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Increasing Indebtedness, Institutional Change and Credit Contracts in Peru

by

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Introduction

In this paper we review the main factors that allowed the rapid growth of credit in Peru in recent years. In the last 5 years the amount of credit allocated through formal financial intermediaries increased significantly. At the end of 1998, bank loans were around 25% of the GDP, significantly higher than the 8% of the GDP allocated by these institutions in 1993. This increasing amount of formal credit in the Peruvian economy results from a combination of several economic and institutional features.

The Peruvian economy has changed dramatically since 1990, when a structural adjustment program was applied. This program included several simultaneous reforms (privatization, market liberalization, public sector reforms, etc.). Within this adjustment program, the financial system was liberalized and opened to the global economy. The consequences of these reforms, such as ending a long high-inflation period and improving most macroeconomic indicators, led to a period of economic stability and, after 1993, of economic growth.

As part of the structural adjustment program, several reforms in reshaped the financial sector, the first of which was the new Banking, Finance and Insurance Act of 1991, later modified in 1993 and 1996. These allowed the birth of new specialized intermediaries and strengthened the system via new practices and improvements in the procedures used by banks in client selection. In addition, the Organic Act restructured prudential regulation and supervision, with the objective of achieving a more effective Superintendencia de Banca y Seguros (SBS), based on the Basle Agreement.

Both groups of changes were necessary conditions to permit more debt in the Peruvian economy without endangering the foundation of the recomposed financial system, and to induce new types of intermediaries to enter formal lending activities. The increasing indebtedness has two dimensions: providing more credit to the traditional clients, and reaching new client groups. The first required a significant increase in the amount of resources managed by intermediaries, that were obtained mainly from external sources which lent capital to domestic intermediaries or became their partners. This made the system highly dependent on these external resources. The second required the adoption of new credit technologies to reach client groups that lacked access to formal financial intermediaries. These techniques were developed mostly by informal (not overseen by the SBS) institutional lenders – NGOs (Non-Governmental Organizations) -- or by newly designed intermediaries – CRACs (Cajas Rurales de Ahorro y Crédito), CMAC (Cajas Municipales de Ahoro y Crédito) and EDPYME (Entidades de Desarrollo para la Pequeña y Micro Empresa). The adoption of new technologies and lending practices at all levels relies on better information-sharing systems that were developed in the formal and informal sectors.

The new credit technologies developed by the smaller or informal intermediaries are based on improvements in borrower selection and credit monitoring. In most cases, however, the enforcement procedures to recover default loans are still inefficient and in the process of development. Our review of the experiences of innovative intermediaries allows us to conclude that there is room to improve client selection through better use of the information available at different levels, and by better adapting credit technology to client needs. In the paper we discuss four different ways by which lenders improved the use of information and innovated credit allocation procedures to serve a segment of clients that apparently were not able to work with credit under market conditions. The four cases reviewed are: (1) the new information-sharing system (public and private institutions) that was recently born and has been growing fast; (2) the case of the CMACs, small scale formal intermediaries, that began working with new sets of clients (rural in the case presented); (3) the case of NGOs that are informal institutional lenders who serve small clients by trying to use the market to allocate their credit (although we found that most of these institutions receive some kind of subsidy); and (4) the case of coordination between the informal and formal sectors, which has been mostly unsuccessful.

Our review shows that information sharing systems develop in different ways and at different levels to serve a variety of demands. In this sense, most of the efforts to improve information flows complement existing information sharing systems, as shown by the CMAC and NGO experiences. Finally, the poor results of the bank-NGO coordination efforts reveal that improving the information flow about borrowers through this channel is not an easy, or cheap, way to improve borrower selection and does not reach the objective of providing sustained access to formal credit by specific groups of clients.

However, for all the cases discussed and for the formal sector, limitations to the expansion of financial activities persist. Certain reforms have not yet reached their objectives, and in certain sectors political and economic factors have constrained the adoption of new procedures, or counteracted the initial changes. Both types of problems result in higher transaction costs in financial markets. For example, judicial enforcement procedures are still inefficient, which increases the costs of credit for borrowers and the risk of lending for intermediaries.

Following this introduction, in section II we present a brief review of the recent development of the formal financial activities. This will include a review and discussion of the relevant recent developments in the Peruvian credit market. In section III we discuss the most important public arrangements that define the new context for credit transactions. In section IV we present four private arrangements that support the debt expansion through better borrower selection practices. In section V we discuss the persistent limitations to credit expansion , using two examples: judicial enforcement procedures, as an example of persistent limitations to the expansion of credit ; and information sharing systems, as an example of an ongoing process that has not yet reached all its objectives. The final section contains the conclusions of the study.

II. Recent developments in the credit market: increasing indebtedness

The formal financial system in Peru is composed of five subsystems: Multiple banking, financial institutions (Financieras), CMACs, CRACs, and EDPYMEs. The last one can place funds but does not receive deposits. The EDPYMEs have been created to facilitate the formalization of institutional lenders that have been operating informally.[2]

1. Banks

The banking subsystem, until December 1998, comprised 26 banks,[3] six of which were 100% backed with national capital. These 26 banks are responsible for the 98.36% of the loans and 98.33% of the savings deposits in the formal financial system. Banks' market shares differ widely, with the four most important banks accounting for 60.85% of loans and 70% of the deposits.[4] In spite of this high concentration, this share has been falling since 1996. Banks have increased their productivity significantly: the ratio of deposits (in US$ thousands) to the number of workers has risen from 57.32 in 1990 to 436.32 in 1994 and to 524.33 in 1998.[5]

Between December 1994 and December 1998, bank loans increased from 5,417 to 13,320 million dollars, 81.45% of which were in foreign currency. This amount represented in 1998 more than the 25% of the GDP, a number much higher than the 8% of GDP that loans represented in 1993 (Marthans, 1997b).[6] For this same period, deposits increased from 5,804 to 13,060 million dollars, with 72.46% being in dollars. Loans increased more than deposits owing to the increased external debt of intermediaries. Loans and deposits remain concentrated in Lima, the country's capital (79.4% of loans of the subsystem).[7] Likewise, 86.6% of the loans correspond to commercial credit, 7.7% to personal credit and 5.7% mortgage credit.

Although intermediation has grown at a faster rate than the economy as a whole, it is still at relatively low levels compared to other countries in the region.[8] An indicator of the importance of bank loans can be obtained by comparing the results of the living standards measurement surveys (ENNIV). As shown in Table 1, in 1994 only the 16.6% of households

[2] "Informally" means not under the SBS oversight, i.e. not supervised and without legal recognition as lenders.
[3] Indeed, there were 25 banks in this subsystem in December 1998, since the Banco República was closed on November 25th, 1998. The information presented by the SBS includes this bank up to October 1998.
[4] General information about the financial system is presented in Annex 1.
[5] This greater productivity is also due to the increase of the intermediate volumes resulting from economic stability.
[6] The increase in lending is very unequal at the sector level. Lending to commerce exceeds 20% of their ouput, while lending to farming does not reach 5% of its output.
[7] The main agencies of all the banks are located in Lima.

had some credit, and scarcely 7.0% of these mentioned banks as their main source of credit. In 1997 we can see a substantial increase: 32.0% of households had some credit, and of these 26.7% came from banks. This growth is even more evident in urban areas.

Table 1
Households with credit: 1994 and 1997
(Percentages)

Indicator	1994			1997		
	Urban	Rural	Total	Urban	Rural	Total
% of household with credit	16.7	16.4	16.6	38.1	22.1	32.0
% of household with credit that mention banks as the main source	10.3	1.4	7.0	33.9	7.2	26.7

Cases: 1994: 3623; 1997: 3843
Source: Living Standards Measurement Survey (ENNIV) 94 and 97.

