than fifty thousand *reales* (R\$50,000), which can be classified in accordance with any internal assessment model or according with delays mentioned in (I) above; such classification is made, as a minimum, at the level of risk A. The Central Bank of Brazil can change the value mentioned by this Article 5.

Any non compliance occurred implies the reclassification of the debtor's operation at the risk level H, without regard to other measures of administrative nature.

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### 3. Ecuador

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In "Elements of risk assets rating and its classification:" for commercial credits, the analysis factors to specify one risk category (A, B, C, D or E) are: payment capacity, guarantees, information from the Risks Central, credit experience of the client and market and economic environment risks.

For commercial loans of less than USD 25.000, the rating will be done in relation to the default, thus, credits overdue up to one month will have rating A; from 1 to 3 months of default will have B; from 3 to 6 months of default rating C; from 6 to 9 months of default rating D; and more than 9 months of default rating E.

For consumer credits, the rating will be done in relation to default, thus credits overdue up to 15 days, will have rating A; from 15 to 45 days rating B; from 45 to 90 days rating C; from 90 to 120 days rating D; and more than 120 days overdue rating E. If the banking supervisor detects weaknesses in the credit risk management for consumer operations, the entity should make the rating in relation to more stringent default parameters, thus credits in default for up to 5 days will have rating A; from 5 to 30 days rating B; from 30 to 60 days rating C; from 60 to 90 days rating D; and more than 90 days overdue rating E.

For housing credits, rating will be done in relation to the following default periods: overdue up to 3 months rating A; overdue from 3 to 9 months rating B; overdue from 9 to 12 months rating C; overdue from 12 to 24 months rating D and overdue for more than 24 months rating E.

For microcredit risk ratings will be given in the following way: rating A for credits overdue up to 5 days; from 5 to 30 days overdue rating B; from 30 to 60 days overdue rating C; from 60 to 90 days overdue rating D; and more than 90 days overdue rating E.

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#### 4. United States

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All credits, independently of being wholesale or retail, are subject to the rating regulatory process of "passing," "special mention," "substandard," "doubtful," or "loss," the latter three designations indicating that credit has been adversely rated.

The main difference is the focus the inspectors take to rate credit risks. For wholesale credits, inspectors rate individually the risk for each credit after reviewing the credit file and discussing the credit with the bank management. Most of retail credits are typically rated in accordance to guidelines for uniform rating that determines credit rating based on the default status of the borrower. These insured credits by a type of liquid collateral, for example, cash or negotiable securities titles, are not adversely rated. Likewise, government guarantees are not adversely rated.

The criteria used to assign quality ratings to credit extensions that present potential problems or well defined weaknesses, are mainly based on the degree of risk and probability of orderly payment and its effect on the soundness and safety of a bank. Credit extensions that present potential weaknesses are ranked as "special mention," while those that present well defined weaknesses and a clear loss possibility are assigned to the more general category of "classified." The term classified is subdivided in subcategories that range from the minimum to the most severe: "substandard," "doubtful," and "loss." The number of classified credit extensions as a percentage of capital represents the standard measure to express general quality of a bank's credit portfolio.

These rating guidelines only apply to individual credits, even if segments or complete portions of the industry to which the borrower belongs to are going through financial difficulties. Assessment of each credit extension should be based on the fundamental characteristics that affect collectability of that particular credit. In general terms, problems associated with some segments or sectors of an industry, like certain real estate commercial markets,

should not carry out too pessimistic assessments of particular credits in the same industry that are not affected by difficulties of the sectors with problems.

#### Assessment of credit quality

The assessment of each credit should be based on fundamental aspects of each credit in particular, including as a minimum:

- > resources and general financial condition of the borrower, including the present cash flow and the stabilized cash flow (capacity);
- > the credit history of the borrower;
- > the character of the principal or the borrower;
- > the purpose of the credit in relation to the payment source; and
- > the types of secondary payment sources available, such as the backup of the guarantor and the value of the collateral and cash flow, when these are not a main source of payment. The undue dependence on secondary payment sources should be questioned and the bank's policy in regard to allowing such practice should be reviewed.

If the borrower's credit extension term or the contractual rights to obtain funds are greater, greater is the risk of an adverse development in the borrower's capacity to repay the funds. This is due to the trust in the payment capacity of the borrower which is based on the previous financial compliance of the borrower as well as in projections of future compliance. The failure of the borrower to meet its financial projections is a credit weakness, but does not necessarily mean that the credit extension should be considered as special or classified mention.

On the other hand, the lack of capacity to generate the sufficient cash flow to service the debt is a well defined weakness that obstructs the payment of the debt and, in most cases, merits its classification. In stipulating which is the rating category of the credit quality, the inspector should consider the extension of the deficit in the operating figures, the support provided by any collateral pledged, and/or the support provided by consignees, endorsers or guarantors.

