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Institutional Arrangements to Ensure Willingness to Repay in Financial Markets: a Case Study of Paraguay

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Abstract

The paper examines the consequences of the deficiencies in the legal protection of creditors' rights and the low efficiency of judicial enforcement on the functioning of credit markets in Paraguay, as well as the solutions developed to compensate the informality and enforcement flaws of financial contracts. In the formal sector, legal dispositions are found to greatly facilitate the recuperation of collateralized loans over other type of credit. This sector proves to be highly distorted, with dominance of short term and high credit interest rates and a general reliance on collateral instead of adequate project screening. The informal sector in turn has strong enforcement methods, generally relying on instruments like the postdated check, which until 1995 was criminally enforceable. The change in the check legislation after 1995 gives a unique opportunity to observe how a shift in enforcement level reflected in market practices. It is concluded that there was, as expected, a decrease in the use of the postdated check and a cleansing of the market. It is also documented how a modification in the legal framework of this financial instrument generated effects on the real side of the economy, being concretely an amplifying factor of the recession. Finally, an alternative experiment, the micro-enterprise credit program, is analyzed as an attempt to solve potential willingness to repay problems through the introduction of an improved practice in credit technology. Specially, the development of long-term relationships and the better screening of clients are shown to have led to lower costs, lower default rates and greater availability of credit for this segment of the market. The effects on interest rates, however, are not completely desirable. Thus, despite positive results of the program, the paper concludes with the question whether further progress toward higher credit efficiency can be made without addressing legal and enforcement problems first.

I. Introduction

This paper is a case study of institutional arrangements to ensure willingness to repay in Paraguayan financial markets. The Paraguayan legal framework belongs to the French legal family. Consistently with the figures for other Latin-American countries, characterized in recent studies (La Porta et al., 1996 and 1997), this legal system performs badly, both in term of creditors' protection rights and the enforcement of these rights. Debtors' lack of willingness to repay, which may be a consequence of inefficiency of legal frameworks and institutions, crucially effects and shapes the make up of the financial business. This case study examines how various segments of the financial market develop remedies to work around legal and enforcement limitations. The study also intends to appraise the influence of these aspects on the functioning of the Paraguayan financial market, its evolution in the 90's, and the level of key variables (interest rates, default rates, amount and type of loan).

To do so, the paper is divided into 5 sections. Section II includes a brief summary of the macroeconomic and financial evolution of the country since 1989, when it became a democracy and started implementing market-oriented policies. Emphasis is put on the factors that influenced the financial crisis the country is currently experiencing. Section III outlines main characteristics of Paraguay's legal framework in relation to economic claims. The problems of prevailing laws and the enforcement problems in ensuring creditors rights are examined, concluding that the best protection against these problems is the implementation of collateral. Section IV analyzes the formal financial sector, which appears to suffer important structural deficiencies regarding interest rate levels, loan terms, low administrative efficiency and the assignation of credit in the economy. The main causes of these features are examined, including willingness to repay considerations. Section V focuses on the vast informal market. After main characteristics are outlined, focus is placed on the postdated check, an instrument that was developed in Paraguay and was dominant in this market until 1995. The circumstances of the 1995 banking crisis and the following modification of the check legal framework provide an opportunity to observe changes. Section V concludes that the shift towards a weaker enforcement led to a change in agents' practices creating a tightening and cleansing of the market. Section VI reviews an experiment that attempts to implement an alternative way of solving the problems mentioned above. The Micro-enterprise Global Credit Program, supported by IDB loans, is oriented to the introduction of a new credit technology that may help reduce specific information and enforcement problems. The positive results of this program (in terms of greater availability of credit, lower rates and lower default) are interpreted here as significant progress towards lowering unwillingness to repay incidences through better information management and the introduction of long-term lender-borrower relationships. The conclusion summarizes the main finding of the study.

Analyzing the characteristics of financial markets in a country like Paraguay is not an easy task. Due to the importance of informal activities there is a critical lack of data, and the data that does exist is often not reliable. This study is an attempt to fill in this void, having recourse to a variety of official sources as well as direct interviews.

II. Macroeconomic and financial survey of the Paraguayan economy 1989-98

1. General Features

When Paraguay emerged from Stroessner's 35-year dictatorship in 1989, its economy was sluggish and plagued with privilege rent-seeking activities by persons and groups of interest related to the political power, and its regulatory and institutional economic framework showed the crude deficiency of excessive dirigism and statism. Corruption was a general practice in both the real and the financial sectors.

One relevant aspect of this period, that crucially shaped the financial sector functioning, was the development of an informal commercial center for smuggling and re-exportation in the southern cone. This helped compensate the growth slowdown after the completion of the Itaipú Dam in 1981 and the progressive exhaustion of the agricultural frontier toward the end of the 80's¹, while generating uncontrolled financial flows to the local banking sector.

In the 70s and first part of the 80s, non-registered trade was mainly smuggling from Brazil; in the mid-80s the so-called "re-exportation" business appeared. Several reasons explain this change of policy: high tariffs without an import-substitution strategy, multiple exchange rates, complacency of political power with related groups and, in the case of re-exportation, high protections in Brazil and Argentina against the importation of products like alcohol, cigarettes, perfumes, electronic devices, sport shoes, etc. Also, due to high internal taxes, products were introduced from Brazil and re-exported to the same country. After 1989, there was an official decision to validate the re-exportation business, through lower tariffs for "tourism goods" (the re-exported ones) and in 1991 VAT on these goods was set lower (2%) than the overall level (10%). In 1995, several of these goods were included in the MERCOSUR exception list, which contain 399 products benefiting from lower tariff, due to converge in 5 to 10 years to the Common External Tariff. The size of this business is certainly considerable: according to the IMF-DOT statistics, for example in 1994, non registered exports amounted to 179% of registered exports, while non-registered imports accounted for 66% of registered imports².

The Paraguayan economy is a very informal one. It is characterized by fiscal evasion, unregistered trade, a big informal sector of small productive and commercial enterprises, and larger firms operating at different levels of formality. Recent estimates by the IMF reported a 30% to 40% tax evasion and GDP understatement is estimated to be possibly as high as 100% (IMF, 1997). There are several reasons why these activities exist. As stated in World Bank (1996b), informality arises as a consequence of a combination of high costs and low benefits of formality. Traditional businesses in Paraguay generally maintain multiple sets of books, in order to avoid taxes and regulations, and have a large part of their patrimony undeclared. In a recent declaration (Diario El Día de Asunción, August 11th 1998), the president of the National Value Commission considered that 70% of firms have "subterranean movements, double, triple and quadruple book-sets". The tax system suffers distortions that affect the policies of businesses: the high corporate income tax rate (30%) and the absence of personal income tax produce a transference from firms to personal patrimonies, thus worsening the already low transparency of the overall economic structure.

This paper will argue that this is a major obstacle to the functioning of an efficient credit market, as the same feature in the financial sector mirrors the formal/informal dualism in the real economy. Until 1995, banks accepted deposits at different levels of informality, or different "colors" on a large scale: white

¹ The Paraguayan economy had its mayor period of growth (about 8% a year), in the 70's, with the construction of the Itaipu Dam, the biggest dam in the world owned half by Paraguay and half by Brazil, that boosted the construction sector and gave an important push to the commercial and financial sectors.

² It must be noted that the emphasis put on taking advantage of the neighbor countries "comparative disadvantages" was to the expense of the exploitation of Paraguay own comparative advantages, leading to a very low development of national productive units. Nevertheless, The MERCOSUR start, with the tariff convergence process, and the probability of a later a tax harmonization, will slowly lead to the end of this model and oblige the country to define a new export-oriented development strategy.

(officially registered), gray (official bank receipts, but no registration in the official books), and black (only personal receipt), (World Bank, 1996b). The official credit market coexists with a large informal credit market, based on a variety of instruments among which the postdated check was dominant, and with a very strong enforcement based on "Mafia" arrangements (physical threat, prison penalty).

In addition to these characteristics, the Paraguayan financial sector is suspected to be a main center for money laundering. According to the US State Department (quoted in the Economist Intelligence Unit Report on Paraguay, 4th quarter 1995 and in CEPPRO 1996), during six months of 1995, transfers to US Banks amounted to US\$ 357 million from Argentine, US\$ 342 million from Brazil and US\$ 1,000 million from Paraguay, despite Paraguay's GDP being 1/37 of Argentine's and 1/76 of Brazil's. Recently, the Brazilian Ambassador to Paraguay declared to a Paraguayan Newspaper (ABC Color, June 3rd 1998) that in Ciudad del Este (frontier to Brazil and Argentine), nearly US\$ 8,000 million was laundered each year, an amount equivalent to 80% of Paraguay's GDP. Considering this general framework, it is useful to focus more precisely on the macroeconomic and financial evolution of the country.

2. Macroeconomic evolution

Between 1989 and 1997, Paraguay experienced apparent stabilization, as shown in Table 1. The inflation rate was reduced to a single-digit number in 1996, and fiscal balance remained satisfactory throughout the period³. International reserves soared to US\$ 1,100 millions in 1995 and the external debt decreased to around US\$ 1,400 million in 1997, about 14% of GDP, the lowest relative level in Latin America (see Straub 1998, for a detailed analysis of the macroeconomic evolution).

Table 1. Macroeconomic Indicators 1989-1997

	1989	1990	1991	1992	1993	1994	1995	1996	1997
GDP per capita (1982 US\$)	1,618	1,616	1,612	1,597	1,619	1,625	1,656	1,634	1,634
GDP growth rate (%)	5.8	3.1	2.5	1.8	4.1	3.1	4.7	1.3	2.6
Central Gov. Fiscal surpl.(+)/Def.(-) (% of GDP)	2.4	3.0	-0.3	-0.3	-0.7	1.0	-0.3	-0.8	-0.8
Non Fin. Publ. Sect. surpl.(+)/Def.(-) (% of GDP)	1.9	5.2	1.6	0.9	1.2	2.4	2.5	1.7	n.d.
External debt/exports of goods & serv.(%)	148	89	81	66	44	36	30	32	37
Inflation rate (%)	28.5	44.1	11.8	17.8	20.4	18.3	10.5	8.2	6.2

Source: Central Bank and Finance Ministry (preliminary data for 1997)

Some of the first steps taken were the freeing of the foreign exchange market and the capital account, and the liberalization of the financial market (see below in section 2.3 a detailed analysis of the financial reform). Monetary policy progressively eliminated rediscount operations, and shifted to open market operations, although support to some specific sectors like cotton did not fully disappear⁴. Monetary financing of the public sector was also ruled out. In practice, monetary policy can be characterized as a "bi-anchor" policy: through open market operations, the Central Bank intends to regulate the growth of monetary aggregates, while a dirty float policy in the exchange rate market allows it to reduce pressure from imported goods, in a kind of "tablita" scheme⁵. With the difficulty to control the quantities of money in an extreme informal economy without the possibility to limit non-registered financial operations, and almost half its money supply denominated in US dollars (see Table 2), the exchange rate component soon took more importance.

³ Unlike its neighbors Argentina and Brazil, in the last decades Paraguay never went through periods of hyperinflation, nor did it experience high fiscal deficits.

⁴ Until 1994, for example, the Central implemented an indirect rediscount scheme, in which it granted legal reserves reduction to financial institutions supporting cotton planting.

⁵ The "tablita" scheme was the name of the "crawling peg" scheme applied in Argentina at the end of the 80's, consisting in a periodic, predetermined and decreasing devaluation of the exchange rate in order to slowdown the inflation rate.

**Table 2. Coefficient of dollarization of the economy 1989-1997
(1-M2/M3: deposits in US\$ as % of total monetary aggregate)**

1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
4%	23%	27%	30%	36%	43%	38%	33%	37%	40%

Note: After the pick in 1993, the introduction of the public sector deposits tends to lower the part of dollar deposits.
Source: Own elaboration with Central Bank data.

As a consequence of the anti-export bias of the economy⁶ and of an erratic growth rate, the industrial sector barely maintains its share of the total product and activity concentrated in speculative, real estate and financial operations in connection with illegal commercial activities.

Table 3. Major legal, economic and institutional reforms 1989-1997

General reforms...

