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THE ROLE OF CREDIT UNIONS IN NICARAGUAN FINANCIAL MARKETS: IMPROVING THE FINANCIAL ACCESS OF SMALL SAVERS AND BORROWERS

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EXECUTIVE SUMMARY

A. Objectives of the Study

In August 1996, the USAID/Nicaragua Rural Credit Unions Program implemented by the World Council of Credit Unions (WOCCU) in Nicaragua initiated a program of voluntary stabilization and innovative service development to re-establish the capability of participating credit unions to mobilize local savings for reinvestment in productive loans to small farmers and small businesses.

The principal strategy of the program is to help the Nicaraguan credit union movement move away from a traditional reliance on share accounts, dependence on external financing, and associated problems with loan delinquencies. Instead the proposed new credit union model is characterized by: the mobilization of local savings by offering competitive interest rates on standard withdrawable deposit accounts; stricter enforcement of loan repayment schedules; loan application evaluation policies which place greater emphasis on capacity to repay; and financial management disciplines which include capital accumulation, loan loss provisioning liquidity management and delinquency control.

The adoption of this package of innovative savings and credit services and financial management disciplines will permit participating credit unions to (i) become operationally efficient, (ii) achieve full financial self-sufficiency and (iii) grow through membership expansion, as well as increased savings mobilization and the provision of credit to households engaged in small and medium-scale commerce and agriculture.

The purpose of this report is to:

- (1) Present information on member practices and needs in order to guide the process of credit union reform and help credit union leaders evaluate and improve their services.
- (2) Provide the Credit Unions with marketing information regarding members' and non-members' demographic and economic characteristics, use of financial services and perceptions of credit union services.
- (3) Monitor the impact of the project over time on the savings behavior, access to credit, production activities, and the economic well-being, in general, of low and middle income credit union members.

B. Survey Methodology and Contents

The results presented in this study are based on the data obtained through the 1997 Credit Unions Services Impact Survey of credit union members and non-members. The data collection process was completed between May and July 1997.

The very low degree of market penetration by credit unions in Nicaragua, ruled out the random selection of households in the market area of the credit unions regardless of member or non-member status. Instead, three samples corresponding to three different reference populations were defined:

•Sample I: Credit union members

•Sample II: Urban business entrepreneurs

•Sample III: Agriculturalists.

At the national level, 9 of the 10 credit unions which had joined the Rural Credit Union Program were selected to participate in WOCCU's member survey. (The remaining credit union, "UCOOM", had until recently limited its membership to other credit unions). The credit unions, their departments, their municipalities and the size of their membership are given below. For purposes of this report, the membership sizes also include the number of the "ahorrantes no asociados" (also known as "aspirantes a socios") who hold savings accounts in the credit unions, but are not members of these institutions. The long term strategy of the RCUP model of credit unions is to convert ahorrantes to credit union members.

CREDIT UNIONS	DEPARTMENT	MUNICIPALITY	NO. OF MEMBERS
EL SOCORRO COODEPAGRO GUAPISA AVANCE MARIA AUXILIADORA LA HERMANDAD LA UNION SAN ANTONIO IAGUEI UCOOM	Carazo Carazo Rivas Chontales Boaco Matagalpa Matagalpa Estelí Chinandega León	Diriamba Jinotepe Rivas Santo Tomás Boaco Sébaco Matagalpa Estelí Corinto León	116 227 ⁽¹⁾ 342 ⁽²⁾ 237 85 273 239 431 98

^{(1) &}quot;COODEPAGRO" has 227 members, of whom only 89 live in the municipality of Jinotepe.

^{(2) &}quot;Guapisa" has 342 members, of whom only 195 live in the municipality of Rivas.

At the credit union level, a random sample of 40 current users of credit union services (members and/or *ahorrantes*) were selected in each participating credit union, using the most recent and complete membership listings (Sample I).¹

A random sample of business entrepreneurs were also interviewed in each of the 10 municipalities in which the credit unions are located. A total of 800 interviews were completed with owners of non-farm business enterprises (Sample II).² Survey data was also randomly gathered from approximately 80 small or medium-scale farmers in selected rural areas of two of the municipalities (Sample III).³ The random selection of households engaged in business and agriculture (Samples II and III) was done regardless of member or non-member status, and therefore can give an indication of the degree of market penetration by credit unions in each municipality. Of the 953 respondent households in samples II and III, only 16 were members of a credit union. In other words, Sample II and III are representative of non-member business entrepreneurs and agriculturalists in their respective municipalities.

Finally, it must be noted that, as Samples II and III were stratified to include only households with agricultural and/or commercial enterprises, comparisons across members and non-members must control for occupational categories.

The survey instrument and sampling strategy were structured to collect and analyze data that will:

- Identify the users of credit union services
- Compare members and non-members in terms of demographic characteristics, commercial and agricultural activity and asset structure
- Compare the savings behavior and credit access of members and non-members.
- Compare members' use of financial services provided by credit unions to those provided by other financial intermediaries and estimate credit unions' share of their members' savings and loans (in terms of both numbers and volumes).

interviewed in each municipality are "weighted" proportionately to the actual size of the population of business entrepreneurs and agricultural producers in that municipality.

When using this sampling method, the resulting over-representation of members from the smaller credit unions will be addressed by a process of "weighting" the data to compute the overall averages.

² Using information gathered from the census of urban commercial, manufacturing or service enterprises conducted by the Nicaraguan Institute of Statistics and Censuses (INEC) at the municipal level, as well as from interviews conducted with municipal authorities in the field, the numbers and geographic areas of concentration of small and medium-scale manufacturing, services and commercial enterprises were identified, and 80 individuals with ongoing business enterprises were randomly selected and interviewed in each municipality.

³ The two municipalities selected were: (1) Jinotepe where "COODEPAGRO"--whose members are principally small farmers--is located; and (2) Matagalpa with a rural population of 44,984 and with a reportedly good potential for expansion of agricultural production.

In calculating overall averages for each of the samples of business or agricultural entrepreneurs, the number of cases

• Determine whether members are satisfied with the quality of services provided by the credit unions.

C. Principal Findings⁴

The survey results presented suggest that the credit unions participating in the study principally service the business sector. Overall, 75% of surveyed members reported their primary occupation as business (self-employment in commerce, production, or services). The most notable exception is "COODEPAGRO", where agriculture is the primary source of employment for the majority of the membership. Comparisons of income and wealth distributions between Sample I members primarily engaged in business and Sample II business entrepreneurs (99% of whom are not credit union members) suggest that member entrepreneurs tend to be slightly better off in terms of their individual income and household wealth than non-member entrepreneurs. The economic characteristics of the membership give a sense of the potential dynamism of the credit unions if membership is attracted to make fuller use of their services.

The study offers strong evidence that credit unions fill an important gap in the provision of financial services to their membership. Because of credit union membership requirements, all members have a share or a deposit account in a credit union. Credit unions hold the dominant share of the savings (deposits and checking) accounts of their members and mobilize 65% of their financial savings. Moreover, credit unions fill a unique role by channeling the mobilized savings back to their members in the form of loans for investment and consumption. In 1996, 76% of the credit union members surveyed had either received or were paying off a loan, with the vast majority of those loans coming from credit unions. Credit unions account for over 70% of the number of their members' loans, and 60% of the total volume of these loans.

The evidence presented for Sample II (business entrepreneurs) and Sample III (agriculturalists)-98% of whom are not credit union members--presents a very different picture. Only 29% of respondents or their spouses in Sample II (business entrepreneurs) have an account in a financial institution, and only 38% had either received or were paying off a loan in 1996. In the case of Sample III (agriculturalists), the percentage of households with a savings account and the percentage of households with loans are only 4% and 13% respectively.

Comparisons of total savings and total loans between member and non-member business entrepreneurs offers further evidence of the important role that credit unions already play in mobilizing savings and providing loans to their members. Controlling for wealth levels, average

⁴ The presentation of the Impact Survey results includes analysis at both the aggregated survey level and at the individual credit union or municipal level. In the results tables, the statistics calculated for individual credit unions and for the samples of business entrepreneurs and agricultural producers at the municipal level are actual (unweighted) values. The results at the aggregate level, however, are weighted to reflect the actual size of each reference population. In all cases, the number of observations presented inthe tables are actual (unweighted) values. All figures listed in the results tables have been given in the local currency (Córdobas). The rate of exchange used as a basis for conversion to U.S. dollars was US\$1=C\$9.

total savings for members were higher than for non-members for all but the wealthiest households. Also, controlling for wealth, credit union member households obtain loans more frequently than non-member households. In particular, 27% of non-member business enterprise households in the lowest wealth categories (with household asset values of less than C\$10,000) had received or were paying off loans in 1996; by contrast, 69% of the business enterprise member households in the same wealth category had obtained credit (largely via loans from the credit unions).

The data presented does, however, identify a number of areas of concern with respect to credit unions' role in financial markets.

Credit unions' members' most commonly-stated reason for choosing a credit union as their primary savings institution is to secure a loan. Thus, credit union accounts do not generally mobilize significant savings: the size distributions of members' share and regular savings accounts at the credit unions reveal a pattern of many small accounts with low balances and only few larger accounts. It could be argued, however, that as credit unions increase financial savings mobilization efforts among their membership (in particular among small savers), their share or savings accounts requirement positions credit unions favorably to capture the increased savings of their members.

However, the analysis of the survey data does indicate that currently 35% of the total savings of credit union member households are held in deposit and checking accounts outside the credit unions, primarily in public banks. The survey data also indicates that the size of share and deposit accounts at the credit unions are small compared to the average deposit and checking accounts held by member households in public and private banks. Finally, the percentage of members with deposit and/or checking accounts outside the credit unions are strongly and positively related to both income and wealth. In other words, credit unions' share of their members' savings decline as the income and wealth of their members increase.

Credit unions efforts to mobilize savings would therefore benefit from promoting increased savings of smaller savers and from attracting savings held elsewhere by their more affluent members. However, to encourage the broader membership to use financial savings deposit accounts further and to induce members to shift more of their savings to the credit unions, credit unions' interest rates have to be more attractive relative to those of other financial institutions, and credit unions have to improve their image as safe and secure institutions. These changes will require additional efforts from the credit unions. These efforts include monitoring the rates of return on deposits offered by banks, and the development and use of promotional campaigns to advertize credit unions' rates of return and to build confidence in credit unions as safe institutions.

One other limitation that credit unions currently face in capturing savings, especially among commercial enterprise owners and wealthier households, is the lack of checking services. The percentage of respondent households with checking account, especially, among the wealthier households, is large enough to warrant consideration and potential provision of checking services in the modern credit unions.

Another area of concern identified by the survey data pertains to credit unions' role as lender. Although the evidence clearly showed that credit unions provide a segment of the population with credit that would otherwise not be available to them, access to credit union loans are also positively related to wealth. Low-wealth households have a smaller share of the number and volume of credit union loans and receive smaller credit union loans, on average, than member households from higher wealth quintiles. It must be noted, however, that the analysis in this report did not address the extent to which member households at the lower end of the wealth spectrum are restricted in their access to credit or whether they simply choose not to pursue credit. In other words, the report does not address the issue of the demand for loans. Nevertheless, if credit unions want to reach lower wealth households, in particular, lower wealth agricultural and commercial producers, they must give serious consideration to developing appropriate policies for loan decision-making that would enable low wealth members to overcome the inherent wealth constraint.