#### Special mention category

A credit extension of a special mention is defined as one that has potential weaknesses that merit special attention on the part of the administration. If not corrected, these potential weaknesses could, at

*some future date*, result in deterioration of the credit payment perspectives or of the credit position of the institution. Credits with special mention are not considered as part of the classified extensions of the risk category and do not expose an institution to sufficient risk to justify its classification. Credit extensions that could be described in this category include those in which:

- > the loans official may not have the capacity of supervising the credit properly due to an inadequate contract for credit or loan;
- > there are questions in relation to the condition and/or control of the collateral;
- > economic or market conditions could unfavorably affect the obligor in the future;
- > the existence of a downward trend in operations of the obligor or an imbalanced position in the balance sheet, but not to a degree that obstructs the payment; and
- > the presence of other deviations in prudent financial practices.

### Classification categories

In classifying a specific credit, it may not be appropriate to assign the total balance under one category of risk quality. This situation is referred to as “division of classification” and could be adequate in certain cases, especially when there is more certainty on the collectability of a portion of a credit extension than in other. The classifications division could also involve special mention as well as credits with “passing” rating -those that are neither special mention nor classified. Credit extensions that present well defined credit weaknesses, can justify its classification based on the description of the following three classification categories:

#### > Extensions of substandard credit

A “substandard” credit extension is inadequately protected by the present soundness value and payment capacity of the obligor or of the collateral pledged, if there is one. Credit extension thus classified should have a weakness or well defined weaknesses that obstruct the settlement of the debt. They are characterized by the specific possibility that the bank will bear part of the loss if deficiencies are not corrected. The potential loss, while existing in the total amount of substandard credits, does not have a reason to exist in individual extensions of credits classified as substandard.

#### > Extensions of doubtful credit

An extension of a credit classified as “doubtful” has all weaknesses inherent to a classified substandard credit, with the additional feature that weaknesses make collection or settlement in total based on actual existing facts, conditions and values, highly questionable and improbable. The possibility for loss is extremely high, but due to certain important pending factors, reasonably specific that could favor and strengthen credit, its classification as estimated loss is deferred until its status is specified with greater accuracy. Pending factors could include a proposed acquisition or merge, liquidation process, capital injection, execution of taxes in the additional collateral or rescheduling plans.

Inspectors should avoid classifying a complete credit as doubtful when collection of a specific portion appears as highly probable. An example of the adequate use of the doubtful category is the case of a company in liquidation, in which the trustee of the bankruptcy indicates a minimum disbursement of 40 per cent and a maximum of 65 per cent for unsecured creditors, including the bank. In this situation, estimates are based on valuations of liquidation value when actual values are yet for liquidation. By definition, the only portion of the credit that is doubtful is the difference of 25 per cent between the 40 and the 65 per cent. An appropriate classification of such credit would show 40 per cent as substandard, 25 per cent as doubtful, and 35 per cent as loss.

Inspectors should in general avoid repeating doubtful classification in subsequent inspections, since the time between inspections should be sufficient to resolve pending factors. This does not mean that situations may occur when the doubtful classification is justified. However, the inspector should avoid an excessive continuation if repetitively, during the course of time, no pending events happen and the payment is once again deferred in waiting for new developments.

#### > Extensions of Loss Credits

Extensions of credits that are classified as “loss” are considered uncollectible and of so little value that their delay as negotiable assets is not justified. This classification does not mean that the credit does not have absolutely any rescue or recovery value, rather that it is not practical or desirable to defer settlement of this asset basically without any value even if partial recuperation could be made in the future.

Banks should not be allowed to try long term recoveries while the credit continues in the banking books. Losses should be taken in the period in which they appeared as uncollectible. In some cases, inspectors should determine a reasonable net value in books for a credit extension with problems and require a value adjustment through a charge to reserve for losses on loans and leasing, or to other operation expenses in the case of "other assets." Such specification should be based on tangible facts registered in the credit files of the bank and contained in reports on problem credits submitted to the executive council or its committee, and not only in oral statements of a bank's official.

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## 5. Guatemala

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The Regulation for the Credit Risk Administration (RARC) highlights two types of analysis of the payment capacity along the life of a credit asset. The first one corresponds to the assessment phase, thus denominated at the moment an application is known giving way to a new credit asset, an extension, an innovation or restructuring. The second corresponds to valuation, understanding with this the moment at which the banking entity stipulates the reasonable recovery value of its credit assets.

The valuation process is the result of analysis of credit risk factors that allow establishing the classification of the credit asset and the establishment of reserves or provisions, when appropriate.

The assessment of larger entrepreneurial applicants or debtors includes analysis of financial and qualitative issues. Financial issues contemplate the following:

- > historic financial behavior based on information required in prudential provisions;
- > capacity of generating sufficient fund flows to attend the timely payment of its obligations within the term of the contract;
- > experience of payment at the institution and at other institutions;
- > relationship between debt service and the projected fund flow of the applicant or debtor;
- > level of indebtedness of the applicant or debtor; and
- > relationship between the amount of credit asset and the value of guarantees. In the case of credits with actual guarantees, there should be information on the physical state, juridical situation and,

when applicable, insurance of the goods in question. For the case of personal guarantees, the guarantor, the lender, co-debtor, guarantor or collateral provider will be assessed in the same way as the applicant or debtor, expect that for the guarantor, co-debtor, or collateral provider it will not be compulsory to request the projected funds flow.

As part of the qualitative aspects, consideration is given to: the nature of the business or industry and risks associated to its operations; and the objectives of the applicant or debtor and estimates on its competitive position related to the economic sector to which he/she belongs.

