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CREDIT MARKERS IN BRAZIL: THE ROLE OF JUDICIAL ENFORCEMENT AND OTHERS INSTITUTIONS

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1 – Introduction

Sound financial markets have long been recognized as essential to foster economic development, not only for their role in mobilizing savings to finance investment and production, but also for their contribution to economic efficiency through the selection and monitoring of investment projects. As noted by Stiglitz (1994, p.23), “enforcing contracts; transferring, sharing and pooling risks; and recording transactions, [are] activities that make them [financial markets] the ‘brain’ of the entire economic system, the central locus of decision making”. As important as they are, however, financial markets have found little room to flourish in many low- and middle-income countries. Poor economic policy and market failure are usually blamed for this (e.g., Fry 1982). Macroeconomic instability increases credit risk, while low and unevenly distributed income reduces market size and increases unit costs. High risk and costs keep interest rates high, limiting the pool of viable projects and increasing default rates. By the same token, the shortage of well-trained labor and the high cost of information (poor accounting systems, high costs of computers and information technology in general, etc.) also reduce the ability of banks to assess borrowers’ ability to pay back their loans. As a consequence, very little credit flows to the private sector.⁴

Recent studies have suggested another explanation for the underdevelopment of financial markets in developing countries: institutional failure. The role of institutions in fostering economic development has a long tradition (e.g., North 1990 and Olson 1996), but the link through financial markets is a more recent one. It relies on the fact that secure contract rights are essential for banks and similar institutions to work as the “brain” of the economy. Shleifer and Vishny (1996) discuss how the lack of proper contract enforcement reduces debtors’ willingness to pay and, as a consequence, creditors’ willingness to lend. La Porta *et al.* (1996) assembled a data set on the legal protection of investor’s rights and on the enforcement of such rights in 49 countries. They found that legal rules differ greatly and systematically across countries, which may be grouped according to the origin of their legal system. According to these authors, common law countries tend to protect investors considerably better than civil law countries (with the French civil law countries ranking last in investor protection). The same pattern is observed in the analysis of law enforcement and the quality of accounting standards. La Porta *et al.* (1997) extend this earlier work to test whether less investor protection leads to inferior opportunities for external finance and thus to smaller capital markets. Their results confirm the hypothesis that a better legal environment (described by both legal rules and the quality of their enforcement) leads to both a higher valued and a broader capital market. French civil law tradition countries have the least developed capital markets.⁵

Although much progress has been made in understanding the importance of institutional failure in explaining creditors’ unwillingness to finance firms and individuals in less developed countries, the pertinent empirical literature still has an important shortcoming: it does not separate out the effects of legal protection, accounting standards and judicial enforcement. This paper tries to overcome this gap by analyzing the discrete effect of the quality of judicial enforcement on the performance of credit markets.

The importance of efficient judicial systems for the development of complex inter-temporal transactions such as those taking place in credit markets has been well emphasized in the literature. North (1992, p. 8), for instance, notes that: “Indeed, the difficulty of creating a relatively impartial judicial system that enforces agreements has been a critical stumbling block in the path of economic development. In the Western world the evolution of courts, legal systems, and a relatively impartial system of judicial enforcement has played a major role in permitting the development of a complex system of contracting

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⁴ These stylized facts are consistent with the fact that most Latin American countries, which have a history of high inflation and pronounced economic instability, tend to have lower volumes of bank credit to the private sector than developed and Asian countries (excluding India). In general, they are also less efficient and operate with higher interest rates. Chile, with a longer history of macroeconomic stability, is the noteworthy exception. See Table B.1 in Appendix B.

⁵ Latin American countries fare particularly bad in their analysis so the underdevelopment of their credit markets is also consistent with the institutional failure argument. This argument is also appealing because it helps to explain why some countries (such as Argentina, Brazil and Chile) continue to present high interest rates, limited credit markets, and a pronounced shortage of long term operations, despite the dramatic reduction in inflation and the resumption of growth. Again, see Table B.1 in Appendix B.

that can extend over time and space, an essential requirement for economic specialization". Williamson (1995) in fact suggests that the quality of a judicial system may be indirectly assessed by the complexity of the economic transactions it is able to support.⁶ Clague *et al* (1995) explore this dependency of financial markets on third party enforcement and obtain a set of cross-country regressions that suggest that countries with lower ratios of "contract-intensive" money to GDP tend to grow less.

In Brazil, previous efforts to analyze the impact of the judiciary on the economy include Camargo (1996) and Pinheiro (1996, 1998). Camargo (1996) shows how the slowness and bias of labor courts end up hurting workers and favoring informality. Pinheiro (1996) reviews the relevant literature and develops a theoretical framework linking judicial system performance and economic growth. Pinheiro (1998) gauges how businessmen assess the quality of the Brazilian judicial system, identifies what they perceive to be the system's main problems, and measures the economic costs of the inefficiency of the judiciary in terms of output, investment and employment. This study concludes that improving judicial efficiency may have a significant impact on growth and presents anecdotal evidence of how the inefficient enforcement of loan contracts reduces the volume and increases the price of credit.

The main objective of this paper is then to empirically assess the impact of judicial enforcement on the development of credit markets. Two subsidiary objectives are (i) to describe credit markets and the legal and judicial institutions protecting creditors in Brazil and (ii) to present the institutions that substitute for good judicial enforcement of credit contracts. It has four sections, in addition to this introduction. Section 2 presents data on the size of credit markets, the allocation of credit across different types of borrowers, and on interest and default rates. Section 3 looks at the legal and judicial institutions protecting creditors' rights. Section 4 examines cross-state differences in the size of credit market and assesses the importance of judicial performance as an explanation for the observed differences. Section 5 describes different ways devised to cope with institutional failure in specific credit markets – i.e. the private and public arrangements, or forms of governance, in Williamson's terminology, created to overcome the problems created by judicial inefficiency. Section 6 concludes.

2 – Size and Structure of Brazilian Credit Markets

2.1 – Size of credit markets and allocation of credit

Brazilian financial markets are characterized by a relatively low volume of credit, high default rates and very high interest rates. Table 2.1 presents the stock of performing loans provided by the domestic financial system at the end of each year in 1988-97, broken down by type of borrower. It shows that the total volume of credit is not only low but, somewhat surprisingly, it has come down as a percentage of GDP since inflation was brought down in 1994. To some extent this was the result of the contraction of banking credit to the public sector, which accounted for 10.2% of the total in 1997, down from 28.7 percent in 1988. This reduction resulted mainly from the contraction in loans to the federal government and is largely explained by the process of privatization: a large share of the credits extended by banks to the public sector consists of loans to state enterprises.

In the private sector, loans to housing and industry are individually the two most important segments, with 23.4% and 24.5% of total performing loans in 1997, respectively. But it has been the consumer credit segment that has posted the largest growth rates since the launching of the 'Plano Real'. The dramatic reduction in inflation rates after the 'Plano Real' (July 1994), from 2103.7% in 1993 to 7.9% in 1997 (IGP-DI), had as a result a significant reduction of both bank's non-interest income and overall uncertainty. These two factors encouraged and facilitated a substantial expansion of credit to the

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⁶ "The upshot is that the quality of a judiciary can be inferred indirectly: a high-performance economy (expressed in governance terms) will support more transactions in the middle range [i.e., long-term contracting outside hierarchical organizations] than will an economy with a problematic judiciary. Put differently, in a low-performance economy the distribution of transactions will be more bimodal – with spot-market and hierarchical transactions and fewer middle-range transactions." [Williamson, 1995, p. 181-2]

private sector.⁷ This was especially the case of credit to households, with consumer credit increasing from an average of 2.4% of total loans for the years 1998-1993, to 8.4% in 1994; it has since then further increased, having reached 13.0% in 1997.

Table 2.1: Loans by the Financial System: Performing Loans as a percentage of GDP ⁽¹⁾

		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Public Sector	Federal Gov.	3.9	2.0	1.7	1.4	1.3	1.6	1.1	0.8	0.6	0.4
	States and Municipalities	5.7	4.4	4.3	3.1	4.3	4.1	3.6	3.9	4.7	2.2
	Total ⁽²⁾	9.6	6.4	6.0	4.6	5.6	5.7	4.7	4.8	5.3	2.5
Private Sector	Industry	5.7	3.6	4.5	4.1	5.8	11.1	6.8	6.7	6.2	6.1
	Housing	9.3	10.4	7.9	5.4	7.8	7.4	7.9	7.2	6.2	5.8
	Rural	2.5	1.2	1.7	2	2.4	2.3	2.9	3.1	2.2	2.4
	Commerce	3.8	0.8	1.1	1.2	1.7	2.5	3.3	2.9	2.6	2.2
	Household Credit ⁽³⁾	0.8	0.5	0.3	0.5	0.8	1.1	2.7	1.8	2.4	3.2
	Other Services ⁽⁴⁾	1.9	1.2	1.6	1.4	2.5	3.7	3.6	3.0	2.6	2.5
	Total	23.9	17.7	17.2	14.6	20.9	28.2	27.2	24.6	22.3	22.4
Grand Total		33.5	24.0	23.2	19.1	26.5	33.9	32.0	29.4	27.6	24.9

Source: Central Bank.

Notes: (1) Does not include FGTS (Fundo de Garantia de Tempo de Servico, a compulsory savings earning TR+3% p.a. which can be withdrawn only in case of (a) being laid-off, (b) retirement, or (c) marriage) operations and pending information. All ratios calculated with the stock of loans on December 31st and GDP measured at end-of-year prices using IGP-DI centered on December 31st (IGP-DI is a general price index: consumer price index 30%, wholesale prices 60% and construction prices 10%). (2) State enterprises are included in public sector. (3) Includes all credits to individuals other than for housing. (4) Includes foundations, institutes and other institutions maintained with budgetary funds from the public sector (e.g. autarquias).

The overall net public debt, which is mostly contracted through securities rather than bank loans, varied substantially in 1981-97: from 23.7% of GDP in 1981 to 50.1% of GDP in 1985, declining to 26.0% of GDP in 1994 and expanding again afterwards (Table 2.2). Even more significant is the variation in the composition of debt in its domestic and foreign components. Net public domestic debt, after more than doubling as a percentage of GDP in the eighties, dropped as a result of the asset confiscation that took place in 1990-91, increasing again after that, particularly since 1994. Net public foreign debt, on the other hand, gained importance in the mid-eighties, having fallen substantially since 1992 with the accumulation of foreign reserves. The other face of this process has been a substantial expansion in private foreign debt (mostly through bonds), which also helps to explain the contraction in domestic banking credit as a proportion of GDP.

Table 2.2: Net Public Sector Debt (% of GDP)

	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97
TOTAL	23.7	29.5	49.5	53.4	50.1	44.9	47.3	45.5	38.9	38.5	35.3	35.7	32.2	26.0	27.3	30.9	30.7
Domestic net public debt	8.8	11.5	16.6	20.2	19.5	16.2	17.3	19.7	20.3	15.5	12.0	17.0	17.8	17.6	21.8	27.0	26.4
Central Gov. (incl. Central Bank)	-0.2	0.0	2.7	5.9	5.5	2.5	1.3	2.5	6.8	0.4	-3.6	-0.6	0.9	3.0	6.6	12.0	12.5
State and Municipal Govts.	3.3	4.3	4.8	5.2	4.9	4.7	5.2	5.2	4.9	5.5	5.9	8.1	8.3	9.5	10.3	11.1	13.0
State enterprises	5.7	7.2	9.1	9.1	9.1	9.0	10.8	12.0	8.6	9.6	9.7	9.5	8.6	5.1	4.9	3.9	0.9
Foreign net public debt	14.9	18.0	32.9	33.2	30.6	28.7	30.0	25.8	18.6	23.0	23.3	18.7	14.4	8.4	5.5	3.9	4.3
Central Gov. (incl. Central Bank)	4.4	5.9	14.5	13.6	11.3	13.2	16.3	14.9	11.5	14.0	14.5	11.3	7.8	6.2	3.5	1.6	1.9
State and Municipal Govts	0.9	1.1	1.6	1.8	2.1	1.8	1.6	1.4	0.9	1.1	1.0	1.1	1.0	0.3	0.3	0.4	0.5
State enterprises	9.6	11.0	16.8	17.8	17.2	13.7	12.1	9.5	6.2	7.9	7.8	6.3	5.6	1.9	1.7	1.9	1.9

Source: Central Bank. These figures do not include the monetary base.

A third motive for the fall in the ratio of bank credit to GDP has been its substitution for other forms of credit, with the more widespread use of credit cards, securities and direct credit by retailers. Table 2.3 shows figures for credit card companies. Following the sharp expansion of household credit with the 'Real Plan', the number of credit cards and of transactions more than doubled from 1993 to 1997. Even more substantial was the increase in the value of transactions, which more than doubled as a

⁷ McKinsey (1998) estimates that from 1993 to 1995, float income dropped from 46 to 4 percent of overall bank income, whereas net interest income rose from 37 to 66 percent of this total.

percentage of GDP. Similar results are observed for the stock of debentures, which are essentially issued by the private sector. There was a six-fold increase in the average stock, measured in US\$, between 1993 and the 12 months ending in June 1998 (part of this increase was due to the appreciation of the real).

Table 2.3: Basic Statistics on Credit Cards and Debentures

	1991	1992	1993	1994	1995	1996	1997
Credit Cards							
Number of Cards (thousand)	7903.1	7820.5	8431.5	11244.7	14369.3	17243.1	19384.8
Number of Transactions (thousand)	105704.0	151667.8	199976.3	210336.7	319056.4	437107.2	516731.8
Value of Transactions (% GDP)	1.29	1.32	1.48	1.90	3.03	3.29	3.47
Debentures: Stock at year end (% GDP)			0.91	1.86	2.03	2.05	2.38

Source: ABECS and ANDIMA.

Despite the substantial expansion in the number of credit cards and the volume of transactions, the proportion of these credit accounts in Brazilian retail banks remained much below that in the U.S. (Table 2.4), suggesting that there is still room for further expansion. Also noteworthy is the much lower proportion of mortgage accounts. In this way, retail banks concentrate on short-term lending in the form of working capital, export finance, and credit for the acquisition of goods by firms and households, and on providing personal loans and overdraft facilities for firms and individuals. Table 2.5 presents the stock of credit to firms and households for typical short-term loan operations. Together, these ten types of short-term credit to firms amounted to 6.0 and 5.7% of GDP at the end of 1996 and 1997, respectively. These figures are equal to roughly half of the total credit to private industry, commerce and other services borrowers in each of the two years. The equivalent totals for households were 1.7 and 2.0 % of GDP, or about two-thirds of the total non-housing credit extended to household by the financial system in 1996 and 1997, respectively. In sum, most of the credit extended by retail banks, particularly private ones, is short term.

Table 2.4: Credit accounts in retail banks by type (in percent)

	U.S. (1994)	Brazil (1996)
Installment	26	16
Mortgage	22	8
Credit Card	48	15
Revolving / other	4	61

Source: McKinsey (1998)

Note: Includes the total number of loans through overdraft protection, credit cards, installment loans, mortgages and other forms of credit at year end.

The retail-banking sector shows a relatively high concentration: the three largest banks answer for 57% of all deposits, against 13% of the next three largest and 30% of the remaining banks (Table 2.6). The sector is also characterized by a high participation of public banks, created to appropriate part of the floating income and enable credit activities that would not flourish naturally in a highly inflationary environment. State banks answer for about 60% of all deposits and assets and are responsible for virtually all long-term credit, including almost all credit for business investment and housing. Concerning the stock of credit, in 1997 public banks answered for 52.1% of all performing loans, private national banks for 36.2% and foreign banks for the other 11.7% (although this share increased substantially in 1998). In addition, we have that:

[1] Public banks are responsible for almost all lending to the public sector, federal and non-federal alike. Their loans to the private sector have traditionally concentrated on the housing, industry and rural sectors.⁸ They have experienced a continuous but below average expansion in non-housing credit to households since 1994, answering for 23.5% of this market segment in 1997.

⁸ In 1997, public banks accounted for 83.2% of the stock of credit to housing.

[2] Private national banks are responsible for the remaining loans to the public sector, but these represent only a minor portion of their outstanding credits. Until 1993, private banks lent preferably to industry, other services, housing and commerce, in this order. Since then, the importance of loans to household has increased dramatically, while that of housing loans decreased. In 1997, private national banks answered for 55.3% of all credits to households other than for housing.

[3] The profile of foreign bank lending is even more concentrated. Until 1993, loans to industry, commerce and other services comprised almost all lending to the private sector. Since then, the importance of loans to households has increased very substantially, becoming second only to credits to industry. Lending to housing by foreign banks was negligible throughout the 1988-97 period. Loans to the public sector, relevant in the late eighties/early nineties, have since then fallen to almost zero.

Table 2.5: Stock of Different Kinds of Credit to Firms at End of Each Year (% of GDP)

	1996	1997
Credit to Firms		
Hot Money	0.25	0.09
Discount of <i>Duplicatas</i>	0.40	0.41
Discount of Promissory Notes	0.07	0.07
Working Capital	0.99	1.02
Overdraft Account	0.74	0.86
Credit for Acquisition of Goods	0.10	0.12
Vendor	0.54	0.47
Advances on Foreign Exchange Contracts	1.36	1.37
Export Notes	0.07	0.08
Resolution 63 Operations	1.47	1.24
Credit to Individuals		
Overdraft Account	0.48	0.61
Personal Credit	0.38	0.65
Credit for Acquisition of Goods	0.79	0.78

Source: Central Bank.

Table 2.6: Government Banks' Share of Deposits and Concentration of Banking Sector (1996) ⁽¹⁾

Country	Private Banks	Public Banks	Top 3	Top 4-6	Rest
Netherlands	100%	0%	77%	17%	6%
U.S.	100%	0%	10%	7%	83%
Korea	88%	12%	14%	9%	77%
Brazil	40%	60%	57%	13%	30%

Source: McKinsey (1998).

(1) Does not include interbank deposits.

3.2 – Interest rates

Another reason for the low values of banking credit in Brazil is the very high real interest rate faced by firms and households, a result of the high borrowing rate paid by banks and the high spreads they charge. The high passive rate is mainly a consequence of the over-reliance on tight monetary policy, which has substituted for a more effective fiscal policy since 1994. In 1994-97, the real interest rate on federal government securities averaged 21.5% p.a. As shown in Table 2.7, banks paid similar rates on the certificates of deposit they issued in this period.

On top of these high borrowing interest rates, banks charge large spreads. To some extent, these high spreads are the result of banks' low productivity that, despite having increased substantially since

1991, is still much lower than in the U.S.A., Korea and the Netherlands. According to a study by McKinsey (1998), productivity is particularly low in credit-granting activities:

“Capital intensity and technology also cause productivity differences between Brazilian banks and best practice, principally in the credit process. The infancy of credit scoring models hinders productivity in granting loans to individuals and small business, where only a small portion of applications are approved automatically. There is also great intra-sector diversity. While some banks have rather moderately advanced systems for credit-scoring others use rudimentary methods.”

Table 2.7: Average Monthly Interest Rates on Public and Private Securities (percent per month) ⁽²⁾

	Federal Govern. Securities	Bank Certificates of Deposit	TR	TJLP	Inflation ⁽¹⁾	Exchange Rate Devaluation
1990	23.45	26.1	n.a.	n.a.	25.84	26.42
1991	16.68	17.69	n.a.	n.a.	15.78	16.34
1992	26.31	26.21	23.49	n.a.	23.49	22.69
1993	33.34	32.81	31.15	n.a.	32.04	30.72
1994	23.46	19.75	23.37	n.a.	21.25	19.38
1995	3.61	3.5	2.32	1.77	1.16	1.09
1996	2.04	1.98	1.16	1.25	0.75	0.55
1997	1.86	1.88	0.76	0.81	0.60	0.6

Source: ANDIMA.

Notes: (1) IGP-DI (2) The TR and the TJLP are the interest rates that index house mortgages and development bank loans, respectively. (3) n.a.: Not applicable.

Although low productivity is a generalized problem in the Brazilian financial system, its importance is accentuated by the high proportion of activities carried out by public banks, which are more inefficient than their private counterparts. For retail banks, McKinsey (1998) estimates that labor productivity in state banks equals 29% of the average American bank and 56% of the average private Brazilian bank, concluding that:

“Government ownership reduces the overall level of productivity in two ways. Obviously, it pulls down the sector’s efficiency by employing half the sector’s workers and achieving only half the productivity of private banks. Government banks also restrain efficiency improvements by lowering the level of domestic competitive intensity by creating a price-ceiling under which the more efficient banks can profitably and comfortably operate.”

High interest rates also explain why most credit to the private sector goes to finance consumption and firms’ working capital. Standard interest rates charged on short-term loans are presented in Table 2.8. These show that, on average, firms pay lower interest rates than households. Still, annual interest rates on working capital loans averaged 74% in 1995-97, against a mean annual inflation of 12%. Typical loans to households (other than for housing) are consumption and personal credit and overdraft accounts. Annual interest rates for these loans averaged 124.7%, 144.2% and 198.0% in 1995-97, respectively.

Real interest rates for loans indexed to the exchange rate are much lower than those for loans in reais. In 1995-97, advances on foreign exchange contracts (ACC) and Resolution 63 operations, the two most popular types of loans indexed to the dollar, had average annual interest rates of 20.3% and 31.8%, respectively, already including the exchange rate devaluation. The main reason why these rates are comparatively low is that banks get funding for these loans from borrowing abroad at rates much below what they pay domestically. By indexing their loans to the exchange rate they transfer the exchange rate risk to borrowers. In this way, the difference in interest rates between dollar and real denominated loans arises essentially from the cost to borrowers of hedging against the devaluation of the real.

The difference between interest rates charged on Resolution 63 and ACC operations is due to the latter's lower credit risk. There are two main reasons for that. First, while debtors in Resolution 63 operations are national firms or banks, in ACC loans the debtor is the importer buying the goods exported. Second, the ACC loan is secured by the goods exported, which when the loan is granted have already left the country. Therefore, in an ACC loan the creditor does not incur Brazil's country risk, neither from a macroeconomic nor from a judicial point of view. If he has to apply to the judiciary to recover the loan, he will do so in the importer's home country.

Table 2.8: Average Monthly Interest Rates on Short-Term Loans Taken by Firms and Individuals.

	1994	1995	1996	1997
Credit to Firms				
Hot Money	24.6	6.7	4.2	4.4
Discount of <i>Duplicatas</i>	24.9	8.0	5.4	4.7
Discount of Promissory Notes	27.1	8.5	6.0	4.8
Working Capital	24.9	8.1	4.7	4.1
Overdraft Account	23.5	9.2	6.0	4.8
Credit for Acquisition of Goods	23.7	9.6	5.5	3.7
Vendor	26.2	5.5	3.1	2.7
Advances on Foreign Exchange Contracts ⁽¹⁾	0.8	0.8	0.8	0.8
Export Notes ⁽¹⁾	1.7	1.6	1.3	1.2
Resolution 63 Operations ⁽¹⁾	1.6	1.6	1.7	1.4
Credit to Individuals				
Overdraft Account	29.2	11.3	9.1	8.2
Personal Credit	26.9	9.8	7.1	6.3
Credit for Acquisition of Goods	27.3	9.7	6.6	4.7

Source: Central Bank.

Notes: (1) Plus exchange rate devaluation.