Banks have increased their own debt exposure, especially with foreign intermediaries, in step with their increase in lending. According to Marthans (1997a) there are five banks with more than the 200% of their capital in short term debts. This growth can be explained by high dollarization of the loans and deposits, high legal reserves to deposits in foreign currency, and no legal reserve requirements for external source loans.[10] The rapid growth of debts and other liabilities in the short run has caused banks not only to worry about making their loans in dollars (to avoid the exchange risk),[11] but also to match the maturity structure of their loans with that of their liabilities. [12]

In the period analyzed, the lending rates in domestic currency showed a slight tendency towards a decrease, while the dollar rate remained steady. In December 1998, the average lending interest rate (on annualbasis) in domestic currency (TAMN) was 36.45%, close to its value at the beginning of 1995; the average deposit rate in domestic currency (TIPMN) was 12.55%; the

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[8] According to Marthans (1997b), only 1 out of 5 persons in Lima with saving capacity works with a bank.

[10] During the entire period under analysis the Banco Central de Reserva (BCRP) maintained a legal reserve of 45% on deposits in foreign currency. On the 1st of July 1998 the legal reserve on the deposits in foreign currency was reduced from 45% to 35%, and the remuneration to the medium legal reserve was increased from 4.3% to 4.7% in order to reduce the incentives to obtain loanable resources outside the country.

[11] Rojas (1997) says that concerning the high levels of dollarization, the banks will be matching deposits (the most debtors) and loans by type of currency to avoid the exchange risk.

[12] Many intermediaries have increased their interest rate exposure, by borrowing at variable rates while lending at fixed rates.

lending rate in dollars (TAMEX) was 16.95%, while the deposit (TIPMEX) was 5.39%, 0.45 higher than the average at the end of 1994.

Interest rates vary considerably across banks, especially between corporate banks and the so called "retail banks". For example , the main bank in the country currently charges an average rate of 36.2% for loans in domestic currency up to 360 days, while retail banks charge between 113.4% and 138% for the same loans. These extremely high interest rates charged by the retail banking raise two important issues. First, they suggest that many borrowers may be unable to deal with banks, shopping around to find the cheapest terms for their loans. Second, retail banks may charge such high rates to compensate for the absence of guarantees and information about most of their borrowers.

The bad debt indicator, used as a soundness indicator for the financial system, shows a favorable evolution in the last few years. The bad debts of banks have fallen since the end of 1994, reaching 6.96 in December 1998 . Out of the total delayed loans of the banking system, around 54% are in the process of judicial collection. According to our interviews, the percentage of the delayed portfolio in the judicial process is high due to the excessive time it takes to solve a judicial procedure of this nature, as we shall discuss in section V.

2. Other formal intermediaries

Banks are the most important intermediaries, but one should not disregard other intermediaries. Until December 1998, beside banks, there were seven financial institutions (Financieras), 17 CMACs and 14 CRACs. These 38 institutions accounted for less than 2% of all financial system loans. Even though they intermediate small volumes, they are important for their local impact and for the type of client they work with (mostly small clients not served by banks). Trivelli (1998) found, for example, that banks lend only to agricultural producers with more than 10 hectares of land, while CRACs and CMACs consider ideal clients agricultural producers owning between 3 and 10 hectares. These intermediaries, mainly CRACs, CMACs and

EDPYMEs, have tended to establish more innovative credit contracts, broadly based on information that the lender has about potential clients.

The institutions comprising these four subsystems were created to supply credit to specific groups of clients. The Financieras, many linked to large department stores, operate with the purpose of increasing the sales of their products through credit operations, that is, they grant loans in the form of products. The CMACs are dedicated mainly to serving small clients (both in loans and deposits), especially small urban enterprises and dealers: they cater to nearly 200,000 clients, of which 37% are micro entrepreneurs and 44% are individuals (Chong and Schroth, 1998). The CRACs serve the small farmers (with less than 10 hectares) as their primary clients.[13]

The CMACs and CRACs are the only ones that have a local, and not a nationwide nature, which, on one hand, restricts their chances of development (little opportunity to diversify risks, for example) but, on the other hand, provides the advantage of drawing on local information about their clients. These two subsystems are very recent in Peru and feature an uneven development.

These subsystems are more dependent on foreign funds (not deposits) than the banks. However, in contrast to banks, the indebted amount comes mainly from funds provided by the Corporación Financiera de Desarrollo (COFIDE), which performs as "second tier" bank. Many analyses of the performance of the CRACs and the CMACs agree that this dependence on funds from COFIDE, and the inability to acquire funds by other means, is one of the principal causes for the poor performance of many of them (see for example Alvarado and Ugaz 1998; Lazarte, 1996; Trivelli, 1998). However, access to these resources is one of the main reasons why informal intermediaries would want to become formal by converting to an EDPYME or a CRAC.

The default rates for the CMACs and the CRACs are higher than in banks. The default rate of the CMACs is decreasing over time, while that of the CRACs is increasing (see Annex 1).

Nevertheless, the level of reserves in the CRACs has been increasing, and in 1998, covered 62.7% of its past-due portfolio. There are several reasons behind these different patterns: differences in management capacity, experience in the credit and financing business, speed in operation growth. Generally, CMACs have proved more efficient, due to their greater experience and the technical assistance received from international cooperation for many years. CMACs have been more successful than CRACs in obtaining deposits from the public and diversifying their loan portfolio.

III. New economic and institutional rules supporting the increase in debt

The recent growth of the Peruvian credit market has been induced, or at least favored, by important changes in the economic and institutional context since 1990. The control of high inflation, a more open market, privatization, liberalizing product and factor markets (amongst them, the capital markets), and in general, the application of a structural adjustment program have modified the way in which the economy works.[14] Complementary to the application of the economic adjustment program, the virtual elimination of guerrilla in 1992 (with the capture of the Shining Path's leader) marked the end of a long period of violence that hindered economic activity (main macroeconomic indicators are reported in Annex 2).

The new economic framework included several institutional reforms. For the financial system, in 1991, the "General Banking, Financial and Insurance Institutions Act", defined the new legal framework within which financial liberalization took take place. Later, in October 1993, the "New Act for Banking, Financial and Insurance Institutions" was passed, later replaced by the December 1996 Act 26702, which is currently in force. A result of this new legal framework, interest rates were liberalized, the intermediation of funds by non-authorized persons and entities was prohibited, all legal differences between domestic and foreign banks were eliminated, and total freedom was given to perform all operations in foreign currency. State

[13] By December 1998, 36.2% of the CMAC's loans went to the Commercial sector, and the 58.4% of the CRAC's loans went to the farming sector.

development banks were eliminated, thus reducing the state's participation in the financial system to two entities: COFIDE, and the Banco de la Nación; leaving out, of course, the Central Bank (BCRP) as part of the system.[15]

The new legislation also added new practices to strengthen the system. The most important changes are: 1) all financial institutions in the system, including the CMACs, CRACs, and EDPYMEs, are allowed, under certain requirements, to perform a set of operations and functions previously reserved to banking institutions; 2) the assessment and management of risk now includes market risk[16], as well as the credit risk; 3) new arrangements concerning the interval over which bank reserves are computed and the minimum legal reserve rate help to reduce liquiditycrunches; 4) a greater amount of reserves is required and most guarantees are no longer evaluated at a discount, to improve the quality of the bad debts portfolio; 5) the maximum risk of financial leverage is reduced to 11 times the effective capital of each financial institution; 6) collateral is considered only as a subsidiary criterion in client selection; and 7) prudential supervision focuses on the consolidated balance sheets of financial intermediaries..