1989. Exchange rate reform: introduction of a free unique floating exchange rate. (Dec. 216/89)

1991. New Tax Law: introduction of VAT and simplification of the tax structure (from about 80 to only 9 taxes). No personal income tax.

1991. Asuncion Treaty: funding act of the MERCOSUR common market.

1992. New Constitution enacted. Introduces important changes in the political and administrative field, allowing among others the judicial reform. Nevertheless, it fails to lay ground for economic reforms: major flaws include the regulation of privatization and the lack of independence of the Central Bank.

1995. January 1st. Official start of the MERCOSUR common market.

... and financial reform

1989-1996. Reduction of reserve requirements. Local currency deposits, from 42% in 1989 to 25% in 1994. In 1996, introduction of a differentiated system, ranging from 15% for current account deposits to 0% for time deposits above 18 months. Foreign currency deposits, stable at 30% until 1996. After 1996, decreasing rate from 27% for current account deposits to 0% for deposits above 36 months.

Since 1996, remuneration for legal reserves above 7% in local currency and 10% in foreign currency.

1990. Interest rates liberalization: ceilings on interest rates (active and passive) are eliminated. (Res. 3/131/90)

1991. Creation of the National Value Commission (CNV, Comisión Nacional de Valores) and the legal framework for the development of the capital market. As for 1997, about 60 firms opened their capital to the stock exchange. Nevertheless, operations concentrate in the money market.

1993. Liberation of public funds. These funds may now be deposited in the private financial sector.

1994. All contracts in foreign currencies are allowed. (law 34/94).

1995. New Central Bank Organic Law. (Law 489/95). Failed in giving independence to the Central Bank.

1996. New Banking Law (Law 861/96): introducing, among others, Basle Standards. Passed only in 1996, after the 1995 financial crisis.

1996. New Check Law (Law 805/96): making the postdated check legal.

3. Financial market evolution, 1989-1995

After 1989, a financial reform that aimed to liberalize the functioning of the system was implemented (see Table 3). Despite some positive aspects, the reform was essentially incomplete. Aside from the liberalization of interest rates, the reduction in reserve requirements and the freeing of foreign currency contracts, virtually nothing was done to eliminate major sources of inefficiency like those arising from public intervention in the financial sector. Directed credit partly remained (see footnote 4) and public banks were not privatized (as of end of 1997 they still represented 16% of total deposits, 22% of total lending and 20% of total assets of the banking sector) and only functional changes were introduced. Because the liberalization took place before strengthening the supervision body and improving the regulatory framework, wrong sequence of reforms was deemed responsible for failed reform (IDB, 1996; Straub, 1998). As of 1998, the banking supervision still requires a major reform.

Due to lack of control during this period and the low capital requirements⁷, the number of financial

⁶ Reflected in the real exchange rate appreciation, as well as tributary and legal dispositions favoring the importation of foreign goods for re-exportation against the local production.

⁷ Until the banking law was changed in 1996, it was possible to open a bank with US\$ 3 millions and a finance company with US\$ 1 million.

institutions rapidly increased: 13 new banks and 38 finance companies were opened between 1989 and 1994. As of 1994 (before the financial crisis), the Paraguayan financial market was composed of 34 banks and 65 financial companies⁸ (apart from savings and credit companies, cooperatives and housing loan companies). At this time, there was one financial entity for every 47,000 inhabitants, compared, for example, to a ratio of 1 to 200,000 in neighboring Argentina in 1994 before the Mexican crisis ("tequila shock").

Table 4. Basic ownership structure of banks 1989-1998
Number of financial institutions by type of capital

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total Banking sector	26	26	27	29	29	34	35	32	30	23
Banks with majority of foreign capital	14	14	13	13	13	13	13	14	15	15
Banks with majority of national capital	10	10	12	14	14	19	20	16	13	7
Public banks	2	2	2	2	2	2	2	2	2	1
Finance Companies	29	37	40	50	52	65	68	60	50	44

Note: Separate figure for branches of foreign banks (100% of foreign capital) and banks with majority of foreign capital are only available after 1996.

Source: Central Bank - Banking Superintendency

Management of these financial institutions was categorized in two types: the first type, made up foreign branches and some well managed national banks, with prudent strategies, focused their financial activities on first class local clients and maintained home-base headquarters. The second type, often poorly managed national banks and finance companies, extended loans to firms linked to the bank through common ownership, or looked for high gains through consumer loans and credit card operations. The latter type of financial institutions rapidly accumulated risky assets, and their "off book" portfolios grew very quickly, as an important part of their resources financed the informal sector or illegal activities. As these financial institutions needed to attract deposits in order to finance their risky operations or to cover growing losses, interest rates remained high (see discussion in part IV).

The existing dichotomy in the system led to a credit rationing of some sectors (like small and medium size enterprises that were not related to some financial group), and a rapid growth of credit portfolios in other activities like real estate and informal business. Between 1989 and 1995 the ratio of bank loans to GDP rose from 10.8% to 19.5%. In other words, in this period the growth of credit in real terms, as captured by the ratio of real credit growth to GDP growth, was 6.2, similar to that of countries with a comparable financial penetration level, like Argentine and Colombia (see The Economist, 1997, and Straub, 1998). Nevertheless, considering only national banks, this ratio rose to 10.4, which was clearly unsustainable.

Due to these circumstances, the weak supervision and the lack of political decision to enforce the existing rules, the Paraguayan financial market suffered a crisis in 1995. This crisis affected four banks, comprising 11 percent of the banking system assets, and ten non-banking financial institutions. Despite the passage of a new banking act and the tightening of prudential regulations, several institutions remained in extremely weak conditions (IMF, 1997). In 1997 a new financial crisis arose, and two more banks (including the largest national bank) and a savings' company were intervened by the Central Bank. Due to the depositors' flight to quality, banking in Paraguay became increasingly concentrated in foreign banks. As of December 1997, the five major foreign entities had more that 38% of the total credit market. As this paper is being concluded (December 1998), twelve more national financial institutions closed, through intervention or self-dissolution.

⁸ Finance companies are regulated financial institutions, which are permitted to offer all types of banking services, except checking accounts and international transactions.

3.1. The financial crisis and the functioning of credit markets

The issues leading to the financial crisis (wrong sequence followed during the process of reform, poor prudential regulation enforcement and the deficient supervision capacity, poor bank management, and the underlying consumption and lending boom), as well as the recessionary vicious circle following it, are well examined by financial literature. In fact, the Paraguayan financial crisis is a textbook case. The seven main causes of banking crisis in developing countries characterized in Goldstein and Turner (1996) are present. However, the Paraguayan case is unique, in that the financial fragility arose as a result of high risk, illegal and uncontrolled activities. In that sense, Straub (1998) argues that the banking crisis after 1995 can be characterized, following the Gavin and Hausmann (1995) framework, as the result of internal and external shocks in a context of vulnerability caused by an adverse macroeconomic evolution. In this particular case, the consuming boom, fuelled by an excessive credit growth, was closely linked to the growth of the informal sector, illegal financial activities and non-registered capital flows.

Furthermore, examination of the mechanisms through which creditors assured borrower's willingness to repay are key in understanding how the formal and informal markets developed. As analyzed in the following sections, the institutional framework, the inefficient Paraguayan judicial system, the serious enforcement problem, as well as the highly informal economy, led to the growth of certain types of instruments and contracts, and altered the cost of credits and the growth of the portfolio of each type of credit. Each segment of the market (formal and informal) developed its own legal remedies and mechanisms to work around the existing difficulties. These features in turn contributed to the banking crisis and its effects on the real sector. Before turning to this analysis, the next section examines the characteristics of the Paraguayan legal framework and the main enforcement problems.

I. Enforcing Payment in Paraguay

1. Type of procedure

In Paraguay, the Code of Civil Procedure (hereinafter CPC) outlines the judicial enforcement of economic claims. There are two types of procedure: ordinary and executive.

Ordinary procedure

Judicial disputes that do not have a special procedure are categorized as ordinary procedure. Ordinary procedures, for many reasons, are not useful to enforce repayment of loans. The procedure is long and tedious, one taking normally three to five years, if not longer, to obtain judgement. Also, the debtor has many defenses against the creditor, for example, it is unlikely that the creditor will obtain an attachment against the assets of the debtor at the beginning of the procedure. To complicate matters, the decision of a judge can be appealed at any stage of the procedure and the process is very expensive.

The executive procedure

A creditor can enforce his or her rights through executive procedure if he or she holds an executable document (mortgages, promissory notes, pledges, or checks) that demands collection of payable duty (Article 439 of the CPC). The CPC stipulates that in the execution procedure, the resolutions of the judge cannot be appealed with the exception of the resolution of sale and the resolution of liquidation of the costs (Article 442). Executive procedure is a faster procedure restricted to suits against debtors who have defaulted on a loan payment. The judge shall carefully examine the document, and if he determines that it is executable he shall issue a writ of attachment for the debt, interests and costs. The writ of attachment is given to an Officer of the Court, who within three days shall require the debtor to pay the debt. If the debtor does not pay, the Officer of the Court shall attach properties of the debtor for a value equal to the debt, interests and costs. Once the properties are attached, the creditor shall cite the debtor for motion. The debtor has five days from the service of process to present his defense (Art. 450 and 451 CPC). If the debtor does not fill out defenses or if these are rejected, a final decision will order public auction of the attached property (Article 470 CPC) The enforcement of this judgement is governed by the judgment procedure stated in Chapter V of the CPC.

The executive procedure is preferable to the creditor because:

- a) It lasts six months to one year in normal circumstances;
- b) Obtaining an attachment is likely at the very beginning of the procedure;
- c) Throughout the process, there are only two decisions that can be appealed; the decision of judicial sale and the decision of liquidation of costs;
- d) The debtor has limited defenses;
- e) It is less expensive than ordinary procedure.

Despite the advantages of the executive procedure, some de facto and legal problems exist in the collection of economic debts.

2. Problems in the judicial collection of loans

2.1. De facto problems

In Paraguay, the whole procedure takes place in writing. If one of the parties requires an order of the Judge, this must issue such order in writing. Testimonies, reports, and requests for evidence are also performed in writing. Petitions for obtaining evidence requires a written order of the judge to be served. Electronic mail transmissions or facsimile communications to the parties or to the judge are not allowed. In exceptional cases the judge orders service of process through telegraphic notification or certified letter of the Clerk of the court. The cost of these options is not included in the liquidation of the costs of the procedure. In cases where testimony of experts is required, such as to advice to the judge whether the sign of the debtor on a note is authentic, experts must accept their appointment from the court. If one expert declines or if one of the parties does not agree to the appointment, a second expert must be called; therefore, the judge may take considerable time to receive any filing, request opposing party response, and to issue a decision.

The infrastructure of Paraguayan Courts is in process of modernization. Word processing equipment is used in some courts and others use ordinary typewriters. Officers of the Court handle cases manually which are physically stacked in aisles organized both by alphabetically and by the year when the case started. The Judicial Power 1997 Annual Report also shows efficiency problems related to low institutional capacity: there is one judge for 50,000 to 60,000 habitants and each judge has to process an average of 3,000 proceedings a year. As a result, the responses are very low and demand more time and efforts than it should be.

2.2. Legal problems

Small Controversies

The competence of a Judge before whom a creditor must initiate the suit depends on the amount of the claim. According to the Law 879/81, controversies involving relatively small amounts of money (60 daily minimum salaries, equivalent to US\$ 530) are handled by a Justice of Peace, not necessarily holding a law degree. If the amount sued is from 61 minimum salaries (US\$ 530) to 300 minimum salaries (US\$ 2,650) the case is handled by a judge holding a law degree. Lack of guarantees for the parties result in having a justice who does not have a law education. Officers, including the judge, do not have the necessary qualifications to assure a speedy process and they are often exposed to corruption due to the low salary level.