Interest rates are also much lower than most of those in Table 2.8 in the cases of credits provided by development banks and of loans for housing. Development banks finance a large share of non-housing investment charging rates that vary from TJLP to TJLP plus 6% p.a.⁹ In 1995-97, the TJLP averaged 16.4% p.a. They manage to charge these relatively low rates by having access to special sources of funding at compatible costs. In the mortgage sector banks operate according to the following rules:

[1] There are two systems. The first, called *Sistema Financeiro da Habitação* (SFH – Housing Financial System), is strictly regulated by the government, which sets caps on the value of the houses or apartments eligible for finance and on the value of the loans that may be extended. In the other system, called *Carteira Hipotecária* (Mortgage Portfolio), banks are free to set loan conditions.

[2] Almost all financing for these loans comes from the popular savings accounts, which pay a governmentally-fixed interest of TR plus 6% p.a. and carry a government guarantee.

[3] By law, a large portion of the deposits in these savings accounts have to be used to provide housing loans in the SFH system at a fixed rate of TR plus 12% p.a. In 1995-97, this was equivalent to an annual average interest rate of 32.5%. These are 15-year loans capped at R\$ 90,000 or 60% of the value of the property being bought (which may cost at most R\$ 180,000), whichever is lower.

[4] Loans above these caps are available only in the *Carteira Hipotecária* system at a rate freely fixed by banks, which in general range in the interval of TR plus 14% to 16% p.a.

Government regulation and the fact that these loans are secured by the property being financed at relatively high collateral/loan ratios explain why interest rates in the mortgage market are lower than those charged in the largely unsecured loans provided to firms and individuals. However, the

⁹ The stock of loans by BNDES, Brazil's National Development Bank, amounted to 4.5% of GDP at the end of 1997.

continuous decline in the stock of housing loans in recent years, with most of the outstanding balances concentrated in public banks (see section 2.1), indicates that the situation is more complex than suggested here. A possible explanation for these trends is the existence of laws blocking the repossession of property in case of default if the collateral is the only house owned by the debtor.

Further evidence on the importance of collateral in determining interest rates was obtained from a special survey carried out with banks in Brazil in the first semester of 1998.¹⁰ Banks reported that for personal loans annual rates ranged between 38 and 60% if there were 'real guarantees', between 38 and 90% for 'other guarantees', and between 75 and 269% for unsecured loans. For firm loans, values were between 28.5% and 77.0% if there were guarantees (both kinds) and between 28.5 and 197% for unsecured loans.¹¹

2.3 – Default rates

Another reason for the high interest rates in Brazil is the relatively high default rate, which creditors factor in when fixing their spreads. Tables 2.9 and 2.10 present the stock of overdue and defaulted debts on December 31st for the years 1988-97, measured as a proportion of total loans. As defined by the Central Bank, a debt is considered overdue if it has been due for over 60 days. Loans are considered defaulted if overdue for more than 180 days when guarantees are considered insufficient, or for more than 360 days when guarantees are considered sufficient.¹²

The ratios of overdue and default loans to total loans averaged relatively high values in 1988-97: 2.6% and 18.8%, respectively. In both cases, these averages have been pushed by the high default rates of the private sector. In fact, while recently the stock of non-performing loans (overdue plus defaulted) to the public sector has declined, that of loans to the private sector has expanded very substantially, particularly since 1995. The patterns for overdue and defaulted loans have not, however, been totally overlapping. For all types of private borrowers the ratio of overdue to total loans peaked in 1995, except for rural and housing loans, for which the worse indicators were registered in 1990-94 and 1996, respectively. The proportion of overdue loans declined in 1996-97 for industry, commerce, household and other services. On the other hand, the stock of defaulted loans has shown an almost continuous increasing trend for most types of private borrowers, although for housing and rural credits the peaks were registered in 1996.

What is perhaps more noteworthy is that the stock of non-performing debts at the end of 1997 surpassed that of performing loans that, nonetheless, expanded during this period. This apparent paradox is explained by the high interest rates and large penalties levied on non-performing loans. A survey by ANEFAC (National Association of Factoring Firms) showed that banks charge monthly penalties that vary from 9.78% to 16.00% (i.e., annual fees of 206.4% to 493.6%) on the outstanding debt of overdue personal credits and overdraft accounts that exceed the allowed credit limit.¹³ In Table 2.11 an attempt is made at netting out these two components from the stock of non-performing loans. As shown, at the end of 1997 the original stock of loans overdue and defaulted answered for just 8 percent of the total stock of non-performing loans. The default rate, measured as the ratio of overdue

¹⁰ These results pertain to a survey with banks regarding their credit practices. The original sample consisted of 44 banks, of which 18 returned the questionnaire. Since one was too incomplete to be useful, only 17 answers are included in the analysis. The sample included national and foreign, large and small, private and public banks, based on different states of Brazil.

¹¹ Other questions asked about credit guarantees. For personal credit, unsecured credit prevails for small private banks (with one exceptionally preferring 'other guarantees'), while medium and large banks (public and private) seemed to prefer either 'real guarantees' (this was the case of 4 banks) or 'other guarantees' (this was the case for another 4 banks). There doesn't seem to be a clear pattern for banks on this regard, however. As far as firm credit goes, private banks prefer 'other guarantees' (with three exceptions out of the 12 cases), while public banks (except one) prefer 'real guarantees'.

¹² The reported values include interest and penalties, calculated on an accrual basis. Under Central Bank regulations, unsecured credits in local currency can remain in arrears for up to 60 days, partially secured credits can remain in arrears for up to 180 days and fully secured credits can remain in arrears for up to 360 days before being fully provisioned. Upon becoming 60 days in arrears, partially secured credits must be provisioned as to 50 percent of the recorded value of the credit and fully secured credits must be provisioned as to 20 percent of the recorded value of the credit. Further provisioning is required to be made every 30 days thereafter (up to the 180th day or, as the case may be, the 360th day) to ensure that the provision remains at the required level of 50 percent or, as the case may be, 20 percent of the recorded value of the loan. Loans made by financial institutions to public sector borrowers are treated in the same way as loans to private sector borrowers for this purpose.

¹³ In fact, a survey by the consulting firm Austin Assis, which analyzed the balance sheet of 25 banks in the first semester of 1998, revealed that these banks had a profit of R\$ 1.2 billion with these fees (in 'O Globo', August 23, 1998, p. 37).

plus defaulted loans to the total stock of extended loans, both net of income to appropriate, equaled 7.2 percent at the end of 1997.

Table 2.9: Overdue Loans as a Percentage of Total Loans (December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municip.	Total	Industry	Housing	Rural	Commerce	Hous. Credit	Other Services	Total	
1988	0.8	5.3	3.5	1.3	0.4	0.8	0.6	4.2	1.1	0.8	1.6
1989	4.0	2.6	3.0	1.5	0.1	0.5	0.2	0.7	1.6	0.5	1.2
1990	17.9	2.4	7.7	3.1	0.3	6.3	1.1	1.7	1.3	1.9	3.4
1991	23.0	12.5	16.1	3.0	0.2	8.0	1.3	1.2	1.7	2.4	5.9
1992	23.4	4.2	9.4	2.6	0.4	6.4	1.3	2.4	1.3	2.0	3.7
1993	18.5	2.3	7.6	1.3	0.3	6.4	1.2	1.6	1.1	1.5	2.5
1994	19.8	0.3	6.0	3.1	0.5	5.0	1.3	1.1	1.2	2.0	2.5
1995	0.0	0.5	0.4	3.9	0.6	1.2	5.4	5.5	3.6	3.1	2.7
1996	0.0	1.9	1.7	1.4	1.1	0.6	2.0	2.3	1.6	1.5	1.5
1997	0.0	0.9	0.8	1.1	0.9	0.8	0.9	2.3	0.4	1.0	0.9

Source: Central Bank. Note: Loans are considered overdue if due for over 60 days (Central Bank Resolution 1748 of August 30, 1990). Values include interest and penalties. See other notes in Table 2.1.

Table 2.10: Defaulted Loans as a Percentage of Total Loans (December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municip.	Total	Industry	Housing	Rural	Commerce	Hous. Credit	Other Services	Total	
1988	0.6	0.9	0.8	5.9	1.4	2.0	35.8	1.8	5.6	10.5	7.8
1989	1.9	1.8	1.8	6.0	1.0	4.0	60.7	1.6	3.1	8.4	6.7
1990	9.7	4.2	6.1	10.7	1.6	8.4	47.2	9.5	13.4	11.0	9.7
1991	4.3	5.1	4.8	15.9	1.5	6.2	41.1	4.6	10.6	12.3	10.4
1992	8.5	12.8	11.6	11.9	2.2	10.1	33.6	4.1	26.9	12.7	12.4
1993	10.5	10.5	10.5	12.2	2.3	21.1	24.2	8.0	44.3	18.0	16.8
1994	9.7	4.2	5.8	17.2	2.7	20.4	21.1	5.9	25.8	14.7	13.5
1995	29.7	3.3	9.1	29.0	5.9	36.1	26.7	19.2	45.5	26.8	24.5
1996	4.7	3.6	3.7	44.5	6.8	32.3	45.2	21.6	61.4	37.9	33.4
1997	6.1	6.2	6.2	61.1	4.4	27.8	68.6	34.2	80.8	55.7	53.2

Source: Central Bank. Note: Loans are considered defaulted if overdue for more than 180 days and with guarantees considered insufficient and for more than 360 days when guarantees are considered sufficient (Central Bank Resolution 1748 of August 30, 1990). Values are measured including interest and penalties. See other notes in Table 2.1.

Table 2.11: Total Loans of the Financial System According to Payment Status (million R\$) ⁽¹⁾

		1995	1996	1997
(a)	Performing loans	209309	245846	255137
(b)	Overdue loans	7529	5351	5430
(c)	Defaulted loans	64814	107815	247634
(d)	Overdue plus defaulted loans	72343	113166	253064
(e)=(a)+(d)	Total	281652	359012	508201
(f)	Income to appropriate	43766	95607	233137
(g)=(e)-(f)	Total net of income to appropriate	237886	263405	275064
(h)= (d)-(f)	Overdue and defaulted loans net of income to appropriate	28577	17559	19927
(i) = (h)/(g)	Default rate	12.01%	6.67%	7.24%

Source: Central Bank.

Note: (1) These figures include FGTS and for this reason differ somewhat from those reported in Tables 2.1, 2.9 and 2.10.

Public banks have traditionally shown a higher ratio of overdue to total loans, with no clear ordering between national private and foreign banks (Table 2.12. See also Tables B.2 through B.10 in Appendix B for more detailed data). Since 1995, however, the differences among the three kinds of financial institutions have become less pronounced, virtually vanishing in 1997. Public banks present a much higher ratio of overdue to total loans in the case of industry, rural, commerce and other services

borrowers, with foreign banks in general faring better than private national banks in these market segments. In the case of household credit, public banks showed a worse performance until 1993, but afterwards they had an above average success in reducing the proportion of overdue debts in this market segment. Concerning defaulted loans, we have that (see Appendix B):

[1] Foreign banks present the lowest proportion of defaulted, although for them too this ratio increased substantially after 1993. Default rates measured in this fashion were particularly high in 1995-97 for housing credits, in 1994-95 for rural credits and household credit in 1995. They have also registered high volumes of defaulted loans with the federal public sector since 1992.

[2] Private national banks registered a high ratio of defaulted to performing loans throughout the 1988-97 period. These default rates have been historically high for rural, commerce and other services, and more recently for households. Default rates are low for housing and moderate for loans to industry.

[3] Most defaulted loans in 1997 were concentrated on public banks. For them, the ratio of defaulted to performing loans increased substantially for all types of private borrowers, except for housing loans, for which the rise in this indicator was less significant. Interestingly, in 1988-97, the proportion of defaulted loans to the public sector was consistently lower in the case of public banks than in that of national private and foreign banks.

Table 2.12: Overdue and Defaulted Loans as a Proportion of Total Loans for Public, National Private and Foreign Financial Institutions (in percent, December 31st)

	Public		National Private		Foreign	
	Overdue	Defaulted	Overdue	Defaulted	Overdue	Defaulted
1988	2.1	2.1	0.8	18.1	0.6	0.6
1989	1.2	2.3	1.1	17.5	1.4	1.3
1990	4.6	6.8	1.3	16.4	3.6	2.8
1991	8.9	9.2	0.8	14.3	3.3	3.4
1992	5.6	11.6	0.6	15.5	0.8	4.7
1993	4.2	23.5	0.7	13.5	0.3	0.9
1994	3.9	13.6	0.8	14.4	1.1	4.9
1995	2.8	27.6	2.7	21.9	2.0	8.2
1996	1.3	44.0	2.0	13.2	1.3	8.7
1997	0.7	66.8	1.5	16.8	1.9	9.6

Source: Central Bank.

3 – Recovering a loan: Which are creditor's alternatives?

When a debtor defaults, the first stage of collection is usually an amicable one, usually carried out directly by the manager of the branch that extended the loan. If collection is not successful at this stage, the account is classified under "loans in liquidation" and the contract is sent to the credit recovery department of the bank.¹⁴ Formally, extra-judicial collection starts at this point. This is the preferred method of debt collection in Brazil – it is fast and avoids new expenses such as court and lawyer fees. Moreover, it avoids increasing the antagonism between the bank and its client. Non-performing debtors face heavy penalties, including large fees charged by collection firms. These fees, combined with the high rates of interest, quickly cause the debt to "mushroom" (as described in section 2). As a consequence, debt negotiations usually take place with large discounts. It is not uncommon for banks to close deals accepting repayment of a mere 40% of the outstanding debt (which may still involve a larger debtor payment than the value of the original loan).¹⁵

¹⁴ Credit recovery is usually pursued by banks' Department of Credit, rather than by their Legal Department.

¹⁵ Public banks may not, by law, accept a deal that returns less than the original loan.

If extra-judicial collection fails, creditors may choose to take the case to court. Brazilian law allows judicial debt collection to be carried out in a few different ways.¹⁶ The choice of the best procedure to follow depends on the type of credit instrument used and on the formalities required by the legislation. The legal action least used by banks, due to its duration, is the *ordinary action*. This action starts with a *cognizance action*, in which the plaintiff tries to establish that a debt of a given value exists and that it is due. After an action of this type is initiated, the defendant has 15 days to respond. If there is no response, the debt will be considered executable, meaning that it is liquid, certain and due.¹⁷ However, if the judge is not convinced of the existence or of the stated amount of the debt, or that it has matured, a judicial process is started, and only after the publication of a favorable court ruling can the debt be considered liquid, certain and due, and thus executable.

Only after the debt is considered executable may the creditor proceed to the next step: initiate another judicial process, called an *execution action*, in which he demands before a judge that the debtor pay his debt. In the *execution action*, the defendant is asked to pay the debt within 24 hours or to name assets to be held before the court as a guarantee of payment (this is known as the *penhora* of the assets).¹⁸ If the debtor does not pay nor does he name the assets for the *penhora* within 24 hours, the court officer himself lists as many assets for the *penhora* as he considers necessary to satisfy the credit. If the court officer does not find any assets to include in the *penhora*, it is up to the creditor to search for such assets and to indicate them to the court.¹⁹ The *execution action* is suspended until such assets are found. Assets included in the *penhora* may not be disposed of without the judge's permission. Only after the *penhora* is completed can the case then be judged.

Therefore, although from a legal point of view there is not much difference between a secured and an unsecured loan (in both cases the creditor must go through the motions described here), the existence of a real guarantee insures that there will be assets for the *penhora*. If the loan has a personal guarantee, the assets of the guarantor will be available for the *penhora* if the debtor himself does not have enough of them.²⁰ If a firm enters into a *concordata* procedure (reorganization, see below), a secured creditor does not need to go through the habilitation process for having the asset that serves as collateral to be included in the *penhora*; this happens automatically. In the case of bankruptcy, the creditor is paid once the asset is sold and, if there is any value left over, it is distributed among unsecured creditors.²¹ In Appendix C we discuss the main types of guarantees used in credit contracts in Brazil.

If the debtor wants to defend himself, he will not do so within the *execution action*, but through another judicial action called an *embargo to the execution action*, which will be appended to the *execution action*. Typical embargoes argue that interest rates are too high,²² or that an asset may not be used in the *penhora* because it is essential for the firm to operate and eventually pay back the debt.²³ The *embargo* may also contest the use of compound interest (*anatocismo*), which is seen by many judges as

¹⁶ The main law guiding judicial collection of debts is the Code of Civil Process (Código de Processo Civil), Federal Law 5869 of January 11, 1971, in particular articles 566 to 795.

¹⁷ A debt is liquid when there is no doubt about the amount that has to be paid by the debtor. It is certain if it has been structured according to the law (e.g., a credit contract has to be witnessed by two people other than the creditor and the debtor, who also have to sign the contract). It is due if the date of payment has passed.

¹⁸ *Penhora* consists of the attachment of property in satisfaction of a lien.

¹⁹ In this search, the creditor may work with the tax authorities, the telephone company, the department of motor vehicles, etc. It should be noted that, while in the *cognizance action* there is the possibility of defense (with the judge coming to learn of the defense's allegations), in the *execution action* the debtor may only defend himself after the *penhora* of the assets that guarantee payment of the debt. One should however mention that in most instances the debtor's home cannot be included in the listed assets.

²⁰ It must be noted that the creditor may not seize the guarantee in case of default. The guarantee only serves to facilitate the process of obtaining assets for the *penhora*. The seizure of the guarantee itself is allowed only in two cases: (1) that of a real estate mortgage (as in case of a housing loan) – the procedure then is the execution of the mortgage; and (2) the case of credit operations secured by fiduciary alienation, for which the creditor may request a search and seizure action of the asset given in guarantee.

²¹ If the value raised by the sale is not sufficient to pay the creditor back, he should then habilitate himself for the difference not covered, now as an unsecured creditor, in the bankruptcy procedure.

²² Most contracts do not specify a fixed interest rate, but rather one of the reference rates described in section 2, in addition to a spread. In some credit operations it is not uncommon to end up with monthly real rates above 10 percent. Debtors in many of these cases argue that these are unreasonable and unfair rates.

²³ Job loss is another argument to which many judges are sensitive.

illegal.²⁴ There have also been cases in which the debtor argues that the person who signed the contract was not authorized to do so.

If the *penhora* of the assets took place and if the debtor has still not paid nor has he managed to get his *embargo* accepted by the judge, then the assets are publicly auctioned. The proceeds of this auction are then used to pay the debt (and the auctioneer's fees), with the revenues exceeding the value of debt being returned to the debtor. If there are no interested parties in acquiring the assets in the auction, the assets may then be transferred to the creditor.

Some credit securities are ruled by specific legislation that, if correctly used, guarantees that the securities satisfy the liquidity and certainty requirements. If a loan based on such securities is not paid when due, the first step consists of notifying the public registry (*Cartório de Ofício de Registro e Protesto de Títulos*) that the debtor has not paid. This step is known as the protest of the security, or *protesto*.²⁵ The creditor can then proceed directly to an *execution action*. For this reason, these securities are called self-executable.²⁶ An *execution action* may thus have as object either (i) an executive extra-judicial security, (i.e. the document received by the creditor – such as those listed above) or (ii) a judicial executive title (the ruling proffered by the judge at the end of a successful *cognizance action*).

Banks usually structure loans using self-executable credit securities, since they allow a much faster judicial collection in case of default.²⁷ For this reason, banks only initiate a *cognizance action* in case that, due to an error or to legal impediments, the loan contract does not have the requirements of an extra-judicial title, but yet there is evidence that the debt exists. An example is the case of current account debts (overdraft), in which there is no written contract except for the one opening the current account.²⁸

Judicial debt collection depends crucially on the debtor having sufficient assets to cover payment of the debt. For this reason, banks usually demand their clients to list their assets when opening a current or credit account, an information that is sometimes checked directly by the bank. It may be the case, though, that after contracting the loan the debtor sells his or her property, making it no longer available to be put up for *penhora* – that is, the debtor becomes insolvent before the debt is due. In this case, the creditor may start a *Pauliana action*, showing the insolvency and bad faith of the debtor and seeking a court ruling canceling the relevant sales.²⁹ If the decision is favorable, the asset may be used for the

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²⁴ This interpretation follows from article 192 of the Constitution, which, however, has not yet been regulated and for this reason is not applicable, according to others.

²⁵ The *protesto* must take place during a certain period of time after the debt is due. After that, these securities lose their property of being self-executable and may serve only as proof of debt in an *ordinary action*.

²⁶ The importance of using self-executable (or extra-judicial) securities becomes evident by noticing that the most commonly used credit securities in Brazil are self-executable: the *duplicata* (a certified and negotiable copy of an invoice, a credit security apparently existent only in Brazil), the bill of exchange, the promissory note, and industrial and commercial credit *cédulas*. Each is ruled by specific legislation: Law 5475 (July 18, 1968) for *duplicatas*, Decree 2044 (December 31, 1908) for bills of exchange and promissory notes, and Decree-Law 413 (January 9, 1969) and Law 6840 (March 11, 1980) for industrial and commercial credit *cédulas*. A check (Law 7357 of September 2, 1985) is also self-executable. Some of the bank lawyers we interviewed pointed out, however, that the legislation has not kept up with technological change. For example, for a *duplicata* to be self-executable, it must be signed by the client who buys the good or service that originated it. In practice, however, given the large number of documents issued daily, banks no longer process the due paperwork nor do they check signatures. Banks simply provide specific software to clients, where the basic information on the *duplicatas* is recorded. The law, however, still requires written documents.

²⁷ A standard *cognizance action* in Brazil may take several years. This is the main reason why creditors avoid following this type of procedure. Some lawyers, however, pointed out that beginning with an *execution action* carries the risk of having the liquidity or certainty of the debt questioned further on in the case and, if not sufficiently established, the case has to be restarted with a *cognizance action*. If this happens, all the time and costs incurred until that point would have been wasted. In several cases, therefore, it would be less risky to start with the *cognizance action*. An alternative is to start with a *monitória action* ("a summons to appear before the court"). This action allows the debtor to pay his debt immediately, or to present his defense. If the judge accepts his allegations, the action becomes an *ordinary action*. Otherwise, the debt becomes liquid, certain and due, allowing its execution.

²⁸ An interesting procedure adopted by banks and credit card companies when giving apparently unsecured personal credit, such as overdraft allowances, is to include a provision in the contract allowing them to issue a credit security (e.g., a promissory note) against the debtor in the amount of the credit conceded. This security would then be sold in the market and used to compensate the bank or credit card company. In recent years, however, it has been the interpretation of the judiciary that such procedure is illegal, because it disrespects the Consumer Protection Law, that states that nobody may be asked to sign a blank contract.

²⁹ Note that this is different from *defrauding the execution*, which happens when the debtor sells property after debt collection has started (not necessarily through the judicial system). The fraud to execution may be informed in the *execution action* itself; it is not necessary to begin a new

penhora. The party who bought the asset in good faith may then sue the debtor. Banks very rarely engage in this type of action due to the difficulty in proving the debtor's intentions when selling his or her property.