Finally, while credit unions play an important role in the provision of financial services to their members, the credit unions' impact on financial markets of the communities within which they operate is clearly limited by their low level of penetration among the potential households in those communities. Only 1% of each of the two samples, the 800 randomly selected business enterprise owners (Sample II), or the 153 randomly selected agriculturalists (Sample III) were credit union members. The degree of market penetration for the credit unions included in this study ranges from 0.3% of the economically active population in the municipality of Boaco in the case of "María Auxiliadora" credit union, to 2.8% in the municipality of Santo Tomás in the case of "Avance" credit union.

The ultimate challenge for the credit unions in their efforts to increase their market penetration will be the challenge of serving a broad membership: attracting dynamic households with more wealth and enterprise activity while continuing to assist lower wealth households to overcome credit constraints which limit their ability to invest and smooth consumption.

II. CREDIT UNION MEMBERSHIP PROFILE

A. Gender

The percentage of women in the credit union membership is considerably higher than that of men, and greater than their weight within the overall population as a whole (Table 1). Clearly, there is not an obvious gender bias in credit union membership. Note, however, that higher membership levels for women than for men does not necessarily imply higher levels of participation in the management or governance of the credit unions, nor does it imply greater access to credit or other financial services.

The gender distribution of the credit unions' membership is explained, to a large extent, by the members' prime occupation areas. As the discussion of the economic characteristics of the credit

union membership will show, the vast majority of members are involved in business (self-employed commerce, manufacturing or services) and women account for 70% of the sample members who report business as their main activity.

Table 1							
Male Female							
REPUBLIC OF NICARAGUA ⁽¹⁾	49%	51%					
SURVEY RESPONDENTS(2)							
Sample I: CU members							
Overall	36%	64%					
Business entrepreneurs	30%	70%					
Agriculturalists	82%	18%					
Sample II: Business Entrepreneurs	31%	69%					
Sample III: Agriculturalists	92%	8%					

Sources: (1) Instituto Nacional de Estadísticas y Censos (1996), *Resumen Censal, VII Censo Nacional de Población y III de Vivienda, 1995*, Managua: INEC. (2) Survey data

Similarly, the gender distribution of Samples II and III reveals that nearly 70% of the business entrepreneurs interviewed are women and, by contrast, more than 90% of the agricultural producers are men.

B. Occupational Categories

Table 2: Primary Occupation of Sample Credit Union Members						
	0 11	By G	ender			
	Overall (N=360)	Male (N=122)	Female (N=238)			
Self-Employed Business	75%	63%	82%			
Self-Employed Agriculture	7%	16%	2%			
Public Sector Employee	10%	13%	9%			
Private Sector Employee	4%	5%	3%			
Homemaker	2%	0%	3%			
Unemployed	1%	2%	0%			
Retired	0%	1%	0%			
Student	1%	0%	1%			
Total	100%	100%	100%			

At 75%, business (self-employment in commerce, production or services) is by far the most important source of employment for the sample credit union members (Table 2). At only 14%, the second most commonly reported occupation of sampled credit union members is public or private sector employment.

Table 2 also presents the variations in prime labor activities by gender. Eighty-two percent of female credit union members report their primary occupation as business. Of the remaining, 12% are salaried workers and 3% are homemakers. By comparison, 63% of male members report business as their primary occupation, with the remainder equally active in salaried employment and in agriculture (18% and 16%, respectively).

Women represent 70% of credit union members who report business as their primary occupation (Table 3). On the other hand, men, who represent 36% of the sample of credit union members, account for 44% of salaried employees, and 82% of agriculturalists. Female members' role in the business sector is clearly more significant than in wage employment or agriculture.

Table 3: Gender Comparison of CU Members' Primary Occupation, Sample of members from 9 CUs							
Male Members Female Members (36 %) (64 %)							
Self-Employed Agriculture	82 %	18 %					
Self-Employed Business	30 %	70 %					
Salaried Employee	44 %	56 %					
Other	35 %	65 %					
Note: Figures in parentheses indicate percentage of sample in each gender group.							

C. Income Distribution

The median annual income of credit union members (their individual income) is C\$18,000 (or approximately US\$2,000) (Table 4). The highest median incomes are found among members of the "San Antonio", "La Hermandad", and "Avance" credit unions. The lowest median incomes are found among members of the credit unions "COODEPAGRO" and "María Auxiliadora", with the median income of their members less than one third the median income of members of the "San Antonio", "La Hermandad" and "Avance". This large differential suggests that credit unions have the potential to serve a wide range of income groups.

The median annual income of surveyed urban business entrepreneurs (Sample II) is C\$15,000 (or US\$1,667). The median incomes were generally higher for sampled business entrepreneurs in the cities of Diriamba and Jinotepe (both in the province of Carazo), and the cities of Matagalpa and Estelí. The median annual income of surveyed agriculturalists (Sample III) is C\$3,600 (or US\$400), and it is higher for agricultural producers in the municipality of Jinotepe than in the municipality of Matagalpa.

Table 4: Individual Income Distribution								
	Median							
	Income (Córdobas)	5000 or less	5001 to 10,000	10,001 to 25,000	25001 to 50,000	50,001 or more		
Sample I: CU Members	18,000	10%	20%	33%	27%	10%		
By Credit Union								
El Socorro (Diriamba)	18,000	6%	23%	31%	26%	14%		
COODEPAGRO (Jinotepe)	7,800	37%	32%	21%	11%	0%		
Guapisa (Rivas)	15,600	16%	16%	35%	19%	14%		
Avance (Santo Tomás)	22,500	14%	17%	31%	31%	8%		
María Auxiliadora (Boaco)	7,200	24%	32%	32%	12%	0%		
La Hermandad (Sébaco)	24,000	3%	10%	41%	38%	8%		
La Unión (Matagalpa)	18,000	0%	30%	24%	30%	15%		
San Antonio (Estelí)	24,000	6%	21%	29%	29%	15%		
Iaguei (Corinto)	18,000	11%	21%	57%	4%	7%		
Sample II: Business Entrepreneurs	15,000	13%	17%	40%	20%	10%		
By Region								
Diriamba	24,000	12%	14%	35%	26%	12%		
Jinotepe	19,000	8%	13%	44%	27%	9%		
Rivas	14,400	23%	17%	42%	12%	6%		
Santo Tomás	15,000	20%	19%	37%	20%	4%		
Boaco	12,000	16%	16%	45%	13%	9%		
Sébaco	12,000	26%	16%	38%	16%	5%		
Matagalpa	18,000	8%	17%	42%	20%	14%		
Estelí	18,000	4%	13%	46%	30%	7%		
Corinto	15,000	14%	12%	53%	10%	10%		
León	12,750	20%	21%	32%	14%	13%		
Sample III: Agriculturalists	3,600	60%	20%	17%	3%	1%		
n n :								
By Region								
By Region Jinotepe	5,000	51%	25%	20%	5%	0%		

Finally, comparisons of income between credit union members and the sample of business entrepreneurs will help identify the relative income levels of each group. The information presented below suggests that the median annual incomes of credit union members primarily involved in business is higher than the median annual income of respondents from the sample of business entrepreneurs. Moreover, of the sampled credit union members who are primarily involved in business, 41% have annual personal incomes of more than C\$25,000 (or more than US\$2,700), compared with 32% of the sample of business entrepreneurs in general (Sample II).

Table 5: Individual Income Distribution							
	Median						
	Income (Córdobas)	5000 or less	5001 to 10,000	10,001 to 25,000	25001 to 50,000	50,001 or more	
Sample I: CU Members Overall Business Entrepreneurs	18,000 21,000	10% 7%	20% 19%	33% 33%	27% 29%	10% 12%	
Sample II: Business Entrepreneurs* (Excluding León)	17,000	10%	15%	43%	23%	9%	

^{*} Note: For the purposes of this comparison, the information presented for the sample of business entrepreneurs in this table excludes the municipality of León, where no credit union members were interviewed.

D. Ownership of Assets

The survey obtained the approximate values of all (business, agricultural, residential) assets owned by the respondents and/or their spouses. Table 6 presents the distribution, across different wealth categories of respondents from the sample of credit union members (Sample I), from the sample of business entrepreneurs (Sample II), and from the sample of agriculturalists (Sample III).

The distribution of wealth within the credit unions is concentrated in the C\$50,000-200,000 category (US\$5,555-22,222). Members of credit unions "El Socorro", "Avance", "La Unión" and "San Antonio" are among the wealthiest in the sample: more than a 30% of their members have more than 200,000 Córdobas in wealth. Members of credit unions "COODEPAGRO", "Guapisa" and "Iaguei" are among the poorest: more than a quarter of the membership belong to the lowest wealth category (less than C\$10,000, or approximately US\$1,000).

Table 6 also reveals that female credit union members tend to belong to households that are poorer in terms of their ownership of assets. Forty seven percent of female members fall in the bottom two wealth categories, compared to 21% of the male members. On the other hand, 30% of male members belong to the top two categories, compared to 21% of the female members.

The distribution of wealth for respondents from the sample of business entrepreneurs concentrated in 10,000 to 200,000 Córdobas categories. The entrepreneurs surveyed in Matagalpa are the wealthiest, with more than a third having wealth levels in excess of 200,000 Córdobas. At the other extreme, more than a quarter of business entrepreneurs surveyed in Rivas, Sébaco and Corinto have household wealth levels of less C\$10,000 Córdobas or less.

The information presented in Table 6 also indicates that wealth levels for the sample of entrepreneurs is higher--both at the overall sample levels and at the regional levels--for entrepreneurs than it is for agriculturalists.

	Table 6: Household Wealth									
	N	0-10,000	10,001- 50,000	50,001- 200,000	200,001- 500,000	500,001 or more				
Sample I: CU Members	237	13%	23%	39%	18%	7%				
By Credit Union										
El Socorro (Diriamba)	19	5%	32%	32%	21%	11%				
COODEPAGRO (Jinotepe)	28	25%	29%	36%	11%	0%				
Guapisa (Rivas)	28	29%	21%	32%	14%	4%				
Avance (Santo Tomás)	29	7%	21%	38%	28%	7%				
María Auxiliadora (Boaco)	29	17%	48%	31%	3%	0%				
La Hermandad (Sébaco)	31	6%	19%	58%	10%	6%				
La Unión (Matagalpa)	24	13%	25%	25%	25%	13%				
San Antonio (Estelí)	29	10%	10%	41%	24%	14%				
Iaguei (Corinto)	20	25%	50%	25%	0%	0%				
By gender of CU member										
Male	97	9%	12%	49%	20%	10%				
Female	140	17%	30%	31%	16%	5%				
Sample II: Business Entrepreneurs	457	18%	29%	30%	17%	6%				
By Region										
Diriamba	41	10%	39%	29%	17%	5%				
Jinotepe	41	20%	27%	32%	12%	10%				
Rivas	38	29%	13%	37%	13%	8%				
Santo Tomás	46	4%	26%	52%	11%	7%				
Boaco	43	12%	37%	37%	9%	5%				
Sébaco	54	30%	28%	26%	15%	2%				
Matagalpa	59	10%	29%	27%	20%	14%				
Estelí	49	18%	31%	33%	16%	2%				
Corinto	44	25%	36%	20%	9%	9%				
León	42	21%	29%	24%	21%	5%				
Sample III: Agriculturalists	101	29%	35%	32%	2%	3%				
By Region										
Jinotepe	50	30%	34%	32%	0%	4%				
Matagalpa	51	27%	35%	31%	4%	2%				

Finally, Table 7 below compares wealth levels between credit union members engaged in business and the sample of business entrepreneurs in general, 98% of whom are non-members. The information presented suggests that credit union members tend to belong to households that are better off in terms of their ownership of assets than non-member entrepreneurs: 46% of

entrepreneurs in Sample II (business sector) belong to the bottom two wealth categories, compared to 34% of those in Sample I (credit union members).