Creditors that lend from US\$ 530 to US\$ 2,650 can only require small assets, appliances or the salary of the debtor as collateral, and the law forbids collection of appliances and salaries for more than the 25% of their value (Art. 716 CPC). These goods can be traded during the term of the loan without the control of the lender, since they are not recorded in the Public Registry. Therefore, if the judge orders the attachment at the beginning of the procedure and the collateral disappears, the creditor must seek existent assets to attach. If not found, the creditor can petition the judge for a prohibition to sell registrable property (vehicles or real estate). The creditor, thus, does not collect the debt, although he can obtain attachment over the assets that the debtor acquire in the next five years and continue the procedure until the judge orders the judicial sale.

The address issue

Another problem with enforcement is related to the address of the debtor. In private instruments such as the promissory note, the loan parties are able to agree on a special address in the document. Once the debtor has defaulted on a payment and the creditor has decided to judicially enforce the debt, the latter must notify the claim in the "real" or current address. According to the prevailing interpretation of Paraguayan courts, it is necessary the debtor's acknowledgement of the note in court to assure the authenticity and enforceability of the document. Thus, if the debtor moves out of his "real" address, the creditor is not allowed to notify the claim at the address set up in the note, and must find his or her current address and notify there the claim. After the creditor has proved due unsuccessful diligence in looking for the "real" address of the debtor, the law mandates service of process through newspapers

ordered by a judge (Article 140 CPC). Service of process through the newspaper is costly. Publishing in one newspaper for five days costs about US\$ 300; total cost for the first publication is estimated at US\$ 600. Thus, in the case of small loans, the address issue may be a serious impediment to loan recovery.

Bankruptcy law

Bankruptcy law is also another barrier to effective enforcement (see in annex 1 a discussion of shareholder and creditor rights in the framework of La Porta et al., 1996). A debtor who engages in commercial activities and reaches a state of insolvency is obliged by law to file for bankruptcy or request a creditor's meeting. The court will decide whether to accept the petition or to declare bankruptcy. If accepted, the court will nominate a trustee who will review the documentation submitted by the creditor. Creditors will then be notified of the court's admission by publications in one newspaper. A reorganization procedure has negative effects over judicial claims. The insolvent debtor can continue administering his assets. The creditor cannot continue or start legal actions against the debtor whose petition for creditors' meeting has been accepted by the court, with the exception of credits guaranteed by mortgages or pledges, or credits by salaried personnel as a consequence of a labor contract. The debtor must present a payment proposal for creditor's consideration in a special meeting called to this effect. If the payment term is less than two years, the debtor can propose a rebate of up to 50%; but if the term exceeds two years, the rebate cannot exceed 30% of the credit. The maximum term authorized is four years. If the creditors turn down the proposal, or if accepted, the court does not confirm it, bankruptcy is declared. Creditors then have the option of collecting payment with a substantial rebate, usually without interest, or voting for bankruptcy with the risk of recovering payment after liquidation (assets are judicially sold and the proceeds are distributed pro rate among unsecured creditors, after labor claims, the trustee in bankruptcy, and the secured creditors are paid off). For these characteristics, the reorganization procedure is considered by most creditors to be a sure way for debtors to avoid payment of most part of their obligations.

Collateralized loans

Loans secured with mortgages or pledges assure recovery of payments more effectively than any other instrument of credit. Firstly, the creditor can obtain the attachment over the collateral (real estate or movable property) that is stated in the public instrument. As mortgages and pledges are registrable properties, the Officer of the court does not need to seek out assets of the debtor and can go directly to the Public Registry and attach the collateral for a value equal to the debt, interests and costs. It is likely that the collateral will not be sold or traded because, through the Public Registry potential buyers of the property are informed of the legal status of the property. Collateral can only be sold to a third party if that party is aware of the existing debt and is willing to pay it. Secondly, CPC does not require acknowledgment in court by the debtor for loans that are notarized or the notes that were issued in relation with the notarization and registered in the Public Registry, which allows the creditor to speed up the process and to save money. Thirdly, in a notarized loan the parties can agree on a special address where the debtor can be notified of any order of the judge. Fourthly, as seen above, creditors with credits guaranteed by mortgages or pledges are prevented from the negative consequences of a reorganization procedure filled by a debtor and can collect capital, interests and costs with a privilege over other creditors. Lastly, a survey among law firms practicing in the field of commercial law shows that when the execution of a debt is backed with collateral the probability to renegotiate the debt during the procedure is higher than when such collateral does not exist (50 to 60% with it and 30% without).

3. Cost of judicial enforcement of economic claims

The cost of the judicial enforcement of an economic claim varies and depends on different factors. Law 1376/88 states the legal fees of lawyers. Article 34 states that legal fees in an execution procedure can never be lower than 8% of the value of the claim. Article 32 allows judges to set the fees up to 20% of the value of the claim. Additional expenses have to be considered when a judicial enforcement is necessary. The government charges a 0.40% tax over the value of the claim. Legal notifications cost \$2.50 if the debtor lives in Asuncion. Restrictive measures cost from 1% to 5% of the value of the claim. In a public auction, creditors must pay announcements in newspapers and fees to judicial auctioneers. Thus the total cost varies from 9.40% to 25.40%, plus the cost of newspapers' publications.

4. Summary

There are clear enforcement problems of economic claims in Paraguay. The main obstacles to enforcement are de facto problems related to structural inefficiencies of the judiciary and of the economy. Deficiencies of the legal framework include weakness in bankruptcy and the procedure for the recovery of small credits. Overall, collateral appears as the best protection for creditors.

I. The formal credit market

The high degree of informality of the Paraguayan economy, with its unique formal/informal dualism is also seen in the financial sector. When examining the relationship between formal and informal financial sectors, it is helpful to outline their characteristics. The characteristics of the formal market are:

- High overall lending rates and spread;
- Dominance of short maturity loans;
- Excessive reliance on credits backed by some kind of guarantee;
- Credit rationing and/or even higher interest rates to sectors with high perceived risk;
- Poor credit evaluation; and
- High overall default in the system, at least in the last years.

1. High interest rates and spread

Despite the total liberalization of the financial market after 1990, the decreasing inflation rate and strong reduction in reserve requirements, interest rates in national currency did not experience substantial reduction. As a result, real lending rates actually rose, real deposit rates were low, and the financial spread stayed above 20% (see Table 5)⁹. When visiting the country in 1994, the Director Manager of the International Monetary Fund, Michel Camdessus, declared: "The country financial cost record should be recorded in the Guinness Book of Records (...) One of the highest in the world. Such a pronounced financial spread is an unequivocal symptom of financial underdevelopment".

Table 5. Interest rates 1991-1997 (national currency)

Lending rates	(Annual Nominal rates)						
	Dec. '91	Dec. '92	Dec. '93	Dec. '94	Dec. '95	Dec. '96	Dec. '97
Development Loans	27.5	31.8	30.5	29.4	32.6	28.9	24.9
Comercial Loans	30.8	33.8	36.8	34.3	32.6	30.0	26.8
Personal Loans	39.6	39.4	44.0	39.1	40.6	41.4	31.9
Credit Card*	49.0	44.1	46.1	47.5	56.5	53.4	48.9
Overdraft*	49.0	49.6	52.7	54.6	60.1	56.6	53.4
Average (pond.)	34.5	39.5	40.8	38.3	42.8	40.0	36.0
Deposit rates	(Annual nominal rates)						
	Dec. '91	Dec. '92	Dec. '93	Dec. '94	Dec. '95	Dec. '96	Dec. '97
Saving accounts	14.1	11.3	11.2	12.2	10.7	9.7	5.9
Term deposits	11.4	16.6	17.9	16.0	14.0	14.8	11.3
Saving dep. certificates	21.0	22.5	24.7	23.2	22.2	17.1	14.4
Average (pond.)	14.8	15.4	14.7	18.3	14.7	13.0	7.6
Financial spread	19.7	24.1	26.1	20.0	28.1	27.0	28.3
Inflation	11.8	17.8	20.4	18.3	10.5	8.1	6.2
Lending rates	(Annual real rates)						
	Dec. '91	Dec. '92	Dec. '93	Dec. '94	Dec. '95	Dec. '96	Dec. '97
Development Loans	14.0	11.9	8.4	9.4	20.0	19.3	17.6
Commercial Loans	17.0	13.6	13.6	13.6	20.0	20.3	19.4
Personal Loans	24.9	18.4	19.6	17.6	27.2	30.8	24.2
Credit Card	33.2	22.3	21.4	24.7	41.6	41.9	40.2
Overdraft	33.2	27.0	26.9	30.7	44.9	44.8	44.4

⁹ The interest rates in foreign currency fluctuate in a similar way than international rates. Nevertheless, during the period, the premium on domestic lending rates was between 4 and 8%, comparing to the US Prime Rate.

Average (pond.)	20.3	18.4	16.9	16.9	29.2	29.5	28.0
Deposit rates	(Annual real rates)						
	Dec. '91	Dec. '92	Dec. '93	Dec. '94	Dec. '95	Dec. '96	Dec. '97
Saving accounts	2.0	-5.5	-7.6	-5.2	0.2	1.5	-0.3
Term deposits	-0.4	-1.0	-2.1	-2.0	3.1	6.2	4.8
Saving dep. certificates	8.3	3.9	3.6	4.1	10.6	8.3	7.8
Average (pond.)	2.7	-2.1	-4.8	0.0	3.8	4.6	1.4

* 1991 credit card and overdraft rates are not discriminated.

Source: Own elaboration with Central Bank data

An array of factors contributes to the maintenance of high interest rates and of a very large spread between deposit and lending rates. While a detailed discussion of this subject is beyond the scope of this paper, it is worthwhile to mention three explanations that are referred to in Powell et al. (1997) as traditional responses to the question as to why lending rates and spread remain high, and are certainly relevant to the case of Paraguay:

- The risk-taking behavior of banks was the result of the concentration in non-registered commercial activities, smuggling, connected lending, etc., leading to a spiral of rising interest rates, riskier lending and accumulation of poor assets. The ratio of credit growth to GDP growth (see section II) is an indicator of how fast these activities developed during the period. The level of non-performing loans in the system discussed below also indicate this high risk.
- Low managerial efficiency can be seen in some financial/administrative indicators. Table 6 shows the main indicators by comparing branches of foreign banks, banks with majority of foreign capital, banks with majority of national capital and public banks. It is very clear from these data that as Dec. '97 there was still a gap in terms of administrative and managerial efficiency between foreign and domestic institutions (it must be considered that at this date, several inefficient national banks had already left the market), not to mention inefficient public banks.

Table 6. Financial/Administrative indicators (As of Dec. '97)

	Branches of Foreign banks	Banks with majority of foreign capital	Banks with majority of national capital	Public banks
Personal Costs/Deposits	2.8%	4.7%	4.4%	8.7%
Administrative Costs/Deposits	6.7%	8.5%	9.8%	11.6%

Source: Central Bank - Banking Superintendency

- The oligopoly power in the financial sector is often related to high banking profitability. During the past years, foreign banks earned a high return on capital, as can be seen in Table 7. These figures, and the average profitability of the system, are quite high by international standards and thus seem to indicate oligopoly power by a group of banks¹⁰. The behavior of this group of foreign banks, with best administrative practices, can be characterized by the Stiglitz and Weiss (1981) framework, in which the optimal strategy in a market with imperfect information is to ration credit, excluding riskier clients from the borrowing pool. Moreover, due to the tacit oligopoly situation, these institutions set their lending rates just below those of the more inefficient banks, thus achieving high profits. These banks also have an oligopoly power to set deposit interest rates lower than average (they generally pay negative real rates on deposits), since there is a flight to quality among depositors.

¹⁰ Following Powell et al. (1997), banking profitability normally ranges between 10-15% on capital for developed countries.

Table 7. Banking profitability 1991-1997: Earnings/Equity

	1991	1992*	1993*	1994*	1995	1996	1997
Foreign banks	10.3%	16.8%	16.1%	10.4%	19.7%	33.4%**	28.2%**
Banks with majority of national capital	11.3%	13.1%	6.8%	5.4%	8.5%	11.9%	9.4%
Public banks	7.3%	15.1%	14.5%	3.8%	5.0%	4.7%	-4.0%
System average	9.8%	15.4%	13.1%	7.5%	13.5%	21.0%	23.2%

* As of September. ** This figures would be even higher ruling out two banks that have just started their activities in 1996 and thus make no profit.