Under certain conditions, the creditor may try to judicially collect a debt by requesting that the debtor is declared bankrupt. Banks rarely follow this route. Bankruptcy legislation gives preference to debts with workers and tax authorities.³⁰ In practice, however, neither group tends to start a bankruptcy action, since workers want to protect their jobs, and tax authorities are overwhelmed by inertia and by a large number of tax evasion cases.³¹ It is usually only after the firm stops paying suppliers and banks (usually the last to suffer default) that there may be parties interested in requesting debtor bankruptcy. However, the incentives to do so are not strong. In general, when a bank or supplier succeeds in a bankruptcy action, the little that is left over after paying for lawyers and for court fees is barely enough to pay workers and the government, let alone pay other debts. For this reason, it does not make sense for them to request that the firm be declared bankrupt. Threatening the firm with a bankruptcy lawsuit in order to get repayment on a loan may not work either. Lawyers have remarked that if the court is alerted that the request for bankruptcy is intended only to pressure the firm to pay the loan, it will not grant the request if the debtor shows that it is not "broke". If this happens, the bank will have to pay for lawyer fees, judicial costs, etc. Even if the request is granted, the bank will have to wait its turn to receive whatever money is left after other preferred creditors are repaid. So in general banks prefer to help the debtor to get out of difficulties, often trading part of the debt for real assets at a substantial discount.

When a firm is declared bankrupt, all *execution actions* are halted, except for the *fiscal executions*. The judge then nominates a *sindico* (usually the largest creditor) who will manage the company, analyze the quality of its assets and liabilities and assess whether bankruptcy crimes have taken place. Once this process is concluded, the company is put either in (*suspensive*) *concordata* (see below), in which case management returns to its owner(s), or in *liquidation*. *Liquidation* is a process in which all the assets of the bankrupt company are collected, sold at a judicial auction, and used to pay back its creditors (according to the quality of the credit, and proportionately for credits of the same quality).

If a debtor finds himself to be financially insolvent, he may ask a judge to let him go into *concordata*.³² A *concordata* does not affect the debts the firm has with its employees, the tax authorities, credits secured by real guarantees, and privileged credits (e.g., those that use *cédulas de crédito*). In fact, it basically suspends payments to unsecured creditors. These are the creditors that usually provide the firm's working capital such as banks and suppliers. Although the law technically allows creditors to participate in the firm's reorganization process, it is almost impossible for them to interfere in the process without the owner's consent. In practice, though, it is not uncommon for owners to consent, since the *concordata* dries up all sources of credit to the firm (including supplier credit). In the case of firms that crucially depend on supplier credit, such as retailers, creditors often manage the whole reorganization process.

The legal procedures ruling judicial execution are perceived to be in general excessively cumbersome and to allow a great number of ways to postpone a decision. This creates a strong incentive for debtors to default. A *cognizance action* lasts, on average, five years. Once a decision is reached and the execution action begins, the debtor has five days after the *penhora* to present an embargo. In general, a

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lawsuit. Furthermore, the creditor does not need to prove the ill-purpose of the debtor, only that there are no other assets for the *penhora* (that is, that the debtor is insolvent). The two procedures are therefore different. Whereas the fraud of creditors requires them to start a new lawsuit (asking the judge to cancel the sale), in the fraud to execution the fact is taken to the judge in the execution lawsuit itself.

³⁰ Under Brazilian bankruptcy law, debts are paid in the following order: (a) employees' wage claims and indemnity; (b) tax claims (first federal, then state and finally claims of municipal tax authorities); (c) secured credits; (4) credits with special privileges over certain assets (*commercial credit cédulas* with *penhor* are senior to *penhor*, etc.); (5) credits with general privileges (e.g., *industrial credit cédula*); and (6) unsecured credits. Banks often find themselves as low-ranked creditors.

³¹ General fiscal amnesties at the municipal, state and federal levels are common in Brazil. In these instances debtors are able to forego penalties for defaulting tax payment and are given favored conditions to pay back their debts.

³² A non-liquid but potentially solvent firm goes into *concordata* when a judge concedes an authorization for it to reschedule its debts, according to a timetable established in the court sentence. A *concordata* may be 'preventive', when its objective is to avoid the deterioration of the firm's financial health, or 'suspensive', when during a bankruptcy the judge concludes that the firm does not need to be closed.

judge takes about six months to rule about the merit of an embargo, but this decision may take much longer if the judge requests an expert opinion.³³ Once a decision is reached, the debtor may then initiate another embargo action and this may go on successively until "all chances of defense are exhausted". Note also that the debtor may request a negotiation at any time during the process, and the creditor is then asked to participate in good faith. Once all embargoes are judged and a decision is reached, the debtor may still appeal to a higher court. In São Paulo, Brazil's financial center, the *Tribunal de Justiça* (Appeal Court) may take two years just to assign the case to a judge. An additional two years may pass until a decision is reached, and the debtor is again allowed to present embargoes. Generally, the entire process may take somewhere between 1 and 10 years, depending on the creditor's case and on how skillful the debtor's lawyers are.

The Brazilian judiciary is also very formalist. The correct writing of the contract is of a fundamental importance. Guarantees must be precisely described, including all possible elements that serve to identify it. The signatures of the debtor, the creditor and of two witnesses are fundamental. Any mistake will allow the debtor to extend the judgment of the case for a long period and may even result, depending on the case, in a ruling against the creditor. This would entail even a greater loss to the creditor, since he would not only lose the uncollected debt and interest, but he would also be responsible for the payment of judicial costs and the salaries of the debtor's lawyers. Additionally, according to the Civil Code, for a contract to be valid against a third party (e.g., the depositary of a guarantee) it needs to be registered in the competent register.

The cost of an action is yet another problem. Lawyers charge between 10 and 20 percent of the value in debt. In Rio de Janeiro, judicial costs include a fixed fee of R\$ 42.83 (*custas judiciais*) plus a judicial tax of 2% of the value of the debt, with a floor of R\$ 23.29 and a cap of R\$ 10,000.00. Creditors also have to pay to register documents, for the court officer to notify the debtor and/or list assets for *penhora*, etc.³⁴ Usually, only in the cases in which creditors have their own in-house lawyers and the loan exceeds a certain level, is it worth resorting to the courts. For a small loan, it usually does not pay to apply to the judiciary to recover it.

Our bank survey indicated that in the great majority of cases banks try some form of credit recovery in case of default. Regarding personal loans, execution is seldom done through collection services, but rather through a judicial process or through negotiation. Collection agencies are not commonly used in the case of firm loans either, and neither are bankruptcy procedures (as explained above it is not an interesting solution for banks). Most cases are solved through negotiation, with judicial processes other than bankruptcy also being frequent. Many banks did not answer when asked about the fraction of the loan recovered in the case of firm loans. One of them stated that the number of cases is insufficient for a pattern of values to be established (this may be the case for other banks too). Of the little information available in this part of the questionnaire, it seems that this fraction is close to zero for bankruptcy procedures, between 30 and 70% for other judicial processes or negotiation. On what concerns collection agencies, three banks answered that this fraction is 0 while 2 banks indicated 30 and 35% respectively. On the length of the execution process, bankruptcy procedures seem to be the lengthiest process, with answers ranging between 2 and 8 years. Other judicial processes take 1 to 5 years and negotiation, being by far the fastest process, with answers ranging between 1 month and 1 year. Ten banks informed that they had between 0.20% and 0.78% of their staff engaged in credit recovery, two had a little more than 1% and a small bank had 4.6% of its employees allocated to that area.

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³³ In many instances interest is compounded on a daily basis, with daily interest rates having as much as 20 decimal cases. It is often impossible to exactly reproduce the exact value of the debt (liquidity) and an expert may be called to settle the issue.

³⁴ These include the official fee of R\$ 6.84 per visit of the court officer and a variable "informal" fee to encourage officers to speed up their visits.

4 – Impact of Judicial Efficiency on Credit Markets: A cross-state analysis

In the previous section we discussed the alternatives available to creditors to recover a loan through the judicial system, and argued that creditors perceive courts as providing weak protection against opportunistic behavior by borrowers. In particular, we emphasized that even when the law clearly guarantees creditors' rights, the judiciary often inadequately enforces them. In this section, the link between the quality of judicial enforcement and the credit market is explored for the Brazilian case. We attempt to answer the question of whether the size of the credit market depends on the quality of the judiciary. In order to do so, we take advantage of the federal political system existent in Brazil, where laws defining the rights of creditors apply nationwide, but are enforced by state courts, to separate the discrete impact of judicial inefficiency on credit markets. With that end, we look at cross-state differences in the size of credit markets and test whether judicial performance explains these differences. In subsection 4.1 we present data on the volume of credit for each state, describe the result of a survey in which different state's businessmen were asked to rate the quality of the judiciary, and build an index of state "judicial inefficiency", based on the results of this survey. Subsection 4.2 empirically assesses the statistical and economic significance of judicial inefficiency in explaining cross-state differences in credit market size based on regression results.

4.1 – Credit Activity and Judicial Enforcement at State Level

Data for the 1988-97 period shows that there are substantial differences among Brazilian regions and states in the volume of rural and non-rural credits and in the number of bank branches.³⁵ The Southeast region concentrates most credit activity, accounting for about a fourth of overall rural credit and two thirds of the much larger total of other credits. In this region, São Paulo is by far the state with the largest credit volume. The North is the region with less credit activity, with 2.4% of rural credit and 1.5% of other credits. The other regions answer for roughly similar shares of other credits; concerning rural credits, the South gets a third of the overall total, the Center West about a fourth and the Northeast 13%. While this issue will not be explored in this paper, it is worth noting that the number of bank branches does not reflect *pari passu* the importance of credit markets in each region/state. The Southeast and Center West have a below average ratio of branches per volume of credit, while this ratio is especially high in the North.

An obvious reason for the very different shares of the states in total credit is the size of their economies. Table 4.1 shows the ratio of credit to GDP at state level for the 1990-96 period. The figures show that in fact the concentration of loans in the Southeast is largely explained by the size of the region's economy, whereas in the other extreme the low share of loans in the North is to some extent due to its small participation in national GDP. Still, one observes significant differences in the ratio of credit to GDP among regions and states, which remained more or less stable during the entire period. This suggests that the size of the economy is not the single (linear) explanation for the uneven distribution of credit among the states.

Past research has shown that the malfunctioning of the Brazilian judicial system affects economic activity in general and credit markets in particular (Pinheiro, 1998). According to Aith (1998), judicial inefficiency is a "limiting factor to the expansion of the [credit] sector's activities and, more importantly, considerably increases banks' spreads – by up to 30%, depending on the situation." To Aith, the problems with judicial enforcement go beyond its slowness:

"The well-known and long-standing sluggishness of the Brazilian justice, which turns a collection suit into an eight-year-long process (the Northwest region has ten-year-old cases), is not the only problem. Since 1988, the so-called retail banks (...) have had problems within the judiciary that have caused them to decide against doing business in certain states, or reduce them and not carry through investments they would otherwise have gone ahead with."

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³⁵ See Table B.11 in Appendix B.

As suggested by the above quote, the quality of judicial enforcement of loan contracts is not uniform across Brazil's 27 states, even though the same legislation protecting creditor rights applies nationwide. There are different reasons for the unequal quality of judicial enforcement. First, in some states courts are less independent from the government and/or politically influential groups than in others. Second, some state courts (especially in lower level ones) are quite 'politicized'. By that we mean that they tend to have different interpretations of the law to accommodate judges' political views. An example is the different rulings on the privatization process. Another example is the already mentioned interpretation on the legality of charging composed interests. Judges in some regions give much importance to the article of the Constitution that states that property has a "social role" to play, a role which is not, however, defined in the Constitution. Some judges interpret this article as awarding them the right to over-rule contract clauses if they see them as opposing "social justice", and feel it is their duty to in this way redistribute income (or property) in a "fair" way. Third, the problem of corruption is more present in some states than in others. Fourth, both court and lawyer fees in credit recovery cases vary from one state to the other, with the first being fixed independently by each state and the second varying with local demand and supply. Last, the training of judges is not uniform across the country. Judges in the more developed regions are perceived as better prepared.³⁶

Aith (1998) discusses two examples of the "non-standard behavior" by courts. In Maranhão, he refers to "[t]he millionaire, suspicious judicial convictions imposed on banks", some favoring local judges. In Rio Grande do Sul, he mentions the insistence of local judges on "limiting interest rates for loan contracts by banks to 12%, even though the Supreme Federal Court has established that application of such cap – created by the current constitution – still depends on regulating."

We use data from two surveys conducted by IDESP in which businessmen in different states were asked to rate the judiciary with respect to slowness, fairness and costs (Pinheiro, 1998). The first survey, with responses from 602 businessmen, was carried out in the first semester of 1996; the second, answered by 279 businessmen, took place a year later. In the two cases, the question concerning the respondent's view on the quality of judicial enforcement was exactly the same, and was in both cases placed in the beginning of the questionnaires (which were not the same in the two surveys). The two surveys included state enterprises, private national firms and foreign companies of medium to large size.

Table 4.2 gives us the results of IDESP's surveys, and shows the proportion of respondents that rated the judiciary as 'bad' or 'very bad' for each of the three characteristics – cost, speed and fairness. Slowness comes up as the worst of the three problems, what is consistent with our discussion in section 3, followed by high costs and unfairness, in this order.³⁷ Based on these results we built an index of judicial inefficiency. This was done by taking a simple average of the IDESP's survey results on the performance of the judiciary in each state on the three characteristics and for both years. Overall, the results suggest that courts in the South are ranked the best, those in the Center-West second, in the Southeast third and in the North and Northeast fourth and last, respectively (coincidentally, the same order obtained for the number of branches per capita). There is, however, a wide variation among states within a same region and for different characteristics of the judiciary (cost, speed and fairness) within a same state.

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³⁶ This problem is not specific to credit recovery cases, but rather affects the judiciary in general (see Pinheiro, 1998). Several lawyers raised this point in our interviews. Some judges are reported not to understand how leasing, factoring and other less traditional credit operations work. One lawyer mentioned that a judge he was arguing before still used the old and revoked Civil Code.

³⁷ In fact, because businessmen were so unanimous in rating the judiciary as slow in all states it was difficult to empirically assess the impact of this problem on credit markets.

Table 4.1: Ratio of Credit to GDP by State

Region / State	1990		1991		1992		1993		1994		1995		1996	
	Rural	Other	Rural	Other	Rural	Other	Rural	Other	Rural	Other	Rural	Other	Rural	Other
North	1.13%	4.28%	1.34%	3.74%	1.75%	6.99%	1.72%	7.47%	1.23%	7.34%	1.32%	7.37%	0.96%	24.90%
Acre	1.22%	5.51%	0.79%	15.96%	0.70%	17.59%	0.78%	13.68%	0.26%	5.19%	0.38%	7.00%	0.19%	7.31%
Amazonas	0.42%	5.18%	0.47%	8.59%	0.42%	9.09%	0.31%	9.58%	0.13%	7.66%	0.19%	7.09%	0.10%	10.48%
Rondônia	0.85%	2.54%	0.71%	3.04%	0.84%	4.10%	1.12%	4.07%	0.65%	5.32%	0.76%	6.14%	0.58%	22.40%
Pará	0.94%	4.57%	1.10%	5.99%	1.29%	7.52%	1.23%	7.44%	0.71%	8.18%	0.76%	7.66%	0.58%	38.17%
Amapá	0.14%	1.32%	0.20%	1.42%	1.78%	1.89%	1.59%	1.75%	0.06%	2.92%	0.19%	4.63%	0.19%	5.10%
Roraima	1.32%	0.61%	3.04%	0.87%	3.74%	1.01%	4.46%	1.02%	2.01%	4.09%	2.17%	6.43%	1.06%	21.63%
Tocantins	14.64%	4.99%	16.44%	3.07%	24.62%	3.81%	23.47%	3.84%	21.30%	10.78%	20.51%	17.02%	18.65%	24.62%
South	4.71%	15.96%	5.68%	8.71%	6.92%	18.26%	6.29%	17.36%	7.21%	18.64%	7.00%	27.79%	4.71%	26.92%
Paraná	5.79%	14.73%	5.87%	14.58%	7.03%	19.13%	6.58%	19.61%	8.57%	23.12%	8.32%	35.64%	6.06%	31.35%
Rio Grande do Sul	4.85%	16.48%	6.43%	17.95%	8.01%	17.84%	7.41%	15.17%	7.66%	16.36%	7.18%	25.62%	4.42%	26.83%
Santa Catarina	2.45%	16.95%	3.59%	17.23%	4.20%	17.63%	3.13%	18.15%	3.51%	15.06%	3.97%	18.34%	3.08%	18.94%
Center-West	6.21%	41.85%	7.45%	39.22%	9.55%	13.46%	9.29%	47.47%	11.95%	37.60%	13.52%	51.14%	9.33%	32.12%
Mato Grosso	10.45%	8.57%	11.16%	9.54%	17.66%	8.22%	21.93%	10.44%	17.27%	19.03%	17.68%	21.84%	13.17%	27.12%
M. Grosso do Sul	10.12%	11.53%	17.90%	230.84%	12.83%	17.94%	11.25%	16.61%	15.52%	17.08%	30.44%	49.35%	22.21%	63.85%
Goiás	7.91%	6.59%	8.91%	3.78%	12.87%	6.40%	11.93%	7.31%	13.90%	11.75%	1.51%	115.52%	1.25%	42.50%
D.F.	1.51%	95.98%	1.93%	132.38%	1.26%	20.04%	0.76%	114.02%	1.10%	82.92%	2.36%	133.67%	0.77%	82.12%
Southeast	1.13%	29.70%	1.06%	28.42%	1.12%	7.41%	1.17%	37.41%	1.49%	34.87%	1.70%	40.93%	1.54%	41.15%
Rio de Janeiro	0.19%	48.20%	0.16%	47.89%	0.17%	12.00%	0.10%	53.47%	0.19%	28.38%	0.57%	32.05%	0.19%	19.23%
São Paulo	1.32%	27.68%	1.22%	26.33%	1.26%	3.29%	1.41%	38.54%	1.69%	42.08%	1.80%	50.01%	1.92%	56.83%
Minas Gerais	1.51%	17.42%	1.77%	14.82%	1.82%	17.21%	1.64%	18.82%	2.14%	19.61%	2.93%	21.18%	1.83%	14.71%
Espírito Santo	0.66%	10.97%	0.59%	9.54%	0.59%	10.53%	0.50%	11.59%	0.71%	12.60%	1.23%	15.31%	1.06%	16.15%
Northeast	1.98%	18.31%	2.29%	16.83%	3.22%	19.02%	2.82%	18.20%	3.57%	18.83%	4.16%	26.47%	1.92%	22.21%
Bahia	2.35%	20.99%	2.88%	18.17%	3.39%	19.51%	2.58%	19.74%	3.44%	22.79%	4.25%	27.70%	1.92%	17.98%
Sergipe	1.04%	3.39%	1.14%	7.37%	1.12%	7.80%	1.07%	6.74%	0.97%	5.19%	2.17%	8.41%	0.96%	10.19%
Pernambuco	1.84%	26.83%	1.85%	22.39%	3.01%	26.47%	3.45%	27.28%	4.74%	29.48%	4.92%	49.06%	2.79%	27.69%
Paraíba	1.13%	7.86%	1.42%	9.46%	2.24%	9.72%	2.43%	9.97%	3.18%	11.23%	3.69%	12.38%	1.44%	10.87%
Rio G. do Norte	1.22%	6.17%	1.54%	5.09%	2.83%	6.05%	3.24%	7.47%	3.25%	8.12%	3.12%	9.64%	1.25%	10.67%
Piauí	2.73%	6.64%	3.51%	7.06%	4.37%	7.73%	4.33%	8.28%	5.06%	8.18%	5.77%	11.25%	2.69%	19.62%
Maranhão	2.26%	18.74%	3.35%	18.37%	5.91%	18.53%	2.53%	14.93%	3.64%	10.13%	4.54%	9.74%	2.79%	11.63%
Ceará	1.22%	23.87%	1.22%	20.77%	1.82%	24.76%	1.70%	21.91%	2.53%	21.43%	2.93%	36.68%	0.96%	28.94%
Alagoas	3.11%	10.36%	3.86%	16.28%	5.70%	21.05%	6.61%	13.55%	6.75%	14.54%	7.09%	17.49%	3.56%	80.19%

Sources: IPEA and Central Bank.

Table 4.2: Proportion of Respondents Rating the Judiciary as Bad or Very Bad

State/Region	First Survey (1996)			Second Survey (1997)			Weighted Average			Index Judicial Inefic.
	Cost	Speed	Fairness	Cost	Speed	Fairness	Cost	Speed	Fairness	
<u>NORTH</u>	0.33	0.83	0.17	0.75	0.88	0.38	0.57	0.86	0.29	0.57
Acre										
Amazonas	0.50	0.50	0.00	0.67	0.67	0.33	0.60	0.60	0.20	0.47
Rondônia				0.50	1.00	0.50	0.50	1.00	0.50	0.67
Pará	0.25	1.00	0.25	1.00	1.00	0.33	0.57	1.00	0.29	0.62
Amapá										
Roraima										
Tocantins										
<u>SOUTH</u>	0.50	0.89	0.22	0.30	0.84	0.19	0.44	0.87	0.21	0.51
Paraná	0.61	0.92	0.24	0.27	0.95	0.32	0.51	0.93	0.27	0.57
Rio Grande do Sul	0.48	0.85	0.18	0.29	0.77	0.14	0.41	0.82	0.17	0.47
Santa Catarina	0.41	0.91	0.25	0.38	0.85	0.08	0.40	0.89	0.21	0.50
<u>CENTER-WEST</u>	0.64	0.82	0.36	0.36	0.82	0.09	0.50	0.82	0.23	0.52
Mato Grosso	0.50	1.00	0.50	1.00	1.00	0.00	0.67	1.00	0.33	0.67
M. Grosso do Sul				0.00	1.00	0.00	0.00	1.00	0.00	0.33
Goiás	0.75	0.88	0.38	0.43	0.86	0.14	0.60	0.87	0.27	0.58
D.F.	0.33	0.67	0.33	0.50	0.50	0.00	0.40	0.60	0.20	0.40
<u>SOUTHEAST</u>	0.35	0.90	0.25	0.44	0.90	0.23	0.38	0.90	0.24	0.51
Rio de Janeiro	0.51	0.94	0.25	0.55	0.85	0.18	0.52	0.91	0.22	0.55
São Paulo	0.33	0.91	0.25	0.34	0.89	0.22	0.33	0.91	0.24	0.49
Minas Gerais	0.30	0.80	0.20	0.50	0.95	0.26	0.39	0.87	0.23	0.50
Espirito Santo	0.33	1.00	0.44	0.43	1.00	0.43	0.38	1.00	0.44	0.61
<u>NORTHEAST</u>	0.49	0.87	0.31	0.42	0.92	0.45	0.46	0.89	0.37	0.57
Bahia	0.57	0.78	0.43	0.38	0.88	0.50	0.49	0.82	0.46	0.59
Sergipe	1.00	1.00	0.50	0.67	1.00	0.67	0.80	1.00	0.60	0.80
Pernambuco	0.40	0.90	0.10				0.40	0.90	0.10	0.47
Paraíba	0.67	1.00	0.33	1.00	0.00	0.00	0.75	0.75	0.25	0.58
Rio G. do Norte	0.33	0.83	0.17	0.33	1.00	0.33	0.33	0.89	0.22	0.48
Piauí										
Maranhão	0.67	1.00	0.33	0.00	1.00	0.00	0.50	1.00	0.25	0.58
Ceará	0.25	1.00	0.25	0.50	1.00	0.50	0.38	1.00	0.38	0.59
Alagoas				0.33	1.00	0.33	0.33	1.00	0.33	0.55

Source: Pinheiro (1998)

4.2 – Assessing the Impact of Judicial Enforcement on the Size of Credit Markets

Our next step was to assess the importance of judicial inefficiency in explaining the variance in the level of credit activity at state level, after controlling for the size of the states' economies. With that purpose, we ran a set of regressions with the ratio of total, rural and non-rural credit to GDP as the dependent variables and per capita GDP and judicial inefficiency as independent variables. In the regressions for total and rural credit we also included the share of agricultural activities in GDP in the right-hand side of the equation. The regressions were estimated using a panel with the 22 states covered by the IDESP surveys as reported in Table 4.2, with annual data in 1990-96 for the ratio of credit to GDP, per capita GDP and the proportion of agricultural activities in state GDP.³⁸ The measure of judicial inefficiency was fixed for all years.