Table 7: Wealth Distribution								
10000 or less 10,001 to 50,001 to 200,001 to 500,001 o more								
Sample I: CU Members								
Overall	13%	23%	39%	18%	7%			
Business Entrepreneurs	10%	24%	37%	20%	9%			
Sample II: Business Entrepreneurs* (Excluding León)	17%	29%	32%	16%	7%			

^{*} Note: For the purposes of this comparison, the information presented for the sample of business entrepreneurs in this table excludes the municipality of León, where no credit union members were interviewed.

E. Respondents' Business Activities

Members owning small businesses (in production, commerce, or services) form an important subsector of the credit union membership. More than 70% of members in each of the credit unions studied own a business (Table 8). The only exception is "COODEPAGRO" where the percentage of credit union members with a business is only 15%.

The micro-enterprises owned by credit union member households are very small, averaging 2.2 permanent employees. Approximately 40% of the businesses provide regular employment for only one person, and 96% of the businesses employ 5 people or less.

Table 8: Business Ownership of CU Member Households							
	Per	cent Owning Business	ses				
	Respondents (CU members)	Spouses	Member Households				
Overall	80%	33%	84%				
Credit Unions							
El Socorro (Diriamba)	95%	40%	98%				
COODEPAGRO (Jinotepe)	15%	16%	28%				
Guapisa (Rivas)	72%	40%	75%				
Avance (Santo Tomás)	90%	27%	93%				
María Auxiliadora (Boaco)	80%	36%	85%				
La Hermandad (Sébaco)	85%	22%	85%				
La Unión (Matagalpa)	98%	52%	98%				
San Antonio (Estelí)	70%	38%	78%				
Iaguei (Corinto)	100%	28%	100%				

III. SAVINGS BEHAVIOR OF CREDIT UNION MEMBERS AND NON-MEMBERS

A. Who Saves: Why or Why Not?

Table 9: Use of Savings Services by Respondent Households					
Yes No					
Sample I:	CU Members Overall Business entrepreneurs Agriculturalists	100% 100% 100%	0% 0% 0%		
Sample II:	Business Sector	29%	71%		
Sample III:	Agriculturalists	4%	96%		

Table 9 presents the percentage of sample households which use the savings services of a financial institution.

The percentages for Sample I respondents reflect the fact that all credit union members must have a share or a deposit account in a credit union as part of a membership requirement. The picture presented for Sample II and III households (98% of whom are not credit union members) is very different indeed: 29% of respondents or their spouses in Sample II (Business Entrepreneurs), and only 4% of those in Sample III (Agriculturalists) have an account at a financial institution.

Reasons for Not Saving in a Financial Institution

By far, the majority of households (respondents and their spouses) which do not use the savings services of a financial institution stated that they do not have a savings account because of insufficient income. Nevertheless, 14% of the households which do not have an account in Sample II, and 6% of those which do not have one in Sample III, state that the reason is because they are not used to saving. Also, while only 1% mentioned low interest rates as their reason for not saving in a financial institution, 6% of business sector respondents mentioned that they do not have an account because they consider other types of investments to be more profitable.

Table 10: Reasons Why Respondents and their Spouses Do Not Have a Savings Account									
	N	Little income	Not used to saving	Institu- tions are unsafe	Low interest rate	Other invest- ment more profitable	Don't know how or where to open account	Other reasons	
Sample II: Business Entrepreneurs	584	76%	14%	1%	1%	6%	1%	2%	
By Region Diriamba Jinotepe Rivas Santo Tomás Boaco Sébaco Matagalpa Estelí Corinto León	56 57 58 66 58 61 52 50 66 60	75% 63% 79% 77% 81% 90% 83% 68% 82% 77%	7% 16% 14% 15% 5% 8% 13% 20% 11%	2% 5% 0% 3% 0% 0% 0% 2% 2%	0% 0% 2% 0% 2% 0% 4% 2% 0%	9% 14% 3% 3% 10% 2% 0% 6% 6%	2% 0% 0% 0% 0% 0% 0% 0%	5% 2% 2% 2% 2% 0% 0% 2% 0%	
Sample III: Agriculturalists	145	88%	6%	1%	1%	2%	1%	1%	
By Region Jinotepe Matagalpa	73 72	88% 89%	8% 4%	0% 1%	0% 3%	3% 1%	1% 0%	0% 1%	

B. Characteristics of Savers

• Savings Behavior of Credit Union Members

At the overall sample level, credit union members have, on average, C\$1,539 in shares, C\$1,335 in deposits (regular savings, fixed term deposits, youth savings and special savings deposits) and C\$119 in checking, totaling C\$2,993 (US\$333) in savings per member (Table 11).

Table 11 looks at the savings levels of credit union members by credit union, gender, wealth and income. Gender also plays an important role in credit union members' use of deposit accounts. Men have average savings levels which are nearly 50% higher than female members'. The gender difference is also very significant in the case of average shares and average deposit levels.

Finally, Table 11 shows that average savings levels of respondents are strongly and positively correlated with both income and wealth. Credit union members with a yearly income of over 50,000 córdobas average C\$12,010 (US\$1,334) in total savings, while average savings for the lowest income group is C\$703 (US\$78). Similarly the highest savings level is found in the highest wealth quintile (C\$6341 or US\$705) and the lowest average savings level (C\$714 or US\$79) is found in the poorest group (lowest quintile). A similar relationship is observed for

total average shares, deposits and checking per member.

Tal	Table 11: Average Savings of CU Members						
	N	Average total savings per respondent	Average total shares per respondent	Average total deposits per respondent	Average total checking per respondent		
SAMPLE I: CU MEMBERS	328	2,993	1,539	1,335	119		
By Credit Union: El Socorro (Diriamba) COODEPAGRO (Jinotepe) Guapisa (Rivas) Avance (Santo Tomás) María Auxiliadora (Boaco) La Hermandad (Sébaco) La Unión (Matagalpa) San Antonio (Estelí) Iaguei (Corinto) By primary occupation	37 38 37 30 36 35 39 37 39	3,245 660 1,992 2,433 417 3,152 2,264 6,291 2,244	2,500 329 0 1,156 230 2,068 1,646 2,998 1,115	299 331 1,884 1,106 188 1,055 572 3,009 1,129	446 0 108 172 0 29 46 284 0		
Self-employed Business Self-employed Agriculture Public sector employee Private sector employee Homemaker Other	242 35 27 13 6 5	2,956 1,478 3,979 4,330 936 3,990	1,623 1,122 1,470 592 443 3,390	1,193 356 2,509 3,385 493 600	140 0 0 354 0		
By gender of respondent Male Female	113 215	3,749 2,572	1,838 1,327	1,686 1,140	226 60		
By income of respondent 5000 or less 5001 to 10000 10001 to 25000 25001 to 50000 50001 or more	40 62 98 65 25	703 1,573 1,971 3,120 12,010	409 1,143 1,204 2,206 3,366	294 286 767 955 8,038	0 144 0 139 606		
By household wealth 1st quintile 2nd quintile 3rd quintile 4th quintile 5th quintile	45 44 45 44 43	714 1,589 1,850 3,169 6,341	464 973 1,298 1,854 2,550	251 617 552 1,164 3,365	0 0 0 151 426		

Note: Averages are calculated across all households in the sample, not just those with accounts. Savings= Shares+Deposits+Checking accounts

Deposits= regular savings+fixed term deposits+youth savings+special savings deposits

• Savings Behavior of the Business Sector

Table 12: Average Savings of Business Entrepreneurs											
	N	Average total savings per respondent	Average total shares per respondent	Average total deposits per respondent	Average total checking per respondent						
SAMPLE II: BUSINESS ENTREPRENEURS	750	1,983	6	1,537	439						
By Region Diriamba Jinotepe Rivas Santo Tomás Boaco Sébaco Matagalpa Estelí Corinto León By gender of respondent	76 73 77 77 74 76 76 73 74 74	2,028 1,199 2,338 963 879 1,202 3,402 1,850 1,770 1,964	13 5 0 0 0 0 0 0 23 0	1,443 771 1,815 303 812 1,181 2,030 1,689 1,770 1,626	572 423 523 659 68 21 1,372 137 0 338						
Male Female	254 496	1,943 2,001	20 0	1,099 1,740	825 261						
By income of respondent 5000 or less 5001 to 10000 10001 to 25000 25001 to 50000 50001 or more	83 86 227 103 49	216 591 854 3,523 12,809	0 0 0 2 8	216 588 741 3,234 8,436	0 3 113 287 4,365						
By household wealth 1st quintile 2nd quintile 3rd quintile 4th quintile 5th quintile	91 88 89 87 87	73 518 1,679 2,131 6,539	0 0 6 50 0	73 518 1,259 1,914 4,209	0 0 415 168 2,330						

Note: Averages are calculated across all households in the sample, not just those with accounts. Savings= Shares+Deposits+Checking accounts

Deposits= regular savings+fixed term deposits+youth savings+special savings deposits

Table 12 looks at the average savings levels of business entrepreneurs (Sample II), 99% of whom are not credit union members. At the overall sample level, business entrepreneurs have, on average, C\$1,537 in deposits (regular savings, fixed term deposits, youth savings or special savings programs) and C\$439 in checking, totaling C\$1,983 (US\$220) in savings per respondent.

Rather surprisingly, the gender difference in savings behavior for Sample II respondents does not appear to be significant: average savings levels for men and women entrepreneurs are quite similar. Note however, that average deposits per respondents are higher for women, while average checking deposits are higher for male respondents.

Finally, average savings levels for respondents in Sample II are strongly and positively correlated with income and wealth. Credit union members with a yearly income of over 50,000 córdobas average C\$12,809 (US\$1,423) in total savings, while average savings for the lowest income group is C\$216 (US\$24). Similarly, the highest savings level is found in the highest wealth quintile (C\$6539 or US\$727) and the lowest average savings level (C\$73 or US\$8) is found in the lowest quintile. A similar relationship is observed for total average deposits and checking per respondent.

C. Respondents' Primary Savings Institutions

By far, the majority of credit union members say that the credit union holds most of their savings (Table 13). Overall, 92% of members make this claim. Credit Unions' main competitors are public banks which 6% of members identified as their primary savings institutions.

Members' choice of a primary savings institution does not vary greatly by credit union. It does, however, vary with income. The percentage of respondents who hold most of their savings in banks increases from 2% of members in the lowest income category to 25% of those in the highest income category.

Information on the primary financial institutions of non-members in each municipality helps identify credit unions main competitors in each of these municipalities. Sixty five percent of business sector respondents (Sample II) who do have a savings account (deposit or checking) identify public banks as their primary savings institutions, 28% select private banks. Only 3% of business entrepreneurs who have an account identify credit unions as their primary depository of savings, which is not surprising given that only 1% of respondents in Sample II are credit union members.

Table 13 shows that for business entrepreneurs from all income categories, the percentage who consider public banks to be their primary savings institution is greater than the percentage who select private banks. Finally, Sample II respondents are more likely to choose a public than a private bank as their primary depository of savings in all municipalities, except in Sébaco and Matagalpa--both in the province of Matagalpa--where a majority of business entrepreneurs identify private banks as their primary savings institution.

