WESTERN HEMISPHERE CREDIT AND LOAN REPORTING INITIATIVE

INICIATIVA DE SISTEMAS DE REPORTE DE PRÉSTAMOS BANCARIOS Y CRÉDITOS DEL HEMISFERIO OCCIDENTAL



WORKING PAPER 3:

MODEL OF COUNTRY ASSESSMENT REPORT FOR THE CREDIT AND LOAN REPORTING SYSTEM DRAFT UNDER PROGRESS

This working paper presents a model for the Confidential Report "Assessment and Observations on the Credit and Loan Reporting System of Country X" delivered to the authorities at the end of the work of the international team, deployed on the field in the context of the Western Hemisphere Credit Reporting Initiative (WHCRI). The objective of the Initiative is to describe and assess the credit and loan reporting systems of the Western Hemisphere with a view to identifying possible improvement measures in their quality, efficiency and integrity. The WHCRI originated from a high level mandate from the LAC Central Banks' Governors (Dubai meeting fall 2003). The Centro de Estudios Monetarios Latinoamericanos (CEMLA), FIRST (Financial Sector Reform and Strengthening) Initiative and The World Bank lead this initiative. The main expected outcome of the WHCRI is the improvement of credit reporting systems to allow for increased credit to the private sector in the Region. To carry out this mandate CEMLA, FIRST Initiative and The World Bank have sponsored the formation of an International Consultative Committee (ICC) comprised of several institutions with ample expertise in credit reporting systems. The Committee provides technical guidance in defining the methodology for conducting the studies and reviewing the main deliverables of the country study missions. In all phases the international team works in close coordination with a local team of technical experts appointed by the central bank and other regulators. This document was prepared by Ms. Lucinda Brickler (FIRST Consultant), Mr. Federico Castro (FIRST Consultant), Mr. Massimo Cirasino (World Bank), Mr. José Antonio García (CEMLA), Mr. Mario Guadamillas (World Bank), Mr. Matias Gutierrez Girault (FIRST Consultant), and Ms. Margaret Miller (World Bank) and has benefited from comments by ICC members. This tool is constantly revised as a result of international developments, comments received and new experience gained from country assessments under the Initiative.

MARCH 2005

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¹ World Bank, CEMLA, Association of Supervisors of Banks of the Americas (ASBA), Bank of Canada, Bank of Spain, Federal Reserve Bank of New York, Inter-American Development Bank (IADB), International Finance Corporation (IFC) of the World Bank Group, International Monetary Fund (IMF).

WESTERN HEMISPHERE CREDIT AND LOAN REPORTING INITIATIVE

INICIATIVA DE SISTEMAS DE REPORTE DE PRÉSTAMOS BANCARIOS Y CRÉDITOS DEL HEMISFERIO OCCIDENTAL



STRICTLY CONFIDENTIAL

ASSESSMENT AND OBSERVATIONS ON THE CREDIT AND LOAN REPORTING SYSTEMS OF (COUNTRY'S NAME)

PRELIMINARY DRAFT

DATE

WESTERN HEMISPHERE CREDIT AND LOAN REPORTING INITIATIVE

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EXECUTIVE SUMMARY

An Executive Summary of the Report should be prepared, in which all the main issues are highlighted.

1. INTRODUCTION

This *Report* constitutes a draft version of the assessment of the credit reporting systems of Country X performed by the country study team deployed in the context of the *Western Hemisphere Credit & Loan Reporting Initiative (WHCRI)*. The WHCRI originated from a high level mandate from the LAC Central Banks' Governors (Dubai meeting fall 2003). The World Bank and the Centro de Estudios Monetarios Latinoamericanos (CEMLA) lead this initiative. The main expected outcome of the WHCRI is the improvement of credit reporting systems to allow for increased credit to the private sector in the Region.

To carry out this mandate CEMLA, FIRST Initiative² and The World Bank have sponsored the formation of an International Consultative Committee (ICC) comprised of several institutions with ample expertise in credit reporting systems.³ The Committee provides technical guidance in defining the methodology for conducting the studies, integrating the teams that visit the countries and reviewing the main deliverables of the country study missions.

This document is the result of work developed by an international team, in coordination with a local team. The international team visited Bogotá, Colombia from to Members of the international team were: The local team was coordinated by officials from the and, and

In addition to meetings with staff of several departments of the, the team attended meetings with the following institutions: The team had an opportunity for open discussions with those institutions and believes that it has been able to gather representative views of the stakeholder community in the country in regard to current credit reporting arrangements. The team wants to express its appreciation to the management and staff of the and all the representatives of the institutions visited for their full and enthusiastic support to the mission's activities and objectives.

The purpose of the document: through this effort, the team has prepared this *Draft Report*, which describes the Credit Reporting System currently operating and includes several observations for the improvement and future development of such system in Country X. These observations will be held confidentially by the Team and will not be shared with any third parties. At the outset, the international team wants to thank the local team within the for their thorough briefings which were clearly based on a comprehensive understanding of the many issues involved. Indeed many of the observations presented in this document were discussed with local colleagues and the international team is aware that the central bank and banking supervisor are already taking appropriate actions on many of the issues discussed. In many points, this document should be viewed therefore as nothing more than a checklist for use by the local team in undertaking the already initiated current and future actions. In other cases, some additional elements might have been identified and those are brought to the attention of local authorities.

The rest of the document is organized as follows. Section 2 gives an overall view of the country's credit and loan reporting systems. Section 3 presents some ideas on how the reform of the credit and loan reporting

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² The FIRST Initiative is a multi-donor program to support financial sector reforms in developing countries. Information on the program can be found at www.firstinitiative.org

³ World Bank, CEMLA, Association of Supervisors of Banks of the Americas (ASBA), Bank of Canada, Bank of Spain, Federal Reserve Bank of New York, Inter-American Development Bank (IADB), International Finance Corporation (IFC) of the World Bank Group, International Monetary Fund (IMF).

systems should be completed by developing a strategic approach. Section 4 presents the assessment of the legal and regulatory framework in the country and Section 5 the assessment of consumer protection education and outreach. Section 6 describes the private sector credit reporting industry. Section 7 and 8 cover public credit registries and public databases respectively. Section 9 introduces some observations on competition. Section 10 addresses the issue of interaction between credit reporting systems and payments systems and instruments. Section 11 discusses the potential oversight role of authorities over credit reporting systems and cooperation. Section 12 deals with cross-border sharing of information. The report includes Principles for Credit Information Systems regarding the legal framework in Annex I. [The number of Annexes will typically vary from country to country]

2. GENERAL OVERVIEW OF THE CREDIT REPORTING SYSTEM IN (THE COUNTRY)

This section should provide a (brief) description of all credit and loan reporting systems in the country, including key public databases.