We used both a linear and a log-linear specification for each dependent variable. For each type of credit, we ran 6 regressions for each specification of the dependent variable. They all include per capita GDP as an explanatory variable. The first regression includes all observations (including the 5 states for which we do not have data from IDESP's surveys) and excludes the judiciary-inefficiency variable.

³⁸ Notice that due to lack of information on judicial inefficiency five states were left out of most of the regressions. These states are Acre, Rondônia, Amapá, Roraima and Tocantins. The five are in the North region and are among the smallest states in Brazil, in demographic and economic terms.

The second repeats the same functional specification but only considers the states for which we have complete information. The third regression introduces the judicial inefficiency index as an explanatory variable. The other three equations use the same model substituting the index of judicial inefficiency for the shares for “bad” and “vary bad” answers in what concerns cost, slowness and unfairness (respectively).

Regression and test results are reported in Tables 4.3 to 4.5 for total, rural and non-rural credits, respectively. Results in each table are presented separately for the linear and log-linear specifications. In several cases we rejected the hypothesis of homoscedasticity when using OLS estimators, and in these cases t-statistics were derived using White’s asymptotic covariance matrix, as indicated in the Tables. Overall, the regressions showed a reasonable fit, statistically significant independent variables and coefficients that are robust to model specification. More importantly to our analysis, the regressions show persuasive empirical evidence that judicial inefficiency has a distinctive negative impact on the volume of credit extended by financial institutions.

There are several other noteworthy results. First, comparing equations (1) to (2) and (7) to (8) in each table suggests that the results are not sensitive to the exclusion of the five states for which we did not have information on the quality of judicial enforcement. The coefficient of per capita GDP remains virtually unchanged, while that of the share of agricultural activities in GDP is only slightly reduced. Second, per capita GDP has a positive impact on the ratio of credit to GDP, which is particularly significant in the case of total and non-rural credits (in the log-linear specification for rural credits, per capita GDP is not statistically significant).³⁹ Third, in the case of rural credit, the single most significant variable is the share of agricultural activities in GDP. This variable is also statistically significant in the regressions for total credit. Its positive coefficient requires some elaboration, since initially we expected states with a higher proportion of non-agricultural activities to present proportionately more credit activity. Our explanation for the positive coefficient is state intervention; that is, states with strong agricultural sectors are able to secure a disproportionate amount of rural credit (which, as discussed in section 2, is provided mainly by public banks). This is consistent with anecdotal evidence that shows that congressmen linked to agricultural interests are usually very successful at extracting government favors in the form of a large credit supply.

Fourth, all measures of the quality of judicial enforcement, except for slowness, show a statistically significant impact on the ratio of total, rural and other credits to GDP, with relatively large t-statistics. Only for rural credit did one indicator of judicial inefficiency – slowness – show a sign opposite to what was expected and in only one of the regressions did it have statistical significance. The problem with this indicator is that judicial performance concerning speed is very poor in all states, so that there is not enough variance to allow for a good estimation. Fourth, our index of judicial inefficiency results in fact in a better fit of the model than the other individual measures of judicial performance, as indicated by the higher adjusted R squares. Fifth, the coefficient of the index of judicial inefficiency in the linear specification is larger for total and non-rural credits than for rural credits, but as indicated by the log-linear specification this reflects essentially the lower absolute value of the volume of rural credit.

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³⁹ An issue we did not deal with was the possibility of per capita GDP being endogenous. The major reason for that was lack of adequate instrumental variables that could be used to test this hypothesis. We do believe, though, that per capita income at state level is not much influenced by the volume of credit activity in the same or near periods. One, because many other variables, only marginally affected by credit availability, are more important to determine per capita income (e.g., education). Two, because economic agents in one state may easily access credit from banks in other states with only minor additional costs, since inside the country none of the factors that complicate international credit transactions are present (exchange rate risk, different legal systems, cultural differences, etc.).

Table 4.3: Results of Cross-State Regressions – Total Credit

	Linear specification (Total Credit/GDP)						Log-linear specification (ln [Total Credit/GDP])					
	1	2	3	4	5	6	7	8	9	10	11	12
Constant	-0.1512 (-2.608)	-0.1125 (-1.584)	0.4459 (2.785)	0.1577 (1.530)	-0.0148 (-0.073)	0.1059 (1.106)	-2.9194 (-15.607)	-2.5431 (-13.582)	-0.7380 (-1.792)	-1.6947 (-6.343)	-2.5110 (-4.669)	-1.7268 (-9.190)
Per Capita GDP	0.0912 (7.752)	0.0908 (6.760)	0.0698 (5.006)	0.0787 (5.871)	0.0885 (6.262)	0.0777 (5.707)	0.2337 (6.184)	0.214 (6.029)	0.146 (4.066)	0.176 (5.055)	0.213 (5.701)	0.1647 (4.481)
Share of Agr. Activ. in GDP	0.7783 (4.105)	0.5911 (2.356)	0.5088 (2.111)	0.4380 (1.781)	0.6330 (2.393)	0.4120 (1.653)	3.0532 (5.757)	1.5827 (2.392)	1.3168 (2.124)	1.1020 (1.729)	1.5966 (2.286)	0.9133 (1.659)
Index of Judic. Inefficiency			-0.8680 (-3.851)						-2.8060 (-4.841)			
Cost				-0.4467 (-3.507)						-1.4029 (-4.249)		
Slowness					-0.1065 (-0.512)						-0.0351 (-0.064)	
Unfairness						-0.5344 (-3.276)						-1.9976 (-4.946)
Adj R ²	0.2368	0.2240	0.2891	0.2780	0.2202	0.2710	0.1888	0.1837	0.2893	0.2665	0.1783	0.2885

Note: In equations (7), (11) and (12) t-statistics were calculated using White's consistent covariance estimates.

Table 4.4: Results of Cross-State Regressions –Rural Credit

	Linear specification (Rural Credit/GDP)						Log-linear specification (ln [Non-Rural Credit/GDP])					
	1	2	3	4	5	6	7	8	9	10	11	12
Constant	-0.0219 (-2.302)	-0.0164 (-1.353)	0.0517 (1.743)	0.0186 (1.011)	-0.0585 (-2.365)	0.0238 (2.016)	-4.8078 (-22.768)	-4.7861 (-19.875)	-3.0246 (-4.904)	-3.7766 (-10.954)	-5.4787 (-6.032)	-3.9768 (-11.709)
Per Capita GDP	0.0045 (3.031)	0.0051 (2.897)	0.0026 (1.672)	0.0036 (2.562)	0.0061 (3.183)	0.0027 (1.975)	0.0015 (0.042)	0.025 (0.073)	-0.0407 (-1.016)	-0.0198 (-0.573)	0.0411 (0.969)	-0.0231 (-0.665)
Share of Agr. Activ. in GDP	0.3687 (6.276)	0.2906 (4.068)	0.2806 (4.143)	0.2708 (4.104)	0.2725 (3.936)	0.2577 (3.926)	6.9341 (7.735)	6.462 (5.274)	6.2025 (5.203)	5.8901 (5.118)	6.1647 (4.947)	5.7984 (4.727)
Index of Judic. Inefficiency			-0.1058 (-2.139)						-2.7382 (-3.384)			
Cost				-0.0578 (-1.844)						-1.6690 (-3.935)		
Slowness					0.0460 (2.086)						0.7558 (0.809)	
Unfairness						-0.0984 (-3.755)						-1.9802 (-4.009)
Adj R ²	0.4138	0.2371	0.2694	0.2675	0.2411	0.2953	0.3223	0.2389	0.2783	0.2863	0.2382	0.2793

Note: In all equations t-statistics were calculated using White's consistent covariance estimates.

Table 4.5: Results of Cross-State Regressions – Non-Rural Credit

	Linear specification (Non- Rural Credit/GDP)						Log-linear specification (ln [Non-Rural Credit/GDP])					
	1	2	3	4	5	6	7	8	9	10	11	12
Constant	-0.0344 (-0.839)	-0.0316 (-0.664)	0.4550 (2.026)	0.1832 (2.363)	0.0331 (0.169)	0.1227 (1.281)	-2.6994 (-19.287)	-2.5035 (-19.247)	-0.6501 (-1.616)	-1.6802 (-7.633)	-2.4875 (-4.343)	-1.8676 (-9.916)
Per Capita GDP	0.0747 (5.313)	0.0786 (5.210)	0.0615 (3.968)	0.0709 (6.171)	0.0766 (5.899)	0.0709 (4.623)	0.2063 (5.379)	0.201 (5.931)	0.1361 (3.954)	0.1717 (5.265)	0.2007 (5.292)	0.1698 (4.888)
Share of Agr. Activ. in GDP												
Index of Judic. Inefficiency			-0.7811 (-2.277)						-2.9752 (-4.832)			
Cost				-0.4043 (-3.335)						-1.5497 (-4.503)		
Slowness					-0.0646 (-0.339)						-0.0160 (-0.029)	
Unfairness						-0.4581 (-2.051)						-1.8885 (-4.287)
Adj R ²	0.2233	0.2261	0.2822	0.2744	0.2216	0.2640	0.1294	0.1826	0.2874	0.2746	0.1772	0.2678

Note: In equations (1), (2), (3), (6) and (12) t-statistics were calculated using White's consistent covariance estimates.

We attempt to assess the economic impact of the different variables on credit activity by looking at the change in the dependent variables that would result from an increase of one standard deviation in each explanatory variable. Results are shown in Table 4.6. Those for the linear equations indicate the increase in percentage points; the log regressions show the percentage increase in these ratios. As the Table shows, the ratio of total credits to GDP would go up by 11.9 percentage points or 28.2% as a result of an one standard deviation increase in per capita GDP. That is, raising per capita income from R\$ 3.2 thousand (1996 prices) to R\$ 4.9 thousand increases the volume of credit by 12 percent of GDP. The corresponding results for non-rural and rural credits are 10.5 and 0.4 percentage points, respectively. For non-rural credits that means a 26.0% increase in the volume of credit, while for rural credits the increase is roughly equal to a tenth of the simple average of the ratio of rural credit to GDP across the 27 states. According to these results, the low ratios of credit to GDP when compared to industrialized countries' may be explained to a large extent by the lower per capita income in Brazil. Some of the differences between Latin American and Asian countries such as Singapore, Taiwan and Korea may also be accounted for as a result of their higher per capita incomes.

The high sensitivity of the ratio of rural credit to GDP to the share of agricultural activities in GDP is confirmed in Table 4.6. It can be seen that a one standard deviation increase in this variable causes this ratio to expand by almost 3 percentage points, which is an increase of roughly 92%. For total credits the corresponding figures are of 5.4 percentage points and 14.9%, respectively. This is less significant than it may seem to be. It means that it would be necessary for the share of agriculture in GDP to go up by 10.6 percentage points (that is, a 77% increase on average) for the volume of total credit to go up 15% (an elasticity of roughly 0.19).

The result that we repute as the most important in Table 4.6 is the high sensitivity of the ratios of total, rural and non-rural credit to GDP to the quality of judicial enforcement. This result is robust to the measure of judicial performance that we use. We see that a one-standard-deviation increase in the index of judicial inefficiency (a deterioration in the quality of judicial enforcement) reduces the ratio of rural credit to GDP by 1.0 percentage point. In the case of other credits and of total credit, the reduction is of 7.6 and 8.5 percentage points, respectively. In the three cases credit contraction is in the range of 23% to 25%. The impact of the judicial inefficiency index is thus of the same order of magnitude of that of per capita GDP, suggesting that differences in the quality of judicial enforcement are as important as per capita income differentials in explaining cross-state differences in the ratio of credit to GDP. Results indicate that it would be possible to increase the volume of credit by 8.5 percent of GDP by improving the average grade of judicial enforcement by 17.8% (that is equivalent to lowering the proportion of "bad" and "very bad" assessments from 54.8% to 45.1%).

Table 4.6: Sensitivity of the Ratio of Credit to GDP to a One-Standard Deviation Increase in Independent Variables

Variable	Standard Deviation	Linear Equations			Log Equations		
		Total Credit	Rural Credit	Other Credits	Total Credit	Rural Credit	Other Credits
Per Capita GDP	1.6999	0.1187	0.0044	0.1045	28.2%		26.0%
Share of Agricultural Activities in GDP	0.1055	0.0537	0.0296		14.9%	92.4%	
Index of Judicial Inefficiency	0.0975	-0.0846	-0.0103	-0.0762	-23.9%	-23.4%	-25.2%
Cost	0.1654	-0.0739	-0.0096	-0.0669	-20.7%	-24.1%	-22.6%
Unfairness	0.1315	-0.0703	-0.0129	-0.0602	-23.1%	-22.9%	-22.0%

5 - Alternative Private and Public Arrangements to Ensure Willingness to Pay

As seen in section 3, the Brazilian legal and judicial systems grant creditors a relatively weak protection, when compared to the best international standards described in La Porta et al (1996). In section 4 we show that inefficient judicial enforcement is a statistically and economically significant obstacle to the expansion of credit activities in Brazil. However, the figures presented in section 2 suggest that there is much more credit activity taking place in Brazil than would seem warranted by these two findings. We argue that the reason one would come to this apparent “inconsistency” is basically one of methodological approach.

The discussion in the preceding sections and in the literature reviewed in the introduction followed essentially along the lines of “classical contract law”. As discussed by Williamson (1985, p. 69),⁴⁰ classical contract law endeavors to facilitate exchange by stressing discreteness and presentation, treating the identity of the parties to a transaction as irrelevant and giving precedence to formal over informal features of the contract. Furthermore, “remedies are narrowly prescribed so that, ‘should the initial presentation fail to materialize because of nonperformance, the consequences are relatively predictable from the beginning and are not open-ended’ (Macneil, 1978, p. 864). Additionally, third-party participation is discouraged. The emphasis is thus on legal rules, formal documents, and self-liquidating transactions.” However, the emphasis given by banks to the negotiation of defaulted loans, so as to preserve their relationship with their clients, suggests that this approach is not entirely consistent with the way credit markets operate. It indicates that the identity of the parties involved in a credit transaction is often relevant and that the parties value the continuation of their financial relationship. That is to say, banks have incentives to treat default in different ways depending on who the borrower is – whether it is an anonymous consumer that takes a small occasional loan or a firm that recurrently borrows from it.

In this section we show that in Brazil there are forms of contractual relationships, different from those implicit in classical contract law, that enable certain types of credit transactions that would otherwise be unfeasible in an environment of weak creditor protection as the one previously described. These forms of governance rely mainly on the private ordering of contracts, as opposed to judicial enforcement, as assumed in the previous sections. We argue that in Brazil there are three main institutions that allow these forms of governance to flourish and for lending to take place in cases in which legal and judicial protection is particularly weak.⁴¹ The first is the existence of a well-developed informational infrastructure (credit history records, etc.), the second is the presence of public banks, and the third relates to mechanisms that rely on peer pressure to insure repayment. These institutions are discussed *seriatim* in the context of specific credit activities.

5.1 Credit Bureaus

Problems of asymmetric information in credit markets have long been emphasized in the literature. If lenders are unable to identify good projects, an adverse selection problem arises (Braverman and Guasch, 1986). If monitoring is costly, then a moral hazard problem arises too. Both these problems tend to increase default rates and thus to reduce lending activity. Therefore, institutions that augment the amount of information available to creditors reduce the risk of default due to debtor inability to repay and have a positive impact on the volume of credit.⁴² But such institutions are also important because they increase debtors’ willingness to repay through mechanisms such as reputation. Jappelli

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⁴⁰ Williamson, in turn, builds upon the analysis of Macneil (1978).

⁴¹ This type of institutions tends to develop whenever laws and courts are inefficient in supporting market transactions, and they are not particular to credit markets. See Williamson (1995), Hay et al (1996), Cooter (1996) and Greif (1997).

⁴² Stiglitz and Weiss (1986) defend that collateral may serve as a screening device to overcome adverse selection (since safer borrowers are willing to put up more collateral than riskier ones). Collateral is also a way to change incentives and reduce moral hazard. Besley and Coate (1995) suggest that group lending is the solution to these problems (due to peer pressure to repay)

and Pagano (1998) built an international data set on credit data banks and found information effects on default rates and lending activities that are consistent with this hypothesis. They argue that this may explain why central banks forcibly create public credit registries, particularly where creditor protection is poor and where there is a lack of alternative private information sharing arrangements.

Reliable and readily available information on borrowers is an important feature of the Brazilian credit market. Our interviews showed that creditors perceive ex-ante screening mechanisms as their best protection against bad debtors. In this subsection, we proceed as follows: we start by demonstrating the importance of informational factors in determining the cost and availability of credit with the use of a simple theoretical model. In subsection 5.1.2 we describe in some detail the different data banks with information about creditors available in Brazil. Finally, in subsection 5.1.3 we analyze the case of post-dated checks, an example of an important credit market segment that functions essentially based on the existence of reliable information records.

5.1.1 A model of default and information

Assume that there are two types of borrowers.⁴³ Type 1 borrowers are perfectly willing to pay back their loans, including the interest r charged by the bank. Type 2 clients always default on their debts. Assume that, in this case, the bank renegotiates the loans and is able to get the principal back and to salvage a return of $r(1-\alpha)$ on the loan, net of negotiation costs,⁴⁴ where α measures the success of ill-intentioned borrowers on expropriating the bank. The bank cannot observe the borrower's type but learns from experience that a proportion π of its customers is of type 2.⁴⁵ Assume that the interest rate r charged on loans is determined so as to obtain an expected rate of return given by

$$E(\text{return}) = i + a \sigma_{\text{return}}, \quad (1)$$

where i is the interest rate the bank would be willing to charge if $\pi = 0$. In this case,

$$E(\text{return}) = (1-\pi) r + \pi (1-\alpha) r = r (1-\alpha\pi), \quad (2)$$

$$\sigma_{\text{return}}^2 = r^2 \alpha^2 \pi (1-\pi), \quad (3)$$

From which follows that the bank will charge an interest rate equal to

$$r = i / [1 - \alpha\pi(1 + a\sqrt{(1-\pi)/\pi})] \quad (4)$$

It is clear from the above expression that r/i will be higher the larger the values of α , π and a . While a reflects risk aversion, α and π directly depend on the protection the law and the courts award to creditors against type 2 borrowers. Instead of renegotiating the loan, the bank may opt for trying to have it enforced in court. If the law gives appropriate protection to creditors, and if the courts enforce it adequately, type 2 borrowers would settle for a low α . In a similar manner, the value of α and the possibility of being penalized by the courts determines the value of π .

This simple model may well account for the way in which creditors in Brazil have reacted to the unexpected rise in default rates that followed the explosion in consumer credit after price stabilization (see Tables 2.1, 2.9 and 2.10). Because households did not have access to credit during the high inflation period, they did not have a credit history either. Neither were they properly educated on the consequences of defaulting on loans. In this way, creditors had little information (and practice) to discriminate borrowers, while these likely overestimated the benefits of default. As predicted by the model, creditors reacted by charging very high interest rates in order for expected returns to remain positive despite the high values of π and α . The problem, however, is that if π and α are too large, $r > i$, and even type 1 borrowers become a bad credit risk. If interest rates increase too much, banks will

⁴³ The model presented in this subsection was developed by Pinheiro (1996).

⁴⁴ The model may be easily extended to the case in which the bank also loses part of its principal.

⁴⁵ It is assumed that the number of clients of each bank is very small if compared to the number of borrowers, so that the past history of borrowers at the bank does not change π .

probably not be willing to lend any more money. This generates a low-level equilibrium with low credit volumes, high default rates and very high interest rates.⁴⁶

A simple extension of this model helps to clarify the role of information sharing in protecting lenders and increasing borrowers' willingness to pay. Suppose now that an institution collects and sells information about people's creditworthiness, and that for a fee f the bank can buy this type of information. With it, the probability of lending to a type 2 borrower falls from π to ρ ($\rho < \pi$). In this case, both the expected value and the variance of the bank's return on the loan change to

$$E(\text{return})|_{w/\text{info}} = r(1-\alpha\rho) - f, \quad (5)$$

$$\sigma_r^2|_{w/\text{info}} = r^2\alpha^2\rho(1-\rho) \quad (6)$$

From which follows that the interest rate will be determined by

$$r = (i+f) / [1-\alpha\rho(1+\alpha\sqrt{(1-\rho)/\rho})] \quad (7)$$

The model clearly demonstrates that two key features in determining the cost of credit are: (i) the cost of obtaining information on borrowers and (ii) how effective creditors are in using such information (i.e., how successful they are in reducing the probability of lending to a type 2 borrower). Notice, too, that information sharing and good legal/judicial systems reduce interest rates through different channels. The first operates by reducing the proportion of bad debtors that manage to get credit. The second by directly lowering the actual proportion of bad debtors and the loss they cause to banks.⁴⁷

5.1.3 Data banks

Several public and private data banks and information sharing institutions are available in Brazil. The most important of these are the Returned Check Register (*Cadastro de Cheque sem Fundos*); the Credit Protection Service (SPC – *Serviço de Proteção ao Crédito*) and private credit bureaus such as Serasa and SCI. Upon request, these institutions typically run a credit check on an individual or a company, its owners and top management. In general, the inclusion of an individual's or firm's name in any of these negative lists is sufficient to exclude him/her from the credit market. Knowing this, creditors play the threat of inclusion in Serasa's and/or SPC lists as a bargaining card when negotiating with debtors. The following describes the main databanks available in Brazil.

Public Data Banks

The main public data bank used by creditors is the Returned Check Register, which lists all people who have issued checks that ended up being returned due to insufficient funds. This register is organized at the national level and is managed by the Central Bank. Banks compulsorily supply information on returned checks. Once an individual's name is included in the Central Bank's register of returned checks it remains there for five years, a period during which that person is not allowed to have a bank account. This register supplies a key information for credit analysis, given the widespread use of checks, which account for a large share of transactions, a practice inherited from the high inflation period (which heavily penalized the use of cash and credit cards).

Table 5.1 presents the annual number of processed and returned checks. Examination of this table makes it clear that the number of returned checks substantially increased after the launching of the Real Plan. In 1997, 56.6 million checks bounced due to insufficient funds, accounting for 2 percent of the total number checks processed in that year and for about 1.4 percent of the total value of these checks. In an attempt to reduce the number of returned checks, new measures have recently been introduced, such as the creation of a new "black list" (*Cadastro Nacional de Ocorrências*) in August 1998,

⁴⁶ Home-appliance stores and other retailers finance their own sales allowing customers to divide the total payment over a number of months (these credits are not directly included in section 2 tables). The interest rates for retail credit (*Crediário*) are very high. In August 1998 they ranged between 2.3% and 6.0% per month, depending on the number of installments, in contrast to the negative monthly inflation rates registered during most of the year. Default rates in this market segment are also very high. In March 1996 they peaked at almost 30%, falling after that to reach 17% in April 1997.