Along with these measures, the Organic Act of the SBS was promulgated, to increase its effectiveness in regulation as well as supervision, based on the Basle Agreement.

According to bankers, the new legislation is mostly adequate and not to be further modified (except for small adjustments) due to the high cost of adapting to each new Act (three Acts were passed in six years). However, many bankers point out that the current legislation is tougher than that existing in other countries in the region, and in some cases stricter than the Basle Agreement standards (Morris, 1997; interviews with bankers).

The evaluation of portfolio risk and of the repayment capacity of borrowers (rather than their guarantees) has encouraged modernization of the client selection process by banks. The Act in force promotes an evaluation of clients based on the project to be financed and the

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[14] For details of the recent economic changes see Gonzales de Olarte (1998).
[15] For more details about the financial reform, see Rojas (1996), Romero (1996), and Velarde and Rodríguez (1996) among others.

possibilities of covering the debt rather than on their assets. These measures should promote access to the formal credit market by important segments of the population, especially by the small and micro business. In addition, the information provided by rating registers has been broadened to enhance a proper evaluation of current and potential debtors. In fact, the diminished importance of guarantees in classifying clients, as well as the determination of reserve requirements, have increased the importance of information as a key instrument to assure the repayment of loans. We will discuss the characteristics and uses of information systems in the next section.

IV. Private arrangements to improve borrower selection

In credit transactions, owing to the inter-temporal nature of credit and to the existence of information asymmetries, lenders do not know borrowers' real intentions to repay, and do not control borrowers' actions that can affect their capacity to repay. Also, lenders have only limited or partial knowledge of exogenous events that also affect the repayment capacity of borrowers. To minimize the risks of default, lenders perform a series of actions, which in the formal sector are directly related to the proper use of information about the borrower. As the quantity and quality of information increases, lenders can decrease their requirements for real guarantees from borrowers. In fact, as we will see later, in "non conventional" borrower selection procedures, access to more information completely eliminates the requirement for real guarantees. Financial intermediaries can enact several strategies to reduce their informational disadvantage in lending. We will discuss four of them in this section.

1. Information-sharing systems

Resorting to the data supplied by credit information systems can reduce the asymmetries of information between lenders and borrowers, and thereby facilitate the proper evaluation of debtors by each financial intermediary. Therefore, improving risk-rating registers reduces the problems of insolvency and strategic default. Currently, all financial institutions have to classify

[16] Risk related to external factors (not controlled by financial entities), such as the fluctuations of the interest rate and prices.

each client and post this classification in the risk rating registers so all other intermediaries will know how each client was evaluated by former lenders, as well as the client's outstanding debts.

Currently there are five risk rating registers: two public registers (one managed by SBS and one by the Chamber of Commerce) and three private credit bureaus (Infocorp, Certicom and Riesgo Cero). The beneficial effect of these registers on default rates cannot yet be seen, due to the short time they have been operating. However, the intermediaries agree that they provide a powerful instrument, that can be decisive in improving the quality of the loan portfolio.

The SBS's register is a system to record financial, credit, commercial, and insurance risks. It holds consolidated and classified information about debtors in the financial and insurance system. This information is available to firms within the financial and insurance system and the BCRP.[17, 18] Currently the SBS processes the information concerning all types of credit in the financial system whose amount is above S/.13,558 (equivalent to US$4,332 on December 31th, 1998); the remaining credit information (which covers around 20% of the total amount of credit and 80% of the total number of clients of the financial system) is processed by IBM of Peru, so that the universe of loans by formal financial intermediaries is covered. However, the latter information is still incomplete. The SBS processes information about debts by type of credit (normal, with potential problems, deficient, doubtful and loss), debtor's personal information (address, I.D. and residence), the economic strata and the economic sector in which the debtor works.[19]

The other public register is the Chamber of Commerce of Lima (CCL), which through the "National Debtor Register" (RNP) records all the securities (vouchers, promissory notes, warrants and exchange bills) reported as defaulted by notaries and justice of peace throughout

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[17] Not all the information that the SBS handles can be revealed to any individual, because of confidentiality, so the general public can only obtain information about cancellations of credit cards and checking accounts of the financial system clients, either in the SBS itself or on its free Internet web page.

[18] The cost of this information for firms is already included in the contributions they provide for SBS operations. Also, the SBS sells this information to all the private Risk Rating Registries.

[19] Debt is also classified as outstanding, due and of high risk; and direct and indirect (those obtained through guarantees, promissory note or exchange bills). As part of the information about the debtor's finances, SBS includes also information about loans, overdrafts, discounts of bills and notes, financing leasing, as well as the amount of written-off credit and seized collateral,

the country.[20] The CCL is entrusted also with the task of correcting the record of these securities once they are paid.[21] The cost of this information for 6 months ranges from about US$360 for CCL associates to US$430 for nonassociates. Information is available since 1990.

For institutional lenders, it is more expensive to access private credit bureaus than public rating registers, because the CCL and SBS do not charge them for extra consultations, as part of the benefits of being associated with them. The relatively higher costs of private bureaus are justified by the greater quantity of background information they provide on financial and commercial system debtors. These credit bureaus buy information from the SBS, the CCL, the Superintendencia Nacional de Administración Tributaria (SUNAT),[22] commercial firms, industry, warehouses, and other companies that provide information concerning default by clients with whom they had business.[23] In the case of Infocorp, the cost of each consultation (about a single person or entity) ranges between $0.95 and $1.90, although there are discounts depending on the number of consultations performed.[24]

The responsibility for the validity and truthfulness of the information obtained by all the private credit bureaus is born exclusively by those same information sources. This is particularly important since there is no document (unpaid bill or letter of exchange, etc.) which is presented to the bureau as proof of default.

2. Non-conventional contracts in the formal sector

CMACs have successfully reached a sizeable number of micro businesses, and reduced bad debt rates through the use of non-conventional credit contracts. Support from the German Technical Cooperation (GTZ) organization to these institutions was decisive, not only to strengthen the CMACs, but to launch their horizontal integration through the consolidation of

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and the interest that a debtor owes to particular institution. Finally, financial institutions supply information about provisions to cover the direct financing, and relevant contingencies and guarantees.

[20] The cost of this service fluctuates between US$7 and US$10.

[21] This allows the account holder to be considered again as a credit applicant.

[22] For the case of tax debtors in condition of enforced collection.

[23] So, infomation about the clients of the financial system is basically the same.

[24] Given the recent development in the communications 'infraestructure in the country, Inofocorp recently began to offer its services over the phone at a rate of $1.99 per consultation, to be paid in the phone bill.

the CMACs' Peruvian Federation (FEPCMAC). This Federation performs an important role in controlling the soundness of the CMAC subsystem.

Sullana CMAC, created at the end of 1986, is a particularly interesting example of the innovative credit techniques used by these intermediaries. In contrast with the CRACs' procedures, the credit analyst is in charge of all the stages of a loan, except personal loans and pledging, where collection corresponds to the operations area (Alvarado and Ugaz, 1998). This procedure provides good incentive for better borrower selection, since if a borrower does not repay, the analyst is the one in charge of collection (in the first 30 days after the loan is due).

Sullana CMAC selects borrowers on an individual basis, beginning with a pre-evaluation (it is required that the firm has been operating at least for 6 months or the borrower holds a steady job). Then, a visit is made to the firm or home, and a family income and expense statement is made, based on the information given to the analyst.[25] At this stage, in order to verify or complement the borrower's credit history, the Banco Agrario (BAP) debtors list is used, and also the CCL and SBS Risk Rating Registers are consulted. Likewise, the organization has backup data on its old clients. As a general rule, at this stage, information is more important than guarantees;[26] however, this is valid only for loans up to US$4,000. If loans are greater than this amount, the real guarantees become important for credit approval.