3. STRATEGY FOR STRENGTHENING THE CREDIT REPORTING SYSTEM IN (THE COUNTRY) (if applicable)

Context

The experience of several countries has proven that the lack of a strategic approach to financial infrastructure issues not only impacts on the success of individual projects underway but also affects the overall financial infrastructure and, at the end, the economy. If a common strategy is not defined and agreed, the credit reporting systems will be the uncertain result of separate efforts by stakeholders trying to improve their systems without a view of the overall national interest.

A consensus on a strategic and collaborative approach is crucial in that it would take a holistic view of all aspects of the nation's credit reporting system needs and satisfy them in an orderly and cost-efficient manner. A collaborative approach, with the active participation of all stakeholders, is highly desirable because of the complexity of the required changes which will involve inputs relating to service providers, users, technologies, legal and regulatory matters, and contributions from several professional disciplines. A well-structured collaborative approach will create synergy, stimulate learning and provide a basis for optimizing benefits through cooperation and consensus building. Finally, the strategic approach will be able to address all the critical issues present in the current credit reporting system arrangements.

The scope and difficulty of developing and carrying out a strategy for credit reporting systems modernization successfully should not be underestimated. This will be a new process, and the projects that will be designed and carried out under the umbrella of the overall strategy will present new challenges to all parties involved. The major risks are: (i) the systems developed could not be used (ii) the resulting system changes will not satisfy the needs of all users, and (iii) the systems will not be cost efficient and affordable. However, a collaborative and cooperative approach is the only way in which these risks can be minimized. In order to have an efficient cooperative approach appropriate human resources, in number and expertise, should be made available by the different stakeholders.

Status in the Country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

Observations

Includes some observations about how the issue analyzed could be improved.

4. LEGAL AND REGULATORY FRAMEWORK

Context

The legal and regulatory environment for sharing credit information and other related data is a key determinant of how credit reporting develops. In some countries specific laws on credit reporting exist, in others more general laws related to data protection and/or bank secrecy govern the industry and in yet others, little legal or regulatory guidance exists. While there are many ways to construct an adequate legal and regulatory framework for credit reporting, there are also some common principles that most of the countries with good practice in this area follow. These common principles include:

- i. Recognition of the legality of credit information sharing by lenders, retailers and service providers in the economy, including both positive and negative data;
- ii. An effective consumer protection framework which balances the lenders' need for data with the individual's rights regarding the collection and distribution of his/her own financial data;
- iii. Institutions and mechanisms to enable authorities to supervise and enforce compliance with the legal and regulatory framework.

The World Bank has developed good practice guidelines for the development of laws and regulations for credit reporting. These guidelines will be used for country compliance reviews undertaken by the World Bank, IMF and other multilateral organizations and are attached as Annex I to this document. These guidelines also provide a point of reference for the review of credit reporting laws and regulations in Country X.

Status in the country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

Observations

Includes some observations about how the issue analyzed could be improved.

5. CONSUMER PROTECTION, EDUCATION AND OUTREACH

Context

Databases containing information relevant to making credit decisions, such as credit histories, personal data and other information, represent a great concentration of power. For this reason, the impact of misuse, mishandling or errors is potentially damaging to individuals. At the same time, it should be recognized that the existence of such databases offers consumers who honor their obligations with the opportunity to

distinguish themselves from those who do not, i.e., to establish "reputation collateral." As a result, these consumers should enjoy greater access to credit at more favorable rates. The ability to build "reputation collateral" is especially important to consumers with lower incomes who may not own property that could serve as physical collateral for borrowing.

To achieve the optimal balance between protecting consumers while allowing information that will benefit them in their borrowing activities to be collected and distributed requires a combination of adequate legal and regulatory protections, enforcement and properly aligned incentives for all participants in the system.

- i. Consumers should understand what information is being collected about them and how and by whom it is being used.
- ii. Consumers should feel confident that information about them contained in a credit information system is accurate, complete and up-to-date.
- iii. Consumers should feel confident that information about them is secure and not being misused. Extra care should be given to the collection and distribution of data deemed to be sensitive.
- iv. Policies with respect to credit information systems should protect the rights of consumers with good payment histories. Some of these elements include achieving sufficient coverage of the population, requiring reporting of positive payment behavior as well as negative data, maintaining data for an adequate period of time, and avoiding so-called amnesty periods that allow negative information to be erased.
- v. The existence and operations of credit information systems should be as transparent as possible in order to develop public confidence.
- vi. Adequate enforcement and procedures for dealing with violations of consumers' rights should be provided.

The legal section of this report deals with additional elements of the credit reporting legal framework that are essential to consumers. This section of the report focuses on specific tools that are often afforded to consumers to allow them to assert their rights. Examples of the kinds of provisions found in highly functional credit reporting environments to protect the interests of consumers include:

- i. Consumers have free or low cost access to information about themselves. It is widely recognized that consumers are in the best position and have the greatest incentive to ensure that data contained in their credit reports is accurate, complete and up-to-date.
- ii. Consumers have the right to dispute information that they perceive to be inaccurate, incomplete or out-of-date in a timely and low cost manner. When potential problems are detected, the source of the information in question should be obligated to investigate thoroughly and make any needed corrections in timely manner. Other measures that are often employed to protect consumers' rights with respect to disputing information contained in their credit report include flagging of data that is in dispute and allowing consumers to include explanatory text in the body of their credit report in order to explain a dispute or the circumstances related to information contained in their report.
- iii. Requiring authorization of the data subject before data may be distributed for any permissible purpose. This measure is used to prevent misuse of data. Consumers are empowered to detect abuse by being able to examine who has accessed their report.
- iv. Notification of consumers when they are denied credit or some other adverse decision is made

based upon the information in their credit report. This gives the data subject the opportunity to correct any erroneous information contained in their record. It also promotes the development of a credit culture by providing consumers with direct and timely feedback about why their profile may be considered too risky by creditors, giving them the opportunity to take corrective action.