⁴⁷ Note, though, that information-sharing mechanisms will also help to reduce the actual probability of default π , since type 2 borrowers know that the probability of their borrowing again if they default on a loan will be much lower.

registering negative occurrences, such as reported theft and counter-order in check payment. The Central Bank also imposed, starting in 1999, that all checks bare additional information: the person's I.D. number and the date in which the checking account was opened.

Table 5.1: Number and value of checks processed and returned for insufficient funds (million checks and billion reais, respectively)

Quarter	Checks processed (A)		Checks without funds (B)		B/A (in percent)	
	Quantity	Value	Quantity	Value	Quantity	Value
1991	3212.1		36		1.12	
1992	3762.1		33.1		0.88	
1993	4412.5		33		0.75	
1994	4142.1		30.2		0.73	
1995	3402.6	2102.5	52.4		1.54	
1996	3177.4	2534.5	50.4		1.59	
1997	2943.9	2729.1	56.7	26.4	1.93	0.97

Source: Central Bank.

Note: n.a. - not available.

Another public data bank is the Register of Defaulters (*Cadin* - Cadastro de Inadimplentes). Although originally intended only for public financial institutions, currently all public institutions may enter information about firms and individuals in this Register, whether or not related to credit activities. It is not, however, accessible to private creditors. Although public banks used to be forbidden by law to lend to firms inscribed in the Register of Defaulters, this law was revoked and currently public banks use *Cadin* as just one more source of information on borrowers' creditworthiness. Interestingly, the reason for changing the law was that the number of firms included in *Cadin* had grown "too much", severely limiting the universe of firms to which public banks could lend to. Two factors that determined this growth were (i) firms were included in *Cadin* for many different reasons, ranging from a failure to pay a utility bill to default on a large debt and (ii) although inclusion of a firm's name in *Cadin* is easy and immediate, the exclusion process is lengthy – it may be done only by a central office in Brasilia and it usually takes a long time to be processed.

Non-Profit Data Collecting Institutions

The SPC – Credit Protection Service – is the other major source of information used by creditors in Brazil. The SPCs are non-profit institutions established at the municipal level and organized by the local Associations of Retailers (Clube de Diretores Lojistas – CDL). The SPCs are relatively old institutions; the one operating in Rio de Janeiro, for instance, was established in 1955. Currently, there are about 1,200 of them operating in all of Brazil. Information coverage is in general municipal (i.e. at the city level), but SPCs from different cities exchange information forming a national network, in effect.

SPCs' databank contains information collected from retailers, banks, credit card administrators, financial firms, etc. and is used by most creditors essentially as a veto register: individuals included in the SPC data bank find it almost impossible to obtain credit in formal markets. In order for a member of the CDL to be able to include or exclude default registries in the SPC data bank it must sign a contract with the CDL that specifies duties and responsibilities for both sides, as well as the rules to be followed. For example, the contract stipulates that default registries must be made with a delay of at least 30 days and only registries of debts which have originated in a commercial or trading relationship may be included (not debts to schools, landlords, etc.). The exclusion of names is also a responsibility of CDL members; when a debt is paid, the member who included the debt must clear it within 5 days. In practice, however, while quite effective in including names, members are not as efficient in excluding them. Because of this, individuals often have to prove that they have settled their debts so as to "clear" their names from the SPC. A consumer may then obtain a written statement that his/her name is no longer in the SPC's listings; a fee of R\$ 0.15 is charged for such a statement.

SERASA's information is available on-line, through a host to host computer connection, by modem or by fax. SERASA has access to an on-line/real time connection with the various sources responsible for the supply of information to its database. In this way, it tries to provide just-in-time information for risk classification, both for individuals (score) and for firms (rating). Some of SERASA's clients have complained, however, that often SERASA failed in keeping its data banks up to date, especially in what respects *protestos*.

Creditors may choose from a menu of products offered by Serasa, which go from simple checks on the presence or not of a potential client on any negative list to more sophisticated information on credit limits and risk of default. Among the most popular services provided by Serasa are ACHEI/RECHEQUE (National protection against stolen, canceled, stopped, lost and insufficient funds checks – an extension of the Central Bank's Returned Check Register), CONCENTRE (Consultation on Central Restrictions – with information on protestos, bounced checks, bankruptcies, concordatas, judicial actions, tax debts, etc.), FICA (Credit Advanced Analysis File), RELATO (Report of Business Behavior) and CREDIT BUREAU (Includes positive information on over 80 million individuals). A detailed description of the different services offered by SERASA is included in Appendix D.

As with the Register of Returned Checks and the SPC, inclusion of one's name in SERASA's data banks is a main issue, since it may close one's access to credit markets. For this reason, whether or not a name may be included is in some cases an issue taken to courts. As with other data banks, while inclusions are easily and rapidly made, they are not as easily cleared once the debt is settled (either paid at the public register or paid to the creditor and then informed to the public register). This happens in spite of the fact that it is the obligation of the party that included a name in SERASA's listings to clear that name after the debt is settled. Because of this problem, SERASA has an agency in each state where people can bring proof of debt settlement and get their names out of SERASA's listings. Many people are not, however, aware of the existence of these offices.

Clients have annual contracts with SERASA, with the cost of its services varying with the ex-ante fixed number of consultations and the type of information assessed. Fees charged by SERASA are presented in Table 5.2. As shown, clients get substantial quantity discounts, while having to pay considerably more for more sophisticated information. Notice in particular the low cost of information on checks: in all cases less than R\$ 0.50 per consultation, a relatively low cost when compared to the average value of a returned check in 1997: R\$ 465.61. Another relevant comparison is to consider that in 1997 the probability of a check being returned was 1.93%, while the average value of checks issued in that year was R\$ 927.03, so that the average expected loss for one receiving a check was R\$ 17.89. Again, much higher than the cost of checking the issuer's past history.

The other major private credit bureau in Brazil is SCI. SCI's products cover both individuals and firms, domestic and foreign. Differently from Serasa, SCI is not based on reciprocity: a client may obtain information without the obligation to provide any. However, SCI tries to make clients provide some information back, and has an incentive system that gives a reduction in prices for clients that share their information about potential borrowers. The number of SCI's requests for information has grown 118% between 1994 and 1997, and the number of customers increased from 17.000 to 24.000 in the same period. In these recent years, SCI has added some new information to its records, in face of the growing market demand. For example, it now supplies specific systems that help in the detection of fraud. It has also intensified the training of professionals for the area of credit concession, an area still much underdeveloped in Brazil. Overall, however, SCI is much less important than SERASA, functioning as a subsidiary source of information for creditors.

Creditors have other private, informal means of checking borrowers' creditworthiness. One of these is the "pass-through" information. Usually banks ask potential debtors to provide bank references. These, for obvious reasons, tend to be of banks that will give good references and for this reason have little value as direct references. They are important, however, to let banks find out who else has asked for references, currently or in the past. This information is kept regularly by banks and is called pass-through (*passagens*). Banks may contact these other inquirers and learn more about the client's

creditworthiness. This system works entirely on a trust basis and no "pass-through" information is given in writing. Many banks, when facing the prospect of extending a large loan, also do their own research on the banks and registers in the city/area in which the potential debtor has his/her activities.

Table 5.2: Fee structure of SERASA's services. (R\$)

CONCENTRE and CREDIT BUREAU		FICA *		ACHEI and RECHEQUE	
# consultations	unit prices	# consultations	unit prices	# consultations	unit prices
5 to 9 **	8.20	1 to 5	32.79	50 to 99 ***	0.4900
10 to 19	7.70	6 to 10	31.23	100 to 199	0.4600
20 to 29	7.23	11 to 15	29.75	200 to 499	0.4200
30 to 49	6.79	16 to 20	28.34	500 to 999	0.4000
50 to 69	6.38	21 to 25	26.98	1.000 to 4.999	0.3700
70 to 99	5.99	26 to 30	25.70	5.000 to 9.999	0.2215
100 to 149	5.63	31 to 500	23.14	10.000 to 19.999	0.2085
150 to 199	5.29	501 to 1,000	16.20	20.000 to 29.999	0.1969
200 to 299	4.96	1.001 to 2.000	14.31	30.000 to 49.999	0.1855
300 to 499	4.66	2.001 to 5.000	12.64	50.000 to 99.999	0.1783
500 to 699	4.37	5.000 to 7.000	11.16	100.000 to 199.999	0.1729
700 to 999	4.11	7.001 to 10.000	9.86	200.000 to 499.999	0.1660
1.000 to 1.499	3.86	10.001 to 15.000	8.71	500.000 to 799.999	0.1585
1.500 to 1.999	3.63	15.001 to 20.000	7.69	800.000 to 1.099.999	0.1515
2.000 to 2.999	3.41	20.001 to 30.000	6.79	1.100.000 to 1.399.999	0.1446
3.000 to 4.999	3.20	30.001 to 40.000	6.00	>1.400.000	0.1380
5.000 to 6.999	3.00	>40.000	4.05		
7.000 to 9.999	2.83				
10.000 to 14.999	2.65				
15.000 to 19.999	2.49				

Source: Serasa. See Appendix D for description of services (Concentre, Credit Bureau, Fica, Fica Avançada, Achei and Recheque).

* Prices for FICA Avançada and FICA in English are twice these prices

** If < 5 consultations, a fixed administration fee of R\$41,00 is charged

*** If < 50 consultations, a fixed administration fee of \$24,50 is charged

5.1.3 Post-dated checks

With the implementation of the Real Plan, total loans to the private sector experienced a large increase: 45% real growth between July 1994 and July 1997. In this period, the credit market segment that expanded the most was personal credit: 230% in real terms, more than doubling its share in the total of loans granted by the financial system. A large part of this expansion was due to consumer finance companies (*Sociedades de Crédito, Financiamento e Investimento*), whose single activity is financing the acquisition of durable consumer goods by individuals. The total credit balance of these companies increased from US\$ 1.8 billion in July 1994 to US\$ 4.8 billion in April 1997.⁴⁸ This largely accounts for the expansion of credit in the automobile and home appliance retailing sectors (*Crediário*).

An equally important change in credit markets with price stability, largely unaccounted for in Central Bank statistics, was the expansion of financing in the non-durable consumer goods market. Since 1994 retailers have begun to finance the sale of clothes, footwear, toys, foodstuffs and other similar goods. Even services are often paid in a few installments, rather than in full when provided. The instrument that made this form of financing possible is the post-dated check. As shown in Table 5.3, about 36 percent of all sales in São Paulo are paid for using post-dated checks, against 37 percent using cash and 21 percent paying with credit cards. A survey by Banco Fenícia and FIPE (Fundação Instituto de Pesquisa Econômicas) in São Paulo during six weeks in June/ July 1997 showed 49.5% of the people interviewed were using pre-dated checks, the most important source of consumer financing. The second

⁴⁸ Salomon Smith Barney, "Banco do Brasil", July 24, 1998.

most used source is retailer credit (*crediários*), used by 40.8% of the respondents, while 24.5% were using some sort of credit card financing and 11.9% were using store credit cards (private label). The importance of this instrument may also be assessed from the estimate that, in May 1998, 60 percent of all checks issued in Brazil were post-dated.

Table 5.3: Forms of payment in São Paulo

	November 1996	April 1997	August 1997	November 1997
Cash	33.0	33.2	38.7	44.4
Credit card	25.0	20.6	18.4	18.3
Pre-dated check	36.0	41.9	35.1	32.2
Bank loan	3.0	1.1	4.1	4.8
Other	2.0	3.2	2.1	0.4

Source: FCESP.

It is virtually impossible to measure the volume of credit extended through pre-dated checks. A crude lower-bound estimate may be derived, however, from the activity of factoring companies, which recycle these funds, reducing the working capital needs of retailers.⁴⁹ In 1997, factoring activity involved 726 firms and operations amounting to R\$ 14.75 billion, 29.38% more than the R\$ 11.4 billion registered in 1996 (Table 5.4). These compare to the stock of household credit at the end of 1996 and 1997, which totaled R\$ 19.6 and R\$ 28.9 billion, respectively.

Table 5.4: Basic Information on Factoring

Year	Portfolio value (in R\$ billion)	Number of Associated Firms	Default Rate (%)
1993	3.5	430	3.96
1994	6.1	435	4.08
1995	8.6	430	4.74
1996	11.4	655	4.16
1997	14.7	726	3.75

Source: ANEFAC.

What makes credit through pre-dated checks interesting to our analysis is that it operates largely outside the formal framework described in section 3. It is not supported by collateral or personal guarantees. Its low unitary value precludes recourse to the judiciary in case of default.⁵⁰ Moreover, differently from some other Latin American countries, in Brazil there are no major legal sanctions to issuers of checks without funds: they do not go to prison nor have to pay any pecuniary penalty. Issuers may also suspend payment of the check before it is presented without suffering any legal sanction. In fact, post-dated checks do not even exist legally, since creditors may cash them at any time.

In this way, this entire market segment is basically supported by information sharing institutions (and by peer pressure on the part of other retailers, in waiting to cash the checks when agreed). It is the easy and low-cost access to information on the person writing the check and the high cost to the consumer of entering a "black list" if writing a check that has no funds that have made post-dated checks a widely used form of financing consumption. The efficacy of such "informal" sanctions may be assessed by the interest charged by factoring firms: 4.9% (monthly rate in April 1998),⁵¹ which is low compared to interest rates charged, for instance, by credit card companies. Default rates are also relatively lower than for financial institutions' credit portfolio: 2.9% in São Paulo, 3.72% in the Southern region, 3.66% in the Central/Eastern Region and 4.75% in the Northern/Northeastern region. This also compares favorably with the proportion of *crediários* that have late payments: 10% (Banco Fenícia/FIPE

⁴⁹ Factoring is an activity that consists in the purchase of firm's credit resulting from merchant sales. In factoring the risk is assumed by the buyer: if the supplier does not repay, the factoring firm is responsible for the credit, not the firm that sells. In this respect, the operation differs from the discount of a *duplicata* done by a bank since, in case of default, the bank collects from the firm that discounted the document.

⁵⁰ In the Banco Fenícia/FIPE survey, more than half of the loans were of values under R\$ 500.

⁵¹ Corresponding to a discount of 4.7% per month on the face value of the check.

survey).⁵² Post-dated checks are also widely accepted as collateral to bank loans, being preferred by these to other forms of collateral (e.g., *duplicatas*).

5.1.4 Collection Agencies

In addition to the ex-ante use of information, ex-post creditors have access to collection agencies, some of which are more formal than others. Grupo Unidos is possibly the largest of these collection firms. Created 50 years ago, it operates in about 500 collection locations throughout the country, with a team of 5000 agents specialized in individual credit collection. In 1997 Group Unidos recovered 13 million credit securities. Other important collection agencies are Cardbank, which recovers credit from both individuals and firms and is in the market for 8 years, and ABE (Assessoria Brasileira Empresarial), which is specialized in collection from firms. Negotiation is tough and in general results in a significant reduction of the values repaid. ABE charges 10% of the recovered amount and its announced rate of recovery reaches 70%. Beyond these formal collection agencies there are in activity many small firms operating at the fringes of the law or, in some cases, well past the borderline. Ads announcing the recovery of "unrecoverable" loans may be found in the country's main newspapers. These firms operate with Mafia-like techniques and charge very high success fees (at around 50% of the value of the debt).

5.2 Public Banks

The usual response of policy makers in developing countries to either market or institutional failure in financial markets has been state intervention.⁵³ This is the case in Brazil, where a large part of the credit market is dominated by the public sector (see Appendix B and the discussion in section 2). As previously discussed, although there is some overlapping in the activities of public and private banks, the former are particularly important in some market segments in which there is very little private credit. One reason for that is the privileged access of public banks to sources of funding that have comparatively low cost and long maturity terms. But that is not the only explanation. Also important is the fact that, by being state-owned and virtual monopolists in their market segments, these banks are able to structure their credit operations in ways that mitigate the negative effects of weak creditor protection. In some cases, these provide for governance structures that also grant debtors protection from government expropriation. This creates a mutual hostage situation that allows for economic activities that would not otherwise flourish in private hands.

In this section we analyze one of such case: the financing of private investment in infrastructure. For reasons different from the ones raised in the previous sub-section, this is another example in which the use of collateral and the potential recourse to the judiciary are not sufficient to make credit operations feasible. Screening is not much helpful either, since these transactions are very infrequent and highly specific. As discussed below, however, credit operations based on relational contracting, as opposed to classical contracting (see Williamson, 1985, p. 68-72), have been able to prosper, overcoming the constraints imposed by the weak protection awarded to creditors by the legal and judicial systems.

In Brazil, like in other Latin American countries, most infrastructure was foreign owned and financed during the first half of the century. Only after World War II did the state progressively took upon itself the responsibility of investing in infrastructure. Investment financing was done with the use of budgetary funds and loans from multilateral institutions.⁵⁴ Starting in the early eighties, the state's

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⁵² A recent survey by Serasa not only confirmed that default rates are lower for post-dated checks than for *credíarios*, but also provided more detailed information about those rates (Gazeta Mercantil, December 31, 1998, p. B-1). According to this survey, default rates increase with the value of the check (respectively, 0.23%, 0.89%, 1.94%, 3.20%, 5.25% and 10.39% for checks in the intervals of up to R\$25, R\$25 to R\$ 50, R\$50 to R\$100, R\$100 to R\$200, R\$200 to R\$500 and more than R\$500). Default rates also go up depending on how long the creditor has to wait to cash it: respectively, 0.31%, 0.63%, 1.60%, 4.82%, 8.14% for periods of up to 5 days, 6 to 20 days, 21 to 40 days, 41 to 70 days and more than 70 days. Default rates for immediately cashable checks is just 0.20%.

⁵³ As noted by Gray (1991, p. 775) "[c]ertain forms of direct regulation and government policies of intervention in the marketplace in developing countries can be seen at least in part as substitutes for an independent, well-functioning legal system". State intervention in financial markets is common also in industrialized economies. Stiglitz (1994, p. 20-21) notes that "[i]n the United States, (...) throughout the 1980s about 25 percent of all loans were either originated by government agencies or carried government guarantees."

⁵⁴ During the seventies, loans from foreign commercial banks were also important sources of funds.

capacity to invest in infrastructure shrank dramatically and many projects necessary to keep up with demand growth and technological change ended up not taking place. More recently, the state has recognized the need to catch up in infrastructure projects and has agreed to transfer to the private sector the "burden" of carrying out large investment projects in much needed areas (such as electricity, roads, railways, etc).

While some of these infrastructure projects may be financed through traditional corporate finance instruments, others may not. This is the case of projects in industries such as oil drilling or electricity generation. In these cases, the volume of lending involved is so large that its inclusion in the investor's balance sheet would quickly exhaust its investment capacity and compromise its credit rating. The solution traditionally encountered to overcome this problem has been the use of project finance. As described by Sirtaine (1994):

"In essence, the ultimate goal of project finance is to arrange a borrowing for a project which will be completely non recourse to the sponsors, in no way affecting their credit standing or balance sheet. That is why project financing is sometimes called "off-balance sheet financing" or "non-recourse financing", meaning that should the project company (in general in project finance a new company, here called the "project company", is created in order to implement the project) go bankrupt, its creditors could not claim the assets of the companies having invested in the project company to be sold as a means to repay the debt of the project company *vis-a-vis* these creditors. Lending is provided against the anticipated cash-flows that will be generated by the project for repayment and servicing of their loans, and the assets of the project itself used as collateral for their loans."

The two instruments most often used by lenders in Brazil to encourage debt repayment – collateral and credit rating – work inefficiently in the case of project finance. In infrastructure the 'project company' is a poor collateral if the project is not a success since its assets are highly specific and have low resale value (especially before the project is complete). In addition, the 'project company' does not have a credit history. Sponsors' credit history provides only imperfect guidance, since there is no recourse to the sponsors' assets. For this same reason, the threat of including the project company's name in "black lists" such as SPC's or Serasa's also carries little weight.

Although the use of project finance is fairly recent in Brazil – the first operations were completed in 1995-96 – the number and total volume of loans structured in this way have increased since then, and several operations are in the pipeline. The big surge took place following infrastructure privatization, which began in 1995. Up to August 1998, project finance had been used by BNDES and other creditors to structure loans to seven large investment projects in power generation, road rehabilitation and expansion, and oil drilling. Then, the demand for infrastructure financing ran around US\$ 36 billion, encompassing investment projects of 57 different companies in seven different sectors.⁵⁵ A large part of these loans were being structured as project finance operations, especially in sectors such as roads, railways, electricity, water, sanitation, natural gas and ports.⁵⁶

Overall, it is estimated that about half of the loans to infrastructure projects are channeled through project finance operations. Most of these operations have a similar structure: about 30 percent of the project is financed through equity provided by the project sponsors, and about 70 percent is financed by loans. The financing package has been almost exclusively based on loans from BNDES and IADB or IFC (never the two at the same time). Many foreign banks (ABN Amro, Citibank, ING Bank, etc.) participate through the IADB and the IFC. A typical project finance loan is based on two separate contracts, one with BNDES and the other with IADB or IFC. The latter is divided in two parts: part A, through which these institutions lend their own funds, and part B, through which private banks channel

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⁵⁵ Not included in this sum were the US\$ 10 billion of annual investment expected to occur as a result of the privatization of Telebrás and the equally large projects in the oil sector.

⁵⁶ However, as of September 1998, BNDES was analyzing demands for project finance loans to investment projects in telecommunications totaling US\$ 23.7 billion (see BNDES, "Project-finance aumenta sua importância na carteira de investimentos da AI", *Em Dia*, September 4, 1998.)

their resources.⁵⁷ All loans have the same maturity, although their costs are not the same. Loan maturity is determined by the length of time necessary for construction to take place plus an additional 8 to 12 years. BNDES charges annual interest rates equal to the TJLP plus a spread of 4 to 5%. Interest rates charged by IADB and IFC are indexed to the exchange rate and vary considerably from one project to another. Another relevant difference is that while Brazilian law and courts apply to BNDES loans, the New York law and courts govern loan contracts with IADB and IFC.

Capital markets (bonds, equity and venture capital) and domestic financial institutions (banks, pension funds, etc.) have had a minor role in project finance operations. Investors point out several reasons for this: the lack of experience in providing large long-term loans, the risks involved, the lack of adequate funding and the low return on these operations. Another important factor is the availability of less risky opportunities stemming from the privatization of state enterprises. For these reasons, the participation of local private banks is currently limited to providing short-term bridge loans, underwriting debentures and investor advising in the structuring of project finance.⁵⁸

In terms of creditor seniority, the practice so far has been for all creditors to proportionately share the same guarantees, with no seniority for any of them. The project itself is the main guarantee for all loans – both the project's revenues and assets constitute the collateral in the financing contract, including all the special purpose company's available assets – bond (*caução*) of the SPC's shares, mortgage of the fixed assets, etc.⁵⁹ The mortgaging of fixed assets is needed so as to prevent the investor from using them to request other loans; that is, the project becomes entirely committed to the lenders, and the investor is not allowed to obtain other loans or in any other way dispose of the assets. It is, however, unlikely that the bank will foreclose on the mortgage, as its market value is too low. As stated by a bank officer: "what will the bank do with a loss making power plant?". Revenues also act as a collateral: all proceeds go to a central account, which is managed by a trustee who then makes required payments according to previously defined priorities: first trustee's fees, then operational expenses, loan servicing comes next and dividends in the end. Specific clauses and guarantees apply to different contingencies:

[1] The construction risk includes the risk that the project fails to be implemented in the scheduled time and/or that the actual construction costs exceed what was budgeted. In general, the construction stage is the one with the highest risks since incomplete projects have low market value (who would want to buy a semi-complete gas pipeline?). Besides that, during the construction phase no revenue is generated, so that a delay usually implies not only higher costs but also lower revenues.⁶⁰ BNDES, IFC and IADB require guarantees for cost overruns, but do not participate in insuring against this risk. Usually these guarantees are negotiated case by case, and generally risk is shared by the constructor and by the equity investor. Lenders also require that the sponsors have guarantees for their equity participation – a letter of credit or a bank bond (*fiança*), to insure that they will actually come up with their share of the investment financing.