After obtaining the required information, an evaluation is made. A credit committee, whose composition varies according to the amount requested, grants the loan. The supervision phase consists of verifying the evolution of defaulting borrowers. If a borrower does not repay in the first 30 days after the due date, the administration takes charge of the loan. And, after 60 days, the loan is turned over to management and is sent to judiciary collection, even when the sum to be collected is lower than the legal costs. But it can be refinanced if the borrower shows willingness to repay, and if the reason for his default was temporary.

[25] This is different from farm loans, where a cash flow statement is built.

Finally, an important feature of the Sullana CMAC (shared with the Piura CMAC) concerns the long-term relationship with clients: 70% have had previous credit with them and 60% borrow only from them. This indicates that these organizations are achieving one of their objectives, which is to grow with their clients.

The credit technology of the CMACs, and especially of the Sullana CMAC, provides a good example of a technology targeted to a specific segment of otherwise unserved clients. Both banks and informal lenders should take into account this experience to generate an adequate credit technology attuned to this specific client segment. We will compare the performance of selected CMACs with some specialized NGOs credit programs in the next section.

3. Non-conventional contracts in the informal sector: institutional lenders (NGOs)

The informal credit sector is composed of a variety of intermediaries, ranging from individuals to specialized institutions (the NGO's main activities also vary widely). "Informal" means that these lenders are not under the supervision of the SBS. Thus, they cannot (legally) intermediate funds obtained from third parties; they can only use their own resources, cannot receive deposits, do not need to make any provisions for loan losses, and must pay sales tax on their financial incomes. These informal lenders use different procedures to select, supervise and collect their loans, and their lending policy is based, in most cases, on information about the clients rather than on their collateral or possession of legal documents. The size of the informal sector is unknown, as well as the number of clients served. However, these lenders serve an important segment of clients usually not served by formal lenders (for geographical reasons, scale, etc.). The good performance of several informal lenders has attracted the attention of researchers and formal lenders, interested in learning about their techniques.

In the last 20 years, the number of NGOs has grown rapidly. An important group of NGOs, mostly concerned with the economic development of lower income population, has

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[26] This characteristic is shared by the rest of CMACs and because the sector they work with (basically small and micro enterprises) does not usually have "self-liquidating" guarantees. The CMACs have basically "slow collection" guarantees (pledges and mortgages), which represented 54% of their loans up to December 1998.

credit programs. These have not been studied in depth, except for case studies or research on a specific type of credit programs. The importance of these programs is widely recognized, to the point that the Banking Act includes a specific procedure to transform NGOs with credit programs into formal lenders. The most important feature of the NGOs' credit programs is the use of solidarity groups or social endorsement to obtain information about potential clients.

In the next two sections, we focus on this type of lender.. First, we present a description and discussion of the credit contracts they employ.Second, given that there is no consensus about the importance, heterogeneity, performance, and soundness of these lenders, we decided to draw a representative random sample of NGOs with credit programs in order to learn something about the entire sector.

3.1. Use of solidarity groups

Among the non-conventional arrangements found in the informal sector, the most important are those which work hand-in-hand with solidarity groups or grassroots organizations. In both cases, the groups and grassroots organizations allow lenders to obtain trustworthy information from borrowers, upon which the lending decision is made. In exchange for this information, the groups and grassroots organizations become favored beneficiaries or clients of a given credit program.

When selecting borrowers in collaboration with solidarity groups, the most important aspects are the guarantees comprised of cross endorsements from self-selected borrowers, generally not more than ten. They sign documents that constitute personal guarantees making them responsible for the loans of all members in the group. Thus, every borrower becomes liable for repayment in case any member of the group fails to repay his loan.[27] Sometimes real property guarantees are requested, but they consists of goods that usually cannot be mortgaged, registered in guaranty registers, or whose legal seizure in case of default would be very difficult or expensive.

[27] Normally, to reduce the risk of default, the number of members of solidarity groups should not be too large.

It must be pointed out that the loans are to individuals, despite the intervention of the group mentioned above. So, each borrower individually receives the loans and each decides how to invest it. To facilitate oversight, the group members are asked to be within a certain geographic proximity (to reduce the supervision costs) and in some cases to have similar production activities, especially for agricultural loans.

In Peru these types of arrangements or procedures (i.e., with intervention of social endorsements) have been used in loans in rural areas, mainly by NGOs. This kind of non-conventional arrangement, although only developed on a small scale, has proven to be very efficient in allowing small farmers and peasants to gain access to credit, and has resulted in very low default rates, even lower than in the formal financial system. However, this type of arrangement has also shown some weaknesses.[28] Non-conventional arrangements with groups work efficiently when the amounts and number of loans granted are relatively small, but when the amounts are large the incentives to collude and default increase (taking into account the limited enforcement capacity).

3.2. A sample of NGOs

To better understand the credit practices carried out by NGOs we interviewed 21 NGOs that have credit programs.[29] A stratified random sample was chosen, based on 3 groups of NGOs: 79 in Lima, 27 on the Coast but outside Lima, and 98 in the Andean Region. The universe was split into these three groups, because loans are granted differently in each group, and because of the high concentration of NGOs in Lima. Of the 21 interviewed, 8 are located in Metropolitan Lima, 10 in the Andean Region and 3 on the coast.[30]

A general characteristic identified initially was the heterogeneity among the NGOs' credit programs. This is not only because of their scale, but also because of the program objectives and

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[28] Various authors, such as Schmidt and Zeitinger (1994), indicate that the group cases face collusion problems as the credit sums increase.

[29] To define the universe of NGOs with credit programs we checked two sources, the NGO directory from the Ministerio de la Presidencia (1996) and Noriega (1997). Through both sources we found 204 NGOs that grant credit, from which we randomly select 21.

procedures used. This required separating the NGOs into two groups: those with specialized credit programs, and those whose credit programs are part of a wider program of local development (of which the extension of credit is a minor component). In addition, we found some NGOs that do not have credit programs, but report these kinds of activities in their scope of action, to keep open the option of starting this activity.

The first group is the most interesting for the development of financial intermediation. These are the most dynamic NGOs, and the most interested in reaching a scale similar to other small formal intermediaries and becoming themselves formal credit institutions. As shown in Annex 3, 10 of the 21 NGOs interviewed belong to this category. Of these 10 only 2 (E and O) are exclusively devoted to granting credit, while the others also have other programs (training, marketing).The characteristics of the NGOs credit programs are detailed in Annexes 3 and 4, and summarized in Table 2. The heterogeneity of the programs translates into unequal amounts loaned and interest rates charged, not necessarily associated with the degree of specialization of the NGOs. To illustrate the heterogeneity among NGOs credit programs we compared the means of several characteristics of the specialized NGOs with the mean of the non-specialized NGOs in our sample. The amount of the funds that NGOs work with, and their origin, are related to the degree of specialization the NGO has in the type of loan granted. Only the more specialized ones work with the local formal intermediaries and/or lend capital obtained from foreign formal sources (banks).[31] The other, non-specialized NGOs, work only with their own funds (obtained through international cooperation in most cases). Similarly, the size of the fund NGOs work with varies considerably. Specialized NGOs tend to work with more funds. As shown by Table 2, the two groups do not differ in interest rate charged and loan maturity, but specialized NGOs have significantly higher default rates, number of clients, total funds loaned and average loan size.