Source: Central Bank - Banking Superintendency.

Problems of information and imperfect enforcement that make the perceived default risk of borrowers higher must also be considered. In the willingness to repay framework, banks tend to charge higher interest rates to compensate for the perceived higher risk. A proxy of the relevance of this motive might be the difference between interest rates for credit with and without collateral.

There is mixed evidence on this issue. One possible approximation, although not strictly corresponding to the collateral-no collateral dichotomy, is the difference between development and commercial loans, and personal loans (personal loans are generally of smaller amounts, thus less prone to be collateralized). The interest rates gap between these loans is between 5 and 13% during the decade. The other piece of evidence from the questionnaire is less compelling. The two banks that gave data about the difference between credit with and without collateral show a gap of between 1% and 4% in an annual term, depending on the currency and the type of guarantee. Interestingly, in some cases loans with third-party personal guarantee have lower interest rates than collateralized loans.

A sizeable gap exists in some cases according to the size of clients and loans: gap between credits to small firms and those directed to big firms may be as high as 8%, while difference between loans of less than US\$ 10,000 and loans of more than US\$ 1,000,000 is about 5% (here, however, the fix cost component may have relevance). Nevertheless, banks seem to have different policies, since there are also institutions that do not apply different rates according to size motive. Considering these diverging facts, a generic explanation may be that banks charge an interest rate premium to sector or type of loans that they perceive as riskier. This perception happens to be highly variable across banks, according to the market segments in which they have better operating knowledge.

2. Short-term credit

The Paraguayan financial system is also characterized for its short-term orientation. As of April 1995 (no such data are available for years other than 1995), 87% of the total credit to the non-financial sector has a maturity of less than one year and 49% has less than 60 days. Looking specifically at corporate loans, the percentage of medium and long-term loans is higher than global credit market figures, although still low in absolute terms.

Even though most loans are written as short-term contracts, they are generally rolled over and become *de facto* long term loans (Gavin and Haussmann, 1995), which allows banks to transfer the risk to the borrowers and also proves their oligopoly power. However, the assignation of these short-term loans generally does not involve the same type of evaluation as the required to long-term industrial credit, reinforcing the bank's tendency to concentrate their lending portfolio on a certain type of credit and on clients that do not require a thorough risk evaluation: consumer credit to people with salary and/or personal guarantee, and credit with pledges or collateral.

3. Concentration of credit by sectors and type of guarantees

As shown in Table 8, there is an important concentration of credit in non-productive sectors, mainly commerce and consumer loans. Considering exclusively private banks, only 25.2% of the total loan portfolio goes to productive sectors (agriculture, cattle, industry and construction), while more than 56% goes to commerce and consumer loans alone. This is a clear consequence of the incentive structure discussed in section II that benefits commercial triangulation and other illegal activities.

Table 8. Credit by sectors (as of dec. 1997)

	Agriculture	Cattle	Industrial	Construction	Export.	Consume	Commerce	Other
Foreign banks	4.9%	4.9%	9.3%	2.5%	3.2%	12.5%	47.4%	15.3%
National banks	6.3%	5.5%	14.2%	1.3%	4.3%	12.3%	42.0%	14.1%
Total private banks	5.8%	5.3%	12.3%	1.8%	3.9%	12.3%	44.0%	14.6%
Public banks	34.4%	3.8%	19.2%	0.0%	1.6%	17.3%	20.2%	3.6%
System average	12.7%	4.9%	14.0%	1.3%	3.3%	13.5%	38.3%	11.9%

Source: Central bank

There are valid reasons for banks to require collateral when extending a loan. In the legal field these reasons are legal complications for credits of small amounts, enforcement problems (possibility for the debtor to dilate the case, lack of judicial efficiency, etc.), and the inadequate bankruptcy and reorganization procedures. In all cases, the best protection is the existence of collateral, which makes collection faster and easier (six months to one year through an executive procedure, with 75% or more of collection).

According to the new banking law, Law 861/96, when computing the effective equity to asset ratio (due to be at least 12%), collateralized credits are considered low risk assets, with a 0.50 coefficient, while non-collateralized credits are normal risk assets, with a 1.00 coefficient. Thus, there is an incentive to ask for collateral, which allows a higher leverage. In the operative part, a high grade of informality makes an adequate screening process difficult. One way to compensate for this information problem is to rely systematically on some kind of guarantee.

As a matter of fact, data from the Banking Superintendency show that 86.7% of the banking system portfolio is backed by guarantees of some type: 49.3% by collateral (real estate, pledges) and 37.4% by third party personal guarantee. Furthermore, responses to the questionnaire show the following percentage of loans backed by some kind of guarantee: Loans to individuals, between 41 and 90%, and corporate credit between 62 and 70% of total loans. Typical loan-to value ratios are also quite high, ranging between 100% and 50%, but with this lower percentage value being the most common among all institutions. This may indicate an extra-requirement in term of amount of collateral, to compensate for the expected lost in case of execution of the guarantee. It also may be related to the general perception that the real estate market has been overvaluated and that collateral may have to be executed at low prices.

4. Lack of adequate credit evaluation

The strong reliance on collateral in the Paraguayan market may be an explanation for the lack of adequate credit evaluation, since to some extent collateral is a substitute to project evaluation (see Manove, Padilla and Pagano, 1998, for such a model of lazy banks, performing socially inefficiently low level of screening). Also, the low transparency of firms makes any formal evaluation a difficult task. There are problems of administrative inefficiency as a result of poor managing practices. Paraguayan financial institutions organize the credit process as a "chain" process, with a different person in charge of each successive step. This process proves to be quite problematic, especially in term of informational efficiency¹¹.

¹¹ In part VI we present an alternative experience that precisely intends to solve these problems with great success.

Many sources (interview with A. Caballero, director of the Central Bank, *Diario ABC*, *Suplemento Económico* June 22nd 1997; IMF, 1997) connect the lack of evaluation with the related lending practices that were common in the Paraguayan financial market until 1997. Banks with tiers with some industrial group assigned credit based on their commercial relationships, without consideration for the profitability of projects and the quality of the borrowers' administration.

Finally, the results of the questionnaire show that there is a strong reliance on the data provided by information agencies (see annex 2 for a description of the private agency operating in Paraguay). Every institution surveyed considered reports from this agency at least as important as own data in the decision to extend credit, and some of them rely exclusively on this information. It is also a well-known fact in the country that the appearance in the agency's registers practically hinders future access to formal credit¹². Hence, it seems that in Paraguay this mechanism acts as an important borrower discipline device (Padilla and Pagano, 1996). Moreover, besides screening borrowers, this system is also used to solve enforcement problems. Banks monitor their current clients in case of default, before taking any action. In particular, if they discover that a client has any judicial process, they "rush" to the court. Most bankers interviewed, however, claim for a more efficient credit scoring organization that would provide detailed information: both "white" (complete characteristics of clients) and "black" (past default) information. The Risk Central, implemented at the Central Bank since 1997 and not fully operational yet, may progressively fill in this gap.

5. High default rate

It is worthwhile to observe the effect of structural deficiency reviewed and the macroeconomic factors on the level of loans past due during the period. Consistently with what happened in other Latin-American countries (Gavin and Haussmann, 1996), the level of non-performing loans in the Paraguayan system did not deteriorate until the 1995 financial crisis broke in.

Table 9. Level of loans past due 1991-1997 (as a % of total loans)

	1991	1992*	1993*	1994*	1995	1996	1997
Banks with majority of foreign capital	3.1%	3.1%	4.1%	4.9%	3.8%	5.6%	4.5%
Banks with majority of national capital	2.3%	5.7%	6.2%	8.5%	8.5%	14.3%	16.8%
Public banks	9.6%	21.6%	10.7%	16.4%	11.7%	17.9%	35.6%
System average	4.4%	7.6%	6.1%	8.6%	7.0%	11.3%	13.1%

* As of September.

Source: Central Bank - Banking Superintendency.

6. Summary

In order to explain the structural deficiency of the Paraguayan financial system and the disruptive financial crisis that began in 1995, this paper has stressed various factors. Banks are poorly managed and the overall regulation and incentive structure is inadequate. Although there has been some improvement in the last years, these factors are still presently seen.

The financial sector does not function independently from the rest of the economy. Banks cannot undertake an adequate credit management process because of the high level of informality of the market. The lack of transparency of many firms (multiple balance sheets) and lack of information make it almost impossible to evaluate the real creditworthiness of the potential debtors. As a result, even well-managed banks with adequate credit evaluation capacity only extend loans with some kind of guarantee or to a selected sector, and charge higher interest rates and/or shorten the maturity to compensate for the higher perceived risk. In that sense, the informality of the real sector leads banks to ration credit to clients lacking formal guarantee, leaving them without access to formal loans. The informal credit market usually caters to these economic units.

¹² Although it is sometimes reported that big borrowers can "pay their way out" of the registers.

I. Informal credit market

The informal credit market¹³ attracts clients who typically lack the kind of guarantees that formal institutions require (collateral, reputation). Informal creditors rely on alternative mechanisms to ensure adequate credit recollection, to compensate for a potential higher risk, and to lower unwillingness to repay. These unique functioning requirements led the market to develop original instruments, given the institutional and legal conditions prevailing.

To better understand market functions it is important to know:

- Who the clients and sectors attended are.
- What the typical conditions (rates, terms, amounts) of the loans are.
- What instruments are dominant.

1. Characteristics of the informal credit market

1.1. Sectors attended

The traditional clients of the financial informal sector are usually referred to as the micro, small, and medium size enterprise sector. The more common criteria to define the micro, small, and medium size enterprise sector is the number of employees, being enterprises with 1 to 5 employees as micro, those with 6 to 20 as small, those with 21 to 100 as medium and the rest as large. Other definition criteria are total assets and annual sales, as well as some qualitative conditions. Nevertheless, due to the great informality in many developing countries, it is very difficult to determine the real value of these variables. Moreover, there is no secure data about the number of these enterprises in Paraguay. The available data from the 1997 industrial census of the Ministry of Industry indicate a total of 9,002 firms, of which 76% are micro, 16% small and 6% medium size.

Estimations from the Paraguayan Industrial Union reveal the importance of this sector of small, mostly informal enterprises (aggregating from 1 to 100 employees), in the Paraguayan economy. It represents 97% of the total number of firms, 36% of industrial employment and 21% of the industrial value added. Others estimations of commercial and service enterprises, from 1994, state 27,926 commercial firms and 8,624 service firms, totaling approximately 45,000 firms. Moreover, following the previous definition, and including industry, services and commercial activities, available estimations indicate that there are about 400,000 micro-enterprise in the urban sector, more than half of them being independent workers.

This sector has fairly low access to the formal credit market, as shown in Table 10. The percentage of total financing coming from the formal financial sector (understood as banks and finance companies) is only 22% for small firms, 24% for medium ones and 26% for large ones.

Table 10. Source of financing by firm size (1996)

	Internal Financing	Commercial Banks	Finance Companies	Suppliers	External Financing
Small	52%	16%	6%	21%	4%
Medium	61%	20%	4%	13%	2%
Large	55%	23%	3%	14%	5%

Source: World Bank, 1996a.

Rural economic units, too, are frequent clients of the informal credit market: 75% of Paraguayan agricultural exploitations do not have access to formal credit (commercial or public). This percentage rises to 88% when considering exploitations of less than 5 hectares (Hirsch, CEPPO, 1994).

¹³ "Informal" credit institutions are considered here to be those, whose activities escape any official register.

1.2. Characteristics of the loans

As their counterpart in the formal credit market (see part IV), loans in the informal credit market are generally short term loans, with maturity ranging from a few days or weeks to a maximum of six months. They usually finance short-term operations, like acquisition of raw materials or intermediate goods, and more general production and commercialization processes. In cases where they are designed to finance medium term operation, short-term loans are rolled over. Interest rates are usually well above the already high rates of the formal system. An estimation of minimum interest rates for different type of credit is shown in Table 11.