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⁵⁷ An incentive for European banks to lend through IADB or IFC is the implicit guarantee provided by the Brazilian government against some sorts of political risk (e.g., a foreign debt moratorium). In practice, while they have to make provisions if lending directly to infrastructure projects in Brazil, if the loan is made through IADB or IFC no such provisions are necessary.

⁵⁸ An example is the Viaoeste project of the Concessionária de Rodovias do Oeste de São Paulo, a special purpose company created to manage the 20-year concession of two state highways in São Paulo. Banco Real de Investimentos, a private local bank, has coordinated the placement of commercial papers of Viaoeste totaling R\$ 80 million with a six-month maturity and that pay 102% of the CDI interest rate. This money is being used as a bridge loan while the company negotiates the concession of two long-term loans, from BNDES and the World Bank, each amounting to R\$ 150 million. These funds will be used to finance the investment in rehabilitation and expansion of the highways, that are part of the concession contract, which requires Viaoeste to implement investment projects totaling R\$ 506 million in the first five years of the concession period.

⁵⁹ It is important to note that concessionaires of public services may not give the assets of the concession (e.g., a highway) as a collateral. The Concessions Law forbids this, because ownership of the assets is expected to be transferred to the state after the concession.

⁶⁰ The contrast between the high interest of foreign investors and pension funds in the acquisition of infrastructure companies being privatized and the much lower interest in greenfield projects dissociated from these deals suggests that the high risk in the construction stage is an important obstacle to private financing. In this way, an alternative being sought to speed up the recycling of public funds is to bring these investors in once the critical construction phase is over. To give liquidity to these loans, these investors would participate through credit securities such as the TPR (Revenue Participation Security), the creation of which is being considered in the National Congress. The TPR would entitle the investor to receive a share of the project's revenues, which would be deposited on an escrow account and be managed by a trustee.

[2] The major political risk is administrative expropriation. Partial expropriation may occur if the government behaves opportunistically and keeps rates below what had been previously agreed, once the investment is completed. This behavior is illegal, according to the Concessions Law, but verifiability by the courts or other third parties is an important issue. Project finance contracts are structured in a way that this risk is treated as part of the commercial risk, with lenders sharing it with the sponsors. There is also the risk that the government changes its view regarding private participation in infrastructure and completely expropriates the project. The Concessions Law establishes that in this case the concessionaire is entitled to be compensated for its capital expenditures in the project (more specifically, it should be paid the accounting value of the assets of the concession). Lenders share this political risk with the sponsor, receiving for their loans a proportional share of the compensation awarded by the government.

[3] The operating and commercial risks are, respectively, the risk that the plant does not operate as planned and that revenues are lower than expected (lower price or output). So far, all project finance contracts have established an account that serves to guarantee that if a problem of this nature arises the borrower does not default before a solution (e.g., finding a new partner or negotiating a price increase) is negotiated. This account usually has sufficient funds to allow servicing the loan for six months to one year. Another account is kept to cover expenditures with maintenance, operations (typically one year of expenses) and insurance (following payment), but the value of this account is small if compared to the loan-service-guarantee account. In the extreme case that the concession is taken back by the government due to a poor operation, the sponsor has to pay back the full amount of the debt to BNDES, IADB and IFC. In this case, if necessary to allow full payment of the debt, there is even recourse of the lenders to the sponsors' assets.⁶¹

[4] To mitigate the foreign exchange risk, project finance contracts usually include a credit line by BNDES of approximately 10 percent of the total lending. The Project Company can resort to it if, due to exchange rate devaluation, its cash flow turns negative. This loan matures two years later than the original loan.

How do lenders view the protection awarded by the law and the judiciary in project finance operations? These loans are based on carefully written contracts, which strictly abide to the law (Brazilian or New York, depending on the contract) and foresee recourse to the judiciary if necessary. Nonetheless, lenders argue that in case of default in this kind of project, the solution must go through finding a new group of investors to manage the project or, if that does not solve the problem, renegotiating the loan ⁶². As stated by a bank officer: "resorting to the judiciary is the worst of all options." It makes little sense to foreclose on the assets if the project is not doing well and there is no recourse to the sponsors. For this reason, these credit contracts have clauses giving lenders the right to step in if necessary. The riskier the project, the stricter are the covenants allowing creditors to step in.

It thus seems that the most important role for the laws and the judiciary in the financing of infrastructure is to protect investors (and creditors, indirectly) against the political risk of administrative expropriation. So far, with the privatization process still underway and with the same administration in control, there has been no need for judicial action. But one may foresee that an independent and strong judiciary is crucial in making creditors feel secure that, even in the long run, regulatory agencies will respect the concession contract, that the government will not change the laws and that these will be properly enforced.

Meanwhile, financing by public and multinational banks provides for governance structures that simultaneously restrain government's and borrowers' opportunism. On the one hand, sponsors' willingness to pay is encouraged by the fact that they tend to have the prospect of a large number of other credit operations with lenders. The monopolistic position of public banks in long-term credit

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⁶¹ Typically, project finance contracts signed up so far also have had some windows that allow recourse to the sponsors' assets during the construction stage, with the conditions for this being set case by case, depending on the nature of the risks involved and the control of the sponsors over them.

⁶² Sponsors with other businesses with the lenders have other incentives to negotiate a fair distribution of losses.

markets is then essential to reduce the benefits of opportunistic default. On the other hand, government opportunism is discouraged since (i) the fact that through public banks it will share the losses imposed on the project, and (ii) it would likely compromise the country's ability to obtain financing from multilateral institutions.

5.3 Peer pressure

Peer-pressure based mechanisms combine the advantages of both formal and informal lending programs. Lenders know the borrowers well and have access to a better monitoring and enforcement technology than in other formal lending schemes, a characteristic that is the well-known advantage of informal lending. However, it avoids the negative aspects of informal lending, such as increased market segmentation, lack of sufficient risk diversification and small operation scale.⁶³ Peer pressure schemes include credit cooperatives and group lending. The latter provides particularly strong incentives, in the sense that in group lending all are liable for repayment and will be sanctioned if any one individual defaults. As a consequence, individuals in the group provide information and help enforcing contracts, allowing for better governance structures in loan contracts than when these are extended directly by formal institutions to poor individuals.

One must, however, be careful when evaluating the merits of group lending. Two opposite-sign factors may arise from the repayment game which individuals play given joint liability, as shown by Besley and Coate (1995). On the one hand, bad borrowers may inflict a negative externality on good borrowers – otherwise willing to repay borrowers might decide not to repay once they observe that others have defaulted, since they know that they will be sanctioned in any case. On the other hand, a person who has succeeded in an investment project may decide to help another person who did not succeed in repaying his debt, in order to avoid sanctions. This second effect would reduce the default risk and is thus a positive factor, whereas the first is clearly a negative one. Huppi and Feder (1990) review the evidence on group lending and conclude that there is a mixed performance, suggesting that the net effect may go on either direction.

Examples of group lending can be found in Brazil, but mainly in the field of micro-credit. BNDES is behind two initiatives involving small, and often informal, businesses. Small businesses in Brazil have high failure rates, with a high proportion of them closing down less than a year after being established. Because of this and also because they often have difficulties in providing good collateral, small businesses have traditionally suffered from a severe credit shortage. The two mentioned initiatives are directed at remedying this situation. They are *BNDES Solidarity* (which supports credit-granting NGOs) and *BNDES Worker* (which is currently being structured with state and municipal governments – because this program is yet not functioning, we will not discuss it in detail). Both programs' objective is to extend very small loans – from 150 to a few thousand reais – to businesses that often operate informally and that in general have no bank account. Also active in micro-credit, but in this case mostly to individuals, are Credit Cooperatives. In none of these cases is there the intention to subsidize borrowers. Interest rates charged are similar to those found in the market place and these programs are expected to be self-sustainable. In all cases, it is expected that borrowers will grow to eventually be serviced by regular financial institutions.

What is peculiar about these initiatives is that they rely on a complex governance structure – based on peer pressure, information sharing and public credit – which are very different from that assumed in classical contracting law. Loans are too small to be formally registered, let alone to enforce them in the costly Brazilian judicial system. We next analyze how these programs operate, look at loan size, maturity and cost, see which institutions ensure willingness to pay and see how effective they have been (by looking at default rates of these programs so far).

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⁶³ Stiglitz (1990) and Varian (1989) were the first to develop the idea that community-based mechanisms could reduce the risk of default, since it is easier for neighbors than for banks to monitor borrowers in these circumstances.

5.3.1 Credit Cooperatives

Credit cooperatives are financial institutions that raise deposits to lend to their members. The relatively small number of members allows for a better individual knowledge of borrowers and facilitates monitoring (relatively to conventional banks). Banarjee, Besley and Guinnane (1981) argue that credit cooperatives might function better than conventional banking for two reasons: in the first place, the small number of members together with repeated interaction curtails shortsighted behavior. In the second place, borrower monitoring is induced in an efficient way. However, problems specific to credit cooperatives may also arise, such as free riding in monitoring (if the number of non-borrowing members is large) and the possibility that borrower and non-borrower members collude and decide not to repay the lenders. [Guinnane (1992) finds evidence of this, as do Huppi and Feder (1990)].

The high cost of and the difficulty in obtaining bank credit in Brazil have driven individuals into forming credit cooperatives, which provide general-purpose micro-credits. "Low" interest rates (2 to 5 % per month) and the certainty of obtaining a loan when needed have fueled the growth of this type of institution. In 1989, there were about 300 such organizations in Brazil; today, they are 1.100, with about 1.000.000 associates and a R\$1.4 billion in resources⁶⁴. Cooperative equity comes from members' paychecks every month. In some cases, a percentage is used (about 1%), while in other cases a fixed fee is charged (for example, one cooperative charges R\$12 from members with 'low' salaries and \$17 for those with 'high' salaries).

To facilitate cooperatives' credit operations, the Central Bank authorized in 1997 the creation of two private banks: Bancoob and Banfired. Together, these banks have a net worth of over R\$700 million. Bancoob alone (the largest of the two and covering 8 states) has a net worth of R\$517 million, demand deposits of R\$504 million, a loan portfolio of R\$675 million, and net income of R\$5 million. These figures place it among the 20 largest private banks in Brazil.

5.3.2 BNDES Solidarity

BNDES Solidarity is a program created to provide funds to non-government organizations (NGOs) engaged in micro lending. To be eligible, the NGO must show at least six months of successful experience in micro-credit. In addition, a public or multilateral institution, or another reputed NGO must have financed at least a quarter of the loans it previously extended. Additionally, if the NGO was created by a municipality, this municipality must have at least 250 thousand inhabitants.

BNDES provides funds equal to 100 percent of the total value of the NGO's stable resources, up to a maximum of R\$ 3.0 million per contract. BNDES tries to lever the loans of the NGOs that have shown good results in micro-credit without interfering with the way they operate – it is up to the NGO to define who will it lend to and under what conditions. Nonetheless, the contract extending the loan to the NGO imposes rules to encourage the NGO to keep sound credit-granting procedures. Loans' maturity is of at most 8 years, with a six-month grace period and an interest rate equal to the TJLP (see section 2), which accrues quarterly. The NGO must keep 1% of all clients' payments in an account to cover non-performing loans, up to an amount equal to 15 percent of the resources apportioned by BNDES. If the fund presents a default rate⁶⁵ between 6 and 8% for two consecutive quarters, or if this rate is above 8% in any quarter, BNDES may withdraw an amount equal to the total value of overdue loans. If the default rate exceeds 15%, loans with BNDES funds will be suspended, the guarantee account transferred to BNDES together with available resources and all new payments will have to be used to complete the refund of BNDES's resources.

Table 5.5 presents basic statistics as well as a description of required guarantees and procedures adopted in case of default for five institutions engaged in micro lending. It is clear that these NGOs charge high interest rates. Equally stiff are the penalties applied in case of default. As high as interest rates might seem, however, they are still well below the rates charged in the alternative forms of credit

⁶⁴ Source: Brazil Cooperatives' Organization (OCB)

⁶⁵ Defined as the proportion of loans that have been due for over 30 days.

which are available to these borrowers.⁶⁶ Penalties are also much lower than those charged by banks on similar operations (see section 2). Although default rates vary considerably, they are not high by market standards. Peer pressure, foreclosure on real and personal guarantees and the inclusion of the debtor's and the *avalista*'s names in black lists such as the SPC are the instruments used to ensure willingness to pay. Judicial enforcement is not perceived as an alternative in most cases, because it is too costly. In fact, for most loans, the cost of taking judicial action is higher than the value of the loan. For a similar reason, these loans are often not taken to the relevant public register. Only for the larger loans are these procedures justifiable.

An early and successful experience with micro lending by NGOs is the Community Credit Institution Portosol, based in Porto Alegre. Since 1996, Portosol has supported small businesses that are not able to secure credit from traditional financial institutions. The city established this NGO with a fund of R\$700,000, an amount soon after increased by an additional R\$350,000 contributed by the state and R\$300,000 provided by the German GTZ. Up to mid-1998 Portosol had lent R\$7.24 million to more than 4,559 clients, with an overall default rate of only 0.6%. In July 1998 it had a portfolio of 1,572 clients with an outstanding debt of R\$1.7 million. The default rate increased after the rise in interest and unemployment rates and the drop in GDP growth that followed the Asian crisis. In July 1998, of the total loans extended, 4.5% had been overdue for more than 30 days.

Portosol operates with a R\$5,000 cap on the value of loans directed at working capital, and of R\$10,000 for loans used to buy fixed assets. The minimum loan is of R\$200. There is no requirement that the borrower be a formal company, but Portosol requires real and personal guarantees, from the borrower, including an *avalista* (see Appendix A and C). If the borrower defaults, his or her name is included in the SPC and, if necessary and justifiable, the case is taken to the judiciary. In the case of group lending, Portosol has used, with very positive results, the following procedures:

- (i) When the loan contract is signed, a single check in the name of the group coordinator and in the full amount of the credit is cashed in the presence of the whole group. In this way, all members cash the check and receive their respective shares of the loan.
- (ii) Each client receives an invoice book with the value of each payment on his or her credit, in this way avoiding that the payment of an entire installment is delayed in case one of them is not able to pay his or her part. In this way, the penalties on overdue credits accrue only with respect to the unpaid part of the loan, making it easier for the group to pay it, and helping Portosol to pay its own debts when due.
- (iii) All members of the group sign the loan contract.
- (iv) When a member of the group fails to pay on time, contact is immediately made with the rest of the group so they can look for a solution.
- (v) The debt is considered paid only when all of it has been paid. If overdue for more than 30 days, all members of the group are included in the SPC, until the debt is paid. The member of the group that failed to pay is registered as a debtor and the others as *avalistas*.

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⁶⁶ According to a survey by Anefac (National Association of Finance, Management and Accounting Executives), in August 1988, moneylenders (*agiotas*) were charging a monthly interest rate of 20.53% (or 940.03% p.a.), on average. In some cases, borrowers were paying interest rates as high as 33.64% per month (O Globo, August 23, 1998, p. 37). Interest rates on personal loans and overdraft accounts are discussed in subsection 2.2.

Table 5.5: Basic Practices and Results of NGOs Engaged in Micro-Lending

	Monthly Interest Rate (in percent)	Guarantees	Default Rate (%) ⁽²⁾		Procedures in Case of Default
			June 98	July 98	
Portosol	3.5	Individual <i>aval</i> , mutual <i>aval</i> or real guarantees ⁽¹⁾	5.00	4.45	One day after the loan is due a credit officer will visit the client and try to arrange for an immediate new date for payment the client visits. At the same time, the financial sector will mail a collection letter to the debtor and the <i>avalista</i> . If no payment is made on the new date, a new visit is made to the client and the <i>avalista</i> is also visited to try to negotiate a final payment date. The debtor will be required to give, personally or in writing, the reasons for the delay. If he or she does not do that, the loan will be considered defaulted and an additional 1% of monthly interest rate and a 2% penalty for loans due for over 30 days will be charged. After that period the loan is considered due in its full amount. In this case collection is passed to a lawyer and the name of the debtors and the <i>avalista</i> are included in the SPC. The lawyer will try to manage a friendly collection and, if not successful, will start a judicial collection process.
Blusol	4.8	Individual <i>aval</i> , mutual <i>aval</i> or real guarantees ⁽¹⁾	0.0	0.2	The credit officer will visit the debtor to learn the reasons for the delay and notify the client that his or her payment is overdue and that a penalty and additional interest rate (<i>juros de mora</i>) will be charged. In case of group lending all borrowers are informed of the penalties. If no payment is done after 15 days of the original payment date, the loan guarantor is notified. After 25 days of the payment date, a final warning will be given to the debtor and the guarantor, informing that in 5 days a judicial collection process will be started and collection fees will be added to the debt due. The name of the debtor is also included in the SPC.
FAEP ⁽³⁾	3.9	Individual <i>aval</i> , mutual <i>aval</i> or real guarantees ⁽¹⁾	0.76	0.32	If any part of the debt is not paid on time, the debtor must give personally or in writing the reasons for the delay. If this is not done up to 24 hours before the debt is due, the loan is considered non-performing and the debtor has to pay an additional 2% of interest rate and a 1% penalty for delays over 30 days. After that period the loan is considered due in its full amount.
CEAPE – PE ⁽⁴⁾	5.3	Individual <i>aval</i> and real guarantees	3.2	3.1	A penalty and an additional interest rate are charged on overdue loans. Since October 1996 CEAPE-PE has required that borrowers open a savings account associated to the loan where deposits are made each time a credit is provided. This savings account provides a partial guarantee in case of default.
Viva Cred	3.9	Individual <i>aval</i> and promissory note issued by the borrower	2.0	2.6	In case of delay, a credit officer visits the client. If there is a justification for the delay, the credit officer works out a solution to be taken to the credit committee, which will take a decision on the matter.

Source: BNDES.

(1) Which guarantees are demanded depends on the purpose and type of the loan.

(2) Proportion of loans overdue for 30 days or more.

(3) Fundo de Apoio ao Empreendimento Popular.

(4) Centro de Apoio aos Pequenos Empreendimentos – Pernambuco

6 – Final Remarks

Our analysis of the Brazilian credit market revealed a set of stylized facts and led to the derivation of two important results, the usefulness of which, we believe, extends beyond the analysis of this country's particular experience. They concern (i) the link between judicial inefficiency and credit market size and (ii) private arrangements that substitute for a better performing judiciary. In what follows, we review the stylized facts, present our results and comment on their policy implications.

Credit markets in Brazil have long suffered from the consequences of macroeconomic instability and high inflation, which have usually been pointed out as the reasons behind the country's low ratio of credit to GDP. Since inflation was brought down, following the launching of the Real Plan in 1994, the volume of credit to households has gone up substantially. Loans by domestic financial institutions to firms and individuals have nevertheless remained concentrated on short-term operations and substantial market segmentation continues to exist, with public banks providing most longer-term loans to finance housing, rural activities and "large" investment projects. A striking fact, however, is that the ratio of performing loans to GDP has come down since 1994, rather than having gone up. This is mainly due to the reduction in the public sector banking debt, largely a result of privatization, as well as to the very high interest rate levels that have prevailed since 1995.

Interest rates in Brazil are among the highest in the world. They are the result of both a tight monetary policy, that keeps banks' borrowing rates high, and of large loan spreads. These large spreads are a result of low productivity and high default rates in the Brazilian banking sector, among other factors. The inefficiency of banks is a pervasive problem, and is particularly relevant in credit-granting activities. Default rates, too, are very high in Brazil, when compared to international standards. Public banks, which account for more than half of the overall stock of credit, have productivity levels equal to half of their private counterparts'; they also present above average default rates. We found that the existence of good collateral (e.g., in mortgage loans or fiduciary alienation) and of "protection" to creditors from judicial slowness (e.g., in advance to foreign exchange contracts, ACC) contribute to reduce interest rates charged by banks.

Creditors' rights are only weakly protected by the legal and judicial systems in Brazil. Slowness is a major problem, with the law allowing debtors several ways in which to postpone a court decision. Costs are also an issue, particularly for low-value credits. The preference given by the bankruptcy law to liabilities with workers and tax authorities in practice eliminates the protection it is supposed to provide creditors with. A set of legal institutions try to substitute for a better performance of the judiciary, as often also found in other French civil law countries, such as the use of self-executable securities and the creation of special forms of collateral (such as fiduciary alienation).

A prime objective of the paper was to assess the impact of poor judicial enforcement on the development of the Brazilian credit market. We analyzed this issue by testing whether differences in judicial performance explained cross-state differences in credit market size. Although the legislation protecting creditor rights is the same throughout the country, there is a lack of uniformity in the quality of judicial enforcement across the states. There are differences in the training of judges, in corruption levels and in the independence from the government and/or influential groups. In addition, court fees are independently fixed by each state. The interpretation of the law, too, frequently accommodates the judges' political views, which also often differ among states. To measure judicial performance, we created an index of judicial inefficiency that builds on a survey conducted by IDESP with businessmen in different states regarding slowness, fairness and costs of the judiciary.

The first main result of this paper concerns the link between judicial enforcement quality and credit market size. We present persuasive evidence that lack of proper judicial enforcement significantly reduces the ratio of credit to GDP, even after controlling for the level of per capita income. Regression results show that judicial inefficiency has a distinctive negative impact on the volume of both rural and

non-rural credits. They also show that the ratio of credit to GDP increases with per capita income, which may at least partly explain why the size of credit markets in Latin American countries is smaller than industrialized economies' as well as Asian countries' (such as Singapore, Taiwan and Korea). A one-standard-deviation increase in per capita income is shown to raise the ratio of credit to GDP by 11.9 percentage points, or about 28.2%. Similarly, raising the index of judicial inefficiency by one-standard-deviation (a deterioration in the quality of judicial enforcement) causes the ratio of credit to GDP to fall by 8.5 percentage points. This is equivalent to a contraction of 23.9% in the volume of credit, keeping per capita GDP and population constant. These regression results suggest that differences in the quality of judicial enforcement are as important as per capita income differentials in explaining cross-state differences in the ratio of credit to GDP.

The second main result of the paper is the identification of governance structures in the financial market that support important credit activities, in principle highly dependent of strong legal and judicial credit rights' protection. We argue that, while the environment is one in which this protection is largely lacking, three main institutions allow these forms of governance to flourish: the existence of a well-developed informational infrastructure, the presence of public banks, and the use of mechanisms that rely on peer pressure to insure repayment.

