

**EVALUATING THE ROLE OF PERUVIAN CREDIT UNIONS: A CASE STUDY OF 8 CREDIT
UNIONS**

Prepared by

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October, 2006¹**

¹ I am grateful for the enormous help provided by the FENACREP staff in the coordinating and implementation of the survey. A special acknowledgement must be made for Jorge Sanchez and Manuel Ravines, without whose help this project would not have been possible, and thanks to all the Branch Managers who provided all the requested information. Many thanks to all the survey team members who did their job diligently. Finally, Nicole Bice and Catherine Ford who were my go to people here in Madison. All errors are my own.

EXECUTIVE SUMMARY

Objectives of the Study

Peruvian credit unions are in the process of implementing WOCCU's IGP project over the next three years. The principal purpose of this project is increase income generation and wealth accumulation through adoption of a package with innovative savings, credit, and financial management services that will permit the credit unions to become operationally efficient; achieve financial sufficiency; and grow through attracting new members, increased savings mobilization, and the provision of credit to small and medium-scale agricultural/business holders. To this end, the aim of this project was to provide a snapshot view of the eight selected pilot credit unions.

The purpose of this report is to:

1. Provide the Credit Unions with key marketing information regarding the members' and non-members' demographic, and economic characteristics, use of financial services and their perceptions of the credit unions as a financial institution.
2. Highlight the differences between members' and non-members profiles so as to guide the improving of services as well as implementation of new services.
3. Identify Credit Union reach in terms of income distribution and poverty level.
4. Provide a baseline dataset so that WOCCU can track the impact of the project over time in terms of savings behavior, access to credit, membership levels, implementation of other services, the economic well-being of members, and the contribution of these credit unions towards poverty reduction in their region.

Survey Methodology

The information presented in this report is based on the data collected through the 2006 Credit Union Member and Non-member Survey in several credit union regions of Perú. The data collection process was completed between July and August of 2006. The principal goals of the Member/Non-member Survey was to provide a detailed profile, both demographic and socio-economic, of members and non-members; the use of savings and loan services provided by different financial institutions.

At the national level, 8 credit unions (with a total membership of 162,054) were selected to participate in the study. At the member level, the sampling strategy used for the baseline study was two fold: 30 members were selected randomly, from a list of 300 members prepared by the credit union staff, and invited to participate in the study; if the invited member failed to show up for the interview every fifth member that visited the credit union to conduct business ("walk-ins") was selected to participate.

At the non-member level, the sampling strategy was: to interview every fifth individual at the main town square during normal business hours; after business hours the survey team traveled to different neighborhoods to conduct interviews with every fifth person in the "neighborhood Plaza" or knocked on every fifth house to invite the non-members to conduct an interview.

The survey instrument was designed to elicit information about member and non-member demographic characteristics, their savings and loan behavior, their income, their agricultural, business and livestock activity, and their poverty and asset levels.

Main Findings

The survey results presented provides strong evidence that these credit unions play an important role in the provision of financial services to small business owners and salaried public or private employees. Credit union members owning small business form an important subgroup, 38%, and these are micro-enterprises with an average of 2.17 employees. Public sector wage earners form the second most important subgroup, 25%. Credit union members tend to be in the prime years of productive income generation years, 63%. While non-members tend to be younger and perhaps entering the productive income-generating phase of life.

The credit unions participation in the study provide strong evidence that they currently service low to low-middle income segments of the Peruvian population. All the credit unions in question need to expend outreach efforts to increase participation from the rural poor (below US\$2 per day). On average members hold higher income levels, 37%, than non-members. For male members the median total income is 11,730 Soles (US \$3,666) as compared to 10,000 Soles (US \$3,125) for female members, corresponding to a 17% difference in income. The gender differential for non-members is 9%, 10,000 (US \$3125) Soles for male non-members versus 9097 (US \$2842) Soles for female non-members.