Table 11. Annual interest rates for different type of credits (as of 1997)

Informal commercial credit by Usurers ****	Postdated check (discount rate)**	Credit to micro-enterprises***	Commercial credit by finance companies*	Commercial credit by banks*	Development credit by banks*	Corporate credit by banks – prime rate**	Cost of funds*	Inflation rate 1997*
120-180%	43-150%	70-80%	38%	26%	22%	18%	15%	6,2%

Sources: * Average rates, Central Bank, 1997. ** Interviews. *** Technical Unit for the Execution of Programs (UTEP). **** Borda, 1997.

1.3. Mechanisms/Instruments of credits

A credit operation in the informal market can be implemented through simple oral contracts, promissory notes and an instrument singular to the Paraguay reality: the postdated check. Oral arrangements and promissory notes are commonly used in very short-term operations, as the loans made by usurers lending to small micro-enterprises with urgent liquid necessity. These types of clients usually do not have bank accounts, so they can not rely on overdraft facilities or the postdated check system described below. The postdated check finances more regular operations with suppliers or medium-term commercial credit (from 30 days to a few months).

The enforcement of documents in the informal market can be characterized as "Mafia-style" enforcement, since informal creditors rely on physical threat or prison penalty. In the case of usurers lending, the president of the finance companies association quoted the following story:

"One of our client was heavily indebted with several creditors, including ourselves and an usurer. As a way to remind him of his obligation, the usurer sent him a bullet in an envelope. The client paid the usurer first and then filed a reorganization procedure. Only a small fraction of the formal loans was recovered."

2. The postdated check

2.1. The postdated check until 1996

Prior to the enactment of the law 805/96, checks drawn without funds were defined as a swindle, and therefore punishable, under the Law 941/64. Debtors signed checks with a future date, and if they did not have sufficient funds at the date stated on the check, the creditors initiated a criminal procedure that allowed them, with an order of arrest issued by a judge, to demand the whole payment of the debt. If the debtor did not pay, the creditor utilized the order of arrest to put the debtor in jail with a great probability to assure the repayment of a loan in a very short time since the borrower would do anything to avoid prison.

Similarly, postdated checks were also used as a replacement of collateral as the guarantee of a business transaction. The borrower wrote a postdated check to the lender for the amount of the loan. If the borrower did not pay the loan at the expiration date, the lender could deposit the check in his bank account to cause it to "bounce." The bank sealed "without sufficient funds" and returned it to the lender, which entitled the lender to follow the criminal procedure described above (see in World Bank, 1994, a

description of the same proceeding in Bolivia). So the postdated check, initially related to genuine commercial operations (like a sort of conformed credit bill), soon took a life of its own and was used as a mechanism to ensure the borrower's willingness to repay in the informal credit market. Moreover, this instrument had the advantage of being a liquid one, since a broad (illegal) rediscount market for postdated checks appeared.

These facts lead to the presumption that the postdated check was a very efficient instrument in terms of enforcement, which in turn explains its great acceptance. As stated in CÉPPRO (1996):

"The postdated check is an adaptation, from certain point of view successful, of the economic agents to the Paraguayan situation, with its endemic lack of legal security, through which they develop a credit instrument suited to their needs",

One indicator of the level of use of the postdated check are the available judicial statistics for the 90's, showing a great quantity of cases related to checks (postdated and regular checks). Nevertheless, it is quite plausible that rebound is higher when considering postdated checks¹⁴. Emission of check without funds represented between 10 and 20% of the criminal proceedings initiated in the 90's. Since a great part of the cases labeled as swindle are related to checks without funds, it can be estimated that between 30 and 40% of the criminal proceedings have to do with checks. Moreover, about 10% of the population of the National Penitentiary were incarcerated for the issuance of a check without fund.

These data indicates that despite the strong enforcement level of the postdated check, many people were in jail for checks without funds, thus indicating that in most cases of default the problem may well have been inability to pay¹⁵. It is difficult to separate default due to inability to repay from default due to unwillingness to repay. Nevertheless, the enforcement procedures in the informal market may make the willingness to repay issue relevant when a debtor has multiple obligations and gives priority to the one(s) with the most threatening penalty: physical threat or prison threat with the postdated check, as in the "bullet story" quoted above.

Another way to examine the importance of enforcement mechanisms in the development of this particular market is to study what happened after 1996.

2.2. The postdated check after 1996

In the aftermath of the 1995 crisis, the Paraguayan economy experimented a clear recessionary slump. However, the official banking statistics, which of course do not include check-credit statistics, show neither significant credit crunch, nor deposits flight after the banking crisis. A careful study of the situation led many observers to believe that the main impact came from the fall of the postdated check credit market. Several banks, through their related finance companies, had developed rediscount departments of postdated checks. The fall of the most active of these banks and the consequent mistrust of the public in this instrument, explain the strong crunch in the informal credit market, which was a major factor of the following slowdown of the economy¹⁶.

As this phenomenon became more evident a general preoccupation to restore functioning of the credit channel that served social purposes, insofar as it was used by most of the productive unit not accessing the formal financial sector, started to rise among policy makers. This led to an important modification of the legal framework regarding the check. It is important to examine the hypothesis that this change, and more importantly the shift in the check enforcement level, led to a modification in market practices, presumably a decline in the use of this instrument, and also induced a cleansing of market practices. More precisely, this section argues that the sequence of events was the following:

- 1- A sharp drop in the check-based credit market because of the confidence problem in the banking sector, with strong and immediate recessionary effects on the economy;

¹⁴ With the prison penalty involved, someone would probably not issue a check without funds knowing that the receiver will deposit it at once. On the other hand, it is more likely that a check to be paid several weeks or months ahead may be issued with the hope of covering it, but defaulted when the time of payment comes.

¹⁵ Here again it is worthwhile to mention the lack of credit evaluation that arises as a consequence of the excessive reliance on guarantees.

¹⁶ Of course, such a violent banking crisis has very likely affected the economy through other channels as well, but the check market crunch was apparently the first and stronger factor.

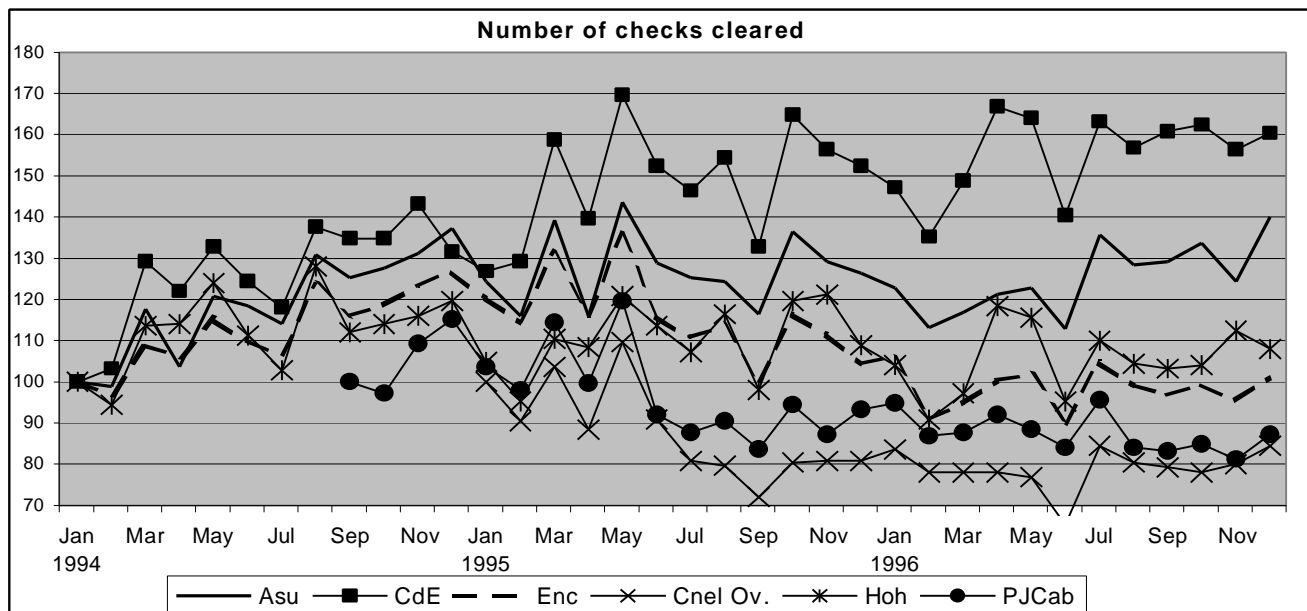
- 2- The modification of the check legislation, aimed at giving new life to this market;
- 3- Unexpectedly (at least for policy makers), a further fall in the check-credit turnover, due to the lower enforcement level implied by the new legal framework, the judicial reform thus being an amplifying factor of the recession.

From the enactment of the Law 805/96 in Dec. 1995, articles 17 and 18 overruled the Law 941/64 and thus checks drawn without funds are no longer a criminal offense. Furthermore, from January 1st 1997 this law also established the postdated check as a different instrument from the check by use of a special checkbook, allowing banks, financial institutions, and customers to operate with both checks and postdated checks. Rediscount of postdated check also became legal. Finally, a normal check issued with a future date could also be paid at any moment if presented before that date.

The bank must fine a person who writes checks without sufficient funds and does not pay the amount after three day of the request. If the person is fined or if the payment of three checks is denied for insufficient funds, he/she will unable to open or have checking accounts in any bank throughout the country for one year. The bank must notify the Regulatory Institution (Superintendencia de Bancos), of the closed account, which in turn must inform to the other banks within 48 hours. Closed accounts and fines must be published in two newspapers for a period of two days. When the one-year period of suspension has expired, the individual can open a checking account provided that he or she pay for the returned checks or the fine. A person who writes a check under a closed account will be unable to have an account for ten years¹⁷.

Figure 1. Monthly evolution of the number of checks cleared in main cities (1994-1996)
(Indices: 100 at the beginning of the period)

¹⁷ There still may be prison penalty in the case of the issuance of a check written under a closed account, since this is considered as swindle.



Source: Central Bank - Clearing house.

As seen in figure 1, there is a marked decrease in the quantity of checks processed by the clearing house after May 1995 (which marked the date of the first banking problems). This decreasing trend is also evident when reviewing total amounts instead of number of checks cleared. It is of course difficult to control for various factors that are embodied in this particular statistic. Firstly, both in May and the following months, four banks were intervened and ceased their activities, so a large amount of current accounts disappeared. Also, it is possible that a fall in economic activity occurred, correlated with fewer transactions, thus leading to fewer expeditions of checks. Finally, these data include "normal" checks as well as postdated checks that came to maturity. It may then be difficult to distinguish between the percentage of decrease due to fewer checks and the percentage corresponding to fewer postdated checks.

The fact that several banks fell out of the market has a clear impact on postdated check credit. The banks that closed were considered active in the market, both by opening of a great number of current accounts to small depositors (the first two banks intervened in 1995 had 8% of the banking system total deposits, with very low exigency to open an account¹⁸) and through rediscount operations of this instrument. Hence, there is indeed a correlation between the closure of these institutions and the crunch in the postdated check market.

As for the economic slowdown that resulted from the crisis, it is difficult to evaluate since there are no monthly or quarterly GDP data. The best indicator available is perhaps the level of tax collection, particularly VAT, which is directly related to sales levels. There is indeed a decrease starting from July 1995. However, the magnitude is quite small, as 1995 total collection surpass 1994 results and goals for 1995 (CEPPRO, 1996). As a matter of fact, global GDP figures show a growth of 4.7% for 1995 and the real recessionary impact seems to appear only during 1996, with a global growth rate of 1.3% and negative sector results for industry (-2.2%) and commerce (-1%). Moreover, opinion polls show that the informal sector was probably the most badly hit. So, it seems that the large decrease in the check circulation in the second semester of 1995 (see Table 12) overshoot the magnitude of the slowdown in activity.¹⁹ This supports the idea that the great declines in quantity and amount of checks cleared are in part due to the suspension in the use of postdated checks. Furthermore, since most deposits in the intervened banks were covered by the Central Bank²⁰, and then deposited again in the banking system (there was no fall in the

¹⁸ As discussed below, first class banks have fairly high exigencies to open an account, in terms of starting amount, average balance and references, that generally repel the kind of clients operating with postdated checks.