We first analyze the case of post-dated checks, a low-cost credit instrument that finances the sale of non-durable consumer goods and basic services. No figures are available on the volume of credit provided through post-dated checks. However, based on the volume of factoring companies transactions, we estimate that in 1997 it reached R\$ 15 billion, equivalent to more than half the stock of credit to households extended by the financial sector (excluding mortgages). What makes credit through post-dated checks interesting to our analysis is that it essentially functions based on the existence of reliable information records, and is thus basically supported by information sharing institutions (and peer pressure on the part of retailers, which wait to cash the checks when agreed). That is, it is not supported by collateral or personal guarantees, and its low unitary value precludes recourse to the judiciary in case of default. Moreover, differently from some other Latin American countries, in Brazil there are no major sanctions to issuers of checks without funds: they do not go to prison nor have to pay any pecuniary penalty. It is the easy and low-cost access to reliable information on the person writing the check and the high cost to the consumer of entering a "black list" if writing a check that has no funds that have made post-dated checks a widely used form of financing consumption. The efficacy of such "informal" sanctions may be assessed by the relatively "low" interest and default rates registered in these operations.

The second institution is the presence of public banks. In Brazil, a large part of the credit market is dominated by the public sector. Although there is some overlapping in the activities of public and private banks, the former concentrate on market segments in which there is very little private credit. A reason for that is the privileged access of public banks to sources of funding that have comparatively low cost and long maturity terms. But that is not the only explanation. Also important is the fact that by being state-owned and virtual monopolists in their market segments these banks are able to structure their credit operations in ways that mitigate the negative effects of weak creditor protection. In some cases they provide for governance structures that also protect debtors from government expropriation, creating a mutual hostage situation that allows for economic activities that would not otherwise flourish in private hands. We look at the case of the financing of private investment in infrastructure as an illustrative example of such a governance structure. In infrastructure investment, like in the case of post-dated checks (but for different reasons), the use of collateral and the potential recourse to the judiciary do not provide sufficient support to make credit operations feasible. Screening is not much helpful either, since in this case transactions are very infrequent and highly specific. Financing by public and multinational banks provides for governance structures that simultaneously restrain government and borrower opportunism. On the one hand, borrowers' willingness to pay is encouraged by the fact that they tend to have the prospect of a large number of other credit operations with lenders. The monopolistic position of public banks in long-term credit markets is then essential to reduce the

benefits of opportunistic default. On the other hand, government opportunism is discouraged by: (i) the fact that through public banks it will share the losses imposed on the project, and (ii) that this will likely compromise the country's ability to obtain financing from multilateral institutions.

Peer pressure schemes constitute the third institution. They include credit cooperatives and group lending. The latter provides particularly strong incentives for repayment, since all group members are liable for the debt and will be sanctioned if any one individual defaults. Consequently, individuals in the group provide information and help enforcing contracts, allowing for better governance structures in loan contracts than when these are extended directly by formal institutions to poor individuals. Examples of group lending can be found in Brazil in the field of micro-credit. One of these is *BNDES Solidarity*, which supports credit-granting NGOs that extend very small loans – from 150 to a few thousand reais – to businesses that often operate informally and that in general have no bank account. Also active in micro-credit, but in this case mostly to individuals, are Credit Cooperatives. In none of these cases is there the intention to subsidize borrowers. Interest rates charged are similar to those found in the market place and these programs are expected to be self-sustainable. What is peculiar about these initiatives is that they rely on a complex governance structure – based on peer pressure, information sharing and public credit – which is very different from that assumed in classical contracting law. Loans are too small to be formally registered, let alone to be enforced in the costly Brazilian judicial system.

Some policy implications may be drawn from our results. A first (and obvious) implication is that improving the quality of judicial enforcement is important to allow for the development of credit markets. This would in turn, as discussed in the introduction, indirectly contribute to foster economic development and growth. A second implication is that, because judicial reform is a slow process, government should support institutions that substitute for good judicial enforcement in encouraging debtors to repay – facilitating and supporting information sharing and group lending, for example. Finally, we believe that a more detailed assessment of the comparative advantages and disadvantages of the governance structures here discussed *vis a vis* judicial enforcement should be carried out. For instance, the low productivity and high default rates of public retail banks suggest that, although they may be effective in allowing certain credit activities to take place, they may not be the most efficient solution, were creditors' rights properly enforced. On the other hand, even if rights were efficiently enforced, information sharing would still be warranted due to its low cost and strong disciplinary effects.

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Appendix A – Glossary

Alienação Fiduciária - Fiduciary alienation (or alienation in guarantee), also known as chattel mortgage, is the transmission of ownership of an asset from the debtor to the creditor as a guarantee of the fulfillment of an obligation of the debtor. The debtor remains in direct control of the asset, as a depositary.

ANBID Rate □ – The ANBID rate is similar to the TBF, differing only as for the institutions that make up the sample and for the inclusion of CDI's on the average (usually the volume of more long term CDI's is very small and its weight on the average is negligible). The universe of institutions included in the ANBID rate is made up of investment, multiple and commercial banks that have given their written adherence to the operational form used to calculate this indicator. Initially a simple average of all CD's, RD's and CDI's in operations above a minimum value is taken. Next, all rates outside an interval of two standard deviations around the mean are excluded. Finally, weighted averages are calculated with the remaining rates for each maturity (30-35 days, 60-65 days, etc.) These rates are published on a daily basis.

Aval - A "written engagement by one not a drawer, acceptor or endorser of a note or bill of exchange that it will be paid at maturity" (Webster Dictionary).

Banespa – The third largest public commercial bank in Brazil, was formerly owned by the state of São Paulo and federalized in 1997.

Banco do Brasil S.A. – One of the largest commercial banks in Brazil, provides a full range of banking products to the public and private sectors. It is controlled by the federal government.

Bill of exchange - An order given in writing to a certain person to pay an amount of money to someone at a specific date.

BNDES – A federal-government-controlled development bank which is primarily engaged in providing medium- and long-term financing to the private and public sectors either directly through other public and private sector financial institutions.

Caução – the submission of an intangible good (credits of the guarantor) as a guarantee of fulfillment of an obligation. The guarantee is the right to the credit represented by the security and not to the security itself.

CDI Rate – This is the interest rate associated to the CDI's (Interbank Certificates of Deposit), instruments equivalent to the regular CD's, but negotiated exclusively among financial institutions. This market does not suffer any influence of the Central Bank nor is it taxed, but there are arbitrage mechanisms with the Selic. Most operations are one-day operations, known as CDI over, and reflect the next day interest rate of bank reserves.

CDI/Cetip Rate – The CDI/Cetip rate is an average of the rates observed in deals done with CDI's during a day, according to the registers kept at Cetip (Security Custody and Liquidation Center). Only operations done between financial institutions of different groups are computed in this calculation. The Cetip is responsible for liquidation and custody operations of private securities among financial and nonfinancial institutions. The average daily turnover at Cetip in 1997 was of R\$ 18 billion/day.

Cédulas de Crédito – Credit security linked to a specific business project, which has some degree of seniority in bankruptcy procedures. These securities are ruled by Law 6040 of March 11, 1970.

CEF – A federal-government-controlled savings bank, is the principal agent of the National Housing Finance System. It is involved mainly in deposit-taking and providing financing for housing and urban infrastructure projects.

□ This and other interest rate definitions were extracted from Banco de Investimentos Garantia (1998).

Commerce and industry credit cédulas - Securities to which a loan contract is appended that include not only a financial but also a physical schedule and are normally used for medium to long-term loans associated with an investment project.

Concordata – Authorization conceded by a judge for a non-liquid but potentially solvent firm to reschedule its debts, according to a timetable established in the court sentence. The concordata is used in order to avoid or suspend the firm's bankruptcy.

Discount Bordereau – Sort of a ledger, showing debt and credit movements of duplicatas and related merchandise.

Duplicata - A credit security that originates from an invoice issued as a result of a sale of a good or service. Industry and other business frequently use duplicatas to finance their working capital. Banks buy them at a discount. They may also be deposited at a bank and used as a guarantee to a loan (called a *caução*). Apparently, this credit security exists only in Brazil.

Fiança – It is a written contractual obligation through which someone, called *fiador*, guarantees the fulfillment of an obligation assumed by the debtor in case this does not do it, or guarantees the payment of an indemnity or penalty in case the debtor or executioner does not fulfill an obligation to pay or do something specified in the contract.

Fiador – the person or company that guarantees the *fiança*.

Fidejussory guarantee – Personal guarantee where the guarantor fulfills the financial obligation if the debtor does not honor it. In this type of guarantee, the personal assets of the guarantor answer for the payment of the debtor's obligation.

Fiduciary alienation (or alienation in guarantee) is the transmission of ownership of an asset from the debtor to the creditor as a guarantee of the fulfillment of an obligation of the debtor.

Lien - Right to keep somebody's property until debt owed in connection with it (for repair, transport, etc.) is paid.

Penhor – “the submission of a mobile or mobilizable asset as a guarantee of fulfillment of an obligation.” (Civil Code art. 768)

Pre-dated checks – A check written today but which will only be submitted for payment at the issuer's bank on a previously agreed future date (usually the date written on the check). Although the law allows anyone with a signed check to immediately cash it, receivers of this form of payment usually respect the “agreement” and wait until the agreed date before submitting it to the bank. It is this feature that has allowed this form of payment to flourish in the Brazilian retail market (it is estimated that 60 percent of all checks are pre-dated checks). Some institutions have specialized in cashing these checks (discounting them), actually extending credit to the check holder until the agreed date (e.g. factoring firms), when they then cash the check.

Promissory note - A promise, made by a person to another person, of paying a specified amount in cash at a specified date

Protesto – Procedure through which creditors make public that a debtor has defaulted on a credit security. This fact is communicated to a public register that then requests the debtor to pay the debt. The original idea behind the *protesto* was to allow the creditor to demand the payment from its guarantors. In time, it became a way inform other possible creditors of the debtor's lack of creditworthiness.

Selic rate - This is the primary interest rate of funds negotiated in the acquisition and sale of public securities registered in the Selic (Special System of Liquidation and Custody). This system is an electronic system under the responsibility of the Central Bank and of ANDIMA (National Association of Open Market Institutions), where the liquidation and custody of deals with federal securities takes place. In the Selic, registered financial institutions negotiate federal government securities issued by the

Central Bank and the National Treasury. The average daily turnover in the Selic in 1997 was R\$ 234 billion/day in 1997.

TBF (Basic Financial Rate) – The TBF represents an average of the rates paid on CD's and RD's (certificates and receipts of deposit, respectively) of 30 to 35 days, weighted by their respective volumes, issued by the largest 30 institutions in Brazil. The two largest and smallest rates are excluded from the average.

TJLP (Long Term Interest Rate) – The TJLP was established in November 1994 with the objective of creating an interest rate for long term loans less affected by short-term monetary policy (as is the case of the TR, which the TJLP was intended to replace). Currently the TJLP is the main reference rate for loans provided by BNDES. The TJLP is fixed every three months and is calculated as a weighted average of public foreign debt securities with at least a year until maturity and public federal domestic debt securities with at least six months until maturity.

TR (Reference Rate) – The reference rate (TR) was created after the Collor Plan II (1991) to be a reference of future inflation included in nominal market interest rates, changing the previous system of indexation to past inflation. Currently, the main use of the TR is as a basic rate of the Brazilian System of Savings and Loans (SBPE), which finances housing construction. It is used to index interest rates of the popular savings accounts, which pay interest rate of TR+6% p.a. The value of the TR is derived from the TBF (average value of CD's and RD's (Receipt of Deposit) of 30 to 35 days).

Appendix B

Table B.1: Indicators of credit activity by banks in selected countries

Country	Bank Credit to the Private Sector			Bank Sector Indicators			
	Annual Growth Rate		% of GDP	Costs		Net Interest Margin	
	1981-89	1990-97		1990-94	1995-96	1990-94	1995-96
India	8	4	24	2.3	2.5	3.1	3.5
China	12	13	97	1.0	1.4	1.7	2.2
Hong Kong	13	8	157	0.15	0.4	0.25	0.3
Taiwan	15	13	138	1.3	1.3	2.1	2.2
Korea	13	12	64	1.96	2.1	2.26	2.2
Indonesia	22	18	57	2.3	2.8	3.3	3.6
Malaysia	11	16	95	1.65	1.4	4.75	3.2
Philippines	-5	18	52	4.0	3.5	5.3	4.8
Singapore	10	12	97	0.8	0.7	2.2	2.0
Thailand	15	18	105	1.9	1.8	3.6	3.6
Argentina	-2	4	18	11.0	6.3	13.1	7.2
Brazil	7	2	24	10.1	6.7	15.5	6.7
Chile	8	11	53	3.1	3.2	6.3	5.7
Colombia	7	9	20	7.5	7.5	8.7	10.0
Mexico	-2	7	14	4.0	3.0	5.4	4.4
Peru	-13	27	19	9.9	7.0	8.0	7.0
Venezuela	-13	-9	9	5.9	7.3	9.5	17.2
memo							
U.S.A	5	0.5	65	3.7	3.4	4.1	3.8
Japan	8	1.5	111	1.0	1.1	1.2	1.5
European G-10 countries	6	4	89	2.1	1.9	2.3	2.0

Source: Central banks, IMF; IBCA, in Gazeta Mercantil (June 6, 1998, p. B-24).

Notes: (1) Annual average; (2) Deflated using CPI; (3) Preliminary data; (4) Bank credit out of central administration; (5) 1993-94; (6) 1991-94.

Table B.2: Loans by Public Financial Institutions: Performing Loans (Balances on Dec. 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal.	Total	Industry	Housing	Rural	Commerce	Household Credit	Other Services	Total	
1988	8,264,414	12,941,910	21,206,324	6,652,751	15,032,457	5,521,582	1,057,701	475,748	1,124,767	29,865,006	51,071,330
1989	88,779	223,312	312,091	84,371	400,082	52,495	12,276	8,032	12,601	569,857	881,948
1990	991,444	2,711,622	3,703,066	1,190,522	3,297,126	928,189	182,207	57,925	146,679	5,802,648	9,505,714
1991	5,105,248	12,191,186	17,296,434	6,999,366	13,895,655	6,876,068	1,178,661	556,591	893,625	30,399,966	47,696,400
1992	57,234,386	200,869,220	258,103,606	118,127,958	288,284,134	105,244,978	16,195,791	8,357,324	16,105,019	552,315,204	810,418,810
1993	2,257,347	5,613,198	7,870,545	3,610,943	8,291,190	2,861,513	683,574	432,439	579,010	16,458,669	24,329,214
1994	5,555	18,096	23,651	15,046	31,625	13,032	4,059	3,741	2,603	70,106	93,757
1995	4,994	24,373	29,367	17,006	37,812	18,637	4,542	4,185	3,277	85,459	114,826
1996	3,955	35,862	39,817	16,836	39,917	13,854	3,886	5,505	4,852	84,850	124,667
1997	2,878	17,736	20,614	20,083	43,239	15,911	3,512	6,798	5,415	94,958	115,572

Source: Central Bank.

Notes: (1) Does not include FGTS (Fundo de Garantia de Tempo de Serviço, a compulsory savings earning TR+3% p.a. which can be withdrawn only in case of (a) being laid-off, (b) retirement, or (c) marriage) operations and pending information. (2) All figures are in current prices: 1988: cruzados; 1989: new cruzados; 1990-92: cruzeiros; 1993: cruzeiros reais; and 1994-98: reais. For all years, figures show the stock of loans in December 31st, except for 1998, for which figures are for February 28th. (3) State enterprises are included in public sector. (4) Foundations, institutes and other institutions maintained with budgetary funds from the public sector (e.g. autarquias) are included in the private sector.

Table B.3: Loans by National Private Financial Institutions: Performing Loans (Balances on Dec. 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal.	Total	Industry	Housing	Rural	Commerce	Household Credit	Other Services	Total	
1988	948,001	617,658	1,565,659	4,761,269	7,996,441	614,831	7,996,441	1,331,124	3,026,590	25,726,696	27,292,355
1989	8,676	7,505	16,181	75,468	157,573	11,031	19,841	15,414	40,087	319,414	335,595
1990	90,710	84,197	174,907	1,209,170	2,013,783	222,147	419,142	119,770	792,382	4,776,394	4,951,301
1991	626,958	617,704	1,244,662	6,936,325	8,605,325	1,286,101	2,637,757	1,191,465	4,180,731	24,837,704	26,082,366
1992	6,495,271	11,080,610	17,575,881	119,647,912	103,689,908	14,805,798	52,283,193	25,522,580	98,047,513	413,996,904	431,572,785
1993	120,878	444,453	565,331	4,251,938	2,694,125	551,211	2,173,323	974,530	4,429,172	15,074,299	15,639,630
1994	404	1,359	1,763	17,485	10,949	2,249	12,362	8,985	15,317	67,347	6,9110
1995	525	2,430	2,955	21,521	10,841	2,582	11,774	7,166	14,393	68,277	71,232
1996	773	2,015	2,788	25,402	9,580	3,081	12,688	11,233	14,099	76,083	78,871
1997	553	1,388	1,941	24,294	7,903	3,571	12,148	15,967	14,589	78,472	80,413

Source: Central Bank.

Notes: See Table B.2.

Table B.4: Loans by Foreign Financial Institutions: Performing Loans (Balances on December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal.	Total	Industry	Housing	Rural	Commerce	Household Credit	Other Services	Total	
1988	567,483	632,787	1,200,270	2,693,500	193	62,697	441,423	130,036	550,977	3,878,826	5,079,096
1989	7510	6,406	13,916	33,607	20	937	9,285	2,115	11,840	57,804	71,720
1990	81,343	76,995	158,338	639,279	3,124	25,624	147,252	40,431	154,634	1,010,344	1,168,682
1991	277,912	374,597	652,509	3,491,701	40,619	153,957	1,230,938	150,373	995,167	6,062,755	6,715,264
1992	2,216,796	3,378,389	5,595,185	55,010,411	723,711	1,650,254	14,928,153	4,491,511	11,807,422	88,611,462	94,206,647
1993	16,471	32,932	49,403	8,674,176	29,040	39,768	916,236	258,263	416,607	10,334,090	10,383,493
1994	12	62	74	4130	171	138	1,276	1,652	1,679	9,046	9,120
1995	69	83	152	6,959	288	141	3,828	725	2,537	14,478	14,630
1996	51	53	104	7,984	489	1,286	4,670	2,818	2,324	19,571	19,675
1997	37	69	106	10,076	828	2,116	4,295	6,109	2,323	25,747	25,853

Source: Central Bank.

Note: See Table B.2

Table B.5: Overdue Loans of Public Financial Institutions (Balances on December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal	Total	Industry	Housing	Rural	Commerce	Hous. Credit	Other Services	Total	
1988	52,709	770,216	822,925	130,306	51,629	28,157	37,418	51,262	18,678	31,7450	1,140,375
1989	2,532	4,737	7,269	2,269	316	209	54	10	555	3,413	10,682
1990	242,545	49,471	292,016	81,483	5510	85,654	1,1750	1,139	10,559	196,095	488,111
1991	1,686,239	1,975,227	3,661,466	561,123	26,922	766,532	63,989	10,071	62,108	1,490,745	5,152,211
1992	22,161,338	10,762,472	32,923,810	8,008,483	91,6250	9,248,497	1,412,768	776,165	1,311,585	21,673,748	54,597,558
1993	623,194	157,604	780,798	199,939	21,534	303,282	46,855	12,961	54,458	639,029	1,419,827
1994	1,679	5	1,684	1,231	157	1,024	181	41	116	2750	4,434
1995	0	30	30	2,047	249	355	1,031	348	535	4,565	4,595
1996	0	706	706	969	509	75	372	168	217	2310	3,016
1997	0	174	174	1,314	400	211	227	135	123	2410	2,584

Source: Central Bank.

Notes: Loans are considered defaulted if overdue for more than 180 days and with guarantees considered insufficient and for more than 360 days when guarantees are considered sufficient (Central Bank Resolution 1748 of August 30, 1990). Values are measured including interest and penalties. See other notes in Table B.2.

Table B.6: Overdue Loans of National Private Financial Institutions (Balances on December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal	Total	Industry	Housing	Rural	Commerce	Hous. Credit	Other Services	Total	
1988	19,585	23,882	43,467	52520	36620	19,761	47790	35,715	34,836	227,242	270,709
1989	1,516	1,279	2,794	769	95	73	84	158	483	1,662	4,456
1990	28,393	8,926	37,319	17350	13,438	1,279	2,974	2,814	5,326	43,181	80500
1991	39,974	19,522	59,496	38,822	28,487	7,573	42,772	13,976	47,456	179,086	238,582
1992	139,333	1,3260	271,934	558,945	664,773	106,274	258,781	182,699	844,942	2,616,414	2,888,348
1993	280	3,272	3,553	30,015	10,512	961	12,235	12,967	55,842	122,532	126,085
1994	0	37	37	176	65	14	102	100	179	636	673
1995	0	107	107	569	78	47	455	468	830	2,447	2,554
1996	1	55	56	262	72	63	374	317	674	1,762	1,818
1997	0	9	9	211	61	5	225	614	306	1,422	1,431

Source: Central Bank.

Notes: See Table B.5

Table B.7: Overdue Loans of Foreign Financial Institutions (Balances on December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal	Total	Industry	Housing	Rural	Commerce	Hous. Credit	Other Services	Total	
1988	4,515	6,335	10850	10,788	0	1,861	5,781	53	38	18,521	29,371
1989	410	415	825	72	0	25	64	6	34	201	1,026
1990	16,763	14,777	31540	10,389	0	321	1,155	320	941	13,126	44,666
1991	175,563	6,488	182,051	34,553	273	5,471	9,184	921	6,226	56,628	238,679
1992	308,807	8,044	316,851	286,353	1,986	20,491	59070	17,162	73,526	458,588	775,439
1993	0	0	0	15,964	327	742	2,494	3,887	3370	26,784	26,784
1994	0	16	16	38	0	1	10	25	15	89	105
1995	0	9	9	57	1	4	130	62	64	318	327
1996	0	16	16	52	2	12	71	94	48	279	295
1997	0	12	12	66	6	19	128	287	49	555	567

Source: Central Bank.

Notes: See Table B.5.

Table B.8: Defaulted of Loans by Public Financial Institutions (Balances on December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal	Total	Industry	Housing	Rural	Commerce	Hous. Credit	Other Services	Total	
1988	3,667	677,101	71,377	571,972	301,481	47,049	69,136	11,958	35,956	1,037,552	1,108,929
1989	526	2,868	3,394	8,225	5,643	1,856	1,306	111	562	17,703	21,097
1990	133,236	102,581	235,817	239,947	79,479	64,308	51,695	6,447	45,868	487,744	723,561
1991	241,730	673,331	915,061	2,845,987	294,784	451,154	265,750	45,199	534,170	4,437,044	5,352,105
1992	4,466,317	31,310,244	35,776,561	28,540,884	8,300,095	7,857,873	6,555,444	954,976	25,636,355	77,845,627	113,622,188
1993	293,251	675,816	969,067	1,895,108	233,355	695,034	469,288	104,242	3,536,843	6,933,870	7,902,937
1994	648	655	1,303	5,714	1,087	2,131	1,682	386	3130	14130	15,433
1995	2,252	701	2,953	15,636	2900	6,306	4,469	1,729	11,511	42,551	45,504
1996	125	1280	1,405	38,778	3,357	6,675	14,588	4,234	31,424	99,056	100,461
1997	104	1,124	1,228	85,408	1,989	6,344	41,693	9,673	91,346	236,453	237,681

Source: Central Bank.

Notes: See Table B.5.