Status in the country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

Observations

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6. PRIVATE SECTOR CREDIT REPORTING INDUSTRY

Context

A modern credit-based economy requires access to complete, accurate and reliable information concerning borrowers' payment history. Credit reporting addresses a fundamental problem of credit markets: asymmetric information between borrowers and lenders that leads to adverse selection and moral hazard. The heart of a credit report is the record it provides of a consumer or firm's payment history. Since one of the best predictors of future behavior is past behavior, data on how a potential borrower has met obligations in the past enable lenders to more accurately evaluate credit risk, erasing adverse selection problems.

An effective credit information system can be integral to the operation of modern financial systems, improving the efficiency of financial institutions by reducing loan processing costs as well as the time required to process loan applications; it could also eliminate the need to make physical inspections. Lenders may also use credit data to monitor their existing portfolios, identify potential problems, and develop and sell new products, thus contributing to their profitability to more accurate pricing and targeting.

Credit information systems also make it possible to empirically assess, in the form of credit scoring tools, which factors are most predictive, permitting finely tuned credit decisions. As a result, creditors can more intelligently assess consumer and business lending decisions, thus promoting the extension of credit and economic development in the countries in which they operate. Also, creditors are in a better position to develop numerous credit offerings tailored to the risk presented by borrowers' unique credit histories.

A well-functioning credit reporting system may also increase the ability to attract foreign investment capital by providing foreign creditors a rational basis on which to evaluate credit risk. This regionalization and globalization of credit granting is further enhanced if consistent or at least transparent information collection standards are employed.

The reputation of credit reporting firms is a crucial factor to gain trust and confidence from the consumers and creditors. Key elements to consider in this regard are: quality of the information; extensive coverage (e.g. financial institutions, retail sector, public registries, utilities, positive and negative data) to present a complete picture of the person or firm's debt situation; consumer protection and rights; clear circumscription of permissible uses of information; and, permanent measures to safeguard information contained in the credit information system.

Lastly but equally important, competition between credit reporting firms promotes and encourages many positive aspects, such as quantity and quality of information, services, products, price reduction, etc. Nevertheless, negative aspects can also arise if there no appropriate regulations are in place.

Status in the country

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Observations

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7. PUBLIC CREDIT REPORTING ACTIVITIES

Context

Public credit bureaus are a frequent element of credit and loan reporting systems, sharing a basic framework regarding their institutional arrangements, the type of data they collect and their policies regarding distribution of credit data.

Usually these bureaus are operated either by the central bank or the superintendence of financial institutions. While they are major credit and loan information collectors, as a result of their banking nature they limit themselves to requesting information from the financial sector intermediaries they regulate, who are compelled to report by means of law or resolution. Therefore, they have typically more limited data sources and resources (human, financial and technological) than private credit bureaus: reporting financial institutions usually furnish borrower's identification, outstanding debt, type of credits, risk rating, collateral and guarantees, and business sector.

The information stored in these databases is used to aid prudential regulation and banking supervision, perform economic analysis and research (measures of credit by sector, by credit quality, compute portfolio credit risk models, etc.) and sometimes also to produce credit reports or share the information through queries. In fact, these potential uses entitle the operator (central bank or banking superintendence) to compel banks report all the information considered relevant, both positive and negative, and can therefore assemble a more complete picture of credit in the regulated financial sector and even operate where the legal environment is inhospitable for private ventures.

As mentioned above, public credit bureaus usually face severe budget restrictions that impact the completeness of their credit reports, the fact that they seldom provide supplementary products and services (i.e., credit scores) and the process in place to handle consumer complaints and challenged reports. On the other side, not always the private sector participates in the credit reporting system or provides the most convenient service. Given that the sharing of sufficient credit information can be regarded as a desirable institution in any market economy, both the costs and benefits of operating a public credit bureau should be balanced. While the costs of doing so are clear, the benefits of the sharing of positive and negative information and thus of a complete credit reporting system are supported by profuse empirical evidence⁴:

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⁴ See Jappelli, T. and M. Pagano, "Information Sharing in Credit Markets: International Evidence", Inter-American Development Bank, Working Paper R-371, June 1999. Further statistical evidence for Brazil and Argentina has been found in Majnoni, G., M. Miller, N. Mylenko and A. Powell, "Improving Credit Information, Bank Regulation and Supervision: On the Role and Design of Public Credit Registries", World Bank, June 2004. See also Barron J. and

attenuation of moral hazard and adverse selection problems, reduced default rates and increased availability of credit. In fact, the empirical evidence also shows that public credit bureaus are more likely to be present where private-sharing arrangements have not risen.

While the public sector is not to replace the private sector in this regard, it does have to play a subsidiary role and correct eventual inefficiencies in the credit reporting system such as insufficient competition⁵, not enough sharing of positive and negative information, inappropriate treatment of customer complains and lack of regulation regarding the propriety of the databases. Therefore, both the need to enjoy the benefits of sharing and disclosing credit information and the lack of a reasonable solution provided by the private sector may motivate the need for a more active public credit bureau, at least temporal and subsidiary.

Regarding the use of their information with prudential regulation purposes, their information is a useful input of portfolio credit risk models that yield economic measures of capital and provisions. In fact, a public credit bureau's data can be used to compute provisioning and capital requirements following the guidelines issued by the Basel Committee on Banking Supervision (enforceable as from end 2006): *International Convergence of Capital Measurement and Capital Standards: a Revised Framework*, which introduces different approaches to compute capital requirements for credit risk. The Standardized Approach, which is an updated version of the existing one (issued in 1988) is based on external ratings (provided by rating firms or export credit agencies), and the Internal Ratings Based (IRB) Approach, which can be implemented either in its Foundation or Advanced variant. Despite the fact that only international active banks of Basle's Committee member countries will have to comply with the new accord, in many other countries banking sector supervisors are considering to adopt it or use them to compute "shadow" economic capital requirements against which to benchmark their ad-hoc capital requirements.