On its side, article 29 of the RARC defines the classification procedure of the credit assets from major entrepreneurial clients, using as classification criteria the payment capacity and the default. Article 30 stipulates classification categories and the criteria to be observed to position them in A, B, C, D and E.

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## 6. Paraguay

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There are two great classifications of factors of credit analysis. "Major Risks" (commercial, industrial, services, agricultural, others) with credits higher than 4% of the minimum capital required for Banks –USD 3,9 million- and 3% for financial entities –USD 1,9 million.

Basically, these have two analysis factors: assessment of the payment capacity –economic and financial issues, analysis of balance sheets, cash flows, verifiable declaration of goods and income, etc.- and default. The same are essentially quantitative, with a very low weight of the character of the client. There are minimum documentation requirements. According to the result of the assessment, risk category is assigned (1 to 5).

For the "minor risks" (minor commercials, medium and small enterprises, consumer, others) whose credits are lower than percentages mentioned previously, only the default factor is considered, with exception of clients with creditors' notification.

The new regulation –enforced as of 2007- basically foresees the same scheme with the following main modifications: the percentage over the minimum capital is reduced to 2% to consider a higher risk, and those minor risks that do not have the minimum documentation required could be classified in category 3 (1 to 6).

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## 7. Peru

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As part of the evaluation of the adequate development of the credit process, the Superintendence evaluates analysis factors considered for the credit award, which should mainly include the cash flow of the debtor, its financial situation, net equity, future projects and other relevant factors to determine the debt service and payment capacity.

### Classification of the debtor for prudential purposes – General Criteria

- a. The risks unit should be in charge of classification of the debtor, which should be independent of the so called business units (front office).
- b. The debtor classification is mainly defined by the debtor's payment capacity, through his/her cash flow and the degree of compliance with his/her obligations. Likewise, soundness, ranking assigned by other companies of the financial system, as well as his credit history, among other prudential elements, should be taken into consideration.
- c. In case the debtor's accountability with the same company includes credits of different types, his/her classification should be based in the higher risk category, without consideration of those credits that the debtor maintains with a balance of less than S/. 100.00 (one hundred *Nuevos Soles*) with the institution.
- d. In case the debtor's accountability in two or more companies of the financial system includes obligations that considered individually result with different classifications, the debtor will be classified in the higher risk category assigned by any of the companies whose credits represent a minimum of twenty per cent (20%) in the system. The revision of a classification thus made will be designated in the following paragraphs as "alignment."
- e. The entity that makes the monthly alignment should consider the debtor's classification based on the latest available information sent by this Superintendence through the "Consolidated Credit Report – RCC". Only one level of discrepancy will be allowed with respect to this category, which should be justified and reflected in the debtor's file.
- f. For the alignment purpose, consideration should be given to:
  - I. Credit portfolios kept by financial system companies, including the penalized credit portfolios

that financial system companies keep and the credit portfolios of the financial system in liquidation;

- II. The credit portfolios that had been transferred through endowment or any other similar contract, as long and when the company of the financial system making the transfer keeps the risk of such portfolio.

### Commercial credits

To classify debtors in the commercial credit portfolio, the cash flow of the debtor should be taken into account primarily, which includes also the acquaintance with the global indebtedness of the debtor company with third party creditors in the country and abroad and its level of compliance with the payment of such debts.

Among these classification parameters, the one reflecting the higher risk for the debtor will prevail. In any case, the compliance with the debtor's obligations will be only considered as valid parameter when the funds used for that purpose are generated by the debtor itself and are not flows financed directly or indirectly by third parties. Such compliances are not to be considered as valid parameters when they constitute a simple accounting device, without mediation of real income. These criteria will be of general application, including cases of operations as matter of rescheduling or restructuration, as well as those financial leases that had their origins in commercial credits.

Likewise, the possible effects of financial risks related to **currency mismatches**, terms and interest rates of the financial statements of the debtor company that could influence its payment capacity, including operations with derivate financial instruments, should be expressly considered.

In assessing the cash flow, the company of the financial system should take into account the degree of sensibility in front of variations in the economic and regulatory environment in which the debtor company is evolving, as well as the degree of vulnerability to changes in the composition and quality of its clients and providers' portfolio and its contractual relationships with them. Additionally, the quality of management of the debtor company and its information systems will be considered.

Debtor's non compliance with payment of the debt in the agreed upon due dates assumes a situation of inadequate flow.

## MES credits, consumer and housing mortgages

In the case of debtors' classification of MES, consumer and housing mortgage credit portfolios (retail debtors); their payment capacity will be taken into account measured in relation to their compliance degree reflected in the number of days in delay, as well as the debtors' classification with other companies of the financial system.

For retail debtors, the alignment will only be made when the classification in the entity whose credits represent a minimum of 20% in the system is either "Doubtful" or "Loss."

To calculate the alignment of retail debtors, the credit information of the debtor with 5 years or less of antiquity computed since the first day of delay will be taken into account.

In case that the company grants financing to retail debtors that previously had been part of the penalized portfolio and had transferred, before the expiration of a deadline of 2 years computed since the date of transfer, a provision of 100% for one year should be created.