Credit unions also hold the dominant share of their members' deposit accounts. In addition to mandatory shares accounts most credit union members have additional savings accounts. In contrast only 20% of non-members respondents have savings accounts of any type. Non-members cite "*not being in the habit of saving*" and "*not knowing how to save*" as their primary reasons for not saving. The data also shows that richer non-members need to be educated about the benefits of maintaining savings accounts while poorer non-members need information about how to save. Marketing the mandatory shares accounts and highlighting the benefits of maintaining such accounts could potentially attract many poorer (bottom two income quartiles within the sample) non-members.

In addition, to promoting savings mobilization other factors are necessary to encourage broader non-member participation namely: Interest rates on deposits have to be more attractive relative to other formal financial institutions. And credit unions also have to improve their image as safe and secure institutions. When asked non-members expressed that they did not trust credit unions either because of a personal bad experience or because they believed it was not a safe institution. The efforts to overcome the "*bad image*" will require additional efforts by the credit unions. These efforts include developing promotional campaigns to advertise credit union services and to build confidence in credit unions as safe institutions. The credit unions will also have to monitor the rates of return on deposits offered by other financial institutions to maintain their competitive edge.

Most credit union members have some access to credit, however, a third of credit union member respondents were either partially or fully constrained in their access to credit. Furthermore, poorer members were more likely to face credit constraints. Only 46% of members participated in credit markets. We also found that non-members belonging to the lower two income quartiles were more likely to be rationed out of the credit market. Lack of adequate documentation and collateral are the primary reasons non-members cite for lack of access to credit while members are rationed due to transaction costs (such as complicated application procedure or mis-information about how to apply). Marketing specifically to low-income non-members and providing access to savings and credit would contribute immensely to the goal of poverty reduction.

Lastly but more importantly, a great marketing effort needs to be in place to include the agricultural sector. The random sample of members selected for the survey reveals a very interesting pattern. Only 8% of members cite agriculture as their primary occupation. Extrapolating, we come to the conclusion that pure agriculturalists are a insignificant minority of credit union members. This suggests that a dedicated effort needs to be developed that includes a broad based marketing strategy tailored to attract the agriculture sector with services and staff dedicated to provide access to financial services to small to medium-scale farmers.

INTRODUCTION

One of the most stylized facts of developing economies is that formal financial institutions leave the poorest population tightly constrained in their access to financial services. It is also widely recognized that economic progress relies largely on access to financial services such as savings, insurance, and credit. Where formal financial institutions fail the large majority of the poor population, there is evidence to support the proposition that credit unions can fill some of the gap (Barham, Boucher and Carter, 1996).

As of 2003, 18 percent of Peruvians live below a 1\$ per day poverty line and 37% live under 2\$ per day². As an effort to address the lack of financial services to the poorer segments of the population, WOCCU (World Council of Credit Unions) in association with FENACREP (*Federación Nacional de Cooperativas de Ahorro y Crédito del Perú*) initiated member/non-member survey in July, 2006 with the explicit goal of understanding access to financial services.

The purpose of this report is to present the findings of a member/non-member survey implemented in Perú in July-August, 2006. The primary goals of this survey were a) create a socio-economic profile of member and non-member respondents in the targeted credit unions; b) gain an understanding of how respondents utilize banking services; c) establish a base line data of a representative member/non-member population.

The results of this survey is aimed to help WOCCU in its efforts to reinforce the targeted credit unions, to improve their existing clientele and the menu of services offered. For this purpose it is necessary first to distinguish key characteristics of members and non-members both in terms socio-economic traits.

The report is organized as follows. Section I presents a brief overview of Perú and the Credit Unions. A review of pertinent literature can be found in Section II. Section III follows with the survey design and implementation. The results of the survey can be found in Section IV. Finally, Section V concludes.

SECTION I: PERU AND THE CREDIT UNION SYSTEM

The Andes runs North-South throughout Perú thus, delineating three distinct geographical regions. The longitudinal length between the Sea and Western slopes are referred to as the *La Costa* (coast); the highlands and valleys are referred to as the *Sierra*; and finally the region east of the Andes, rich with tropical rainforests, is referred to as the *Selva* or *Amazonia* (Jungle). The climatic and cultural differences between each region not only influence the lifestyle of the population, but also the economic activities undertaken in each region.