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[30] To maintain confidentiality in the interviews we have identified the NGOs with a letter, the first 8 corresponding to those in Lima (A to H in Annex 3), the next 3 on the coast (I to K), and the last 10 in the Andean Region (L to U).

[31] Remember that current legislation forbids institutions that are not part of the financial system to intermediate funds.

Table 2
T-test for equality of means between specialized and non-specialized credit programs

Variable	Means		T-Test for Equality of Means	
	Specialized	Non-Specialized	T- Value*	Sig. (2 tailed)
Average loan size ($)	1104.50	164.00	2.636	0.022
Interest rate (%)**	3.32	3.22	0.189	0.306
Default rate (%)	7.01	4.00	1.078	0.085
Number of clients	1922.33	199.50	1.969	0.024
Maturity of loans (months)	6.30	5.08	1.175	0.260
Lending total funds (thousands $)	1220.00	82.50	2.559	0.021

* Note: The results assume equality of variances. However, results do not change if variance inequality is assumed.
**: monthly rate for loans in dollars.
Source: NGO sample. See Annex 4.

Credit technology used

One of the most important assets of NGO credit programs is their lending technology, which is based on non-conventional credit contracts. These contracts result from a particular borrower selection procedure based on information about clients held by the NGO or by a specific group (community, friends, etc.) which helps the NGO to discriminate among borrowers.

When the NGOs were consulted about the procedure they use to select their clients, we found that 8 of the 16 cases with credit programs requested some sort of guarantee. The guarantee concept is wider than in the formal sector because guarantees considered include the conventional ones (mortgages, guaranty, etc.), as well as other goods subject to seizure (electric appliances, tools, etc.). It is interesting how the requirement for real guarantees often is combined with the use of solidarity groups, although this does not reduce the risk that members of the group may collude and decide not to repay.

Many NGOs select their borrowers on the basis of a pre-selection effected by solidarity groups or on the basis of the moral endorsement by some social or productive institution (peasant community, producers or merchant organization). In both cases the selection is based on information that the group or social organization members have about the credit applicant's capacity and willingness to repay.

These two mechanisms are the most widely used to select clients in NGOs programs, but there is a fundamental difference between them: when solidarity groups are involved in the selection, they become liable for the individual loans; when they are not involved in selecting credit applicants, liability rests only with the individual borrowers. This becomes important in matters of supervision and collection. The loans to solidarity groups are self-supervised, and usually collected by the group. In the individual credit cases with social endorsement, supervision and collection is taken care of by the lender. However, in order to maintain a good relationship with the NGO, in practice many institutions that endorse loans also supervise them.

Eleven of the NGOs interviewed pointed out that they intensively used the information they could get about the credit history of the clients. However, many specialized NGOs said it was not necessary to worry about information if solidarity groups were used to select clients.

An interesting result from our interviews was that practically all of the NGOs pointed out that they discriminate between strategic defaults and other insolvencies. That is, the NGOs tries to find out the cause of the repayment delay. They take drastic collection measures only in the cases where strategic default is discovered (generally removing this client from the program), and try to refinance the debts of other insolvent debtors. This appears to be possible because of the small scale of the programs and the adequate information that flows between borrowers and lenders, either directly or indirectly, through solidarity groups and organizations that endorse the borrowers.

Subsidy Dependence

A common concern about the NGOs credit programs has to do with their sustainability. One may suspect that these institutions manage to operate and survive only because they are highly subsidized. Subsidies can come from different sources, but basically exist because NGOs are non-profit organizations that work with donations from international cooperation. The issue is relevant to establish if these institutions can successfully become part of the formal financial sector and compete with other formal lenders. Another related issue is whether credit can be extended to the social groups served by NGOs without subsidizing it. If these social groups can be served only via subsidized credit, , there is little hope that formal lenders may eventually cater to these clients. By the same token, if NGOs were to charge market rates, these borrowers would be cut off from credit.

To be able to fairly compare the situation of NGOs in this respect we chose to compare them with the CMACs and CRACs that, although formal lenders, serve similar borrower groups. For that purpose we present the subsidy dependence index (SDI) suggested by Yaron (1992) for 4 NGOs in our sample, 4 CRACs and 4 CMACs (Table 3).[32] The SDI is a measure of the percentage that the actual interest rate charged by each lender should increase to cover all real costs of the credit program and avoid all subsidies. Thus, the lower the SDI, the less dependent on subsidies and the more sustainable the institution. In the limit, if SDI=0 there is no subsidy dependence. If the institution has a negative SDI, one can say that this institution is making a profit with its current interest rate, because even if the lender reduced its interest rate, it would cover all real costs.

The SDI considers three types of subsidy sources:[33] a) a financial subsidy, that measures the difference between the market interest charged to granted loans and the interest rate the institution has to pay for its funding, multiplied by the total amount of loans received by the institution; b) a subsidized return to capital, that equals the difference between the opportunity cost of capital (using the market savings interest rate) and the net profit obtained by each institution adjusted by inflation; c) a direct subsidy, reflecting donations, direct subsidies for infrastructure, software, etc. Each of these components provides information about the specific actions needed to reduce the dependency, if desired. For example, if the subsidy dependence arises from a high financial subsidy, the interest rate should increase to reach sustainability; but if the subsidy is associated with low capital returns (losses), the institution should modify its portfolio.

[32] Calculated based on information for 1996, based on Alvarado and Ugaz (1998).

Table 3
Subsidy dependence index (SDI) (%)

Institution	SDI	Financial Subsidy	Subsidized Return to Capital	Direct Subsidy
NGO				
J	62.07	57.97	-1.80	5.90
K	801.60	0.00	506.73	294.87
E	151.93	0.00	126.64	25.30
O	116.22	70.24	-20.99	66.97
CRAC				
Libertadores	36.46	0.00	34.42	2.04
Sr. de Luren	27.24	0.00	26.11	1.13
Quillabamba	65.30	0.00	63.07	2.23
Selva Central	12.87	0.00	12.00	0.87
CMAC				
Sullana	-15.78	1.71	-17.49	0.00
Piura	-11.54	1.78	-13.32	0.00
Arequipa	-10.92	0.00	-10.92	0.00
Trujillo	-3.55	0.00	-3.55	0.00

SDI calculations are based on information for 1996.
Source: SBS, Alvarado and Ugaz (1998).

As can be seen, the NGOs have high levels of subsidy dependence. Compared to the formal institutions listed, NGOs are significantly more subsidized. The CRACs are also subsidized, while the CMACs, with more experience and better management teams and technology, do not depend on subsidies at all (which is indicated by the fact their SDIs are negative). In the case of CRACs, the dependency on subsidies is considerable, but below that in the NGOs. From the table, it is clear that CMACs are the only ones making profits with their current level of interest rate (because their SDIs are negative). The remaining question is why other institutions do not seek those profits?

The heterogeneity of the NGOs credit programs also is seen in the source of their subsidies. NGOs E and K, as well as all CRACs and most CMACs, do not work with external credit, so no financial subsidy exists. Only two CMACs have some concessionary funds that come from the FEPCMAC, but these funds are not significant.[34] NGOs J and O, on the other hand, receive important subsidies derived from their access to special loans obtained through international cooperation. Without this credit, NGO O, for example, would need to increase its

33 For a complete discussion on the methodology behind the SDI, see Yaron (1992).

current interest rate by 70%. Thus, the origin of the funds allocated by NGOs becomes important in the interest rate determination.