### Classification categories

The debtor will be classified in accordance with the following categories:

- > Normal Category (0)
- > Category with Potential Problems (1)
- > Deficient Category (2)
- > Doubtful Category (3)
- > Loss Category (4)

### Classification of the debtors of the commercial credit portfolio

#### Category: Normal (0)

The debtor:

- a. Presents a liquid financial situation, with low level of equity indebtedness and adequate structure of the same related to its capacity to generate profit. The cash flow is not susceptible to significant deterioration due to important amendments in the behavior of its own variables as well as those linked to its sector of activity; and
- b. Meets with punctuality the payments of obligations.

Additionally and without regard to what is established in a) and b) above, the company of the financial system will consider if the debtor:

- a. has a consistent and updated information system, that allows permanent information on its financial and economic situation;
- b. has a qualified and technical front office, with appropriate internal control systems;
- c. belongs to a sector of economic activity or business branch that registers growing trends;
- d. is highly competitive in its activities.

#### Category: With potential problems (1)

The debtor has any of the following features:

- a) A good financial and profitability situation, with moderate equity indebtedness and adequate cash flow for the payment of debts' principal and interests. The cash flow tends to weaken to address payments, given that it is extremely sensitive to modifications in relevant variables; or
- b. Occasional and small noncompliance that do not exceed 60 days.

#### Category: Deficient (2)

The debtor presents any of the following features:

- a. A weak financial situation and a cash flow that does not allow attending payment of the total of the principal and the debts' interests; being able to cover only the latter. The cash flow projection does not show improvement in time and presents high sensitivity to minor and foreseeable modifications of significant variables, weakening even more its payment possibilities. It has scarce capacity to generate profits; or
- b. Noncompliance of longer than 60 days but not exceeding 120 days.

#### Category: Doubtful (3)

The debtor shows any of the following features:

- a. A cash flow obviously insufficient, not reaching coverage of payments of principal nor interests; presents a critical financial situation and a very high level of indebtedness and is forced to sell important assets for the current activity and that, materially, are of significant size with negative results in the business; or
- b. Noncompliance of more than 120 days that do not exceed 365 days.

#### Category: Loss (4)

The debtor shows any of the following features:

- a. A cash flow that does not cover production costs. It is in a situation of suspension of payments, be-

ing feasible to presume that it will also have difficulties to meet eventual rescheduling agreements; it is in a state of decreed insolvency or is forced to sell assets important for the current activity and that, materially, are of significant size; or

b. Noncompliance of longer than 365 days.

### **Classification of the debtors considered MES and of the debtor of the consumer credit portfolio**

These debtors should be classified according to the following criteria:

#### **Category: Normal (0)**

These are debtors that are meeting the payments of their installments according to what was agreed upon or with a delay of up to 8 calendar days.

#### **Category: With potential problems (1)**

These are those debtors that register delay in the payment of installments from 9 to 30 calendar days.

#### **Category: Deficient (2)**

These are debtors registering delay in the payment of installments from 31 up to 60 calendar days.

#### **Category: Doubtful (3)**

Are those debtors that register delay in payment of their installments from 61 to 120 calendar days.

#### **Category: Loss (4)**

Are those debtors showing delay in the payment of their installments of more than 120 calendar days.

### **Classification of the debtors of the housing mortgage credit portfolio**

These debtors should be classified in accordance with the following criteria:

#### **Category: Normal (0)**

These are debtors that are meeting the payment of installments in accordance with what was agreed upon or with a delay of up to 30 calendar days.

#### **Category: With potential problems (1)**

These are debtors that show delay in payment from 31 up to 90 calendar days.

#### **Category: Deficient (2)**

These are those debtors that show delay in payment for 91 up to 120 calendar days.

#### **Category: Doubtful (3)**

These are those debtors that show delay in payment from 121 to 365 calendar days.

#### **Category: Loss (4)**

These are those debtors that show delay in payment for more than 365 calendar days.

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## **8. Dominican Republic**

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### **Criteria for the assessment of the debtor**

The assessment of the credit portfolio risk will be done on the basis of the analysis of criteria established in the present Regulation, assigning the risk category corresponding to each debtor, taking into consideration particular conditions of each credit in order to estimate a preventive provision that would cover the expected losses of this portfolio. The assessment of the debtor will be done based on the total of its debts with the financial intermediation entity, in a way that there is a unique rating for each debtor. In no case, guarantees provided by the debtor can modify its rating.

The debtor's assessment consists in the analysis that each financial intermediation entity will do of the essential variables in respect of the same, with the purpose of establishing its solvency that is its capacity to meet its credit obligations, through sufficient and reliable information, and through the risk factors listed as follows:

- > Payment capacity of the debtor in respect of the totality of its obligations.
- > The historic payment behavior of its obligations with the financial intermediation entity and with the financial system.
- > Country risk.

Indicators that are described below will be the ones used by financial intermediation entities to assess the credit quality of each debtor; however, these could be enlarged when a deeper assessment of the debtor is needed. The use of additional indicators to those established in these Regulations, will not improve at any moment the rating of the debtor done in conformity of the indexes established here.