¹⁹ We consider the variation between 3 months period, in order to reduce the distortion that may be caused by the erratic behavior around the time of the banks interventions. At that time, deposit flights from banks that were supposed to be in trouble often took the form of the issuance of checks against those banks. One indicator of this may be the fact that the average amount of checks issued shows an unusual pick in April and May 1995.

²⁰ As incredible as it might seem, in 1996 Congress voted a law that obliged the Central Bank to bailout also "black" non-registered deposits.

total level of deposits), there should have been a rapid recuperation in the level of checks processed. Nevertheless, the figures show a durable modification of the trend after May 1995.

Table 12. Fall in the check circulation in 1995
(% of variation Mar-May/Jun-Ago 1995)

	Quantity	Amount
Asuncion	-5.1%	-20.5%
Ciudad del Este	-3.2%	-17.7%
Encarnacion	-11.2%	-7.9%
Cnel Oviedo	-16.6%	-17.5%
Hohenau	-0.8%	-7.1%
P.J.Caballero	-19.0%	-30.3%
Whole Country	-5.1%	-19.9%

Source: Own elaboration with Central bank Clearinghouse data.

Another interesting point is that the decline was both greater and longer in duration for small towns inside the country that typically have few bank branches (like Cnel Oviedo or P.J. Caballero), than for the capital Asuncion or the frontier town of Ciudad del Este (which maintains most of its financial operations with banks in neighboring country Brazil). Since the credit market features a very low level of development in these small towns, many businesses usually rely on the postdated check, especially for commercial-credit purposes; it can be inferred that this was the cause of the following decrease in the check circulation. Though no regional data about the level of activity are available to infer further correlation with differential regional impacts of recession, field observation and interviews tend to corroborate that point.

Considering that partial evidence exists to support the hypothesis of a crunch in the postdated check credit market, it is now important to look for the causes. It is clear, following CEPPRO (1996), that there was primarily a confidence crisis toward the national banks during the second semester of 1995, with everyone waiting to see "which one will fall next", thus explaining the low willingness to take postdated checks for the fear that the emitting bank may be illiquid at time of payment. Equally important was the closing of various banks formerly very active in this market. However, it is a challenge to determine what happened after the enactment of the new legal framework, especially if new legal mechanisms, which clearly imply a different enforcement process of check-based transactions, had any consequences on the levels, costs and default rate in this market.

After the initial decrease in the total volume of checks traded, a slight but incomplete recovery occurred in 1997, but only in Asunción. As argued above, partial evidence indicates a relationship between this decrease and the reduction in the use of the postdated check. One important additional fact is the reduction of current accounts in the banking system. As of 1997, estimations indicate about 90,000 existing current accounts. Although there are no exact data available about the number of current accounts before 1995, with the closing of ten banks and the higher exigencies to open and maintain a current account in the remaining institutions, access to the banking system has clearly become more difficult after this time.

Table 13. Requirements and penalties for the operation of a current account (1997)
(equivalent US dollars)

	Opening amount		Average required		Penalty*	
	Nat. Curr.	For. Curr.	Nat. Curr.	For. Curr.	Nat. Curr.	For. Curr.
Foreign banks	500 to 1,800 (median 1,100)	4,000 to 10,000 (median 5,000)	300 to 700 (median 500)	1,000 to 5,000 (median 3,000)	10 to 50 (median 25)	20 to 50 (median 30)
National banks	350 to 700 (median 350)	5,000**	270 to 350 (median 350)	1,000 to 3,000 (median 3,000)	20 to 28 (median 25)	30 to 50 (median 30)

* monthly penalty for maintaining an average inferior to the required minimum. ** only data available

Source: Own elaboration with data from newspaper El Día de Asunción.

From January 1997, when the new legal framework was applied, to July 1998, a total of 4,807 accounts were closed and their owners banned from operation of an account for one year²¹. This amounts to 5.3% of the approximated total number of accounts. Moreover, exigencies and penalties linked to the operation of a current account are considerably higher than a few years ago (see Table 13). These exigencies also include personnel and commercial references and in some cases tenancy of land. Finally, banks often deny the opening of an account, even when the formal exigencies are fulfilled. This demonstrates a more extensive screening of clients before allowing them to open an account. Bank officials also declare that many banks "encourage" their clients to close the account after the first problems occur.

Since prison penalty is no longer in effect, banks collect better information about the debtor and his/her business, so as to secure loan repayment. To a certain extent, this implies that the check-based credit newly concentrates on cases related to genuine supplier/producer or commercial operations. However, the poor accounting standards and the low transparency of most of the users of this instrument still make it difficult to make a solid credit evaluation and thus difficult a complete formalization of the check market.

Most probably for the same reasons, there was no clear development of the rediscount market. A phone survey, realized with heads and credit officials of a dozen financial institutions, yields the following results:

- The postdated check operation concentrates in a few national banks and finance companies, although most of them do not encourage their clients to use this instrument. Most foreign banks do not enter the postdated check business: they do not issue the corresponding checkbook, nor do they make any rediscount operations.
- In all cases, demand for postdated checkbook is not high. Most operators still use the common check to do postdated operations, in spite of the fact that it can be paid at any moment upon its presentation. In fact, it appears that there is a general ignorance of the new legal framework's details.
- Most of the institutions making postdated check rediscount operations actually implement it as a traditional credit operation. They extend a short-term credit with a promissory note, keeping the corresponding check in their files.
- Interest rates for operations are the same as other short-term operations (credit card, overdraft): 3 to 4 % monthly. Maturity does not exceed 180 days.
- All the professionals surveyed stated that there has been a decrease in the circulation of postdated check after 1995 and that there was a "cleansing" process of the market.

In short, after the enactment of the new check law in December 1995, there was a modification of the market practice, leading to a decrease in the use of the postdated check, a partial formalization and a "cleansing" of the market by the financial institutions themselves, and a greater concentration on genuine operations. Although, the lack of data on informal activities does not allow definitive conclusions, there is evidence that the change in the legal framework and the resulting lower enforcement level have been relevant factors of this evolution.

The overall formalization of many financial practices of banks and finance companies, as well as the disappearance of the institutions that were deeply involved in informal activities, obviously contributed to the evolution, as the links between the formal and informal market were to a certain extent weakened.

3. Links between the formal and informal markets

The formal and informal financial sectors do not work independently of one another. In fact, the informal sector's work greatly depends on the characteristics of its relationship with the formal system.

²¹ 4499 persons were also banned to operate during ten years, for issuing a check against a closed account. Nevertheless, there is a logical superposition with the ones canceled for one year.

There are two main channels that link the two sectors. Firstly, the formal sector assigns credit to persons that canalize it to the informal sector, thus "hedging" the interest rates difference. The fact that credit is often assigned on the basis of formal guarantees (collateral) or relationship with the owners of the banks (related lending) without an evaluation of the purpose of the loan, make this operation easier. Thus, informal lenders act as intermediaries between formal financial institutions and clients lacking guarantees.

The other channel, in the case of the postdated check credit, is the opening of current accounts that allow the issuance of checks by potential debtors. This channel was strengthened until 1995 by the existence of an active rediscount market for these postdated checks. The resulting liquidity of this instrument surely contributed to the development of the market.

The theoretical literature usually considers that while the formal sector has a comparative advantage in intermediating funds over space and making scale economies, the informal sector has a comparative advantage in solving enforcement and information problems (Besley, 1995). In the Paraguayan case, this traditional dichotomy, between a formal sector that relies mainly on collateral and an informal sector that better screens its clients' projects, is not fully applicable. In fact, the comparative advantage of the informal sector is specifically on enforcement rather than on information. There are presumably two reasons for this. Firstly, low overall formalization and transparency of the economic agents make screening a difficult task *per se*. Moreover, this sector has a strong enforcement level, which, in turn, explains why informal lenders for the most part do not rely on close monitoring of their clients. This is the so-called "Mafia-style" enforcement. In such a case we can better specify the behavior of both sectors in a willingness to repay setting where the informal sector has an enforcement comparative advantage leading to a higher willingness to repay of the debtors. This is what we observe for example when borrowers have multiple obligations. In a pool of credit, informal lenders benefit from the highest rate of repayment, mostly through a major enforcement power.

The solutions of the informal market, with its strong enforcement mechanisms, are nonetheless non-optimal from a social point of view, since credit is assigned without adequate screening of projects and the general conditions of the loans are not satisfactory. In the next section, the paper analyzes an alternative experience that aims to develop new solutions to the enforcement and information problems of lending to small borrowers lacking guarantees.

I. Micro-enterprise program appraisal

1. Description of the program

1.1. Objective of the program

Aside from the traditional explanations discussed in section IV (high costs and monopolistic behavior of financial institutions), it appears that an important component of the high interest rate premium that micro-enterprises have to pay when dealing with the formal sector may be related to poor information quality and a real or perceived lower willingness to repay. An experiment which aims to provide credit sources for micro- and small firms at a reasonable cost through the modification of the credit relationship and its procedures is the Micro-enterprise Global Credit Program, developed in 1994 through an IDB loan. It attempts to:

- *Generate a competitive market segment dedicated to the attention of micro-entrepreneurs.* The objective is to induce financial institutions currently operating in the market to enter this segment.
- *Improve the credit technology and administrative efficiency of lending institutions in order to reduce the cost component.* This is done by changing the traditional "chain" organization of credit management (see part IV) and putting one person (the credit official) in charge of the complete process from client evaluation, credit negotiation to the follow-up and recollection. Also, a performance-based salary scheme is introduced for credit officials.
- *Improve and maintain a relevant information flow from clients to the financial institution through better screening and monitoring, in order to reduce information asymmetry.* The task of credit officials involves direct knowledge of the client, consisting of personal visits, evaluation and the drawing of a balance sheet of the clients' business (most entrepreneurs do not draw one and do not actually distinguish their commercial activities and assets from familiar ones). By doing so, lenders are able to generate and maintain a better flow of information about the client. This is completed by active monitoring, phone contacts and visits upon eventual default.
- *Generate incentives to repay loans among borrowers that typically have a low willingness to repay.* Creating a stable, long-term relationship between the financial institution and the borrower through close and direct contact is a gradual process in which the financial institution would finance short business cycles first, and then later repeat the operation upon successful completion. The borrowers' perception of the way their performance influence the future availability of credit tend to generate incentive to avoid default.

The program functions with profit-seeking financial institutions already operating in the market and does not operate through subsidies²². Instead, it relies mainly on the above mentioned ex ante (screening) and interim (monitoring) credit technology improvements²³, as well as the introduction of better internal administrative procedures and the creation of long-term relationships with the clients. This section aims at comparing interest rates, default rates and lending volumes within the program to market averages in order to assess the effect of the above-discussed improvements on these variables.

Finally, on a more general level it is worth mentioning that another objective of the program is to function as a model for the rest of the financial sector. In that sense, through the introduction of an improved practice in the credit process, it aims at having a scholastic effect on other institutions.

1.2. Features of the program

The program functions as a second-tier institution channeling resources to Intermediate Financial Institutions (IFIs) that in turn use those resources to provide credit to small productive units. The first phase of the program, from January 1994 to July 1997, was supported by a US\$ 12.7 million IDB grant

²² However, since credits are partly covered by an automatic rediscount scheme (see below), the program stabilizes the liability side of the balance sheet of the financial institutions involved and therefore it may reduce their risk.

²³ Note that no particular practices are introduced to address ex post enforcement problems. It may mean that in general financial institutions already have operating procedures adapted to the existing legal and judicial framework.

(including a component of non-refundable technical cooperation). The second phase, which began July 1997, is supported by a US\$ 20 million IDB grant. Funds in US dollars are delivered, through the Finance Ministry, to the Central Bank, which is the executor of the program through the Technical Unit for the Execution of Programs (UTEPE). Funds are transferred to the IFIs through an automatic rediscount mechanism of 80% of the amount of new credits, at an interest rate equivalent to the current market marginal cost of funds²⁴. Credit risk is assumed by IFIs, while exchange rate risk is assumed by the Central Bank²⁵.