Table 13: Respondents' Primary Savings Institution (where most savings kept)											
	N	Credit Union	Public Bank	Private Bank	Finance Co.	Other	No info				
Sample I: CU Members	360	92%	6%	1%	0%	0%	0%				
By Credit Union:											
El Socorro (Diriamba)	40	93%	8%	0%	0%	0%	0%				
COODEPAGRO (Jinotepe)	40	93%	8%	0%	0%	0%	0%				
Guapisa (Rivas)	40	88%	10%	2%	0%	0%	0%				
Avance (Santo Tomás)	40	95%	5%	0%	0%	0%	0%				
María Auxiliadora (Boaco)	40	92%	7%	0%	0%	0%	0%				
La Hermandad (Sébaco)	40	98%	2%	0%	0%	0%	0%				
La Unión (Matagalpa)	40	100%	0%	0%	0%	0%	0%				
San Antonio (Estelí)	40	83%	13%	5%	0%	0%	0%				
Iaguei (Corinto)	40	93%	8%	0%	0%	0%	0%				
<u> </u>											
By income of respondent				0	0.01						
5000 or less	41	98%	2%	0%	0%	0%	0%				
5001 to 10000	70	97%	3%	0%	0%	0%	0%				
10001 to 25000	104	96%	2%	2%	0%	0%	0%				
25001 to 50000	71	93%	7%	0%	0%	0%	0%				
50001 or more	28	72%	25%	3%	0%	0%	0%				
Sample II: Business Entrepreneurs	211	3%	65%	28%	1%	3%	0%				
By Region											
Diriamba	22	5%	77%	9%	0%	10%	0%				
Jinotepe	22	14%	77%	9%	0%	0%	0%				
Rivas	22	0%	95%	5%	0%	0%	0%				
Santo Tomás	12	0%	83%	0%	0%	0%	17%				
Boaco	22	0%	91%	9%	0%	0%	0%				
Sébaco	19	0%	16%	84%	0%	0%	0%				
Matagalpa	28	0%	21%	79%	0%	0%	0%				
Estelí	30	0%	73%	13%	3%	10%	0%				
Corinto	14	14%	64%	21%	0%	0%	0%				
León	20	5%	70%	25%	0%	0%	0%				
By income of respondent					1	1					
5000 or less	8	0%	80%	9%	0%	5%	6%				
5000 of fess 5001 to 10000	14	3%	67%	30%	0%	0%	0%				
10001 to 25000	54	0%	64%	28%	0%	9%	0%				
25001 to 50000	46	3%	67%	26%	0%	5%	0%				
50001 to 50000 50001 or more	34	0%	51%	49%	0%	0%	0%				

Credit union members' most common reason for choosing a credit union as their primary savings institution is to secure access to loans (Table 14). Almost 55% of members who deposit most of their savings at a credit union do so to meet loan requirements. This fact suggests that the credit unions in our sample are borrower-dominated.

	Table 14: Reasons for Choosing Primary Savings Institution														
	N	Highest interest	Greater security	Access to money	Require d for loan	Checkin g account	Reputa- tion	Loyalty	Best hours	Best location	Quality of services	Other reason	No info		
Sample I: CU Members	351	3%	6%	5%	51%	0%	3%	9%	0%	3%	13%	6%	0%		
Primary Savings Institution Credit Union Public Bank Private Bank	324 24 3	3% 9% 0%	6% 0% 0%	5% 2% 37%	54% 19% 0%	0% 8% 0%	4% 0% 0%	8% 20% 0%	0% 0% 0%	3% 12% 0%	12% 31% 26%	5% 0% 37%	0% 0% 0%		
Sample II: Business Sector	210	8%	14%	4%	14%	2%	7%	15%	2%	8%	14%	12%	1%		
Primary Savings Institution Credit Union Public Bank Private Bank Other No info	7 138 57 6 2	0% 9% 7% 0% 0%	0% 11% 27% 0% 0%	7% 1% 2% 46% 0%	23% 19% 4% 0% 0%	0% 1% 4% 0% 0%	11% 8% 6% 0% 0%	59% 20% 1% 4% 0%	0% 1% 6% 0% 0%	0% 8% 12% 0% 0%	0% 11% 21% 27% 0%	0% 13% 9% 23% 0%	0% 0% 1% 0% 100%		

Among the small group of credit union members who did not select credit unions as their primary savings institution, the most common reason for depositing more of their savings at banks is the quality of service. Loyalty is another important reason for selecting public banks. Finally, and rather surprisingly, 19% of members who select public banks as their primary depository of savings, do so to meet loan requirements.

The principal reasons for business entrepreneurs' choice of a primary savings institution identifies areas in which credit unions could do more to attract savers away from their principal competitors in the savings markets. Among business entrepreneurs (99% of whom were not credit union members), the most common reason for choosing a public bank as their primary depository of savings is loyalty and loan requirements. The most common reason for choosing a private bank as their primary depository of savings is greater security.

D. Financial Institutions' Share of Respondents' Savings

The financial data collected in the survey was used to construct different institutions' shares of respondents' *household* savings (the savings of respondents plus the savings of their spouses). The results are presented in Table 15 for Sample I (Credit Union Members) and for Sample II (Business Entrepreneurs).

• Sample I: CU Members

Credit unions hold 85% of member households' accounts, but 65% of their financial savings. That is, more than a third of the total savings of credit union member households (35%) are in fact held in other types of financial institutions, or outside credit unions.

Credit unions' efforts to mobilize savings among existing members would benefit from attracting members' household savings held elsewhere. Credit unions' main competition in capturing their members' savings are clearly public banks, which hold 30% of the volume of members' household savings.

The percentage of members' households savings held at other financial institutions is greater in the newer credit unions ("Iaguei", "María Auxiliadora", and particularly "Guapisa") and in the wealthier ones ("San Antonio" and "Avance"). At the other extreme, "El Socorro" mobilizes more than 80% of the volume of its members' household savings. When the credit unions' share of the total volume of savings is already significant, efforts to mobilize savings among existing members would benefit, particularly, from stimulating members to increase their levels of savings.

• Sample II: Business Entrepreneurs

Credit unions currently hold 3% of business entrepreneurs' household accounts and less than 1% of their financial savings (Table 15). The greatest share of entrepreneurs' savings are held in public banks (65% of the number of accounts and 62% of the volume of savings). Private banks hold 37% of the total household savings of business entrepreneurs.

Table 15: Financial Institutions' Share of Total Household Savings in terms of number of accounts and volume of savings

	Credit	Union	Otl C		Public	Bank	Private	e Bank		ance pany		nunal nk	Ot	her
	%	of	%	of	%	of	%	of	%	of	%	of	%	of
	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol
SAMPLE I: CU Members	84.7	64.7	0.5	0.2	11.1	30.1	3.3	4.6	0.0	0.0	0.1	0.2	0.2	0.4
By Credit Union:														
El Socorro	91.0	80.6	1.5	0.0	7.5	19.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COODEPAGRO	86.6	74.8	6.0	7.4	6.0	17.9	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guapisa	77.6	41.7	0.0	0.0	19.4	58.3	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avance	92.7	63.5	0.0	0.0	7.4	36.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
María Auxiliadora	88.9	60.2	0.0	0.0	7.4	16.4	1.9	0.0	0.0	0.0	1.9	23.4	0.0	0.0
La Hermandad	93.2	75.2	0.0	0.0	4.1	19.5	2.7	5.3	0.0	0.0	0.0	0.0	0.0	0.0
La Unión	79.0	74.8	0.0	0.0	12.3	11.0	7.0	11.4	0.0	0.0	0.0	0.0	1.8	2.9
San Antonio	76.0	59.0	0.0	0.0	17.3	35.3	6.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0
Iaguei	84.9	62.6	1.9	2.1	13.2	35.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAMPLE II: Business Entrepreneurs	3.1	0.4	0	0	64.7	61.8	28.3	36.5	0.8	0.9	0.4	0.0	2.7	0.5
By Region														
Diriamba	8.1	2.9	0	0	64.9	66.4	10.8	29.9	0.0	0.0	8.1	0.0	8.1	0.8
Jinotepe	11.8	0.4	0	0	76.5	53.5	11.8	46.1	0.0	0.0	0.0	0.0	0.0	0.0
Rivas	0.0	0.0	0	0	97.0	99.8	3.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Santo Tómas	29.4	0.5	0	0	70.6	99.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Boaco	0.0	0.0	0	0	88.9	58.1	11.1	41.9	0.0	0.0	0.0	0.0	0.0	0.0
Sébaco	0.0	0.0	0	0	23.1	6.2	76.9	93.8	0.0	0.0	0.0	0.0	0.0	0.0
Matagalpa	0.0	0.0	0	0	31.7	20.3	68.3	79.7	0.0	0.0	0.0	0.0	0.0	0.0
Estelí	2.7	1.2	0	0	70.3	75.7	16.2	16.9	2.7	4.2	0.0	0.0	8.1	2.1
Corinto	15.8	0.7	0	0	57.9	92.3	26.3	7.0	0.0	0.0	0.0	0.0	0.0	0.0
León	0.0	0.0	0	0	70.8	74.1	29.2	25.9	0.0	0.0	0.0	0.0	0.0	0.0

E. Use of Alternative Savings Services

At a greater level of detail, the data on household savings patterns were analyzed by institution and type of account. Tables 16-a and 16-b give the percentage of households in the samples with accounts at different financial institutions, and Table 17 presents the mean size of accounts by type of institution.

• Sample I: Credit Union Members

Table 16-a reflects the fact that all credit union members, or *socios*, must have a shares account in a credit union as part of a membership requirement: 100% of respondents in all but "El Socorro" and "Guapisa" credit unions have shares accounts (or *aportaciones*). In the case of "El Socorro", the random sample of current credit union users included 5 *ahorrantes no asociados* who hold savings accounts in the credit unions, but are not members of the credit union. Finally, the membership structure of "Guapisa" is slightly different from that of the other credit unions studied: "Guapisa" has only 27 *socios* who, as founders of the credit union, each contributed C\$2000 in shares towards the cost of establishment of the credit union; all other users of this credit union are *ahorrantes* who must have a savings account in the credit union as part of their requirement for affiliation.

Access to other credit union services, such as loans, is explicitly tied to the maintenance of an account at the credit union. Not all accounts mobilize significant savings. However, the shares (or, in the case of "Guapisa", the savings account) requirement positions the credit unions to capture savings as households' wealth increases.

Nevertheless, despite the fact that all the participating credit unions offer deposit accounts (regular savings, or fixed term deposits, or youth savings or special savings deposits), only 39% of member households have such an account in credit unions.

Table 16-a also indicates that a noticeable number of member households hold deposit accounts outside credit unions. For the entire sample, more than 10% of member households have a deposit account in a public bank, 5% have one in a private bank. Moreover, 4% of the member households hold a checking account in a public bank.

Generally, there is a positive relationship between the level of personal income and household wealth, and member households' use of deposits accounts in both public and private banks. The percentage of respondent households with public bank deposits increase from, respectively, 6% of those in the lowest income category to 37% of those earning more than 50,000 córdobas. Similarly, 31% of households in the top wealth quintile had a public bank deposit compared to 10% of all sample members. The percentage of respondents with private bank deposits is generally lower than with public banks, but shows a similar positive relationship to income. The use of checking accounts also increases with income and wealth. No member household in the lowest income category has a checking accounts, whereas 25% of those in the top income category do.