The subsidies derived from "return to capital" reflect the efficiency in selecting the credit portfolio. As shown in Table 3, NGOs J and O have a negative subsidy, meaning that they are earning additional income from their good performance in credit allocation and recovery procedures. These two credit programs are very innovative in terms of their borrower selection technology and have a solid management team. A similar situation is found in the CMACs that also use non-conventional credit contracts. NGO O, which works in the Andean region, obtains higher capital returns benefits than all the CMACs, as well as the Sullana CMAC, which is considered the best example of formal lenders working with small client groups. The credit technology used by this NGO is their most important asset.

As discussed before, the CRACs have problems with their credit allocation and recovery procedures, which are directly reflected in their high SDI levels, primarily because of their low returns to capital. These institutions could make more money leaving their resources in savings accounts in the banking system than lending it to their current portfolio.

Finally, the direct subsidy received by the NGOs is positive for all four institutions, as expected. All four, in different degrees have been receiving donations and/or using the existing capacity of the NGO to build up the credit program. NGO K is the much more dependent on this type of subsidy, which probably explains why NGO K is the only one that is not considering the option of becoming a formal lender. The CRACs and CMACs have little direct subsidies. The only sources of direct subsidies in the case of CRACs came from the public sector in the form of software and/or training activities for the managerial team. The CMACs currently have no direct subsidies, but they did receive an important subsidy in the last decade from the German Technical Cooperation (GTZ).

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[34] Without these funds, these two CMACs will have to increase their interest rate by less than 2%.

In conclusion, NGO credit programs are highly dependent on subsidies, mostly derived from their access to subsidized credit lines and to the presence of direct subsidies. This issue could imply that serving their specific target groups has higher costs, compared with working with a different group of clients. This may explain why banks are not interested in working with this segment of clients. However, based on the comparison with the CRACs and CMACs, this point does not apply only to NGOs. As explained above, this subsidy dependence raises doubts about the NGOs ability of eventually turning themselves into formal credit institutions.

4. Vertical Integration between formal and informal lenders: Bank-NGO coordination

A type of non-conventional arrangement that uses solidarity groups is the so-called coordination between banks and NGOs. This arrangement allows commercial banks that rely on conventional procedures in their credit operations to use the technology of the specialized informal intermediaries.[35] The bank-NGO coordination is the only proven experience of vertical integration between formal and informal lenders. For banks, this coordination is a way to broaden the number and type of borrowers. For NGOs, it represents a way to obtain additional funding and to better serve their target group by linking it with the formal sector.

The coordination works as follows. The NGOs pre-select borrowers (using self-selected groups) and present them as solidarity groups to the banks. The NGOs, which generally have a long-term relationship with the borrower, prepare a technical file on each of the group's members, with an analysis of the activity for which the loan is required. Also, a guarantee fund is created with each group member's contribution. This contribution is generally combined with a percentage of the loan that is retained by the bank and deposited in a common savings account of all the group members. The bank makes the final decision to grant the loan to the applicants, although nearly all those pre-selected receive credit. Also, the bank is responsible for loan

[35] Some CMACs, like that in Ica, are also using these mechanisms as part of their farm portfolios.

recovery. The NGOs are in charge of supervision and receive a flat commission payment for the loans when the credit is delivered to the borrowers.[36]

These experiences have not been as successful as hoped, and a sizeable number are no longer working. The poor performance of this coordination program has to do with the way in which banks and NGOs become involved with each other. The terms of the coordination contracts were not clear. Most of the benefits, costs and risks were asymmetrically distributed between the banks and the NGOs. The contracts generated perverse incentives for NGOs in the pre-selection of customers, since they gave banks only limited control over the NGOs, thus increasing principal-agent problems instead of reducing them. In turn, banks had incentives to break the contract and return to their traditional way of doing business.[37]

V. Persistent limitations to credit expansion

1. Information sharing problems and borrower selection

The system of borrower classification according to their risk is the basic instrument for selecting clients and determining the amount of reserves to be held for each loan. To perform a proper evaluation of each client an intermediary turns to the information provided by risk rating registers. Although these registers are fairly modern and complete, there are some problems that restrict the proper use of the available information or hinder recording certain details about the credit history. The main problems are:

1) The information received by risk-rating registers refers to each individual and not to each specific loan, which prevents discriminating between different projects involving the same debtor. Furthermore, since the borrower will be classified according to the worst rating received from any intermediary, there will be cases in which a borrower requesting two loans

[36] In the majority of cases this commission does not cover the NGOs implementation costs for these programs. So NGOs are subsidizing borrowers (with funds from international cooperation), and lenders so they can reach new types of clients.
[37] For more details regarding this problem, see Chaves (1993), González-Vega and Chaves (1996), and McDonald (1994).

to fund two different projects will receive as a final classification only that granted for the lowest-rated project.[38]

2) The information shown corresponds to the current situation of the borrower, not to his history. A borrower without current or late debts does not appear in the rating register.
3) The information given by the rating registers, although showing the debt and overdue balance, does not keep a record of overdue payments subsequently paid.
4) The period for which records of bad debts are kept is not clear.
5) Decentralized institutions (CRACs, CMACs and EDPYMEs) do not find sufficient information about their credit applicants in risk rating registers. On one hand, they find little information at a regional level (only about protested bills, canceled credit cards and closed checking accounts); on the other hand, the majority of the clients they work with never had any relation with the formal system or have had only small loans (less than US $ 5,000), and therefore they are not registered.
6) When a loan is refinanced, it is automatically classified "Doubtful"[39], making it very expensive for the bank (in terms of reserves needed), and costly for the debtor who will have to assume this classification for all their loans until the next year.

Some intermediaries want to see the type of information available improved and widened. Many are using diverse mechanisms to supplement the information provided by rating registers. For example, many intermediaries turn to specific information sources by type of client, such as debtors of the former Banco Agrario, in the case of farmers, or to interview the stores where they buy inputs and/or sell their products. This suggests that the selection of borrowers by lenders has not improved only because of credit registers and other regulatory changes, but also because lenders have come to appreciate the value of investing in the collection and organization of information about credit applicants.

[38] In the same way, since the worst rating will prevail (for a period of at least a year), a debtor that had a bad project or a problem of insolvency, will not obtain funds for new projects until his rating changes, even if his projects are profitable.

2. Judiciary enforcement: Collateral execution

The problems involved in recovering unpaid loans through the liquidation of guarantees can be seen at two levels: legislation and judicial enforcement. The problems found at each of these levels have different impacts on the duration and costs of legal proceeding and on the seizure and liquidation of the guarantees. There are three main limitations set by legislation (Civil Trial Code) for the execution of guarantees:

1) All processes must go through the judiciary. There is no way to use extra-judicial mechanisms, including arbitration.
2) Pre-judicial mechanisms are not allowed in the seizure of guarantees. That means, in the case of an expired loan contract endorsed with liquid guarantees, such as shares or bonds, the lender cannot proceed to collect these guarantees without an authorization from a judge.
3) The judge has the power to regulate ("ordinarizar") the lawsuit. The execution of lawsuits on the guarantees are "executive" processes, and therefore they are faster and simpler, but if the judge determines that the process requires it, he can regulate it, and with this the trial moves to a complete process (with all the steps and possible appeals). These cases are very common. For example, they occur when the borrower claims that there was a miscalculation in the amount of interest charged.

The judiciary itself imposes two serious limitations on the otherwise-good objective of the enforcement processes: the lack of specialized personnel, and corruption. The lack of specialized personnel slows down seizure proceedings. Nor are there courtrooms dedicated solely to trials linked to guarantee the fulfillment of credit contracts. Moreover, no information is systematically released about procedures in this area. These types of weaknesses in judicial administration imply huge delays in the procedures, and interpretation problems in terms of the credit contracts.