The program has conditions with respect to the characteristics of clients, IFI's and loans. The micro-credit program official guide, based on household survey data, considers micro-enterprises all economic units with 1 to 10 persons, including the owner (the criteria of the program is different from the micro-enterprise definition discussed in the previous section). The resulting number of micro-enterprises employs 42% of the occupied workforce. Examples of micro-entrepreneurs are merchants, carpenters, shoemakers, tailors, artisans, owners of mechanical workshops, ice or juice factories, etc. Interestingly, most of these economic units are very stable: 25% have an age of between 5 and 10 years and 39% of more than 10 years.

Table 14. Number of persons employed in micro-enterprises (1995)

Number of employees	Total of the country (urban)	Men	Women
1	193,950	93,753	100,220
2 to 5	363,425	230,380	133,012
6 to 10	93,031	66,494	26,563
Total	650,406	390,627	259,795

Source: UTEPE (Technical Unit for the Execution of Programs)

For a micro-enterprise to enter the program it must have total assets of less than US\$ 10,000 and its total annual sales must be less than US\$ 45,000. An IFI must fulfill all of the following conditions: a ratio "net equity to risk classified assets" no less than 8%; no more than 10% of their credit portfolio more than 90 days past due; positive real economic results; and big loans more than 30 and 90 days past due must not represent more than 10% and 3% of total credit portfolio respectively. Finally, the loans must be in local currency, with a maximum amount equivalent to US\$ 7,000 and a maximum average amount equivalent to US\$ 2,500.

The institutions participating in the first phase of the program are four major finance companies, two finance companies undergoing difficulties that were merged during 1997 and a mixed private-public bank. This investigation focuses on the four finance companies, as the two other companies had atypical behavior in the relevant period and the bank had a quite different approach to the program²⁶. After June 1997, seven new IFIs, including a regional bank, entered the second phase and a first rate international bank (Lloyds Bank) began preparation to enter. At that time, the ten biggest Paraguayan finance companies were participants. As of December 1997, current portfolio consists of 23,264 loans, amounting to the equivalent of US\$ 28.18 million. Table 15 shows the relative size of the portfolios of the four institutions we focus on in this paper.

²⁴ This rate is equivalent to the average rate of 180 days time deposits plus the legal reserve effect.

²⁵ It is important to note that the program has an important and successful education component. Nevertheless, since it is not the purpose of this study, this aspect shall not be discussed here.

²⁶ This bank relied on group lending, with bigger amounts and lower rates. It was actually forced to leave the program during 1997, because it did not fulfill the criteria of admission anymore, and was intervened and closed by the central bank in September 1998.

Table 15. Relative size and portfolio of the IFI's (as of Dec. '97)

	1. Number of loans	2. Program loans portfolio (US\$'000)	3. Total loans portfolio (US\$'000)	2/3
Finance comp. A*	3,980	4,120	29,287	14.07%
Finance comp. B*	3,397	2,603	19,723	13.20%
Finance comp. C	1,509	1,522	9,167	16.60%
Finance comp. D	1,879	1,350	13,289	10.16%
Total 1	10,765	9,595	71,466	13.43%
Finance comp. A**	3,252	2,784	29,287	9.51%
Finance comp. B**	6,134	12,706	19,723	64.42%
Total 2	20,151	25,085	71,466	35.10%

* Part of the micro-lending portfolio backed by the program rediscount scheme.

** Part of the micro-lending portfolio backed by own resources.

Source: UTEP (Technical Unit for the Execution of Programs)

Comparing with the global portfolio of finance companies in the Paraguayan market (50 as of December 1997), these four companies' loan portfolio amounts to 26.3% and their program loan portfolio amount to 3.5% of the total (9.2% if including portfolio backed by own resources). It is important to note that among the four finance companies, only one was already working with the type of clients that participate in the program. The other three focused on other type of lending like corporate credit and/or consumption credit. Thus, the comparability of data and the evolution of some indicators like average interest rates or default are to be assessed in a specific way in each case.

2. Assessment of the Program Impact

As a result of the new credit technology, data show a significant decline of overall costs, mainly through a reduction of default rates. Moreover, the main consequence is on the availability of credit, while effects on interest rates exist but seem to be limited.

2.1. Impact on credit cost

Considering costs, we consider a normal administrative component (efficiency) and a specially risk-related component, observed through the default rates.

Reduction of administrative costs

It is not clear to what extent there has been a reduction in administrative costs within the institutions implementing the new credit technology. The evolution of traditional ratios (different type of Costs relative to Operative Margin and Deposits) does not show a marked improvement nor is there a deterioration over the last three years, which is consistent with what occurred to the system. However, there are some points that aid in understanding this evolution Firstly, the program portfolio is only a fraction of each institution's portfolio and thus has only a marginal effect. Secondly, most of the companies entered this segment of the market for the first time, which by nature carries higher relative fixed costs than their previous activities: follow-up is practically absent in case of personal loans, while for corporate lending of bigger amounts it represents a lower relative fixed cost than for loans of small amounts. There are also important delayed costs for expansion (opening of new branches) that will affect global administrative costs for a few years before an improvement becomes evident. Thirdly, since loans are backed by an automatic rediscount mechanism and not by deposits, the global leverage between deposits and loans rises, thus affecting ratios of costs to deposits in an adverse way without signifying an efficiency loss.

However, authorities of the main finance companies declared there was an efficiency improvement. Head Micro-enterprise in company A states that "the new technology allows for a reduction of administrative costs because the credit officials realize a complete task administrating the portfolio". Representatives of

company B share the same vision. The fact that most institutions involved in the program gradually apply the new credit technology to their other operations implies that it must be cost efficient.

Impact on default rates

Efficiency gains can be observed through the significant decline of default rates. Global default rates data show that for each finance company, default in the relevant program portfolios are below the default rates of the total portfolio (see Table 16)²⁷.

Table 16. Default rate of selected portfolios (as of Dec. '97)

	1. Total loans portfolio default (60 days)*	2. Program loans portfolio default (more than 30 days)**
Finance comp. A	9.0%	8.2%
Finance comp. B	5.6%	4.4%
Finance comp. C	7.9%	7.5%
Finance comp. D	5.4%	4.8%

* Source: Superintendency- Central Bank. ** Source: UTEP (Technical Unit for the Execution of Programs)

Furthermore, we must consider the fact that these institutions have different lending profiles, i.e. some of them are directing their non-program resources to different types of lending than the micro-enterprise sector, which makes default rates not strictly comparable. As stated for example by officials of company C, default rates on consumer credit (directed to people earning a regular salary) and on larger corporate lending are usually lower than that of micro-enterprise lending. In spite of this, default on program portfolio loans is lower than default on usual corporate lending.

The case of company B, which was already working with micro-enterprises previous to the program, is outlined in Table 17 and shows default data of “program” and “non-program” credits, across ten branches of the company. The default rate of the program portfolio is significantly lower, as demonstrates the test of means, which is significant at 1% level. Overall, lower default rates imply smaller costs for recuperation and smaller provision costs.

Table 17. Default rates of program and non-program portfolio (as of Nov. '97) (in % of total portfolio)

Branches	A	B	C	D	E	F	G	H	I	J	K	t-statistic
Non-prog.	14.53	7.7	29.97	5.49	0.22	8.65	5.72	10.31	10.23	17.2	7.16	6.37*
Prog.	4.24	3.61	5.2	3.02	1.1	5.87	3.36	8.7	4.4	3.0	0.58	

* Significant at 1% level.

Source: Financial Company B.

2.2. Impact on interest rates.

Table 18 shows data of the average monthly rates charged by the different finance companies and their evolution over time.

²⁷ As a matter of fact, the difference may be even larger since comparisons are made between data for loans that are sixty days overdue and data for program loans that are thirty days overdue.

Table 18. Program interest rates 1994-1998
(Monthly rates on the outstanding balance of the loans)

	Dec. '94	Dec. '95	Dec. '96	Dec. '97	Jul. '98
Finance comp. A	7.9%	7.5%	6.8%	4.5%	4.5%
Finance comp. B	-	-	4.8%	4.5%	4.5%
Finance comp. C	7.6%	7.2%	6.5%	5.0%	5.0%
Finance comp. D	-	-	6.1%	4.5%	4.5%
Average market-lending rate*	3.3%	3.2%	3.0%	2.8%	2.7%
Interest rate premium	4.3%-4.6%	4.0%-4.3%	1.8%-3.8%	1.7%-2.2%	1.8%-2.3%

* Average lending rate of finance companies (does not include banks).

Source: UTEP (Technical Unit for the Execution of Programs)

It is apparent that these rates remain very high in absolute terms. In a context of decreasing inflation, with single-digit levels after 1996, monthly rates of between 4.5 and 5% correspond to annual rates of between 70 and 80% in nominal terms and between 60 and 70% in real terms. Moreover, these rates are high even by comparison with those of other institutions implementing cost-covering micro-finance projects in Latin America (Schor, 1997).

Nevertheless, there is a downward trend in interest rates over the three year period of the program and the maximum interest rates premium paid by micro-entrepreneurs (compared with the financial companies' average lending rate) has gone down from 4.6% to 2.2% in monthly terms. Yet, this premium remains high. Moreover, the lower bound of the premium went down but then leveled around 1.7%-1.8%, with a tendency to equalize rates across lending institutions.

Evidence of borrowers' perception of interest rates reduction is mixed. In a survey from August 1995 among 320 clients of the program (hereafter "1995 survey"), 68% of the micro-entrepreneurs consider the interest rates adequate and 10% consider them low compared with other sources, while 22% still consider them high. In another extensive evaluation made at the end of 1996 (Borda, 1997; hereafter "1996 survey"), 33% of the entrepreneurs surveyed claimed that interest rates were high, while 23% said they were low and 43% adequate. It is important to point out that most clients of the program previously dealt with informal lenders and/or users, charging monthly rates of between 5 and 9%.

Thus, despite some evidence that the introduction of the program led to a reduction in the interest rates charged to micro-entrepreneurs, there is still a premium of almost 2% in monthly terms comparing with the financial companies' average market rate. However, since finance companies have very different lending profiles, this average rate is of low significance. As a matter of fact, companies involved in the program now charge the same rates for micro-enterprises as they do for other types of credit.

2.3. Availability of credit

As we concentrate on agents that traditionally do not take formal credit, it is not possible to observe increases in average amounts of credit extended (see for example Petersen and Rajan, 1994). However, the mere fact that these agents access credits in conditions judged by themselves as satisfactory is a sign of improvement in availability of credit. The 1995 and 1996 surveys supports this point (see Table 19).

Firstly, the majority of micro-enterprises entering the program are receiving loans from a formal financial institution for the first time. In the 1996 survey, 63.3% of the clients surveyed declare to be in that case. In the 1995 survey, it appeared that the micro-entrepreneurs entering the program previously relied on informal lenders for 51% of their financing and on suppliers for 11.9%. Also, 79.6% state they depend on the program for 50% or more of their financing. Moreover, others indicators show a low level of formal debt. The average debt ratio (debt/net equity) of the enterprises surveyed, (ruling out two very atypical cases) is only 0.20. Also, the average monthly credit payment, (again ruling out an atypical case) is only 7.3% of their total sales.

Table 19. Positive opinions on the access to credit (1995, 1996)
(% of approval)

	1995 Survey	1996 Survey
Term (sufficient)	72%	100%
Guarantee (reasonable)	66.2%	83.3%
Speed (fast enough)	58.8%	76.6%
Amount (sufficient)	83.4%	66.6%

Source: Own elaboration on surveys data.

Thus, there is strong evidence that the program improved access to credit for the businesses involved. In the 1995 survey, 80.3% indicate sales increases as a result of the credit (for 54.6% of them these increases consist of more than 25%) and 92.4% directly relate this to credit. The 1996 survey shows a similar pattern, with 66% declaring that they have increased their sales as a result of credit.