The IRB approach is a simple portfolio credit risk model that provides economic-based capital requirements and provisioning levels. Both of its variants rely on PD (probability of default), LGD (loss given default), EAD (exposure at default) and M (effective maturity) estimates; once these are plugged into the IRB formulae the results are economic measures of what the appropriate provisioning and capital levels should be. While in the Advanced Approach the bank internally estimates all the variables (PD, LGD, EAD and M), in the Foundation the supervisor must provide each bank with an appropriate estimate of them, with the exception of the PD. In addition to this, in both cases the supervisor must validate all those estimates computed internally, by each bank. Therefore, should a regulator decide to implement a Foundation IRB, he should provide the regulated institutions with estimates of LGD, EAD and M and validate their rating systems; in the Advanced IRB, where banks must internally estimate all the parameters, the supervisor should validate their internal estimates of LGD, EAD and Each and M and validate their rating systems; in the Advanced IRB, where banks must internally estimate all the parameters, the supervisor should validate their internal estimates of LGD.

All the abovementioned uses of the borrower's information stored in public credit bureaus motivate that efforts are made to guarantee its reliability; this is critical both for an efficient supervision and to provide accurate credit reports.

Status in the country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

M. Staten, "The Value of Comprehensive Credit Reports: Lessons from the U.S. Experience", Purdue University and Georgetown University, 2003.

⁵ See Negrin J. L., "Mecanismos para compartir información crediticia. Evidencia internacional y la experiencia mexicana", El Trimestre Económico, Vol. LXVIII (3), N°271, July – September, 2001.

⁶ See Trucharte Artigas, C., "A Review of Credit Registers and their Use for Basel II", FSI Award 2004 Winning Paper, September 2004.

Observations

Includes some observations about how the issue analyzed could be improved.

8. PUBLIC DATABASES

Context

Credit reporting systems require comprehensive and quality credit information, which is instrumental in credit risk assessments and decisions. While the information usually stored in credit bureaus and provided in credit reports refers to bank loans, credits granted by stores, etc., there is additional useful information in other databases as well.

As a result of their responsibilities, some public sector entities operate databases with information on debts and collateral. Examples of these may include databases with unpaid taxes (including unpaid tax information in credit reports may prove beneficial for the tax collection agency, who may find that by this token can align the delinquent tax payer's objectives with those of the public sector) and traffic fines (perhaps with detailed information of traffic accidents, that in the case of car loans or insurance firms may be useful), databases with economic and financial information of firms (usually associated to commercial registries), rejected checks and collateral registries.

Collateral registries have information on vehicles and real estate, necessary at the origination of a credit and to assess a bankrupted institution capacity to repay. For example, real estates that are not connected in a modern national network obstruct a creditor's ability to assess an applicant's wealth, and while it doesn't make that task an impossible one, create inefficiencies that increase legal costs, giving a comparative advantage to those creditors that operate on a larger scale.

Status in the country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

Observations

Includes some observations about how the issue analyzed could be improved.

9. CREDIT REPORTING AND COMPETITION IN THE CREDIT MARKET

Context

The degree of concentration of credit grantors and the quality of the infrastructure (i.e. "public good") that is necessary for running a credit business, are two key determinants of the degree and type of competition in the marketplace: in those cases in which concentration is high and infrastructure quality is low and participants' access to this infrastructure is uneven and unfair, players will tend to compete more on the basis of the partial infrastructure each of them has deployed rather than through price and quality.

From this perspective, a well-functioning credit reporting system can help in providing a more level playing field for smaller banks and other credit providers by reducing the information advantage some institutions have over their existing clients and by giving quick, reliable and affordable access to credit histories. Reliable

information in these registries lowers costs and improves the efficiency of the system as a whole. Furthermore, when credit reporting systems include information from a wide variety of lenders (both commercial banks and other types of lenders such as leasing firms, finance companies, retailers) further competitive pressures are brought to bear as consumers can effectively seek finance from a variety of outlets and providers. The availability of bureau scores (credit scores based exclusively upon credit bureau data) can also provide another element of increased competition in financial service markets – if the scores have sufficient predictive power to enable small and less sophisticated lenders who would not otherwise have been able to develop such tools to use them as a key part of their credit evaluation procedures.

In order for these benefits to materialize, however, several other conditions must be fulfilled as well. These include fair access to credit reporting services, appropriate governance structure for the private credit reporting firm(s), appropriate regulation, and an oversight function that aims at improving the overall information infrastructure (i.e. not only the services provided by credit reporting firms) that facilitates credit decisions.

Status in the country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

Observations

Includes some observations about how the issue analyzed could be improved.

10. INTERACTION BETWEEN CREDIT REPORTING SYSTEMS AND PAYMENT SYSTEMS AND INSTRUMENTS

Context

Credit and loan reporting systems and payment systems are key components of the financial infrastructure in every country. Economic and financial literature have analyzed the clear positive correlation between the stage of development of these two pieces of infrastructure on one hand and financial stability and economic development on the other hand. It might not been coincidental that the attention to both issues has increased exponentially in recent years at both the national and international levels.

As already discussed throughout the report, in many countries, credit reporting systems have been crucial in facilitating faster credit decisions based on more reliable credit histories. The knowledge of the credit granted and especially of the failure to fulfill obligations by customers is essential for creditors in deciding either in opening a new credit facility or in evaluating whether to maintain or revoke an already existing one.

The payments system is the infrastructure (comprised of institutions, instruments, rules, procedures, standards, and technical means) established to effect the transfer of monetary value between parties discharging mutual obligations. Its technical efficiency determines the efficiency with which transaction money is used in the economy, and the risks associated with its use. An efficient payments system reduces the cost of exchanging goods and services, and is indispensable to the functioning of the interbank, money, and capital markets. A weak payments system may severely drag on the stability and developmental capacity of an economy; its failures can result in inefficient use of financial resources, inequitable risk-sharing among agents, actual losses for participants, and loss of confidence in the financial system and in the very use of money.

There are clear interrelations between credit reporting and payment systems, in particular with regard to payment instruments. In some countries credit reporting systems also maintain data which allow an effective monitoring of the use of cheques and cards. In other countries, these databases are not managed by credit reporting agencies but still are important sources to establish the creditworthiness of individuals and corporations and provide credit reporting agencies with relevant information to expand their databases. In many cases, ineffective ways to collect data on the use of the different payment instruments has not allowed the country to increase the efficiency of its payments system by moving towards less costly and more reliable payment instruments (e.g. card payments). In some countries, automated clearinghouses (ACHs) and card operators keep more efficient databases on customer behaviors than those maintained by the individual financial institutions, but the former are not used efficiently by credit reporting systems (e.g. the number and nature of frauds on cheques and cards).