### **Payment Capacity**

This variable is specified by the capacity that the debtor has for generating by itself, income or flows that allow the timely attention of the payment of

principal and the returns of its financial obligations. When these are legal entities, such income will be principally determined by the net cash flow after operations. For natural persons, the payment capacity will correspond to the group of verifiable rents that the person or family group perceives, in case of having considered their global revenues. In this sense, the assessment of the cash flow constitutes the central aspect of the debtor classification. However, other financial factors should be considered within the assessment of the payment capacity of the debtor. Thus factors to assess within the analysis of the debtor's payment capacity are the following:

**Cash flow.** The debtor's capacity to generate flow coming from normal operations of the company should be assessed, that is through its main activity or turnover. The flow analysis should be based on the following key financial rationale:

- > Net cash flow after operations/ Interests, commissions and current portion of the long term debt.
- > Net cash flow after operations / Current liabilities.

Analysis should also be made of the operational flow of the company in the last 2 (two) years and the projected for the ongoing exercise, making a comparative analysis with the financial flow ratios of its main competitors in the industry.

If the debtor keeps obligations in foreign currency, the assessment of credit risk should incorporate that variations in the exchange rate could affect the cash flow of the debtor.

- > **Liquidity.** The liquidity analysis of the debtor will focus on the assessment of the main sources of income and expenses of the company, including commitments and obligations for contingent operations. A historic analysis of the trend and evolution of key financial ratios should be done:
  - Current Assets / Current Liabilities
  - Current Assets – Inventory / Current Liabilities
  - Working Capital = Current Assets – Current Liabilities.

In the same way, a comparative analysis of the present situation and the historic evolution of these ratios in the main competitors in the industry where the debtor participates should be conducted.

If the debtor keeps obligations in foreign currency, the assessment of the exchange position should be incorporated in the liquidity analysis, in order to

measure effects that the variation of the exchange rate could have on its financial flows.

> **Leverage.** The purpose of performing a leverage analysis of the debtor will be to learn about its present indebtedness status in regard to its obligations in the short as well as in the long term, in order to know the payment feasibility of this indebtedness, as well as the use that is being given to resources obtained through leveraging. The use of the following key financial ratios will be fundamental to get to know a comparative state with averages within the industry, and its historic evolution within the last two years:

- Total Liabilities / Total Assets
- Total Liabilities / Accounting Capital
- Current Liabilities / Total Liabilities
- Current Liabilities / Long Term Debt.

If the debtor maintains obligations in foreign currency, the leverage analysis should incorporate the assessment of the exchange position that it maintains, in order to measure the effects that a variation in the exchange rate would have on its financial flows.

> **Profitability and Operational Efficiency.** The main sources that generate profits for the debtor should be understood, based on a detailed analysis of past and present income and expenses of the company. An historic analysis of the evolution of the following financial ratios should be done, as well as a comparative study with the main competitors in the industry:

- Net Profit / total Assets
- Net Profit / Accounting Capital

The historic and comparative analysis of the company's efficiency in its business operations should be done, through the following financial ratios:

- Inventory Rotation
- Rotation of Accounts Receivable
- Rotation of Accounts Payable

Mismatches in foreign exchange of assets and liabilities, of income and expenses of the debtors, as well as external factors that introduce vulnerabilities in the normal behavior in them, should also be taken into account.

The analysis of the mentioned financial indicators should consider observations disclosed in the external auditors' report.

For the financial analysis indicated above, only the company's stable income sources should be considered, eliminating isolated or extraordinary income.

Once the different risk factors that make up the financial situation of the debtor are assessed, its payment capacity risk levels should be classified within one of the following levels of risk.

### Historic Payment Behavior

The analysis of the payment experience of the debtor assesses the debtor's payment behavior with the financial intermediation entity and with other creditors of the system, as well as the quality and timeliness of information regarding the payment history of the debtor. In the payment experience, a minimum of twelve months prior to the date of assessment of the debtor should be considered, as well as the roll-overs granted, not justified by the financial conditions of the company. Thus, if the debtor does not show delays because it reports recurrent rolling over, then that should be taken into account to define the historic payment behavior of a debtor.

Determination of the risk level for the payment behavior will be done in accordance with the following criteria:

Classification of the Debtor's Historic Payment Behavior
A Current accounts without delays or with delays of 1 to 30 days.
B Noncompliance between 31 to 60 days.
C Noncompliance between 61 to 90 days.
D Noncompliance between 91 to 365 days.
E Noncompliance of longer than 365 days.

### Country risk

The country risk assessment will be applicable only to debtors that reside abroad or residing in the country whose business operations are concentrated in more than 50% in only one country abroad.

The following table can be used by financial intermediation entities as a parameter for the classification of country risk, using as a basis the sovereign risk ratings of one of the international rating agencies. The same table shows classification equivalences using as an example one of the agencies mentioned with international prestige.