Table 16-a: Households' Use of Savings Accounts at Various Institutions													
	N	Credit union shares	Other CU shares	CU deposits	Other CU deposits	Public bank deposits	Private bank deposits	Any other deposits	Public bank checking	Private bank checking			
SAMPLE I: CU MEMBERS	360	87%	1%	39%	0%	10%	5%	0%	4%	0%			
Credit Union:													
El Socorro	40	88%	3%	43%	0%	10%	0%	0%	3%	0%			
COODEPAGRO	40	100%	8%	45%	3%	10%	3%	0%	0%	0%			
Guapisa	40	0%	0%	100%	0%	15%	2%	0%	5%	0%			
Avance	40	100%	0%	42%	0%	7%	0%	0%	5%	0%			
María Auxiliadora	40	100%	0%	17%	0%	7%	0%	2%	0%	0%			
La Hermandad	40	100%	0%	42%	0%	2%	5%	0%	2%	0%			
La Unión	40	100%	0%	8%	0%	13%	8%	0%	3%	3%			
San Antonio	40	100%	0%	30%	0%	15%	13%	0%	8%	0%			
Iaguei	40	100%	0%	10%	3%	10%	0%	0%	0%	0%			
By Primary Occupation													
Self-employed Business	266	88%	0%	36%	0%	9%	4%	0%	4%	1%			
Self-employed Agricult.	37	100%	4%	37%	2%	6%	8%	0%	0%	0%			
Public sector employee	30	79%	1%	59%	0%	14%	9%	0%	0%	0%			
Private sector employee	14	66%	4%	34%	0%	20%	10%	0%	16%	0%			
Homemaker	7	68%	0%	63%	0%	16%	0%	0%	0%	0%			
Other	6	100%	0%	42%	0%	23%	0%	0%	0%	0%			
By Income of Respondent:													
5000 or less	41	78%	0%	47%	0%	6%	2%	0%	0%	0%			
5001 to 10000	70	88%	1%	38%	0%	3%	2%	0%	3%	0%			
10001 to 25000	104	86%	1%	48%	0%	4%	5%	0%	0%	0%			
25001 to 50000	71	90%	1%	38%	0%	14%	2%	0%	4%	0%			
50001 or more	28	83%	0%	33%	0%	37%	18%	0%	21%	4%			
By Household Wealth:													
1st quintile	47	77%	1%	37%	0%	1%	0%	0%	0%	0%			
2nd quintile	47	84%	0%	53%	0%	0%	0%	1%	0%	0%			
3rd quintile	48	92%	1%	46%	0%	3%	3%	0%	0%	0%			
4th quintile	47	88%	0%	41%	0%	13%	5%	0%	5%	0%			
5th quintile	48	91%	0%	36%	0%	31%	5%	0%	15%	2%			

^{*} Deposits include regular savings accounts, fixed term deposits, youth savings and special savings deposits.

In summary, the figures presented in Table 16-a suggest once again that credit unions' efforts to mobilize savings would benefit from attracting savings held elsewhere by their more affluent members. The data also suggests, however, that these efforts could be limited by the credit unions' inability to offer checking services, particularly among wealthier commercial enterprise owners who are most likely to require the security and convenience of checking services for their frequent and large volume transactions.

• Sample II: Business Entrepreneurs

Table 16-b: Households' Use of Savings Accounts at Various Institutions													
	N	Credit union shares	Credit union deposits	Public bank deposits	Private bank deposits	Any other deposits	Public bank checking	Private bank checking	Any other checking	No savings accounts			
SAMPLE II: BUSINESS SECTOR	800	1%	0%	18%	8%	1%	4%	1%	0%	71%			
By Region:													
Diriamba	80	4%	0%	16%	5%	6%	9%	0%	0%	71%			
Jinotepe	80	5%	0%	18%	3%	0%	8%	3%	0%	71%			
Rivas	80	0%	0%	20%	1%	0%	10%	0%	0%	72%			
Santo Tomás	80	5%	1%	11%	0%	0%	4%	0%	0%	82%			
Boaco	80	0%	0%	22%	2%	0%	5%	1%	0%	73%			
Sébaco	80	0%	0%	8%	18%	0%	0%	4%	0%	76%			
Matagalpa	80	0%	0%	11%	25%	0%	4%	5%	0%	65%			
Estelí	80	1%	0%	24%	5%	5%	4%	1%	0%	62%			
Corinto	80	0%	4%	11%	5%	0%	0%	0%	0%	83%			
León	80	0%	0%	19%	7%	0%	1%	0%	0%	75%			
By income of respondent:													
5000 or less	85	1%	0%	9%	1%	1%	0%	0%	0%	89%			
5001 to 10000	90	0%	0%	10%	5%	1%	1%	0%	0%	83%			
10001 to 25000	237	0%	0%	17%	7%	2%	2%	1%	0%	73%			
25001 to 50000	110	2%	0%	28%	12%	2%	4%	2%	0%	57%			
50001 or more	52	1%	0%	30%	33%	0%	17%	8%	0%	29%			
By household wealth:													
1st quintile	91	0%	0%	2%	0%	0%	0%	0%	0%	98%			
2nd quintile	91	0%	0%	7%	6%	0%	0%	0%	0%	86%			
3rd quintile	92	2%	0%	16%	6%	7%	5%	2%	0%	68%			
4th quintile	91	4%	0%	21%	6%	0%	1%	2%	0%	69%			
5th quintile	91	1%	0%	28%	26%	2%	12%	3%	0%	42%			
* Deposits include regular	r savings	accounts,	fixed term	deposits,	youth savi	ngs and sp	ecial savir	igs deposi	ts				

Table 16-b presents a very different situation for respondent households in Sample II (Business entrepreneurs), only 29% of whom have savings accounts.

Sample II households are more likely to have deposit accounts in public than private banks in all the municipalities studied, except in Sébaco and Matagalpa (both in the Matagalpa province) where the percentage of respondents with private bank deposits is greater than the percentage of households with public bank deposits.

Table 16-b also shows that Sample II households' use of savings services (deposits and/or checking) in financial institutions increase significantly with both income and wealth. Nearly 60% of the households (respondents and their spouses) in the top wealth quintile have savings accounts, compared to barely 2% in the bottom wealth quintile. A similar positive relationship is observed between the level of personal income and the utilization of savings services.

Income and assets play important roles in Sample II households' use of both deposits and checking services. Of the households in the lowest wealth quintile, only 2% have a deposit account in a (public or private) bank. Of the households in the top wealth quintile, on the other hand, 28% have a deposit account in a public bank and 26% have one in a private bank. Moreover, none of the respondent households in the lowest 2 wealth quintiles has a checking account, while 15% of households in the top wealth quintile have a checking account in a public bank and 3% have one in a private bank.

Once again, the credit unions' potential for attracting deposit accounts from new wealthy or high income savers may greatly depend on whether credit unions are able to offer them the convenience of checking accounts.

F. Average Size of Accounts Held at Different Types of Institutions

Table 17 compares the average size of accounts handled by different types of institutions.

• Sample I: Credit Union Members

For the sample overall, the average size of member households' share accounts (1,676 Córdobas or US\$186) are nearly twice as large as their deposits accounts at a credit union (783 Córdobas or US\$87). Share accounts are, however, small compared to C\$5,306 (US\$590) and C\$4,842 (US\$538) for average deposit accounts held by member households in, respectively, public and private banks. They are also small compared to C\$3,059 (US\$390) for average checking accounts held in public banks.

• Sample II: Business Entrepreneurs

While approximately twice as many Sample II entrepreneurs had household deposit accounts in public banks than in private banks (Table 16-b), the average size of their deposit accounts in public banks (C\$6,873 or US\$764) are slightly smaller than their deposits accounts at private bank (C\$7,477 or US\$831) (Table 17). They are also small compared to average checking accounts held in either public or private banks.

Table 17: Average* Size of Household Accounts at Various Institutions											
	CU shares account	Other CU shares account	CU deposit account	Other CU deposit account	Public Bank deposit account	Private bank deposit account	Other deposit account	Public bank checking account	Private bank checking account		
SAMPLE I: CU Members	1,676	613	783	905	5,306	4,842	4,000	3,059	800		
By Credit Union El Socorro COODEPAGRO Guapisa Avance Ma. Auxiliadora La Hermandad La Unión San Antonio Iaguei	2,812 278 1,183 229 1,811 1,568 2,914 1,091	 613 	492 521 568 675 513 1,283 943 942 730	250 1,500	1,662 1,062 5,801 7,767 783 10,975 2,117 6,770 8,238	 3,262 3,008 6,380	 4,000 	16,500 1,250 2,750 2,000 1,000 4,000	 800		
SAMPLE II: Business Sector	1,376		349		6,873	7,477	2,426	10,455	13,354		
By Region: Diriamba Jinotepe Rivas Santo Tomás Boaco Sébaco Matagalpa Estelí Corinto León	2,600 350 124 1,700	 	 101 500	 	5,518 2,987 10,173 3,536 6,290 2,150 4,257 4,823 14,563 10,706	27,000 27,000 500 10,350 9,973 6,897 10,525 5,050 5,308	438 3,000	8,583 5,127 9,050 25,383 3,250 10,193 5,000 25,000	18,000 18,000 800 14,100		
SAMPLE III: Agriculturalists	90	-	-	-	3,477	-					
By Region Jinotepe Matagalpa	90 				4,210 400						

Deposits include regular savings, fixed term deposits, youth savings and special savings deposits

G. Size Distribution of Credit Union Accounts

Table 18 and 19 provide a distribution of credit union shares and deposit savings by account size. The information is based on share accounts and deposit accounts (regular savings, fixed term deposits, youth savings and special savings accounts) held by the credit union members (Sample I respondents).

Table 1	Table 18: Distribution of Members' Credit Union Share Accounts														
	1 to	500	501 to 1000		1001 to	o 5000	5,00 10,0		More than 10,000						
	N	%	N	%	N	%	N	%	N	%					
SAMPLE I: CU MEMBERS	124	32%	51	19%	104	43%	13	5%	2	1%					
By Credit Union:															
El Socorro	9	26%	2	6%	17	50%	5	15%	1	3%					
COODEPAGRO	35	90%	2	5%	2	5%	0	0%	0	0%					
Avance	8	25%	14	44%	9	28%	1	3%	0	0%					
Ma. Auxiliadora	36	95%	2	5%	0	0%	0	0%	0	0%					
La Hermandad	9	25%	6	17%	19	53%	2	6%	0	0%					
La Unión	10	26%	5	13%	23	59%	1	3%	0	0%					
San Antonio	4	11%	6	16%	22	59%	4	11%	1	3%					
Iaguei	13	33%	14	36%	12	31%	0	0%	0	0%					
By Gender															
Male	45	32%	15	17%	37	43%	6	5%	1	2%					
Female	79	32%	36	21%	67	43%	7	5%	1	0%					

Table 19: Distribution of Members' Credit Union Regular Savings Accounts													
	1 to	500	501 to	1000	1001 to	5000	More than 5,000						
	N %		N	N %		%	N	%					
SAMPLE I: CU MEMBERS	75	59%	17	13%	30	28%	0	0%					
By Credit Union:													
El Socorro	9	69%	1	8%	3	23%	0	0%					
COODEPAGRO	11	69%	3	19%	2	12%	0	0%					
Guapisa	27	71%	4	11%	7	18%	0	0%					
Avance	10	67%	2	13%	3	20%	0	0%					
Ma. Auxiliadora	3	60%	2	40%	0	0%	0	0%					
La Hermandad	7	47%	1	7%	7	47%	0	0%					
La Unión	1	33%	1	33%	1	33%	0	0%					
San Antonio	5	42%	2	17%	5	42%	0	0%					
Iaguei	2	40%	1	20%	2	40%	0	0%					
By Gender													
Male	26	49%	4	10%	16	41%	0	0%					
Female	49	65%	13	15%	14	20%	0	0%					

The sample distribution of members' share accounts is concentrated in the C\$500-1000 size range. Nevertheless, the distribution reflects the pattern of many small accounts with low balances (32% of the share accounts are less than C\$500 or approximately US\$56) and few accounts larger than 5000 (US\$555). The distribution of members' deposit accounts at the credit unions is even more concentrated in the smallest size range: 59% of deposit accounts are less than 500 Córdobas, none are larger than 5,000 Córdobas. Many of the small account holders may be members who maintain shares or deposits at the credit union primarily in order to access other services, such as loans.