[39] The SBS has recently declared that, in exceptional cases, the refinanced credit could be classified in the category "With potential problems", based on the payment capacity of each borrower.

Corruption is a problem of paramount importance. The excessive number of pending trials and the low qualifications of many judges aggravate the problem even further.[40]

These problems translate into long and expensive trials whose cost is born by the intermediaries[41] who, in response, either demand more guarantees before initiating the legal processes, or bear these unpaid loans as losses. Clearly both options are reflected in the cost of credit.

2.1. Duration and costs of enforcement processes: an approximation

It is a complex task to determine the duration and costs of the guarantee seizure trials, due to their heterogeneity and to the variety of credit contracts to be executed. The loan amount, the type of guarantee involved, the type of debtor, etc., are related to the duration and costs of the legal process to seize guarantees. Ortiz de Zevallos (1998), based on the situation in December 1997, estimated that the judicial processes carried out by banks average three years. And even then only the 30% of the main value is recovered.

From these estimates, Ortiz de Zevallos (1998), calculates that annually (based on the 1997 situation) banks lose around US$364 millions due to default loans not collected. This number results from a loss of US$294 millions in interest accrued during the judicial negotiations for the collection, and the loss of US$70 millions from not being able to appropriate and sell the goods received as guarantee, and the delay in the guarantee execution in the judicial process.[42] These losses amount to twice the budget for the functioning of the judiciary.

Based on these numbers, Ortiz de Zevallos estimates that the current interest rates include an overcharge due to the inefficiency of the judicial system of 12.34% of the rate in domestic currency and 20.4% in foreign currency. Thus, if the guarantee execution system and

[40] A reform in the judiciary is currently under way. It has already achieved improvements in various administrative procedures , but it has yet to eliminate (or reduce) corruption.
[41] As reported and analyzed by Fleisig and De la Peña (1996).
[42] As can be inferred, there are several legal regulations involved in the process of collecting default credits. As stated by Castelar Pinheiro (1996), the more legal processes involved, the less efficient the system.

other legal procedures are modernized, a substantial reduction in interest rates could be achieved (Ortiz de Zevallos, 1998).

VI. Summary and Conclusions

In recent years Peru has experienced a significant expansion in lending activity and total indebtedness. This expansion has been possible due to improved performance of the financial system and to national economic development. Two sets of factors have been instrumental in sustaining this debt expansion and opening the credit market to new groups of clients. These are: 1) institutional reforms and economic stability, both growing out of the public sector reforms that are part of the economic structural adjustment program implemented since the early 90's, and 2) new credit technologies, primarily based on information sharing practices, developed by the private sector to reach new clients without increasing the risk of strategic default.

The financial reforms adopted in the first half of the 1990s provided a more stable and modern environment to ensure that the increasing indebtedness would not endanger the soundness of the financial system as a whole. The reforms opened up and liberalized the market, and provided incentives for lenders to adopt innovative credit technologies by introducing new decision elements such as information sharing and new rules to evaluate collateral. Despite a more open financial system, however, much of the increase in loans appears to have gone to traditional clients in the form of larger loans. For lenders, reaching traditionally unserved or underserved clients was instrumental to enlarge their market while increasing the diversification of their loan portfolios. The number of households with credit doubled between 1994 and 1997. Most of the new clients are low and middle class urban individuals obtaining small loans for consumption purposes, and small and micro entrepreneurs. To serve them, formal intermediaries had to change their procedures and credit technology. Many innovations were based on adapting procedures used by informal institutional lenders to the needs of the formal sector. This process was not always successful, nor cheap, but allowed the development of a number of private arrangements to improve borrower selection, credit monitoring and recovery to serve these new clients within the norms of a market.

Both the institutional reforms and the private arrangements to improve borrower selection procedures gave a central role to information-sharing systems. The new banking laws made the Superintendencia de Banca y Seguros (SBS) responsible for providing information about the financial systems' clients, for which it has developed the "central de riesgos" (credit register) as a public rating register. In addition, there are three private rating registers that provide similar information, plus data on credit with selected informal institutional lenders, such as department stores. The information provided by these rating registers –private and public– is now a necessity for any credit decision in the formal sector and in most informal institutional transactions. These information sharing systems are increasingly used because telecommunications infrastructure development continues to reduce their costs.

Credit registers, however, do not include data on small and new clients. Given that these clients are becoming a larger part of the system, small intermediaries (formal and informal) catering to these clients looked for alternative solutions to their informational problems. We examined three cases which illustrate their strategies; one in the formal sector, the Cajas Municipales de Ahorro y Crédito (CMACs); one in the informal sector, the Nongovernmental Organizations (NGOs); and third, the attempts of coordination between banks and NGOs.

Most of the CMACs work with non-conventional credit contracts without relying on solidarity groups but relying on intensive screening and monitoring of their clients, who are usually not listed in the rating registers. This is exemplified by the Sullana CMAC, which relies heavily on its ability to select, train and provide incentives to its credit analysts. These credit analysts are responsible for the entire lending process -- selecting clients, monitoring the credit use and collecting the loan when due. This system appears to work only on a small scale and in a limited territory, but has allowed this traditionally urban lender to include rural borrowers without endangering recovery rates.

The NGOs represent intriguing cases of lenders serving poor borrowers. We surveyed a random sample, which includes 10% of the NGOs with credit programs to determine if they were successful, if their operations were sustainable, and how their technology dealt with information problems. We reached the following conclusions. (1) These lenders are very heterogeneous. Only 50% of them specialize in lending, and of those, only 20% were exclusively dedicated to granting loans. (2) The main differences between specialized and non-specialized NGOs are the individual loan amounts and total amount loaned. No significant differences were found between interest rates. (3) NGOs have developed different variants of the practices of granting credit based either on solidarity groups or on moral endorsement contracts. This allows them to solve most of the informational problems related to their client groups and also to avoid some of the problems commonly associated with using the solidarity group technology. (4) All NGOs try to discriminate between strategic defaulters and truly insolvent ones based on the information provided by the solidarity group members or by the endorsing institution. (5) Most NGOs work with their own capital. Only the more specialized rely external credit and, as expected, these are the ones more interested in becoming formal lenders. In all cases, capital comes from donations or "soft" loans, as NGOs seldom have their own assets. (6) All NGOs have some sort of subsidy to support their lending activities. Subsidies vary widely, but we found that the "best" NGO in our random sample would need to increase its interest rate by 62% to avoid all their present subsidies. Thus, without such subsidies, they could not compete with other formal and especially informal institutions, as they would have to increase their interest rates above the level of other informal lenders.

The third case we study is the experience of coordination between banks and NGOs. The idea behind this coordination is simple and promising -- banks do not have information, while NGOs that have information or ways to obtain it, do not have enough resources to lend. At first glance, the benefits of coordination are clear. The results of most these experiences, however, were disappointing. The coordination contracts were designed so that they ended up discouraging NGOs from using their superior technology to select clients. The short run benefits obtained by banks were lower than expected, reducing their interest in reaching these specific client groups, which often reside in rural areas and are less profitable customers than urban clients. These private arrangements reflect the first responses to the new institutional context and to a number of ongoing reforms, and in that sense are still developing. However, their development is hindered by a number of factors, chiefly some flaws in the design of the present information-sharing system and the ineffectiveness of legal enforcement procedures, which translate into higher interest rates and higher transaction costs in lending. Unfortunately, there is little hope of real improvements in the efficiency of the judicial system.