### Equivalent Levels of Sovereign Debt from Standard & Poor's with country risk classification.

S&P Levels	RP Levels
No Rating	No Rating
D	E
C	D
CC	C
CCC	C
B	B
BB	B
BBB	B
A	A
AA	A
AAA	A

### Commercial Debtors

Classification A	-	Normal Risk
Classification B	-	Potential Risk
Classification C	-	Deficient Risk
Classification D	-	Difficult Collection
Classification E	-	Uncollectables

The definitive classification of the debtor results of the combination of factors in the following tables:

	COMPORTAMIENTO HISTORICO DE PAGO					
		A	B	C	D	E
CAPACIDAD DE PAGO	A	A	B	C	D	E
	B	B	B	C	D	E
	C	C	C	C	D	E
	D	D	D	D	D	E
	E	E	E	E	E	E

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## ANNEX NO. 4

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### USE OF CREDIT SCORING MODELS AS A TOOL FOR MEASUREMENT AND UNDERWRITING

As part of the general model for credit risk management as an internal system for credit assessment for the selection and granting of microcredit and consumer and housing credit, financial entities in the Region are utilizing credit scoring models that combine qualitative and quantitative criteria, according to the experience and strategy of the entity.

Credit scoring is a method to forecast how much reimbursement risk the borrowers of consumer credit present. The credit scoring systems are elaborated using data from the credit applications or from risk centrals on those consumers that have already been classified as solvent or insolvent.

Information elements that help to forecast an acceptable performance on the part of the borrower are identified and a score is assigned in relation with its general importance. Then, the values to calculate the general credit quality score are added.

The credit quality scoring is used to approve credits and frequently allows the bank to avoid the long and costly process of individual insurance. The front office determines a minimum score, known sometimes as a cut-off score. Those borrowers, whose scoring is not within the terminal rating margin approved for the type of loan requested, do not meet the minimum underwriting criteria of the bank. However, the bank could pay no attention to unacceptable scoring of a borrower when there are other attenuating factors that maybe were not included in the credit quality scoring.

All exceptions to the credit scoring system of the bank should be documented. Many banks have developed and enforced credit scoring systems as part of the approval process of consumer credits; other banks recur to traditional methods based on subjective assessment of the applicant's solvency by the credit official. Credit scoring systems are replacing the subjective assessment of credit officials about the borrowers' solvency in more and more banks, especially at the largest institutions. Credit scoring systems are divided in two categories: (1) credit systems openly and statistically sound, empirically derived and (2) discretionary systems.

The credit scoring systems obtained empirically are systems that assess soundness assigning scores to the different qualitative features of the applicant

and, perhaps, to the characteristics of the credit requested. Scores assigned are obtained from a statistical analysis of recent solvent and insolvent applicants of the bank. An empirical credit scoring system is statistically sound when meeting the following conditions:

- > Data used to elaborate the system are obtained from an empirical comparison of sample groups or from the population of solvent and insolvent applicants that requested a credit within a reasonably recent time span.
- > The system is developed to assess the solvency of the applicants in order to serve the legitimate commercial interests of the bank that is using it.
- > Statistical methods and principles are employed for the development and validation of the system.
- > The bank reassesses periodically the system's forecasting capacity, using statistical principles and methods, and adjusts it as needed.

A credit scoring system empirically derived can consider the applicant's age as a forecast variable, as long as a negative factor or value is not assigned to the age of an applicant that is older. In a discretionary system depending on the personal assessment of the credit official, in regard to the potential borrower's solvency, it is possible that the creditor does not directly consider the applicant's age. However, the applicant's age could be related to other information that the creditor takes into account in assessing its solvency. For example, the creditor could consider occupation of the applicant and the time left for retirement in order to confirm if his income (pension included) will support the concession of the credit up to its expiration. According to the regulation on consumer credits, all the solvency assessment systems can favor an applicant 62 years old or older.

If the bank has a credit scoring system, the inspector should examine the elements or characteristics of the client included in it. Generally, the credit scoring systems are built upon an experience or historic data base. Methods for credit scoring analyze experience of the persons to whom a previous credit had been granted and divide them in solvent

and insolvent accounts to forecast future consumer credit concessions.

An effective credit scoring system includes a standardized form to estimate the inherent risk of the borrower. An important measure of any credit scoring system is its risk definition and the care with which the explanation variables are defined and how the information is collected and the system tested. The standardized risk estimate should be fundamentally sound, based on historic data, estimate the noncompliance (or loss) risk and produce coherent results over time for a large range of borrowers. The bank should investigate further those potential borrowers that do not meet the credit scoring criteria.

Three examples of credit scoring systems are mentioned below:

- > **Rating based on the risks central.** The bank uses information on the consumer from the risks central in a formula for credit scoring. The rating model is developed by the different risk centrals using the experience notified by all credit lenders with whom the applicant keeps or has kept a credit relationship.
- > **Customized rating.** The bank employs data on the consumer that come from the credit application as well as from the risks central, in a score rating formula. This model is elaborated using only information on the applicants and the borrowers of the bank.
- > **Behavior rating.** The bank uses a formula that includes the reimbursement history, utilization of accounts and the time the customer has with the bank to calculate a risk scoring for renewable accounts.

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## ANNEX NO. 5

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### SUCCESSFUL EXPERIENCES OF CREDIT BUREAUS PROMOTED BY SUPERVISORS IN TEN COUNTRIES IN THE REGION.

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#### 1. Bolivia

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The Superintendence manages a Credit Risk Information Central (CIRC), updated monthly with reports from all regulated financial intermediation entities. This system constitutes a data base that includes a history of more than 15 years. The Risks Central was created in 1988.