H. Savings Mobilization: Higher Savings by Credit Union Members

Lastly, this section examines the differences between the financial savings of credit union member and non-members. Table 20 compares total savings per respondent between business entrepreneurs who are credit union members (i.e., Sample I respondents primarily involved in business) and non-member entrepreneurs (i.e., Sample II respondents who are not credit union members), controlling for wealth levels.

Table 20: Comparisons of Total Savings, by Wealth and Membership Status										
Average total savings per respondent ⁽¹⁾										
	Member Business Entrepreneurs	Non-Member Business Entrepreneurs ⁽²⁾								
By Household Wealth 0-10,000 10,001-50,000 50,001-200,000 200,001-500,000 More than 500,000	674 1,489 2,653 5,862 6,801	107 690 2,621 3,678 11,298								

Note:

- (1) Averages are calculated across all respondents, not just those with accounts
- (2) For the purposes of this comparison, the information presented for the sample of nonmember business entrepreneurs excludes respondents from the municipality of León, where no credit union members were intereviewed.

Average savings for member entrepreneurs tend to be higher than for non-member entrepreneurs for all but the top wealth quintile. This comparison is compelling evidence of the important role credit unions play in mobilizing savings from their members, especially among the lowest wealth categories.

I. Conclusions

The data presented in this Section clearly demonstrates the important role that credit unions play in mobilizing savings from their members. All credit union members (100% of Sample I respondents) have a share or a deposit account. By contrast, 29% of respondents or their spouses in Sample II (Entrepreneurs) and only 4% of those in Sample III (Agriculturalists)--98% of whom were not credit union members--have an account in a financial institution.

Access to credit union services, and in particular access to credit union loans, is explicitly tied to the maintenance of a share or regular savings account at the credit unions. As noted previously, sample members' most common reason for choosing a credit union as their primary savings institution is to secure a loan. Not all credit union accounts mobilize significant savings: the size distributions of members' share and deposit accounts at the credit unions reflect the pattern of many small accounts with low balances and few larger accounts.

Nevertheless, a comparison of total savings between member and non-member business entrepreneurs offered further evidence of the important role that credit unions already play in mobilizing savings from their members: controlling for wealth levels, average total savings for members were higher than for non-members for all but the wealthiest category. Moreover, as credit unions increase savings mobilization efforts among their membership (in particular among small savers), credit unions' shares or savings account requirement positions credit unions favorably to capture the increased savings of their membership.

The analysis of the survey data does, however, indicate that 35% of the total savings of credit union member households are currently held in deposit and checking accounts outside the credit unions, primarily in public banks. The percentage of members who hold deposits and/or checking accounts outside the credit unions is much greater--and credit unions' share of their members' savings consequently much lower--among higher income and wealthier respondents. Credit unions' efforts to mobilize savings would therefore benefit from attracting savings held elsewhere by their more affluent members.

IV. CREDIT ACCESS OF CREDIT UNION MEMBERS AND NON-MEMBERS

A. Use of Alternative Credit Services

• Sample I: CU Members

At the overall sample level, 76% of member households had either received or were still paying off a loan (in cash) in 1996 (Table 21-a).

Supplier credit (i.e. loans in the form of input supplies or merchandise) is a less important form of access to credit for the member households in the sample. Loans from input suppliers are reported by 19% of the sample households. When supplier loans are considered, the percentage of member households using credit (in cash or kind) increases from 76% to 80%.

Member households' principal source of loans are, by far and away, the credit unions. Table 21-a indicates that 65% of member households had a loan from credit unions compared to only 6% with loans from public banks, and 5% from private banks.

There are, however, differences among member households' use of credit union loan services. The percentage of members households with loans from their credit unions is smallest in "COODEPAGRO" (58%) and, especially, in "Guapisa" (22%). "COODEPAGRO" is a multiple services cooperative which does not specialize in the provision of financial services and is better known within the community as a farm supply store. "Guapisa" is a very recent credit union which only began its lending operations in December 1996.

• Sample II: Business Entrepreneurs

At the overall sample level, 38% of Sample II households had received or were still paying off a loan (in cash) in 1996 (Table 21-b). This percentage is highest for Jinotepe and Estelí, and lowest in Santo Tómas and Corinto. The most notable difference in loan access between households in Sample I and Sample II is clearly access and use of credit union loans.

Supplier credit is a more important form of access to credit for respondent households in Sample II. Such loans are reported by 23% of the sample households. When supplier loans are considered, the percentage of households using credit (in cash or kind) increases from 38 to 50%.

• Sample III: Agriculturalists

Finally, Table 21-b shows that only 13% of households in Sample III (Agriculturalists) had received or were still paying off a loan (in cash) in 1996. The most common source of cash loans to agriculturalists are public banks in Jinotepe, and NGOs in Matagalpa.

Loans from input suppliers are reported by only 6% of households in this sample, increasing the percentage of households using any type of credit (cash or kind) from 13 to 18%.

B. Lenders' Share of Credit Received by Households

The survey data was used to construct different lenders' shares of household loan numbers and volume, including all sources except for input supplier credit (Household loans refer to loans of respondents or their spouses). The results are presented in Table 22.

Table 21-a: CU Members: Households' Use of Loans (in Cash and Kind) from Various Lenders

					Loan S	Source				Households with	
	N	Credit union	Public bank	Private bank	Commu- nal bank	NGOs	Money- lenders	Relative/ Friends	Any other source	Loans	Loans or Supplier Credit
Sample I: CU Members	360	65%	6%	5%	1%	5%	1%	2%	3%	76%	80%
By Credit Union:											
El Socorro (Diriamba)	40	68%	8%	13%	0%	13%	5%	0%	0%	75%	80%
COODEPAGRO (Jinotepe)	40	58%	5%	3%	3%	5%	3%	3%	8%	73%	78%
Guapisa (Rivas)	40	22%	10%	7%	0%	10%	0%	7%	10%	57%	65%
Avance (Santo Tómas)	40	83%	5%	0%	0%	2%	0%	0%	0%	85%	85%
Ma. Auxiliadora (Boaco)	40	70%	7%	0%	0%	2%	0%	0%	0%	72%	72%
La Hermandad (Sébaco)	40	65%	0%	10%	0%	0%	0%	0%	0%	70%	77%
La Unión (Matagalpa)	40	68%	5%	8%	5%	10%	8%	0%	3%	85%	90%
San Antonio (Estelí)	40	73%	10%	5%	0%	5%	0%	3%	5%	83%	87%
Iaguei (Corinto)	40	73%	8%	0%	0%	0%	0%	0%	0%	75%	75%
By Primary Occupation											
Self-employed Business	266	69%	7%	6%	1%	6%	2%	2%	2%	80%	84%
Self-employed Agriculture	37	67%	4%	2%	2%	0%	2%	0%	6%	75%	86%
Public Sector Employee	30	38%	3%	4%	0%	1%	0%	0%	10%	52%	56%
Private Sector Employee	14	64%	8%	0%	0%	12%	0%	0%	0%	84%	84%
Homemaker	7	54%	0%	0%	0%	0%	0%	0%	0%	54%	70%
Other	6	43%	0%	0%	0%	0%	0%	0%	0%	43%	43%

Table 21-b: Business Entrepreneurs & Agriculturalists: Households' Use of Loans (in Cash and Kind) from Various Lenders

					Loan S	Source				Households with	
	N	Credit union	Public bank	Private bank	Commu- nal bank	NGOs	Money- lenders	Relative/ Friends	Any other source	Loans	Loans or Supplier Credit
Sample II: Business Entrepreneurs	800	0%	13%	7%	1%	15%	1%	2%	2%	38%	50%
By Region											
Diriamba	80	1%	11%	2%	0%	20%	6%	2%	1%	35%	47%
Jinotepe	80	4%	20%	1%	3%	24%	3%	4%	0%	49%	63%
Rivas	80	0%	16%	0%	1%	20%	6%	0%	0%	39%	51%
Santo Tómas	80	1%	5%	0%	0%	7%	0%	1%	1%	15%	41%
Boaco	80	0%	9%	0%	4%	25%	1%	1%	4%	41%	53%
Sébaco	80	0%	5%	10%	0%	1%	0%	1%	4%	20%	31%
Matagalpa	80	0%	18%	20%	0%	9%	0%	1%	0%	43%	56%
Estelí	80	0%	20%	15%	1%	19%	0%	1%	2%	51%	62%
Corinto	80	2%	1%	2%	0%	1%	1%	1%	0%	10%	21%
León	80	0%	9%	1%	2%	15%	0%	2%	2%	30%	41%
Sample III: Agriculturalists	153	1%	3%	0%	2%	5%	0%	1%	3%	13%	18%
By Region Diriamba Matagalpa	79 74	1% 0%	6% 0%	0% 0%	3% 1%	3% 7%	0% 0%	3% 0%	4% 1%	16% 9%	20% 16%

• Sample I: CU Members

Credit unions are the predominant source of credit to the member households in our sample, accounting for more than 70% of the number of loans and approximately 60% of the total amount of loans granted (in cash) which households were paying off in 1996. The second most important source of loans are public banks which provide only 9% of the loans but 17% of the total amount.

Public banks' share of the volume of loans is particularly high for members of newer credit unions, "Guapisa" (51%) and "Iaguei" (46%). For member households of the "Socorro" credit union, on the other hand, the institutions which account for the highest share of the total amount of loans are in fact NGOs.

The difference in the credit unions' share in the total amount of loans relative to their share of the total number of loans is explained, as we shall see, by the larger size of loans given by all other lenders, except for communal banks.

• Sample II: Business Entrepreneurs

Public banks and NGOs account for an equal share of the number of loans granted (in cash) which Sample II households were paying off in 1996 (34% and 35%, respectively). However, public banks' share of the volume of loans (37%) is greater than that of NGOs (20%). At the regional level however, NGOs' share of both the number and volume of household loans is the highest among business entrepreneurs in Diriamba, Boaco and León.

Table 22 also shows that public banks are a more important source of credit than private banks for Sample II respondents in all regions, except in Sébaco and Matagalpa (both located in the Province of Matagalpa). In both Sébaco and Matagalpa, private banks have the highest share of the number of loans which business entrepreneurs were paying off in 1996, and in Matagalpa, they also have the highest share of the volume of these loans.

Money lenders appear to be an important source of credit to Sample II households in Rivas and Corinto, who were among the poorest households in the sample, in terms of wealth. Lastly, the information presented in Table 22 shows the insignificant role played by credit unions as a supplier of cash loans to the business sector entrepreneurs surveyed in Sample II.

• Sample III: Agriculturalists

Table 22 also presents different lenders' shares of household loans for the sample of agriculturalists. Public banks are the predominant source of credit to agricultural households surveyed in the municipality of Jinotepe, NGOs are the most important source of loans to agriculturalists in the municipality of Matagalpa.