Table 2.1: Human Development Indicators

Perú Human Development Indicators	
Human poverty index (HPI-1) Rank	26
Probability at birth of not surviving to age 40 (% of cohort) 2000-05	10.3
Adult illiteracy rate (% ages 15 and above) 2003	12.3
Population without sustainable access to an improved water source (%) 2002	19
Children underweight for age (% under age 5) (HPI..1) 1995-2003	7
Population living below \$1 a day (%) 1990-2003	18.1

² UNDP country profile - online <http://hdr.undp.org/statistics/data/countries.cfm?c=PER>

Source: UNDP country profile and World Development Indicators online

Perú is a densely populated country with 27.2 million inhabitants³ with 38 percent of its population living below US \$2/day poverty level. It ranks 26th in the UNDP scale of poverty ranking. The gross domestic product (GDP) is comprised of services, at 57%, industry, at 32%, and agriculture, at 9.4%. The GDP growth for 2005 was nearly 6.7 %⁴. The per capita GDP was US\$ 2300 in 2005⁵.

The hyperinflationary period in late 1980's caused many of the Credit Unions to go bankrupt thus, losing the confidence of their members. During the 1992 crisis approximately 40 credit unions went bankrupt resulting in a loss of an asset portfolio of \$160 million. The process of rebuilding the Credit Unions was initiated in 1992 under the guidance of FENACREP⁶. With 162 affiliated credit unions, the primary role of FENACREP is to provide representation, capacity building, technical assistance, and supervision.

Like many other Latin American countries, Perú underwent major economic reforms in the 1990's. Interest rate controls were eliminated and the state run bank (*Banco Agrario*) was closed (Boucher, 2000). A large titling program was initiated in order to increase tenure security (by providing formal land titles and registration) and thus, spark investment demand. The economic and financial liberalization has contributed greatly to the rebuilding of the Credit Unions in Perú.

The primary source of competition for the credit unions is from government promoted *Caja rurales de Ahorro y Crédito* (CRAC) and *Caja municipales de Ahorro y Crédito* (CMAC). Both types of institutions are local run banks designed to provide savings and credit to rural small-scale producers⁷.

SECTION II: REVIEW OF THE LITERATURE

A large array of literature exists by now regarding the effects of financial services on the livelihood of millions of people, mainly in the rural areas of developing countries, who make up the poor of the world. A common thread through this body of literature is that the poor by and large have restricted access to formal financial institutions (Stiglitz and Weiss (1981), Boucher (2000), Barham et. al. (1996), Bell et. al. (1997) and Carter and Olinto (1998)).

Basic access to financial institutions gives individuals the opportunity to smooth consumption through savings and loans. That is, it provides individuals with the ability to manage negative shocks to their income stream by either depleting their savings or borrowing to meet their consumption needs. For the poor, lack of access to financial services delivers a heavy blow because on the one hand, they tend not to have savings and on the other hand, they have constrained access to loans both of which diminish their ability to smooth consumption.

Aside from consumption smoothing, savings and loans play another important role in terms of income generation and productive capacity of individuals. Lack of access to savings and loans

³ Ibid

⁴ 2005 data is the latest.

⁵ These statistics are from the World Development Indicators online .

⁶ Email exchange with FENACREP.

⁷ Ibid (Boucher, 2000)

has two distinct negative effects, namely: the direct effect of forgone investment opportunities, and the indirect effect of their inability to capitalize on labor market opportunities. Thus, access to working capital and consumption credit are fundamental for any poverty alleviation strategy⁸. Savings on the other hand, buffers income fluctuations, particularly with the inherent seasonality of agricultural production or seasonal wage labor income.