On the other hand, a data base called *Cédula del Prestatario* has been implemented, which is a tool that allows having the financial history of the client. This system is fed and updated by inspectors at the time of reviewing credit files during field visits. There is also a module of economic groups that is fed with information that entities report and verified during inspections.

Among others, these three systems constitute the basic information source for monitoring the credit portfolio, both at desk work as well as in the field.

The private sector, through Bureaus of Credit Information, also provides this information to the EIFs, limited to information on the microcredit and consumer portfolios that the SBEF provides and commercial information from other sources.

The CIRC is a data base containing credit information of all borrowers in the system of financial intermediation, which allows the conducting of comparative analysis among peer banks or with the system's average, for supervision tasks. Likewise, it allows obtaining the total indebtedness of a borrower or economic group and in a comparative way, the level of rating (risk) and prevision.

Some of the important characteristics of the CIRC are:

##### **Gathering of information**

- > Total indebtedness of natural persons and legal entities in the system of financial intermediation.
- > History of more than 15 years of credit information.
- > Positive and negative information
- > Information from banking and non-bank operators that conduct financial intermediation activities.

##### **Information disclosure**

- > Access to CIRC is also available for the EIFs, within the framework of the banking confidentiality.
- > No cost access.
- > Electronic access to information.

##### **Quality and Timeliness**

- > It has automated validation mechanisms.
- > Monthly updating and immediate publication.
- > Penalties for reporting improper information.
- > Periodic in situ assessment of information quality.

With this data base, a compliance control of the concentration limits stipulated by legal and regulatory provisions is also implemented. Information contained in the CIRC constitutes an initial data base that is being used by the SBEF to carry on studies and analyses of statistical models for risk portfolio measurement for of contrast or referential credits.

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#### 2. Brazil

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The Risk Central of the Central Bank of Brazil was created in 1997. In 2000, the Risk Central started a reorganization process that gave way to the present system, available since September 2003. The system, called *Sistema de Informações de Crédito (SCR)*, constitutes a supervision tool to follow up credit risk and an information source on credits (loans by types, collateral and guarantees, commitments, etc.), provided by financial institutions to support the information exchange. All credit operations (with individuals or companies) for a consolidated amount of more than R\$ 5.000 (approximately \$US 2.000) must be individually declared. The data on operations below this amount are provided only on a consolidated basis.

The clients' credit information is protected by law. Banks should have a legal document authorizing them to consult the corresponding data base.

The importance of the SCR should be highlighted. For example, in case of noncompliance of an important debtor of the financial system, the supervisor can immediately assess the impact of such non-compliance on the sector overall. Scenarios of the

stress tests are regularly assessed to oversee the credit risk of all of the financial system.

With the new framework of the SCR, new and useful information was added for economic research and for the process of enforcing and validating internal models, within the context of Basel II.

Basic information on the SCR is shown below:

- > Information available for each debtor:
  - Current loans (divided by expiry date scales);
  - Expired loans (divided by expiry date scales);
  - Penalties;
  - Collateral, guarantees and commitments;
  - Credit classification - Ratings of Resolution 2682.
- > Data base: information provided monthly by credit institutions
- > Tools available to oversee the credit risk:
  - Descriptive and comparative analysis
  - Trends
  - Transition Matrix
  - Early warning system: detects variations in the evolution of credit risk indicators of a financial institution.
  - *Riscred*: a file that provides an overall vision of the loans portfolio and all the credit information of a financial institution (provisions, clients' credit rating, risk profile, distribution of the loans portfolio by degree, etc.)
- > Tools available to analyze credit risk:
  - Reports on the credit risk profile (by institution)
  - Individual analysis (main 100 )
  - Economic sector analysis
- > Stress tests scenarios: calculation of the impact on the capital sufficiency of simulated deteriorations of the loans portfolio of a bank, peer group or in a consolidated basis.
- > Transition Matrix
  - Analysis of the evolution of risk classification of the borrowers
  - Potential base to calculate noncompliance.
- > Data are subject to validation prior to its entrance to the data base.

- > Detailed information available for large borrowers (exposure of more than R\$ 50 millions (approximately \$US 20 millions): including the risk classification of the borrower, information on the balance sheet (upon request), ECAI rating.

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### 3. Chile

The Superintendence uses the internal risk central, in which each one of the debtors is reported with its credits, behavior and guarantees. Likewise, information on the debtors' behavior is used at commercial firms, taxes etc., which is obtained from the private Bureau DICOM and that is used for the supervision analysis. The risk central is utilized to assess concentrations.

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### 4. Colombia

There are two risk centrals in the country (*Data-crédito* and *Cifin*) that manage data bases with the history of debtors of the financial system. Their role is not limited to the granting of credit but rather to specify their risk once the same is granted. This is the reason why the *Circular External 100* of 1995 of the SFC establishes that one of the portfolio evaluation criteria is "information coming from risk centrals, consolidated with the system, and the rest of commercial information sources available to the supervised institution."

At present in Colombia there is no explicit regulation about the way data banks should be operated. However, the Constitutional Court, through review of the guardianship actions, has established the general principles for the management of personal data.