Table 22: Lenders' Share of Total Household Loans (in terms of number of accounts and volume of savings)

	Credit	Union	Public	Bank	Private	e Bank	Comr Ba		NO	GO	Money	lender	Relat Frie		Ot	her
	%	of	%	of	%	of	%	of	%	of	%	of	%	of	%	of
	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol
SAMPLE I: CU Members	72.8	60.6	9.1	16.9	5.0	5.7	0.7	0.5	7.7	9.0	1.2	2.5	1.4	1.7	2.3	3.1
By Credit Union:																
El Socorro	62.8	34.9	3.2	18.5	11.7	3.9	0.0	0.0	20.2	41.7	2.1	0.9	0.0	0.0	0.0	3.1
COODEPAGRO	69.1	55.5	7.1	8.1	2.4	19.5	2.4	0.8	7.1	4.8	2.4	1.5	2.4	6.5	7.1	0.0
Guapisa	27.8	4.7	13.9	51.2	8.3	17.5	0.0	0.0	27.8	12.4	0.0	0.0	11.1	0.1	11.1	3.5
Avance	94.4	89.4	3.7	7.3	0.0	0.0	0.0	0.0	1.9	3.3	0.0	0.0	0.0	0.0	0.0	5.1
María Auxiliadora	88.2	75.2	8.8	22.6	0.0	0.0	0.0	0.0	2.9	2.3	0.0	0.0	0.0	0.0	0.0	0.0
La Hermandad	89.4	86.9	0.0	0.0	10.6	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
La Unión	63.5	54.7	3.9	4.4	5.8	1.7	3.9	2.9	15.4	18.2	5.8	13.7	0.0	0.0	1.9	0.0
San Antonio	71.7	67.0	15.1	21.0	3.8	1.6	0.0	0.0	3.8	2.5	0.0	0.0	1.9	1.8	3.8	4.4
Iaguei	69.9	53.8	30.1	46.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
Sample II: Business Entrepreneurs	1.2	0.5	33.7	37.0	17.0	30.9	3.9	2.1	34.7	19.7	4.1	0.4	2.8	7.4	2.7	2.1
By Region																
Diriamba	3.5	3.7	27.1	37.4	9.4	7.1	0.0	0.0	45.9	46.6	10.6	3.6	2.4	0.9	1.2	0.7
Jinotepe	6.9	5.4	43.8	69.4	1.4	0.2	2.7	2.2	38.4	20.2	2.7	1.0	4.1	1.7	0.0	0.0
Rivas	0.0	0.0	33.3	74.5	0.0	0.0	2.0	0.8	33.3	23.1	31.4	1.7	0.0	0.0	0.0	0.0
Santo Tómas	7.1	0.1	28.6	89.5	0.0	0.0	0.0	0.0	50.0	10.0	0.0	0.0	7.1	0.1	7.1	0.4
Boaco	0.0	0.0	21.8	18.5	0.0	0.0	7.3	2.4	61.8	72.6	1.8	0.0	1.8	0.1	5.5	6.4
Sébaco	0.0	0.0	21.1	55.7	47.4	15.7	0.0	0.0	10.5	4.5	0.0	0.0	5.3	2.5	15.8	21.7
Matagalpa	0.0	0.0	34.9	15.8	46.5	81.3	0.0	0.0	16.3	2.8	0.0	0.0	2.2	0.1	0.0	0.0
Estelí	0.0	0.0	32.4	36.1	28.2	17.5	4.2	2.2	31.0	17.4	0.0	0.0	1.4	22.2	2.8	4.7
Corinto	9.1	6.5	4.6	7.5	9.1	31.8	0.0	0.0	18.2	22.4	54.6	22.4	4.6	9.4	0.0	0.0
León	0.0	0.0	38.5	36.5	2.6	0.3	7.7	8.8	41.0	49.6	0.0	0.0	5.1	2.9	5.1	1.9
Sample III: Agriculturalists	11.3	10.3	30.0	46.1	0.0	0.0	11.1	4.4	25.4	23.0	0.0	0.0	7.5	2.2	14.8	14.0
By Region																
Jinotepe	15.0	13.8	40.0	61.5	0.0	0.0	10.0	5.1	10.0	5.7	0.0	0.0	10.0	3.0	15.0	11.0
Matagalpa	0.0	0.0	0.0	0.0	0.0	0.0	14.3	2.3	71.4	74.8	0.0	0.0	0.0	0.0	14.3	23.0

C. Loan Characteristics

• Credit Union Members' Loans

	Table 23: Loan Characteristics by Lender										
Sample I: CU Members											
LOAN SOURCE	# of Loans	Size of	f Loan	Interest Rate	Terms (months)	Loans with Collateral					
LOAN SOURCE	(unweighted N)	Mean	Median		(months)	Conateral					
Credit Union											
El Socorro	59	4,445	3,125	42%	5	93%					
COODEPAGRO	29	460,1	2,000	28%	11	62%					
Guapisa	10	1,450	1,500	27%	4	100%					
Avance	51	4,713	4,000	31%	11	67%					
Ma. Auxiliadora	30	2,177	2,000	36%	7	27%					
La Hermandad La Unión	42 33	7,747 7,326	6,000 6,000	42% 28%	9 8	93% 94%					
San Antonio	38	7,326 9,805	5,000	28% 32%	9	94% 92%					
Iaguei	58	2,248	1,550	38%	2	31%					
laguei	36	2,240	1,550	3670	2	3170					
Sub-Total	350	6,220	4,000	34%	8	78%					
Public Bank	51	16,861	10,000	48%	7	68%					
Private Bank	25	9,132	3,000	55%	4	78%					
Communal Bank	3	5,172	1,800	36%	6	58%					
NGO	44	7,325	5,000	47%	7	80%					
Moneylender	6	15,160	10,000	88%	4	84%					
Family/Friend	6	7,612	10,000	156%	7	32%					
Other Source	10	9,382	3,000	72%	12	66%					
Overall	495	7,378	4,500	40%	8	76%					
Supplier Credit	584	6,581	2,000	No info	No info	No info					

Table 23 compares the characteristics of loans obtained from the different sources by the 360 sample credit union members and their spouses.

Credit union loans are about one third the size of public bank loans: credit union loans average C\$6,220 (US\$690) in size compared to C\$16,861 (US\$1873) for public bank loans, C\$9,132 (US\$1015) for private bank loans, and C\$7,612 (US\$846) for loans issued by NGOs.

Comparisons with supplier loans, in Table 23, suggest that credit union loans in cash are also smaller, on average, than supplier credit. The latter are loans in kind (input supplies or goods) received mostly from merchants and traders.

Given that the sample data set may contain a few extreme values (high or low), the median loan may be a more appropriate measure of central tendency than the average loan. For the 9 credit unions studied, the median loan is in fact 4,000 Córdobas (US\$444). The median of credit union loans remains smaller than the median for loans from public banks and NGOs, but greater than the median for supplier loans.

Table 24: Distribution of Respondents' Loans from Credit Unions														
		than 00		1 - 000		01- 500	2,5 5,0	00- 000		01- 000		001- 000		than
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
SAMPLE I: CU Members	13	5%	26	8%	52	18%	70	33%	44	23%	20	12%	3	2%
By CU:														
El Socorro	0	0%	3	11%	6	22%	11	41%	5	19%	2	7%	0	0%
COODEPAG.	5	23%	3	14%	6	27%	4	18%	3	14%	1	5%	0	0%
Guapisa	1	11%	1	11%	7	78%	0	0%	0	0%	0	0%	0	0%
Avance	1	3%	1	3%	7	21%	15	45%	7	21%	2	6%	0	0%
Ma. Auxiliadora	2	7%	6	21%	12	43%	8	29%	0	0%	0	0%	0	0%
La Hermandad	0	0%	0	0%	2	8%	7	27%	12	46%	5	19%	0	0%
La Unión	0	0%	2	7%	1	4%	9	33%	10	37%	4	15%	1	4%
San Antonio	2	7%	1	4%	2	7%	11	39%	4	14%	6	21%	2	7%
Iaguei	2	7%	9	32%	9	32%	5	18%	3	11%	0	0%	0	0%

The size distribution of loans which credit union members (the survey respondents) were paying off to credit unions in 1996 (Table 24) also confirms that these loans are concentrated in the 2,500-5,000 Córdobas range. The sample distribution of loans reflects the pattern of many small loans (31% of loans are less than C\$2,500 or US\$277) and a very small proportion of loans larger than C\$25,000 (US\$2800).

As Table 23 demonstrates, credit unions offer below-market interest rates on loans, an average of 34% p.a. compared with 48% and 55% in public and private banks.⁵ Credit union interest rates are also lower than the average rate charged by NGOs (47% p.a.). The significant gap in interest rates charged on loans between the credit unions and other formal financial institutions--the banks, in particular--gives relevance to the stated objective for participating credit unions to loan at competitive interest rates.

⁵ It should be remembered that the information contained in these tables are based on responses to the questionnaires, that is on information that survey respondents *believe to be true*.

The average term of credit union loans (8 months), though not very long, are still slightly longer than that of public banks (7 months) and NGOs (7 months). Private bank grant even shorter loans (4 months).

Table 23 also presents information on the average percentage of loans, from different financial institutions, requiring collateral. For the purposes of this table, the different types of collateral considered are mortgages (house, land, business), machinery, vehicles or animals used as guarantees, commercial lien, as well as savings accounts held at the institution providing the loan.

The percentage of credit union loans requiring collateral (78%) is greater than that of public banks, but comparable to the percentage of collateral loans from private banks and NGOs.⁶ It should be pointed out, however, that credit union members are more likely to use their savings/shares as collateral for credit union loans than they would for loans from other financial institutions.

• Business Entrepreneurs' and Agriculturalists' Loans

Table 25 compares the characteristics of loans obtained from the different sources by the 800 Sample II business entrepreneurs and the 153 Sample III agriculturalists and their spouses. Ninety eight percent of respondents in these samples are not credit union members. (Note, however, that the very small number of loans received by Sample III respondents and their spouses make comparisons of loan terms between different sources of credit statistically weak.)

The results in Table 25 indicate once again that the principal sources of credit in cash to Sample II business entrepreneurs (99% of whom are not credit union members) are public banks and NGOs. While a higher percentage of respondent households receive loans from NGOs than from public banks, loans from NGOs are generally smaller than loans received from public banks.

Another important source of credit to the business entrepreneurs in Sample II are moneylenders who charge very high rates of interest, but require collateral much less often than other lenders. This might explain why moneylenders were such an important source of loans to Sample II households in Rivas and Corinto, whose lower wealth levels are likely to constrain their access to collateral loans from other financial sources.

Finally, Table 25 also clearly indicates the importance of supplier credit to business entrepreneurs in Sample II. These loans, in the form of input supplies or merchandise, are generally smaller than cash loans, but are often issued repeatedly, in many cases on a bi-weekly or monthly basis.

⁶ Comparisons across credit unions, however, indicate noticeable differences among them in terms of their collateral requirements.