Therefore, effective interrelations between payment systems and credit reporting operators are both instrumental to enhance the reliability of payment instruments, and consequently on the efficient circulation of money, and improve the quality of the information managed by the credit bureaus.

Other relevant issues refer to the fact that 1) In some cases for some individuals the first step towards obtaining credit (e.g. a credit card, a car loan) is demonstrating a good an orderly management of a bank current account (e.g. no attempts to overdraw the checking account, etc.); 2) In most cases the structure of the retail payments system (typically owned by banks) becomes a de facto entry barrier for non-bank credit providers (e.g. credit cards issued by department stores and others can only be used at their locations and not as general purpose payment instruments).

In addition, an interesting common element for all components of the financial infrastructure is the dynamics of their reform process. As in the case of any payment system reform, the implementation of efficient credit reporting systems depends on the establishment of specific legal and technical rules, an adequate infrastructure, as well as a competent managing body. The domestic banking sector, including the authorities (central bank and banking supervisors), needs to define all the characteristics of the Credit Bureau, such as the categories of operations, the limit of exposures, the characteristics of the information that credit reporting systems must provide to the banks. While every solution is country specific, on many occasions recognition of the operational arrangements of similar systems in other countries is useful before implementing the project. Since many countries are engaging themselves in the reform of their National Payments System (NPS) some economies of scale can be derived in exploiting possible forms of integration of the reform processes and organizational arrangements for the two efforts.

Authorities can take advantage of the model being developed in many countries to carry out the function of payment system oversight to shape their regulatory and supervisory framework for credit reporting systems.

Effective cooperation among market participants, between regulators and market participants and among regulators is essential for the development of sound and efficient credit reporting systems. On the one hand, the sharing of credit information generates significant externalities for the financial sector and other economic sectors and increases access to credit. On the other hand, within the credit reporting systems, the lack of information sharing and coordination failures due to the existence of conflicts of interests (and information costs) as well as the intermediaries' unwillingness to cooperate can lead to "sub-optimal" equilibria in the organizational arrangements as to the system's reliability and efficiency. The credit reporting systems overseers are therefore entrusted with making up for a specific type of failure in the market for information sharing, i.e. the coordination failures.

With regard to the cooperation among regulators, the safety and efficiency objectives of credit reporting systems may be pursued by a variety of public sector authorities, in addition to the central bank and the banking supervisors. Examples of these regulators include: legislative authorities, ministries of finance,

competition and consumer protection authorities. Appropriate cooperation among authorities can be achieved in a variety of ways, for example, exchanges of views and information between relevant authorities may be conducted by holding regular or ad hoc meetings. Agreements on the sharing of information may be useful for such exchanges.

Status in the country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

Observations

Includes some observations about how the issue analyzed could be improved.

11. OVERSIGHT AND COOPERATION IN CREDIT REPORTING SYSTEMS

Context

The smoothness and reliability of information flow and sharing mechanisms affect the efficiency of the real economy and the financial markets; they also have an impact on access to credit by different segments of the population and firms. Market forces alone may not be able to achieve the objectives of efficiency and reliability of the credit reporting systems since participants and operators may not have adequate incentives to share the information on creditors. In addition, the institutional structure of the credit reporting systems may not provide incentives or mechanisms for efficient design and operation.

These are the reasons why in many countries the authorities' involvement in the credit reporting area is an integral component of their overall mandate to ensure stability of the financial system and access to financial services. In this context the authorities (central bank, banking supervisor, Ministry of Finance, etc.) perform a number of different functions in their national credit reporting systems. These functions may include direct involvement in managing public credit registries and in overseeing the system as a whole.

The role of the authorities is particularly relevant in order to play a leading role in developing a vision for the systems, in coordinating with all stakeholders and in carrying out a reform plan, if necessary. This role stems from the need to ensure an adequate legal and regulatory basis, an efficient functioning of the credit reporting industry and public databases and the adequate level of consumer protection. In all cases, in order to pursue the public interest in the credit reporting systems, the authorities should ensure that the systems they operate are in line with best international practices, as overseers, to ensure the (financial and operational) reliability and efficiency of all the systems.

In light of the different perspectives authorities and stakeholders tend to take on credit reporting systems, it is particularly important that a framework to oversee the financial information industry be developed in each country. In particular, the credit report overseer could play a key role to reconcile conflicting public policy actions by finding a satisfactory equilibrium to issues that, if not properly addressed, have the potential to jeopardize the development of the financial sector or economic growth. The oversight framework includes specifying the objectives, policies and instruments the overseer(s) will adopt in carrying out the function as well as the cooperative framework.

It is appropriate that credit reporting systems oversight be explicitly entrusted to the authorities by law. Specifying the objectives in relevant legislation may be the most direct way for providing a well-founded legal basis for the overseer(s) to implement appropriate policies and make it accountable in pursuing its goal

and mandate in the credit reporting area.

Since several authorities share responsibilities for the development and smooth functioning of credit reporting systems in any given country, it is of paramount importance that regulators and supervisors develop appropriate schemes of cooperation in this matter. In particular, effective cooperation among market participants, between regulators and market participants and among regulators is essential for the development of sound and efficient credit reporting systems. On the one hand, the sharing of credit information generates significant externalities for the financial sector and other economic sectors and increases access to credit. On the other hand, within the credit reporting systems, the lack of information sharing and coordination failures due to the existence of conflicts of interests (and information costs) as well as the intermediaries' unwillingness to cooperate can lead to "sub-optimal" equilibria in the organizational arrangements as to the system's reliability and efficiency. The credit reporting systems overseers are therefore entrusted with making up for a specific type of failure in the market for information sharing, i.e. the coordination failures.

With regard to the cooperation among regulators, the safety and efficiency objectives of credit reporting systems may be pursued by a variety of public sector authorities, in addition to the central bank and the banking supervisors. Examples of these regulators include: legislative authorities, ministries of finance, competition and consumer protection authorities. Appropriate cooperation among authorities can be achieved in a variety of ways, for example, exchanges of views and information between relevant authorities may be conducted by holding regular or ad hoc meetings. Agreements on the sharing of information may be useful for such exchanges.

Status in the country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

Observations

Includes some observations about how the issue analyzed could be improved.