Table B.9: Defaulted Loans of National Private Financial Institutions (Balances on December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal	Total	Industry	Housing	Rural	Commerce	Hous. Credit	Other Services	Total	
1988	60,563	63,736	124,299	311,013	30,424	76,162	5,261,170	25,203	244,966	5,948,941	6,073,240
1989	1,174	1,319	2,493	4,101	226	829	62,836	278	1,495	69,765	72,258
1990	18,814	23680	42,494	117,170	6,203	51,758	627,706	16,369	125,617	944,823	987,317
1991	90,271	115,478	205,749	424,724	60,008	141,455	3,315,178	42080	193,972	4,177,417	4,383,166
1992	1,718,257	1,679,065	3,397,322	10,533,934	650,115	6,860,288	36,152,575	666,684	21,455,238	76,318,834	79,716,156
1993	58,571	52250	110,821	381,554	25,494	311,705	740,321	38,171	858,583	2,355,828	2,466,649
1994	165	212	377	1,906	97	2,036	3,052	497	3,761	11,349	11,726
1995	101	211	312	3,456	100	5,899	3,247	1,178	6,472	20,352	20,664
1996	102	161	263	1,864	33	1,998	3,316	1020	3,744	11,975	12,238
1997	105	149	254	1,723	107	1,933	2,926	5,151	4,396	16,236	16490

Source: Central Bank.

Notes: See Table B.5.

Table B.10: Defaulted Loans of Foreign Financial Institutions (Balances on December 31st)

	Public Sector			Private Sector							Grand Total
	Federal Gov.	States and Municipal	Total	Industry	Housing	Rural	Commerce	Hous. Credit	Other Services	Total	
1988	0	0	0	18,582	0	1,496	6,011	462	1,767	28,318	28,318
1989	387	178	565	281	0	4	24	22	26	357	922
1990	4,474	3,535	8,009	20,107	0	260	4,600	593	1,056	26,616	34,625
1991	27,773	24,779	52,552	150,175	231	5,559	20,726	5,139	8,029	189,859	242,411
1992	2,024,349	132,916	2,157,265	1,856,401	4,689	61,044	399,016	48,443	169,661	2,539,254	4,696,519
1993	2,153	3,792	5,945	61,636	290	850	13,482	4,032	5,628	85,918	91,863
1994	6	0	6	274	6	49	68	37	30	464	470
1995	9	0	9	611	111	75	230	180	116	1,323	1,332
1996	11	0	11	682	276	105	329	288	226	1,906	1,917
1997	15	1	16	783	331	144	343	712	460	2,773	2,789

Source: Central Bank.

Notes: See Table B.5.

Table B.11: Distribution of Bank Branches and Credits by State

Region/State	1988			1989			1990			1991			1992		
	Branches	Rural Credit	Other Credits	Branches	Rural Credit	Other Credits	Branches	Rural Credit	Other Credits	Branches	Rural Credit	Other Credits	Branches	Rural Credit	Other Credits
North	4.3%	2.7%	0.9%	4.3%	2.2%	0.8%	4.3%	2.5%	0.8%	4.4%	2.7%	0.8%	4.2%	2.8%	2.9%
Acre	0.3%	0.3%	0.0%	0.3%	0.4%	0.0%	0.3%	0.1%	0.0%	0.3%	0.1%	0.1%	0.3%	0.1%	0.3%
Amazonas	0.8%	0.2%	0.3%	0.9%	0.2%	0.3%	0.9%	0.3%	0.3%	0.9%	0.3%	0.5%	0.9%	0.2%	1.1%
Rorôndônia	0.8%	0.2%	0.1%	0.7%	0.1%	0.0%	0.7%	0.2%	0.1%	0.7%	0.2%	0.1%	0.6%	0.2%	0.0%
Pará	1.8%	0.9%	0.4%	1.7%	0.7%	0.3%	1.7%	0.9%	0.4%	1.8%	1.0%	0.0%	1.8%	0.9%	1.4%
Amapá	0.1%	1.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%
Roraima	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%
Tocantins	0.5%	0.0%	0.0%	0.5%	0.8%	0.0%	0.5%	0.9%	0.0%	0.5%	1.0%	0.0%	0.5%	1.2%	0.0%
South	19.9%	35.3%	8.3%	20.9%	32.2%	11.2%	20.6%	35.1%	10.2%	22.0%	36.7%	5.9%	21.3%	37.9%	26.4%
Paraná	7.8%	11.6%	0.0%	7.7%	11.3%	3.6%	7.7%	15.1%	3.3%	8.1%	13.9%	3.6%	8.0%	13.8%	9.9%
Rio Grande do Sul	7.6%	19.6%	2.6%	8.6%	17.0%	5.6%	8.3%	16.3%	4.7%	8.9%	18.3%	0.0%	8.5%	19.6%	11.5%
Santa Catarina	4.5%	4.1%	5.7%	4.5%	3.9%	2.0%	4.5%	3.7%	2.2%	5.0%	4.5%	2.3%	4.8%	4.5%	5.0%
Center-West	7.6%	22.6%	15.3%	8.0%	24.6%	11.0%	7.7%	20.4%	11.7%	5%	21.9%	12.0%	8.2%	21.6%	8.1%
Mato Grosso	1.9%	6.8%	0.4%	1.9%	6.1%	0.3%	1.9%	5.3%	0.4%	1.9%	5.5%	0.5%	1.8%	6.9%	0.8%
M. Grosso do Sul	1.7%	4.9%	0.5%	1.7%	4.6%	0.5%	1.7%	5.2%	0.5%	0.0%	8.3%	11.2%	1.8%	4.8%	1.8%
Goiás	3.0%	9.4%	1.4%	3.3%	11.2%	1.0%	3.0%	7.9%	0.6%	3.4%	8.0%	0.4%	3.3%	9.0%	1.2%
D.F.	1.0%	1.5%	13.0%	1.0%	2.6%	9.1%	1.1%	1.9%	10.3%	0.0%	0.0%	0.0%	1.3%	1.0%	4.3%
Southeast	50.7%	23.9%	67.8%	49.1%	26.7%	69.7%	50.7%	29.4%	67.2%	51.2%	25.9%	71.5%	49.8%	22.7%	39.4%
Rio de Janeiro	7.9%	1.4%	28.4%	8.0%	1.2%	26.9%	8.2%	0.9%	22.0%	8.7%	0.8%	24.2%	8.5%	0.7%	12.4%
São Paulo	29.7%	15.0%	32.6%	28.3%	18.8%	35.9%	29.1%	21.6%	38.3%	30.6%	18.2%	40.8%	29.7%	15.9%	10.8%
Minas Gerais	11.5%	6.9%	6.0%	11.3%	6.3%	6.2%	11.9%	6.4%	6.2%	10.2%	6.6%	5.7%	9.9%	5.8%	14.6%
Espírito Santo	1.5%	0.6%	0.8%	1.5%	0.5%	0.8%	1.5%	0.5%	0.7%	1.7%	0.4%	0.7%	1.7%	0.3%	1.6%
Northeast	17.6%	15.5%	7.6%	17.7%	14.3%	7.3%	16.7%	12.6%	10.0%	17.0%	12.8%	9.9%	16.5%	15.0%	23.3%
Bahia	5.4%	6.4%	2.5%	5.4%	5.6%	2.2%	5.1%	5.1%	3.8%	5.3%	5.3%	3.5%	5.3%	5.4%	8.1%
Sergipe	1.0%	0.4%	0.1%	1.0%	0.3%	0.1%	1.0%	0.4%	0.1%	1.1%	0.3%	0.2%	1.0%	0.3%	0.5%
Pernambuco	3.3%	2.7%	1.7%	3.3%	2.9%	1.5%	3.5%	2.2%	2.8%	3.1%	2.1%	2.6%	3.0%	2.6%	6.1%
Paraíba	1.4%	0.7%	0.3%	1.4%	0.6%	0.3%	1.1%	0.4%	0.3%	1.1%	0.5%	0.3%	1.0%	0.6%	0.7%
Rio G. do Norte	1.1%	0.7%	0.4%	1.1%	0.6%	0.4%	0.8%	0.5%	0.2%	0.8%	0.6%	0.2%	0.8%	0.9%	0.5%
Piauí	1.0%	0.4%	0.2%	0.9%	0.4%	0.2%	0.6%	0.7%	0.1%	0.7%	0.7%	0.1%	0.6%	0.7%	0.3%
Maranhão	1.4%	1.2%	0.7%	1.6%	1.2%	0.8%	1.7%	1.2%	0.8%	1.8%	1.3%	0.7%	1.7%	2.0%	1.6%
Ceará	2.1%	1.4%	1.4%	2.1%	1.5%	1.5%	2.1%	0.9%	1.5%	2.2%	0.9%	1.6%	2.1%	1.1%	4.1%
Alagoas	0.8%	1.6%	0.3%	0.9%	1.1%	0.3%	0.9%	1.1%	0.3%	0.9%	1.1%	0.5%	0.9%	1.4%	1.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total in Value (1)	13,662	6,135	63,751	14,729	66	1,054	14,887	1,246	14,595	14,433	8,927	85,456	15,139	129,452	491,487

Source: Central Bank. (1) Number of agencies and total credit in billion.

Table B.11: Distribution of Bank Branches and Credits by State (Continuation)

Region/State	1993			1994			1995			1996			1997		
	Branches	Rural Credit	Other Credits	Branches	Rural Credit	Other Credits	Branches	Rural Credit	Other Credits	Branches	Rural Credit	Other Credits	Branches	Rural Credit	Other Credits
North	4.2%	2.9%	1.2%	4.2%	1.8%	1.3%	4.1%	1.8%	1.1%	4.0%	2.0%	3.7%	4.0%	2.6%	1.9%
Acre	0.3%	0.1%	0.1%	0.3%	0.0%	0.0%	0.2%	0.0%	0.1%	0.2%	0.0%	0.1%	0.2%	0.0%	0.1%
Amazonas	0.9%	0.2%	0.4%	0.8%	0.1%	0.4%	0.8%	0.1%	0.3%	0.8%	0.0%	0.4%	0.8%	0.0%	0.5%
Rorônia	0.6%	0.2%	0.1%	0.6%	0.1%	0.1%	0.6%	0.1%	0.1%	0.6%	0.2%	0.5%	0.7%	1.1%	0.2%
Pará	1.8%	0.9%	0.5%	1.8%	0.5%	0.7%	1.7%	0.5%	0.5%	1.6%	0.5%	2.5%	1.5%	0.3%	0.9%
Amapá	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%
Roraima	0.1%	0.2%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
Tocantins	0.5%	1.3%	0.0%	0.5%	1.1%	0.1%	0.6%	1.0%	0.1%	0.6%	1.1%	0.1%	0.7%	1.1%	0.2%
South	21.3%	37.2%	9.5%	21.1%	35.3%	11.1%	21.4%	30.9%	13.0%	21.0%	28.2%	12.2%	19.9%	26.6%	10.3%
Paraná	8.0%	14.1%	3.9%	7.9%	15.5%	5.1%	8.0%	13.5%	6.1%	7.7%	13.0%	5.2%	6.0%	11.1%	3.5%
Rio Grande do Sul	8.5%	19.5%	3.7%	8.4%	16.4%	4.3%	8.6%	14.0%	5.2%	8.5%	11.6%	5.4%	8.7%	11.9%	4.9%
Santa Catarina	4.8%	3.6%	1.9%	4.8%	3.3%	1.7%	4.8%	3.4%	1.7%	4.8%	3.6%	1.7%	5.3%	3.6%	1.9%
Center-West	8.2%	22.3%	10.5%	8.2%	24.8%	9.5%	8.2%	26.4%	10.6%	8.0%	25.8%	6.7%	8.6%	23.9%	11.8%
Mato Grosso	1.8%	7.7%	0.3%	1.8%	9.1%	0.7%	1.7%	9.5%	0.5%	1.5%	9.1%	0.8%	1.6%	8.9%	0.9%
M. Grosso do Sul	1.8%	4.8%	0.7%	1.7%	5.9%	0.8%	1.8%	5.6%	0.7%	1.7%	5.5%	0.9%	1.8%	4.7%	1.1%
Goiás	3.3%	9.1%	0.5%	3.3%	9.2%	0.9%	3.5%	10.4%	1.8%	3.4%	10.2%	2.2%	3.7%	9.3%	1.2%
D.F.	1.3%	0.7%	9.0%	1.3%	0.8%	7.2%	1.4%	1.0%	7.5%	1.4%	1.1%	2.8%	1.6%	1.0%	8.6%
Southeast	49.9%	24.1%	70.9%	50.6%	23.9%	69.0%	50.2%	25.7%	65.0%	51.2%	34.0%	68.7%	52.1%	36.4%	62.1%
Rio de Janeiro	8.5%	0.4%	19.2%	8.5%	0.6%	10.3%	8.4%	1.6%	9.7%	8.5%	0.8%	6.3%	9.4%	0.6%	11.1%
São Paulo	29.9%	17.9%	45.3%	29.8%	17.1%	51.4%	29.1%	16.4%	49.3%	29.8%	25.6%	57.5%	32.6%	27.3%	44.9%
Minas Gerais	9.9%	5.5%	5.7%	10.5%	5.9%	6.5%	10.9%	7.1%	5.4%	11.1%	6.9%	4.1%	8.8%	8.0%	5.2%
Espírito Santo	1.7%	0.3%	0.6%	1.7%	0.4%	0.8%	1.8%	0.6%	0.7%	1.8%	0.7%	0.8%	1.3%	0.5%	0.9%
Northeast	16.3%	13.4%	8.0%	16.0%	14.1%	9.1%	16.1%	15.2%	10.3%	15.8%	10.0%	8.6%	15.3%	10.5%	13.9%
Bahia	5.2%	4.4%	3.1%	5.2%	4.6%	3.7%	4.9%	4.9%	3.4%	4.8%	3.2%	2.3%	4.0%	3.1%	2.8%
Sergipe	1.0%	0.3%	0.2%	1.0%	0.3%	0.2%	1.0%	0.5%	0.2%	0.9%	0.3%	0.2%	1.1%	0.4%	0.5%
Pernambuco	2.8%	2.9%	2.1%	2.7%	3.2%	2.4%	2.9%	3.2%	3.3%	2.9%	2.4%	1.8%	2.7%	2.6%	1.8%
Paraíba	1.1%	0.7%	0.3%	1.0%	0.7%	0.3%	1.1%	0.8%	0.3%	1.1%	0.4%	0.2%	0.8%	0.9%	0.8%
Rio G. do Norte	0.7%	1.0%	0.2%	0.7%	0.9%	0.3%	0.8%	0.9%	0.3%	0.8%	0.5%	0.3%	0.8%	0.6%	0.6%
Piauí	0.6%	0.7%	0.1%	0.7%	0.8%	0.1%	0.7%	0.8%	0.2%	0.7%	0.5%	0.3%	0.8%	0.7%	0.4%
Maranhão	1.7%	0.9%	0.5%	1.7%	1.1%	0.4%	1.7%	1.4%	0.3%	1.6%	1.1%	0.4%	1.7%	1.1%	0.7%
Ceará	2.2%	1.1%	1.3%	2.1%	1.3%	1.3%	2.2%	1.5%	1.9%	2.2%	0.6%	1.5%	2.3%	0.8%	1.5%
Alagoas	0.9%	1.5%	0.3%	0.8%	1.3%	0.3%	0.9%	1.3%	0.3%	0.9%	0.9%	1.5%	1.0%	0.3%	4.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total in Value (1)	15,211	3,646	39,588	15,481	15.8	130.0	17,034	21.8	206.1	16,415	18.2	238.8	14,632	21.6	237.8

Source: Central Bank. (1) Number of agencies and total credit in billion.

Appendix C

Legal Regime of Creditors' Guarantees

Several different laws define creditors' rights in Brazil. Besides the Civil Code (Law 3071 of January 1st, 1916), which fixes the norms governing contracts in general, many other subsidiary statutes are relevant – legislation on bankruptcy, the Commercial Code, laws ruling specific securities and types of guarantees, the consumer protection law, specific legislation on credit operations with foreigners (or funded with resources borrowed abroad), etc.⁶⁸ Legally, these rights are the same whether the loan is secured or not, whether it is extended to a person or to a company, whether it is based on a credit security or on a regular contract, etc. However, the practice of judicial enforcement and, to a lesser extent, the preferences established by the Bankruptcy Law make the degree of creditors' protection crucially dependent on the form in which the loan is extended.⁶⁹ As discussed in section 3, two crucial aspects of credit contracts in Brazil are (i) whether the credit is self-executable when due and (ii) if there will be assets for the *penhora*, once the *execution action* starts.⁷⁰ Much of the legislation ruling credit operations in Brazil concerns these two issues. Self-executable securities were discussed in section 3. This appendix describes the main kinds of guarantees used in credit contracts in Brazil.

Most loans extended to firms in Brazil carry both real and *fidejussory* guarantees.⁷¹ The two prevailing kinds of *fidejussory* guarantees are the *aval* and the *fiança* (bond). The *aval* is a guarantee of payment of a credit security given by an individual (it may only be given for credit securities). An *aval* allows the creditor to start an *execution action* against the person who gave the *aval*, after trying to collect from the debtor. This type of *fidejussory* guarantee is very common, both in personal and commercial loans.⁷² The *fiança* is another type of guarantee of payment, given through a specific contract by a person or a company (including banks).⁷³ With respect to credit, the *fiança* is a subsidiary obligation, that is, it exists only up to the limit established in the *fiança* contract and may only be charged if the debtor does not pay the debt. Unless the contract has a specific clause stating otherwise, the *fiador* (guarantor who gave the *fiança*) cannot be compelled to pay before the debtor has been judicially asked to pay the debt.

The most commonly used real guarantees in bank contracts are *penhor* (pawn), *caução* (bail), fiduciary alienation and mortgage. *Penhor* is "the submission of a mobile or mobilizable asset as a guarantee of the fulfillment of an obligation." (Civil Code art. 768). There must be a transfer of the asset from the debtor to the creditor, which may be either physical or symbolical in the case of a *mercantile penhor*. In the popular *civil penhor*, this transfer must be real (that is, the creditor must effectively have physical possession of the good).⁷⁴ The creditor receives the asset in the quality of depositary and it is in this quality that he must answer to debtor. Banks, because they do not have sufficient physical

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⁶⁸ For a review of the legal statutes governing credit contracts in Brazil see Rizzardo (1997) and Negrão (1998).

⁶⁹ To some extent, several of the subsidiary legal codes protecting creditors were conceived to deal with problems arising from the judicial weak enforcement of credit contracts.

⁷⁰ A third critical aspect to make borrowers willing to pay, the ability to block future credits in case of default, was explored in section 5.

⁷¹ As stated by a lawyer, "a bank only extends a loan to a firm without a real and a personal guarantee if someone makes a mistake."

⁷² In the case of personal loans, the *aval* is usually provided by someone known to the borrower who owns (local) property. In commercial loans, usually the owner and/or manager of the company are asked to give a personal *aval* to the loan.

⁷³ The price of a *fiança* provided by a first-rate bank on a credit operation ranges around 3 to 4% of the value of the loan per annum. One of the banks consulted, a public bank, charges 1% flat when the *fiança* is contracted, plus an annual fee that varies from 0% to 2.5% of the value of the loan depending on the risk of the borrower. When the *fiador* is married it is necessary that the spouse expressly agrees with the *fiança* contract.

⁷⁴ In addition to the *civil* and *mercantile penhores* there are the *rural* and *cedular penhores*. The *rural penhor* is regulated by Decree-Law 167/67 and is used to guarantee credit operations related to agricultural production. The *cedular penhor* is the *penhor* of *Credit Cédulas* (rural, industrial, commercial, etc.). Both the *cedular* and the *rural penhor* must be registered in the local Real State Register (where the asset used for the *penhora* is registered).

installations and trained personnel, tend to opt for a contract with a depositary, usually a third party (a partner or a manager of the client company) indicated by the debtor.⁷⁵

Derived from the *penhor*, the *caução* is a guarantee through intangible goods (that is, on credits of the guarantor). In the *caução*, the guarantee is the right to the credit represented by a security and not to the security itself. For this reason, in order for this guarantee to be fully valid, in addition to the transference of the security to the creditor, a contract between the parties must be signed, stating that ownership (but not control) of the securities remains with the guarantor. With a *caução*, the creditor exercises all the rights over the security, in name of and for the benefit of the guarantor.⁷⁶ If there is a payment of the security given in *caução* the value paid will remain guaranteeing the fulfillment of the obligation.

Another legal solution found for the problem of guarantees is *fiduciary alienation* (*alienação fiduciária*). *Fiduciary alienation* (or alienation in guarantee) is the transmission of ownership of an asset from the debtor to the creditor as a guarantee of the fulfillment of an obligation of the debtor. The debtor remains in direct control of the asset, as a depositary, but ownership of the collateral is not actually transferred to him until the debt is fully paid. This type of guarantee was created to protect institutions financing the acquisition of mobile assets, such as durable consumer goods. It was particularly successful in allowing the growth of credit in the automobile market.⁷⁷

Fiduciary alienation allows creditors to request a search and seizure action of the collateral if the debtor does not pay by the maturity date.⁷⁸ It also allows them to sell the collateral to third parties and to use the sale proceeds to pay themselves back. Thanks to these features, the creditor no longer needs to sue the debtor before searching for the asset given as collateral, facilitating and speeding up the return of his credit.⁷⁹ Courts have a history of speedy rulings in this case. Also very important is the fact that in case of *concordata* (reorganization) or *bankruptcy* the assets financed through fiduciary alienation are not included in the common pool of assets to be sold and shared among creditors, since they are legally owned by the creditor. The success of *fiduciary alienation* in generating a strong supply of credit in the car market has encouraged the more recent creation of similar legislation for non-mobile assets. The objective is to encourage credit to the housing sector (Law 9514, of November 20, 1997). *Fiduciary alienation* does not work well for all types of goods. Goods financed must have a second-hand liquid market and their salvage value must not be very low. In the case of other consumer goods, for example, since resale values are low, search and seizure can easily cost more than the good is worth.

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⁷⁵ The *penhor* has to be contracted with a specific instrument and the asset object of the guarantee must be correctly and completely described in all its characteristics. With few exceptions, the *penhor*, to be valid against third parties (e.g., the depositary), must be recorded in the Securities and Documents Register (*Cartório de Registro de Títulos e Documentos*).

⁷⁶ In general, the banks include in the contracts several rights that may be exercised on the securities given in *caução*, including the right to use the result of charging in the liquidation or amortization of the debt.

⁷⁷ To be valid against third parties, this guarantee must also be registered in the Register of Securities and Documents of the city where the creditor is based. In the case of loans for the acquisition of motor vehicles, the contract must be registered with the department of motor vehicles where the vehicle is registered (effectively blocking its unauthorized sale).

⁷⁸ However, if after handling the asset the debtor is able to prove that he has paid 40% or more of the debt, he is allowed to keep the asset by paying the remaining debt (after the value of the debt is defined by the courts).

⁷⁹ Creditors may not, though, remain with the collateral; being required to sell it and to use the proceeds of the sale to liquidate the loan.

A *mortgage* is an onus placed on real estate, ships or airplanes to guarantee the fulfillment of an obligation. There is no transference of ownership of the asset to the creditor. However, the debtor may not dispose of the asset without creditor's authorization. For a *mortgage* to be formalized it must be done through a *Escritura Pública* (a public document of registry) or through a *Cédula de Crédito*. For a *mortgage* to be valid it must be registered in the local Real Estate Register or in the competent public institution (Ministry of Aeronautics or Navy), depending on the case.

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