On the other hand, the access to information by financial entities is through the purchase of this information, while the general public can accede at no cost to their credit history through the Internet up to 8 times a year.

#### Dec/2003

	SCR Information credits higher than US\$ 2.000	Credits of the National Financial System
Total amount of Credits Registered	US\$. 210.000 millions (86%)	US\$. 244.000 millions (100%)
Total of credit operations	11 millions (5%)	196 millions (100%)
Amount of clients	8 millions	NA

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## 5. Ecuador

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**Risks Central.** The *Superintendencia de Bancos y Seguros* keeps an individualized information registry on debtors and guarantors of the supervised entities, for which it requests the monthly submission of information contained in the Technical Manual called “*Información para supervisión y control – Formatos de envío – Central de Riesgos.*”

**Bureau of credit information.** Under this guideline, it was stipulated that the provision of credit reference services could be done only by institutions for auxiliary services of the financial system specifically created with that purpose, which in their denomination will show their quality of credit information bureau. These institutions will be subject to the norms and oversight of the Superintendencia for Banks and Insurance.

Offices of credit information are authorized to formally collect, process and exchange information about the credit history of natural persons and legal entities, with the objective of providing credit information that is legal, true, accurate, complete and updated, in such a way that it responds to the real situation of the owner of the information at a given time, under principles of reliability, quality, integrity and safety. For this, the office of credit information will provide complete credit reports regarding the indebtedness with the financial system and with the commercial sector of those persons and legal entities. The reports should be detailed and easy to interpret.

The information contained in the Risk Central as well as the reports of the credit information offices serve to adequately identify debtors, to know their levels of indebtedness and credit risk, which helps the monitoring of the health of the economy and the financial risk.

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## 6. El Salvador

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There is a Risk Central System that collects ample information on credit operations granted by the banks, which is updated monthly by each one of the banking institutions. Different reports are elaborated with this information that serve in the extra situ analysis and the in situ examinations of credit risk. Besides being useful for credit risk monitoring, part of the Risk Central information can be consulted by all institutions that send their information, in such a way that it will be useful at the moment of making decisions on new credit operations. The content,

form of distribution and updating of the Risk Central System are defined in the *Normas sobre el Procedimiento para la Recolección de Datos del Sistema Central de Riesgos.*

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## 7. Guatemala

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The Credit Risk Information System implemented by the Superintendencia of Banks has a data base with history of many years. This system is fed monthly with information sent by supervised entities that grant credits, without regard to their amounts.

The System provides supervised entities a confidential report with consolidated data about the level of direct and indirect indebtedness of a natural person or a legal entity, the default history of the debtors, guarantees, the credit's accounting status and the categorization or classification given to the supervised entity based on the observed default.

For supervision purposes, information provided by the System, individually or aggregated, has been interconnected to other data bases with the purpose of being able to assess risks in an integral way, to be useful for the office and field work.

As part of the plans for the System, it is being contemplated to collect financial information of entrepreneurial debtors with indebtedness greater than US\$ 650,000, with the purpose of providing follow up to the performance of some entrepreneurial segments and initiate the development of more complete measurements of the credit risk in the system.

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## 8. Honduras

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The legislation for financial supervision states that a risk central would be established with information on all debtors of supervised institutions, which has been operating since 1998. Through this data base it is possible to follow up to debtors' concentrations, compliance with legal limits of credit to related parties and credits to a sole debtor.

These data is also utilized in situ examinations to determine the samples and generate the credit assessment format that is used by field examiners. A data base is being developed to generate more versatile and usable, that reflect the changes in users needs. Through the financial online network, financial institutions consult debtors as part of their credit processes. It is possible to consult debts by economic group, persons that integrate those groups and their shareholders in case that

they are legal entities. The online access is available to the supervisors.

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## 9. Peru

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The General Law of the Financial System regulates the roles of the Central of Risks of the Superintendence and establishes the creation of private risk centrals.

Any union institution that has the corresponding necessary infrastructure can have access to the Central of Risks, upon signature of the corresponding agreement with the Superintendence.

The corresponding information will be at the disposal of companies in the financial and insurance system, of the Central Bank, of commercial companies and in general of any individual interested, with prior payment of the fees established by the Superintendence. Such information should be provided in a systematic, timely and integrated way. The Superintendence will issue the corresponding regulations.

Prior to granting a credit, all companies in the financial system should require the natural person or legal entity that is applying for the credit, all the general information that the Superintendence stipu-

lates. In case of noncompliance, the credit shall not be granted.

Additionally, the same General Law states that there are no restrictions for the establishment of legal entities with the purpose of providing public information on the credit background of debtors of companies in the financial and insurance system and on the improper use of checks. The information that private centrals of risk that operate in Peru (Infocorp and Certicom) provide to users includes: indebtedness in the financial system, cancelled credit cards, checks returned for lack of funds, current accounts closed due to drafting of checks without funds, banking and commercial default, general data on taxpayers, residential and labor verifications, among other information.

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## 10. Dominican Republic

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Currently there are three centers of credit information registered with the Superintendence of Banks. Financial intermediation entities can arrange particular agreements with the credit information centers operating in the country and provide information related to credits of clients that have so consented in their contracts.