	Tak	ole 25: Loan (Characteristi	cs by Lend	ler	
		Sample II: B	Business Entrep	reneurs		
LOAN GOURGE	# of	Size o	f Loan	Interest	Terms	Loans with
LOAN SOURCE	Loans(*)	Mean	Median	Rate	(months)	Collateral
Credit Union	11	4,780	2,500	44%	6	63%
Public Bank	146	17,952 (16,145)	9,000 (8,000)	50%	7	83%
Private Bank	61	29,091 (14,651)	3,667	85%	6	85%
Communal Bank	13	7,475	7,500	39%	7	57%
NGO	176	7,894	5,000	75%	6	73%
Moneylender	40	2,244	1,000	233%	1	7%
Family/Friend	13	34,032 (3,577)	3,600 (2,000)	97%	4	21%
Other Source	12	9,556	5,000	66%	6	59%
Overall	427	16,391 (12,950)	5,000	74%	6	73%
Supplier Credit	2442	8,441	3,000	No info	No info	No info
		Sample 1	III: Agricultura	lists		
	# of	Size o	f Loan	Interest	Terms	Loans with
LOAN SOURCE	Loans(*)	Mean	Median	Rate	(months)	Collateral
Credit Union	3	2,000	2,000	72%	12	100%
Public Bank	8	2,760	2,000	24%	5	75%
Private Bank	0				-	
Communal Bank	3	858	1,000	24%	9	34%
NGO	7	1,976	1,200	28%	8	28%
Moneylender	0				-1	
Family/Friend	2	650	650	24%	6	100%
Other Source	4	2,058	1,500	23%	8	25%
Overall	27	1,855	1,200	34%	7	56%
Supplier Credit	9	885	570	No info	No info	No info

	Note ((*):	unweighted	N.
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The figures in parentheses exclude 3 outlier cases with exceptionally large loans.

D. Gender and Access to Credit

Table 26 presents data comparing average loan size and loan shares (by number and volume) for men and women. The information in this Table is based on loans received by the survey respondents.

Table 26: Distribution of Respondents' Loans by Gender									
	Percent of	% of	Loans	Average Loan					
	the members	#	Vol	Size					
Sample I: CU Members	100%	100%	100%	7,373					
Gender of Respondent Male Female	36% 64%	33% 67%	49% 51%	10,404 5,756					
Sample II: Business Entrepreneurs	100%	100%	100%	16,415					
Gender of Respondent Male Female	31% 69%	29% 71%	45% 55%	25,811 11,939					

• Sample I: CU Members

Men and women represent 36% and 64% respectively of sample members. Female members' participation in loan activities would be equal to that of the male members if women had the same average loan size as men and received 64% of both volume and number of loans.

Men's average loan size (at 10,404 Córdobas, or US\$1156) is about 80% higher than women's (at 5,756 Córdobas, or US\$639). Women, who represent 64% of the sample, received 67% of all loans, but--because of their lower average loan size--only 51% of the total volume of loans.

• Sample II: Business Entrepreneurs

The data presented for the sample of business entrepreneurs shows a similar tendency. Women entrepreneurs' share of the number of loans (71%) is very close to their proportion in the sample. Yet, because of their lower average loan sizes (C\$11,939 compared to C\$25,811 for men), their share of the volume of loans (55%) is less than their weight in the sample.

The data does suggest, however, that differences in the average sizes of loans between men and women, as well as differences in their shares of loans, are greater for Sample II respondents (99% of whom are not credit union members) than for Sample I respondents (credit union members).

The above simple comparison of gender allows a first attempt at examining whether or not men and women are equally represented in loan participation. However, other factors--in particular income or wealth--may be equally or more important in determining average loan size or loan

participation. Section II showed that male business asset holdings are significantly higher than female holdings for credit union members (Sample I) and, even more so, for the sample of business entrepreneurs (Sample II).

E. Wealth and Access to Credit

Recent developments in economic theory contend that capital markets are characterized by an excess demand for capital and credit rationing. Such credit rationing is likely to be biased against low wealth borrowers. First, credit rationing in credit markets may be wealth-biased because lenders may use wealth to help distinguish the risk characteristics of different borrowers. Moreover, in a loan market with imperfect and costly information in which lenders use collateral to insure against the risk of loan default, the terms of credit depend on the collateral value of owned assets. Credit markets are also likely to be biased against poor borrowers because the *fixed* transaction costs required in the processing and administration of loans raise the effective interest rates higher for small loans. Finally, the wealth bias on the loan market may be related to the fixed transaction costs of collateral collection in case of default.⁷

Table 27: Average Size	e of Loans Re	eceived by Ho	ouseholds (Res	spondents an	d Spouses)
	Average Credit Union Loan Size	Average Private Bank Loan Size	Average Public Bank Loan Size	Average NGO Loan Size	Average Loan Size
Sample I: CU Members	6,220	16,861	9,132	7,325	7,378
By Household Wealth					
1st quintile	2,223	5,000			2,143
2nd quintile	3,724	3,001	3,066	5,753	3,557
3rd quintile	4,621		1,982		6,401
4th quintile	7,151	10,184	6,000	3,500	7,195
5th quintile	10,737	30,129	18,236	11,924	14,552
Sample II: Business Entrepreneurs	4,780	17,952	29,091	7,894	16,391
By Household Wealth					
1st quintile		1,365	1,968	3,197	2,655
2nd quintile		4,135	2,292	5,135	4,264
3rd quintile	7,000	6,916	7,615	5,297	5,885
4th quintile	4,333	15,623	21,042	7,180	11,788
5th quintile	10,000	30,161	14,252	15,991	23,180

Table 27 presents information on the average size of household loans (loans of respondents and of

⁷ Barham, Boucher and Carter summarize, very clearly, the theoretical literature on information-based credit market failures. (See Barham *et al.* (1996), "Credit Constraints, Credit Unions, and Small-Scale Producers in Guatemala" in *World Development*, Volume 24, No.5, pp.793-806)

their spouses) for households in different wealth categories. The credit which is made available to the poor tends to be significantly smaller than that received by higher wealth households.

• Sample I: Credit Union Members

The average size of loans received by member households is strongly correlated with wealth. The average size of loans for households in the top wealth category is nearly seven times the average size of loans received by households in the lowest wealth category (C\$14,552 compared to C\$2,143). The figures presented in Table 28 also indicate a strong linear relationship between credit union loans and wealth.

• Sample II: Business Entrepreneurs

The average size of loans for Sample II households similarly increases with the wealth of the quintile, from C\$2,655 (or, US\$295) for households in the lowest wealth quintile to C\$23,180 (or, US\$2575) for those in the top wealth quintile.

Finally, Table 28 presents data comparing the percentage of loans by volume and number for different wealth categories of households.

Table 28: Loan Share of Households, by Wealth												
		Source of Loan										
	CU	Loans		e Bank ans		e Bank ans	NGO	Loans	All Loans			
	%	of	%	of	%	of	%	of	%	of		
	#	Vol	#	Vol	#	Vol	#	Vol	#	Vol		
Sample I: CU Members	100	100	100	100	100	100	100	100	100	100		
By household wealth 1st quintile 2nd quintile 3rd quintile 4th quintile 5th quintile	12 18 16 26 29	4 12 12 26 45	2 17 0 19 62	1 2 0 8 88	0 24 39 9 28	0 10 12 7 70	0 18 0 12 69	0 9 0 4 87	11 18 15 22 34	3 10 11 18 58		
Sample II: Business Entrepreneurs	100	100	100	100	100	100	100	100	100	100		
By household wealth 1st quintile 2nd quintile 3rd quintile 4th quintile 5th quintile	0 0 27 58 15	0 0 27 51 21	13 12 20 31 24	2 4 9 32 54	15 42 14 12 16	4 13 16 32 35	6 13 35 31 15	3 11 26 29 32	12 18 25 27 17	3 9 16 30 42		

• Sample I: Credit Union Members

Member households in the bottom wealth quintile--accounting for 20% the sample households-received only 11% of loans and 3% of the volume of loans. On the other hand, member households from the top wealth quintile received 34% of loans and nearly 60% of the total volume of loans.

It is noteworthy, however, that the contrast in the percentage of loans received by households in different wealth categories, while still high in the case of credit union loans, appears nevertheless to be less pronounced than the contrast found in the case of bank loans and NGO loans.

• Sample II: Business Entrepreneurs

A similar contrast is found among households with different wealth levels in Sample II: households in the lowest wealth quintile account for less than 12% of loans and an even smaller percentage (3%) of the volume of loans. On the other hand, the top wealth quintile accounts for only 17% of loans, but 42% of the volume of loans.

F. Credit Union Membership and Credit Access

Finally, this section compares access to credit between member and non-member households of similar wealth levels. The goal of this comparison is to demonstrate the vital role that credit unions play in broadening the proportion of the population served by credit services.

Table 29 presents information on the use of credit by Sample I households who are primarily engaged in business and by Sample II households who are not credit union members. Note that credit access is here defined as the proportion of a group with loans, not controlling for demand or whether they consider themselves constrained in their borrowing efforts.

Table 29: Use of Loans for Member and Non-Member Business Enterprise Households										
	Member Households Non-Member Households ⁽¹⁾									
	% with loans	Median Loan Volumes ⁽²⁾	% with loans	Median Loan Volumes ⁽²⁾						
By Household Wealth 0-10,000 10,001-50,000 50,001-200,000 200,001-500,000 More than 500,000	69% 75% 77% 92% 81%	2,000 5,500 8,000 12,500 20,000	27% 39% 36% 45% 66%	2,000 5,000 10,000 12,000 15,000						

Note:

- (1) For this comparison, the information presented for the sample of non-member business enterprise households excludes respondents from the municipality of León, where no credit union members were interviewed
- (2) Median of the sum of all formal and informal loans (in cash) which households had received or were paying off in 1996.

Table 29 clearly demonstrates that credit union membership is strongly associated with access to credit. In particular, it shows how credit unions especially assist member households in the lowest wealth categories. Sixty nine percent of credit union household in the lowest wealth category have credit access, largely via loans from the credit union. In the same wealth category, only 27% of non-member households obtained credit. More than 75% of credit union households in the next three wealth categories received credit (with the vast majority of that coming from credit union loans). The non-member households in the middle three wealth categories, between 39 and 45% obtain loans. Even in the top wealth category, the proportion of member households obtaining credit is greater than the proportion for non-member households.

However, the other important observation to make about Table 29 is that while credit unions make loans available to a segment of the population who would otherwise not have access to loans, this is not done by giving those people smaller loans. The information in Table 29 shows that the median of total volume of loans received by member households is equal or greater than the volume of loans received by non-members in all but the middle wealth category.

F. Conclusion

In 1996, 76% of credit union members surveyed (Sample I) had either received or were paying off a loan. Credit unions are, by far and away, the primary source of credit to the credit union members, with over 70% of the number of loans and 60% of the total volume of loans.

The percentage of Sample II (Business Entrepreneurs) and Sample III (Agriculturalists) households with loans were 38% and 13% respectively. The most notable difference in loan access between households in Sample I, on the one hand, and households in Sample II and III, on the other, is access and use of credit union loans. The principal source of loans to households in the latter two samples are public banks and NGOs. Moreover, an important form of access to credit for non-member business entrepreneurs is credit in the form of input supplies or merchandise.

A comparison of credit access between member and non-member households, which controlled for occupational categories, offered strong evidence of the vital role that credit unions play in improving credit access for members engaged in business. Most importantly, the comparison showed how credit unions especially assist member households in the lowest wealth categories: 69% of credit union households in the lowest wealth categories have credit access, compared to only 27% of non-member households in the same wealth category.

However, while credit unions provide credit to a segment of the population who might otherwise not have access to credit from other financial institutions, access to credit union loans are also positively related to wealth. It is apparent from the data presented here that low-wealth households have a smaller share of the number and volume of credit union loans, and receive smaller credit union loans, on average, than member households from higher wealth quintiles.

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