12. CROSS-BORDER SHARING OF INFORMATION

Context

As a result of cross-border businesses and other activities, individuals and firms may need to receive credit or some other financial service from non-residents. Examples of these may include opening a current account in a foreign branch of a non-resident bank, requesting credit from a store or a mortgage to buy real estate in a foreign country (this may be specially relevant for those individuals or firms that are located next to their country's border, or for business people or students that travel abroad for long periods of time) or even agreements to exchange information on credits between superintendencies with supervisory purposes. Moreover, this may also be relevant for SMEs that, as a result of free trade and customs agreements have the possibility to do business in the corresponding foreign markets, but given their size don't have rated securities and need financing from the foreign counterparty, instead of using the conventional banking financing, sometimes instrumented with letters of credit.

Status in the country

A brief description about the situation in the country regarding the issue analyzed including main shortcomings and areas of potential upgrade.

Observations

Includes some observations about how the issue analyzed could be improved.

ANNEX I. PRINCIPLES FOR CREDIT INFORMATION SYSTEMS

[Principle B1]

Credit Information Systems

A modern credit-based economy requires access to complete, accurate and reliable information concerning borrowers' payment histories. Key features of a credit information system should address the following:

- **B1.1** Legal framework. The legal environment should not impede and, ideally should provide the framework for, the creation and operation of effective credit information systems. Libel and similar laws have the potential of chilling good faith reporting by credit information systems. While the accuracy of information reported is an important value, credit information systems should be afforded legal protection sufficient to encourage their activities without eliminating incentives to maintain high levels of accuracy.
- **B1.2** Operations. Permissible uses of information from credit information systems should be clearly circumscribed, especially regarding information about individuals. Measures should be employed to safeguard information contained in the credit information system. Incentives should exist to maintain the integrity of the database. The legal system should create incentives for credit information services to collect and maintain a broad range of information on a significant part of the population.
- **B1.3** Public policy. Legal controls on the type of information collected and distributed by credit information systems can be used to advance public policies. Legal controls on the type of information collected and distributed by credit information systems may be used to combat certain types of societal discrimination, such as discrimination based on race, gender, national origin, marital status, political affiliation, or union membership. There may be public policy reasons to restrict the ability of credit information services to report negative information beyond a certain period of time, e.g., five or seven years.
- **B1.4 Privacy**. Subjects of information in credit information systems should be made aware of the existence of such systems and, in particular, should be notified when information from such systems is used to made adverse decisions about them. Subjects of information in credit information systems should be able to access information maintained in the credit information service about them. Subjects of information in credit information systems should be able to dispute inaccurate or incomplete information and mechanisms should exist to have such disputes investigated and have errors corrected.
- **B1.5** Enforcement/Supervision. One benefit of the establishment of a credit information system is to permit regulators to assess an institution's risk exposure, thus giving the institution the tools and incentives to do it itself. Enforcement systems should provide efficient, inexpensive, transparent and predictable methods for resolving disputes concerning the operation of credit information systems. Both non-judicial and judicial enforcement methods should be considered. Sanctions for violations of laws regulating credit information systems should be sufficiently stringent to encourage compliance but not so stringent as to discourage operations of such systems.

A modern credit-based economy requires access to complete, accurate and reliable information concerning borrowers' payment history. Key features of a credit information system should address the following. An effective credit information system can be integral to the operation of modern financial systems. Credit information systems can include a number of functions, including collecting, analyzing, and distributing information about how consumers and businesses, large and small, handle their credit obligations. This type of information has proven to be an effective tool for a variety of purposes, including assessing the risk faced by creditors, as past payment experience is a strong predictor of future performance. Credit information systems also make it possible to empirically assess, in the form of credit scoring tools, which factors are most predictive, permitting finely tuned credit decisions. As a result, creditors can more intelligently assess consumer and business lending decisions, thus promoting the extension of credit and economic development in the countries in which they operate. Also, creditors are in a better position to develop numerous credit offerings tailored to the risk presented by borrowers' unique credit histories. Credit information systems promote competition among lenders, thus reducing the cost of credit. In fact, such systems can also increase the ability to attract foreign investment capital by providing foreign creditors a rational basis on which to evaluate credit risk. This regionalization and globalization of credit granting is further enhanced if consistent or at least transparent information collection standards are employed.

Legal Framework

Basis for Operation of Credit Information Systems. The legal environment should not impede and, ideally should provide the framework for, the creation and operation of effective credit information systems. Establishment and operation of credit information systems may be impeded or prevented by legal prohibitions or uncertainties concerning the application of laws relating to the collection, disclosure and use of financial information. For instance, bank secrecy laws may be perceived to prohibit banks from sharing information about their customers' accounts and payment history with a credit information system. The existence of such laws can chill the creation or operation of credit information systems.

Enabling legislation is not required for the development of credit information systems. Many credit information systems have developed organically so long as laws did not prevent their operation. Nonetheless, concerns about fair use of information have led to passage of legislation authorizing and regulating the existence of credit information systems. Passage of such legislation removes doubt about the legal viability of such entities and, by creating greater regulatory certainty, may encourage entrants into the credit information systems marketplace.

Liability Protections. Libel and similar laws have the potential of chilling good faith reporting by credit information systems. While the accuracy of information reported is an important value, credit information systems should be afforded legal protection sufficient to encourage their activities without eliminating incentives to maintain high levels of accuracy. There are a number of potential legal impediments to the development of credit information systems. One of the most significant is the existence of libel laws, laws that permit legal actions based on false publications that damage a person's reputation. The information maintained in a credit information system is of the type likely to damage a person's or company's reputation if publicly known. This may include failure to pay bills or filing bankruptcy. While credit information systems should be encouraged to maintain high standards of accuracy, potential exposure to libel actions -- even as a result of inadvertent mistakes -- could discourage their operation or make them unwilling to report

information unless there was no question about its accuracy. Even with the best intentions, it can be difficult to develop certainty concerning the accuracy of information being reported. Accordingly, some protection from libel or similar actions can be critical to the existence of comprehensive credit information systems. Such protections should not relieve credit information systems from the responsibility to provide reasonably accurate information. Instead, standards more geared to the challenges of operating a credit information system should be substituted.