In conclusion, the new institutional context has given rise to a range of responses by both formal and informal financial intermediaries, moving the system toward more intensive reliance on information in lending. The results of this study provide examples of successes that can be built on, and persistent obstacles that deserve closer investigation.

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ANNEXES
Annex 1
General information about the financial system

Variable	1995	1996	1997	1998 [1/]
MULTIPLE BANKING				
Real liquidity (US$ Millions of August 1990)	9824.87	12067.69	13877.18	14560.77
Total loans (US$ Millions)	7481.22	10051.08	12715.29	13320.41
Total deposits (US$ Millions)	9316.85	11538.68	13511.16	13059.55
Patrimony (US$ Millions)	1211.14	1537.09	1867.74	1926.17
Debt and other financial liabilities (US$ Millions)	1550.35	2472.05	4307.52	5089.04
Net profits (US$ Millions)	227.77	276.29	255.58	160.38
Default rate (%)	4.82	5.22	5.31	6.96
Reserves / Delayed loans	91.05	86.03	90.61	92.06
Number of banks	23	23	25	26
Number of employees	17718	20123	26069	24907
Number of branches	806	833	930	960
Participation of the four principal banks				
Percentage of total bank loans	69.37	68.69	63.51	60.85
Percentage of deposits	73.24	72.89	70.40	69.99
Percentage of equity	66.87	64.50	62.77	60.33
Participation of all regions outside Lima				
Percentage of total loans outside Lima	22.07	21.78	18.95	20.57
Percentage of deposits outside Lima	17.53	17.23	16.39	18.06
OTHER SUBSYSTEMS				
CRACs				
Number	15	16	17	14
Default rate (%)	12.77	13.61	14.57	17.38
Total loans (US$ Millions)	26.70	39.62	52.17	51.96
Total deposits (US$ Millions)	7.12	9.47	18.75	20.34
CMACs				
Number	13	13	13	17
Default rate (%)	10.07	8.66	7.74	7.51
Total loans (US$ Millions)	56.38	71.76	89.34	90.90
Total deposits (US$ Millions)	41.56	48.71	67.31	68.97
EDPYMEs				
Number	0	1	1	7
Default rate (%)		7.33	9.06	6.63
Total loans (US$ Millions)	0.00	2.75	2.83	12.32
Total deposits (US$ Millions)	0.00	0.00	0.00	0.00

1/ Includes the information of Banco República (on October 1998), that is no more operating.
Source: SBS.

Annex 2
PERÚ: Macroeconomic indicators

Year	GDP (Var.%)	Inflation (Var. %)	Devaluation (Var. %)	Net International Reserves (US$ MM)	Current Account/ GDP (%)	Liquidity / GDP (%)	Dolari-zation (1)
1990	-5,40	7649,70	6946,97	682,00	-3,40	16,77	46,80
1991	3,20	139,20	309,82	1933,00	-3,10	12,76	57,98
1992	-1,80	56,70	62,40	2426,00	-4,50	14,61	63,21
1993	6,40	39,50	59,20	2910,00	-5,20	15,31	68,34
1994	13,10	15,40	10,55	6025,00	-5,10	16,76	63,14
1995	7,20	10,20	2,27	6693,00	-7,30	18,06	60,74
1996	2,60	11,80	8,89	8850,00	-5,90	22,55	63,48
1997	7,40	6,50	8,57	10169,00	-5,20	23,80	60,57
1998	0.70	6.00	10.15	9183.00	-6.00	25.00	62.08

(1) Percentage of the financial system liquidity held in US dollars.
Source: Instituto Nacional de Estadística e Inofrmática (INEI) and Banco Central de Reserva (BCRP).

Annex 3
Sample of NGOs interviewed[1]

		Lima								Coast			Andean Region									
		A	B*	C *	D	E*	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
Type of NGO	Specialized					•			•	•	•	•	•		•	•			•		•	
	Non-Specialized	•	•	•													•			•		•
	Did not grant credit in 1997				•		•	•						•				•				
Guarantee requested	Assets/real								• [2]	•		•	•		•	•			•		•	
	Solidarity groups	•	•	•		•				•		•	•			•	•					
	Endorsement of social organization		•							•	•				•	•				•		•
	Document (Letter, guaranty)			•					•		• [3]		•		•				•		•	•
	Uses information/history	•	•						•		•		•		•		•		•	•	•	•
	Supervises credits	•	•	•					•	•		•	•		•	•			•	•		
Recovery	In charge of the group	•	•	•		•				•	•	•	•			•	•					•
	Executes guarantees								•	•		•	•		•	•			•		•	
	Others (off the program)	•	•	•					•						•					•	•	
	Discriminates between insolvent and strategic debtors	•	•	•		•			•	•	•	•	•		•	•	•		•	•		
Formalization	Has coordinated with formal intermediaries								•		•	•	•						•			
	Wishes to be formal			•					•	•	•		•		•	•						•
	Formalization in process or formalized								•		•		•			•						

Source: Own interviews

Notes:

1/ 21 NGOs were interviewed. These NGOs were selected randomly from 204 NGOs reporting having credit programs. The interviews were conducted by the authors during the first semester of 1998 based on a common interview guide especilly desgined for this research. To maintain the confidentiality of the answers we named the NGOs with capital letters (from A to U). Those letters with * have credit programs in Lima and other departments in the country. The • symbol means they practice the activity or they correspond to that category.

2/ Real guarantees are only requested for loans over US$ 2,000.

3/ It is interesting that husband and wife must sign the contract and documents.

Annex 4
Credit characteristics from NGOs that have credit programs[1]
Sample of NGOs interviewed [1]

	Lima					Coast			Andean Region							
	A	**B***	**C***	**E***	**H**	**I**	**J**	**K**	**L**	**N**	**O**	**P**	**R**	**S**	**T**	**U**
Average amount granted ($)	50	s.i.	200	195	1,000[2]	2,500	400	2,000	1,400	900	400	250	1,750	200	500[3]	120
Interest rates[4] (%)	2.5	5.0	4.0	3.0	3.5	3.0	4.0	1.6[6]	3.7[5]	2.0	2.0[6]	s.i.	4.0	2.0	5.0	2.5
Default rate (%)	10.0	s.i.	2.0	10.6	7.0	s.i	1.0	s.i.	15	1.0	4.5	2.0	8.0	s.i.	9.0	2.0
Number of clients	70	s.i.	420	4,820	s.i.	1200	s.i.	s.i.	572	s.i.	3,200	58	742	s.i.	1,000[7]	250
Average term (months)	3	6-9	4	4	6	4-10	4	12	6	6	6	6	6	5	6	5
Total funds (thousand $)	2	300	62	937	2,500	3,000	100	s.i.	819	280	1,300	26	440	5	2,000	100
Funds origin[8]	P	P	P	P	P, C	P,C	P,C	P,C	P,C	P	P,C	P	P,C	P	P	P
Target group[9]	M	C	T	M	E, T	C,M,E	C	C,M,E	C,E,T	C,M	C,T	M	C,E,T	C	C,E, T	C,T

Source: NGO interviews.

Notes:

1 We eliminated NGOs that did not have any credit programs in 1997.

2 This institution grants initial credits of $1,000. Later it loaned up to $15,000.

3 Loans granted between $300 y $10,000. Mortgages are demanded for loans over $4,000.

4 Monthly rate in soles.

5 The main credit program charges this interest rate. However, they have two other programs coordinated with private banks where the interest rate charged is
18% a year in dollars.

6 Monthly rate in dollars.

7 Estimated.

8 P: Own/ donation; C: credit (generally form external source).

9 C: peasants/rural population; M: women; E: micro entrepreneurs; T: merchant; O: others.