2.4. Discussion

Literature considering the effects of close relationships between lenders and borrowers usually stresses that this qualitative modification of the credit relationship positively affects the cost and availability of funds to the borrowers, but generally operates more through quantities than prices (Petersen and Rajan 1994). There are different explanations for this. One is that, due to possible informational monopoly, financial institutions do not pass the whole cost savings along to their client in the form of lower interest rates. Moreover, in a context where clients were previously credit rationed, they may prefer bigger loans to lower rates. Finally, a third explanation refers to the operative and organizational aspects of financial institutions. Loan pricing generally responds to relatively rigid guidelines. Therefore instead of changing loan prices, it is easier for loan officers to influence both the amount of the loan and the loan approval.

Here, there are clear cost-based technical reasons for the reduction of interest rates charged to micro-entrepreneurs (cost-saving new technology and the low overall default rates in the program). Are there, however, still cost motives for the interest rates to be higher than rates normally charged by finance companies? As pointed out above, micro-enterprise lending carries higher relative fixed costs than personal loans or corporate lending of larger amounts, mainly because loans are of very small average amounts (the program average lending amount has been fluctuating between 932 and 1,243 US dollars). Furthermore, due to the great informality of the borrowers, even with very efficient credit management, it remains costly to maintain a steady flow of information on the clients. Thus, part of the premium may be related to a special cost component, although probably not the whole 2% margin.

The existence of monopolistic behavior is discussed in Schor (1997). This appears to have been a relevant explanation during the first years of the program, when the biggest finance company involved had more than 50% of the outstanding volume of loans and indeed charged the highest interest rates. However, after 1997 this situation changed and an equalization of interest rates occurred across institutions. The beginning of the second phase (after July 1997) with the incorporation of seven more IFT's, led to a situation where the ten biggest companies of the market actually compete in this market segment.

Considering the very nature of micro-business lending, it may be assumed that in spite of increased competitive pressure in this segment of the market, lenders do not fully pass the cost reduction onto lower rates. Due to the characteristics of micro-entrepreneurs, it is plausible that the development of close relationships between financial institutions and micro-entrepreneurs creates private information about borrowers (on-site follow-up, informal knowledge of the business) that is not easily verifiable and transferable to another lender²⁸. This will be consistent with a greater availability of credit without interest rate reduction.

²⁸ One possible channel of transfer would be that the credit official himself shifts to another institution. Nevertheless, this is probably not a very frequent case.

The third explanation mentioned above complements the informational motive. In the case of company B that was already working with micro-entrepreneur, the firm policy was indeed to maintain interest rates at their normal level. The other institutions have gradually equalized their rates to match this company, but from that point on, there have been no more rates' reductions. From the interviews conducted, there appears to be little flexibility in the interest rates applied. Instead, the close relationship and the knowledge gained by the firms through the credit official lead, upon successful completion of the first credit, to a renewal of the credit line with superior amount and/or longer term but no interest rate reduction.

The assumption that entrepreneurs prefer more, rather than cheaper credit, is quite difficult to assess. Most of the program clients were not only rationed in terms of quantity before entering, but they did not receive formal credit at all. Moreover, the surveys conducted show no clear evidence to support this, since the rates of approval concerning interest rates are generally lower than those referring to the conditions of the credit (amount and term).

Finally, it is necessary to consider the enforcement problem. It is clear that at the time the program was introduced, the higher risk perceived by banks (due to borrowers' lower willingness to repay) of traditional Paraguayan micro-enterprises was partly responsible for the very strong credit shortage and, in case of accessing credit, the very high interest rates charged to them. The previous discussion suggests that other motives (higher cost, monopoly and informational asymmetry), although important, can not explain interest rate premium of above 4% in monthly term. After a few years, however, an important result of the program was the drastic reduction of this perceived risk, mainly due to a sharp decline in default rates and better information efficiency. The consequence was a marked increase in the availability of credit and a relative reduction of the interest rates. This evolution also swayed many financial institutions outside the program to enter, including first rate international banks.

In sum, reasons why finance companies maintain a premium of about 2% above the average market rate on micro-lending operations can be approximated. The data available and interviews conducted show higher credit costs due to the nature of borrowers and the small lending scale and also to monopolistic behavior in relation with the difficulty to transfer information on borrowers. Also, the institutions participating in the program apply the same interest rates to all their operations, i.e. micro-enterprise lending, consumer loans, etc. It is thus possible to say that at least in their cases the cost premium related to a real or perceived lower willingness to repay of borrowers has become negligible. The entry of higher scale, more efficient financial institutions (first rate banks) into the program should allow a better answer to the question of whether this motive can be completely eliminated and the cost of credit to this segment of the market can be further lowered to get reasonably in line with average corporate rates. This may not be possible, however, before flaws in the legal framework (especially when considering loans of small amount) and the weaknesses of the judicial enforcement process are addressed.

I. Conclusion

In order to assess the effect of the legal and institutional framework on the characteristics and the efficiency of financial markets in Paraguay, the functioning of both the formal and informal sectors have been reviewed. Each sector developed different solutions to compensate the information and enforcement flaws that characterize the elaboration and execution of financial contracts. However, none of these solutions (reliance on collateral, postdated check, among others) have totally succeeded, as strong structural deficiencies still affect the financial business. In fact, credit shortage, very high interest rates and short-term orientations are still dominant features in Paraguay. Besides the well-known macroeconomic, regulation and management aspects, the willingness to repay issue is thus considered in this study to have crucially shaped the evolution of the Paraguayan financial system in the 90's that resulted in a still unresolved banking crisis.

As a counterpart, the Micro-credit Global Program was analyzed as an attempt to introduce alternative mechanisms to solve the information and enforcement problems mentioned above. It can be concluded that these mechanisms are more efficient than the ones traditionally implemented in the formal and informal sector. The program created a competitive lending market for a sector, which previously was not attended by formal institutions. While further progress is needed in order to get interest rates in this market segment nearer average corporate market rates, the analysis of the evolution of costs and availability of credit gives preliminary evidence that this experiment represents an innovative solution to the traditional lack of information and high perceived risk (low perceived willingness to repay) of many economic units. Thus, the strategies implemented by the Micro-credit Program to overcome some of the traditional structural deficiencies of financial institutions makes it a valuable reference for the ongoing financial reform process.

Annex 1. Efficiency of the Paraguayan Law

1. Efficiency of the Paraguayan law as regard to shareholder rights

Table 20 includes a sample of countries from different legal origins and shows the shareholder rights for each country, as well as the average for each legal origin group. The definitions of each shareholder rights can be found in La Porta et al. (1996), Table 1, page 48.

Table 20. Shareholder rights in Paraguay and around the world

Country	Origin	One Share - One Vote	Proxy by mail allowed	Shares blocked before Meeting	Cumulative voting for directors	Oppressed Minorities	% of Shares Capital to call an ESM	Anti-directors Rights	Mandatory dividend
US	1	0	1	0	1	1	0.01	5	0
UK	1	0	1	0	0	1	0.10	4	0
Nigeria	1	0	0	0	0	1	0.10	3	0
Avg. English origin		0.22	0.39	0.00	0.17	0.92	0.09	3.39	0.00
Argentina	2	0	1	1	1	1	0.05	4	0
Brazil	2	1	0	0	0	1	0.05	3	0.50
Uruguay	2	1	0	1	0	1	0.20	1	0.20
Paraguay	2	1	0	1	0	1	0.05	2	0
Spain	2	0	0	1	0	1	0.05	2	0
France	2	0	1	1	0	0	0.10	2	0
Avg. French origin		0.24	0.09	0.43	0.19	0.33	0.14	1.76	0.14
Germany	3	0	0	1	0	0	0.05	1	0
South Korea	3	1	0	0	0	0	0.05	2	0
Avg. German origin		0.33	0.17	0.67	0.17	0.33	0.05	2.00	0.00

With regard to shareholder rights, Paraguay has legal rules comparable with that of other countries of its legal family (French civil law). Its aggregate anti-director score of 2 is close to the average for French civil law countries (1.76). Moreover, Paraguay lacks the remedial legal protection that appears in some countries of this group (and never in other groups) as a way to compensate for weak shareholder rights. Further analysis will be needed to determine whether this lack of protection of shareholder rights plays an important role in the low level of development of Paraguay's current capital market.

2. Efficiency of the Paraguayan law as regard to creditors' rights

Table 21 includes a sample of countries from different legal origins and shows the creditor rights for each country, as well as the average for each legal origin group. The definitions of each creditor rights can be found in La Porta et al. (1996), Table 1, page 48.

Table 21. Creditor rights in Paraguay and around the world

Country	Origin	Restriction for going into reorganization	Automatic stay on secured assets	Secured creditors first paid	Management stays in reorganization	Legal reserve
Us	1	0	1	1	1	0.00
UK	1	1	0	1	0	0.00
Nigeria	1	1	0	1	0	0.00
Avg. English origin		0.71	0.29	0.94	0.24	0.01
Argentina	2	0	1	1	1	0.20
Brazil	2	1	1	0	1	0.20
Uruguay	2	0	1	1	0	0.20
Paraguay	2	1	0	1	1	0.50
Spain	2	0	0	1	1	0.20
France	2	0	1	1	1	0.10
Avg. French origin		0.42	0.74	0.68	0.74	0.20
Germany	3	1	1	1	1	0.10
South Korea	3	0	0	1	0	0.50
Avg. German origin		0.33	0.33	1.00	0.67	0.28

Paraguay's creditor rights are fair, as it has restrictions for going into reorganization, no automatic stay on secured assets and rules to pay secured creditors first. The weak points, however, are the possibility given to management to stay after initiating a reorganization, as well as the subsequent procedure that leads to a low probability of recuperation by creditors (see details in section III of the paper). Noteworthy is the strong protection given to secured creditors by Paraguay's legal rules. Remedial pro-creditor legal rule (legal reserve requirements) is also very high. Although, because of the high level of informality and the low transparency discussed earlier, there is no way to ensure that firms are fulfilling this obligation.

Annex 2. Information sharing mechanisms in Paraguay

1. The private credit scoring agency (Informconf)

The Paraguayan market for credit information is a virtual monopoly, since there is a unique private information agency, called Informconf, created in 1963.

Type of data provided

Informconf provides a menu of data (both "white" and "black" information) on both persons and firms, through on-line consultation. The typical personal report may contain the following:

- General data: name, date of birth, sex, documents, civil status, nationality, profession, observation, consort references.
- Current and past addresses.
- Current and past jobs (with dates).
- Lost documents reported to the police.
- References on this person investigated by the agency upon request of some affiliate (with motive of the request).
- Legal claim against this person (with date and place of it).
- Legal inhibitions.
- Reorganization procedures engaged.
- Bankruptcy procedures.
- Judicial liquidation of properties.
- Inhabilitation of banking accounts.
- Past-due operations reported by affiliates.

In case of firms, address, jobs and lost documents are replaced by data about locals, details of constitution and list of associates. Upon special requests, verifications can be made on properties, conjugal dissolution, vehicles and powers given to third parties. The agency may also realize visits to firms in order to check on site information (size, buildings structure, etc.). Finally, general information can be retrieved, like judicial diary or list of closed accounts over a determined period of time.

Source of data

Although the agency gave no precise information about where the data are from, it can be deduced that most data are gathered by the agency itself from the relevant institutions (mainly judicial and police). Some feedback exists however. First, in order to realize on-line consultation, affiliates must report which kind of operation (loan, credit card, guarantee, rent, etc.) they are intending to carry on with the person/firm they are currently checking. This information (requests on this person/firm, date and motive) is then systematically reported upon each new request on the same person/firm.

Moreover, some files also contain information on past-due operation reported by affiliates, although there seems to be no systematic gathering of this type of information. In a general way, past due operations are not included in the database before they eventually give rise to a judicial claim.

Cost of consultation

The cost of entering the system is between US\$ 90 and 100, and the monthly subscription fee is around US\$ 35, which includes 40 free reports. Each additional report is charged separately, depending of its nature. A standard report costs about US\$ 2.5

Quantity of reports issued

The Agency did not give precise information about the number of report produced. It is important to note, however, that its system is widely used in Paraguay. Affiliates include all banks and financial companies, but also commercial houses of different types (supermarkets, retailer of domestic devices, cable-TV firms, etc.), car retailers, import-export firms, cooperatives, etc. There is evidence that affiliates systematically resort to Informconf before authorizing a financial operation with their clients.

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