Operations

Use Restrictions. Permissible uses of information from credit information systems should be clearly circumscribed, especially regarding information about individuals. Credit information systems collect a wealth of information about individuals and businesses. Much of that information could have a serious impact on reputations and financial standing. The information could be used in negative and potentially harmful ways, such as for purposes of blackmail or referrals to criminal authorities for tax evasion. On the other hand, if the information is used for legitimate, beneficial purposes, the existence of the credit information system is likely to receive public acceptance. Legally imposed use restrictions can address these concerns.

Data Security. Measures should be employed to safeguard information contained in the credit information system. To the extent information in credit information systems is sensitive, and to avoid undermining use restrictions, such systems should employ reasonable methods to protect the security of such information. As appropriate, these methods may include physical, electronic and procedural safeguards to protect against improper data access.

Credit information services can provide valuable information for assessing repayment risk, likely profitability of accounts, debt collection, marketing, employment screening, tenant screening, claims analysis, insurance underwriting, market research, and economic trends. A sound environment for managing credit and insolvency risk requires reasonable access to accurate, reliable and current credit information on borrowers that affords adequate protection and safeguards for the privacy of borrowers and that is governed by general rules of due process.

The legal environment should provide a transparent procedure that contains incentives for gathering and dispensing information. Access should be provided to firms engaged in credit activities and not limited to particular types of entities, e.g., banks. While there may be arguments to limit access to firms that furnish information to the credit information service, this could unduly limit potentially beneficial users, especially firms that are just starting up and may not yet have significant amounts of information to contribute.

Transparency and good corporate governance are the cornerstones of a strong lending system and corporate sector. Transparency exists when information is assembled and made readily available to other parties and, when combined with the good behavior of "corporate citizens," creates an informed and communicative environment conducive to greater cooperation among all parties. Transparency and corporate governance are especially important in emerging markets, which are more sensitive to volatility from external factors. Without transparency, there is a greater likelihood that loan pricing will not reflect underlying risks, leading to higher interest rates and other charges.

Data Integrity. Incentives should exist to maintain the integrity of the database. Credit information systems can be used in a variety of ways. Some uses, such as evaluating credit risk, rely on a database containing historical data on as large a number of potential borrowers as possible. Other uses may not require that data be maintained for extended periods of time. One such use can be as a means of collecting past due obligations by encouraging repayment to have one's name removed from the list. In that context, it might make sense to remove a debtor's name from the database when the obligation has been satisfied. However, if the database is also to be used to make future risk assessments, removal of that information might encourage payment of the particular debt at issue, but it would undermine the ability to identify borrowers who have fallen behind in their payments in the past. If a database is to be used, even in part for credit risk assessment, there should be incentives in place to keep data in the system even after that particular creditor's loans have been repaid.

Scope of Data. The legal system should create incentives for credit information services to collect and maintain a broad range of information on a significant part of the population. Credit information systems are most effective and enhance risk prediction if they contain data on a large segment of the population. The more ubiquitous their coverage, the better they can serve financial institutions in evaluating applicants for credit. Many existing credit systems work effectively through voluntary contribution of data by creditors who recognize it is in their self-interest to contribute information on their customers. If voluntary contributions are ineffective in creating a robust credit information system, legal requirements to report information could be imposed on creditors. Such requirements could avoid the problem that large incumbent creditors may choose not to contribute information due to the concern that reporting will facilitate creditors' competing for their existing customers.

There is strong empirical evidence that systems that collect both positive and negative payment histories permit more accurate risk assessments. Those same systems present the potential of financial institutions identifying their best customers to competitors, thus discouraging participation in the system. Alternatives exist to reduce the risk of losing customers, such as not allowing credit information systems to be used to target specific financial institution's customers. However, it should be noted that these alternatives do potentially reduce some of the beneficial competition that results from increased access to credit information.

One means of increasing demand for credit information services would be if creditors, both consumer and commercial, were expected as part of due diligence on extending credit to consider the borrower's credit history. This would serve the dual purpose of improving those firm's risk controls and creating a necessary market for credit information systems.

Public Policy

Collection and Use Restrictions. Legal controls on the type of information collected and distributed by credit information systems can be used to advance public policies. Control of the use of information collected by credit information systems, or even controls over the type of information such systems are permitted to collect, can be used to advance public policy goals. These public policy goals may often be in tension with the risk assessment functions of credit information systems. In theory, those systems collect the maximum information they can efficiently collect and use it to predict risk. If they were not permitted to use certain types of information, due to public policy concerns, the ability to predict risk based on the available data

could be diminished. There are often public policy judgments made to sacrifice the predictive value of the data in favor of advancing other social or economic goals.

Anti-discrimination. Legal controls on the type of information collected and distributed by credit information systems may be used to combat certain types of societal discrimination, such as discrimination based on race, gender, national origin, marital status, political affiliation, or union membership. There are often legitimate societal values that call for assessment of credit risk, either individual or business, based solely on prior credit experience, as a method of equalizing treatment of borrowers. In some cases, this could result in a prohibition on collecting certain types of information, such as demographic or other data about borrowers that goes beyond their prior loan payment experience, including gender, marital status, or race. The absence of such data collection and use restrictions might well enhance the ability to predict risk, such as by concluding that men pose a greater credit risk than women, or foreigners are more credit worthy than citizens of a country. However, there may be strongly held societal values calling for equal treatment regardless of certain characteristics. These values may be deemed worth the economic costs of reducing the ability to predict risk based on credit information system data. This may result in prohibitions on collecting or using certain information about borrowers, e.g., race, gender, etc.

Ironically, there is another approach to combating discrimination that is directly at odds with reducing the collection of information. Rather than excluding information concerning protected characteristics, in some cases, lenders may be required to collect such data. The data is collected not for its predictive value but instead to use as a basis for evaluating whether the financial institution is making decisions based on prohibited characteristics.

Obsolescence. There may be public policy reasons to restrict the ability of credit information services to report negative information beyond a certain period of time, e.g., five or seven years. Certain types of information in a credit file have the potential of seriously impeding a business' or individual's ability to get credit. One such example is the filing of a bankruptcy petition; another is a series of loan defaults. The knowledge that an individual or company was forced to resort to bankruptcy because their obligations exceeded their assets could lead future creditors to decline to extend them credit. While this is quite rational, the consequence can be the lifetime of economic destruction for an individual or company. In such cases, the government might find itself burdened with providing assistance.

Yet, in many cases, late payments or even bankruptcy filings are precipitated by causes beyond an individual's control, such as a natural disaster, unexpected medical costs, or loss of employment or a contract. It may not signify a permanent inability to manage financial affairs. As a result, there can be a desire to allow borrowers who have at one time failed to fulfill their financial obligations to rebuild their credit histories through subsequent good behavior. A credit information service could undermine this goal by continuing to report the existence of the negative information indefinitely. As a result, there may be important policy reasons to prevent the reporting of certain types of negative information, e.g., late payments, court judgments, tax liens and bankruptcies, beyond a reasonable period of time, such as five to seven years. By contrast, there might be other types of negative information, e.g., convictions of serious crimes, that are in society's interest to report for longer periods of time or even indefinitely. It is possible to craft regulation of reporting practices by credit information services to address and balance these policy concerns.

Privacy

Notice. Subjects of information in credit information systems should be made aware of the existence of such systems and, in particular, should be notified when information from such systems is used to made adverse decisions about them. Citizens in a country are often troubled by the existence of secret, hidden databases that contain information about them, regardless of whether those databases are maintained by the government or private firms. The legitimacy of credit information systems will be enhanced, and public apprehension reduced, if there is transparency concerning their existence and operations.

Aside from a general awareness of the existence of such systems, it can be critical to inform data subjects that information from those systems was used to make adverse decisions about the subject. It is impossible for databases containing thousands, if not millions, of files from numerous sources, public and private, to maintain current accurate information about a population that may have similar or identical identifiers, who do not use their personal identifiers in a consistent manner in all their interactions, who change identifiers over time (e.g., by getting married), and who move frequently. If erroneous data from those systems is used to made adverse decisions about individuals or companies, and the subject is not notified of the source of the data that led to the adverse decision, the subject will have no opportunity to correct the misinformation. As a result, the subject will continue to face rejections based on incorrect credit information system data. Not only is that unfair to the subject, it cast doubts on the operation of the system. It also means that users of the system will continue to be provided inaccurate data that will lead to incorrect risk assessments.

Notifying subjects that adverse action was taken based on credit information service data can also be a tool in policing anti-discrimination laws. If data subjects are permitted access to their information (see below), they can assess whether there are legitimate, non-discriminatory grounds for the denial. For example, if they have comparable credit standing to other borrowers who were granted credit, and the only difference between the applicants is gender or race, they might be able to establish that discrimination has occurred.

It would also be possible to structure a credit information system to only collect or use information with the consent of the data subject. However, giving data subjects control over their inclusion in the database, as opposed to process rights over the use of their data, risks allowing individuals or businesses with poor credit to exclude themselves or limit access to their complete credit history. These are the very people or entities creditors most need risk information about.

Access. Subjects of information in credit information systems should be able to access information maintained in the credit information service about them. Access to data by subjects can serve a number of important purposes. First, greater transparency about how the database operates and the type of information maintained can enhance public confidence. Second, only with access can data subjects who have had adverse action taken against them based on data in the service, determine whether that data is erroneous. Third, in the case of distressed enterprises, it can be helpful to have clear laws and procedures that require disclosure of, or access to, timely and accurate financial information on the distressed enterprise. This can encourage lending to, investment in or recapitalization of viable distressed enterprises. It also helps support a broad range of restructuring activities, such as debt write-offs, re-schedulings, restructurings and debt-equity conversions; and provide favorable or neutral tax treatment for restructurings.

In addition, the Principles and Guidelines for Effective Insolvency and Creditor Rights Systems call for laws that require the provision of relevant information on the debtor that could be accomplished by a credit information service. In addition, those Principles state that corporate workouts and restructurings should be supported by an enabling environment that encourages participants to engage in consensual arrangements designed to restore an enterprise to financial viability. An enabling environment includes laws and procedures that require disclosure of, or ensure access to, timely, reliable and accurate financial information on the distressed enterprise; encourage lending to, investment in or recapitalization of viable financially distressed enterprises; support a broad range of restructuring activities, such as debt writeoffs, reschedulings, restructurings and debt- equity conversions; and provide favorable or neutral tax treatment for restructurings. A viable credit information service can advance these goals.

Dispute Rights. Subjects of information in credit information systems should be able to dispute inaccurate or incomplete information and mechanisms should exist to have such disputes investigated and have errors corrected. It is of limited value to simply make data subjects aware that erroneous information from a credit information service served as the basis for an adverse action concerning them. In order to make that information useful, there must be mechanisms in place, either voluntary or mandated, to have such disputes investigated and, if information turns out to be erroneous, have the information corrected.

There are often timeliness concerns about resolving information disputes, perhaps because a business needs a financial commitment in order to sign a lease or a consumer wishes to purchase a new home that will go to another potential buyer if funding cannot be arranged. Thus, some requirement of timely consideration of disputes may often be critical to making the dispute right meaningful.

Similarly, a cursory review of a dispute, with no real effort to investigate and learn the correct information, can serve to make dispute rights meaningless. In some cases, the error may be apparent on its face, such as a date of birth of an infant belonging to a senior citizen. In others, there may be a need to contact the furnisher of the information to verify its accuracy. Oftentimes the extent of the investigation will be determined by the nature of the dispute.

Enforcement/Supervision

Supervisory Function. One benefit of the establishment of a credit information system is to permit regulators to assess an institution's risk exposure, thus giving the institution the tools and incentives to do it itself. While the principle focus of credit information systems is to permit financial institutions to gauge the risk posed by borrowers, those systems provide valuable tools for regulatory agencies to supervise institutions under their jurisdiction. Credit information systems permit efficient systematic analysis of a financial institution's loan portfolio, including its size, diversity, and risk levels over time.

Effective Enforcement Systems. Enforcement systems should provide efficient, inexpensive, transparent and predictable methods for resolving disputes concerning the operation of credit information systems. Both non-judicial and judicial enforcement methods should be considered. In light of the important financial and privacy interests involved in reporting credit information, there is a need for a mechanism to resolve disputes relating to accuracy and proper disclosure. This

mechanism can exist in the courts, through administrative processes, government oversight, or self-regulatory organizations.

Proportional Penalties. Sanctions for violations of laws regulating credit information systems should be sufficiently stringent to encourage compliance but not so stringent as to discourage operations of such systems. While compliance incentives serve a valuable role in maintaining the integrity of a credit information system, there is a risk of over-deterring conduct by making the penalties for violations too costly. At the extreme, this could deter operations of such services.