Studies of rural finance have shown that credit unions have the potential to fill the gap for those who lack access to key financial services such as small farmers and micro-entrepreneurs (Barham et. al (1996)). Evidence from recent field-work in Perú suggests that while credit unions do relieve the constraints placed by formal financial institutions for some, specifically micro-entrepreneurs they still have to expand their services to include agricultural producers.

SECTION III: SURVEY DESIGN AND IMPLEMENTATION

The 2006 Perú survey seeks to create a baseline profile of members and non-members served in 5 of the poorest regions (*Departamentos*). The structure of the survey instrument was based on a combination of the 2002 WOCCU Rwanda research monograph, the 2005 Guatemala survey instrument, and the Nicaragua WOCCU survey instrument. The survey instrument was designed to elicit information on members' and non-members' demographic characteristics, their livelihood strategies, their asset portfolio, their income, and their savings and borrowing behavior.

Several key pieces of research contributed to the survey design and analysis presented in the report. The research studies conducted, by WOCCU, in Rwanda in 2002 and 2004, Guatemala in 2005, Nicaragua in 2003, and USAID poverty assessment tool 2005, contributed immensely in the design of the survey instrument and methodology.

Eight pilot credit unions were selected as survey sites: *San Pio X-Cajamarca*, and *Nuestra Señora del Rosario-Cajabamba* are both located in the northern highlands (*Sierra*) of *Cajamarca*; *San Martin de Porres-Tarapoto*, and *San Cristo de Bagazan-Rioja* are located in the northern tropical forest region (*Selva*) of San Martin; *San Pedro-Andahuaylas* located in the department of Apurímac, *Santa Maria de Magdalena* and *San Cristobal de Humanga* located in department of Ayacucho, both Ayacucho and Apurímac belong to the southern highlands of Perú; *Santo Domingo de Guzman* located in the department of Cusco (see Figure 3.1).

At each credit union, the survey team planned to conduct 60 interviews; 30 members and 30 non-members. For the purposes of the survey, a *member* is someone who is currently an active member of the credit union being surveyed. A *non-member* is someone who lives in the region of the credit union being surveyed but is not currently a member of the credit union. A non-member could potentially belong to another credit union but not the one surveyed.

A random sample of 30 members was selected from a list of 300 active members for each credit union. An active member was defined as someone who had a transaction within the last six months. For non-members, we used two approaches: a) Two members of the survey team were sent to the town square to interview every 5th person (if this person was a member they went to the next); b) Survey team members also traveled to different areas within the region to make sure with had good representation of non-members within the community. In each neighborhood if there was a town square then again every 5th individual was invited to participate. If it was a

⁸ Ibid

residential neighborhood then the team members knocked on every 5th door and invited the non-members to participate.

Figure 3.1: Map of Perú



Source: Wikipedia: La enciclopedia libre⁹

This said, we must acknowledge that there is a urban bias in the non-member surveys. For members since we used a random sampling method there should be no urban bias. Unfortunately, the turn out for invited members was less than 100%, which implies that the member sample also has an urban bias to a lesser degree than the non-member sample. Given the mountainous terrain it was impossible to travel to really remote areas to conduct non-member surveys.

Table 3.1: Surveyed Respondents

Cooperative	Membership		Total
	Member	Non-Member	
San Pío x	30	35	65
Nstra. Sra. Del Rosario	30	30	60
San Martín de Porres	29	35	64
San Cristo de bagazán	32	30	62
San Cristobal de Huamanga	29	29	58
Santa María de Magdalena	34	27	61
San Pedro-Andahuaylas	35	36	71
Santo Domingo de Guzmán	31	34	65

⁹ http://es.wikipedia.org/wiki/Regiones_del_Perú

Total	250	256	506
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Source: Own calculations from 2006 Perú member/non-member survey.

All surveys were conducted in Spanish or Quechua. Table 3.1 presents the breakdown of members and non-members interviewed in each credit union region. The survey team completed 506 surveys. The fieldwork schedule, team members are presented in the Appendix.

At each credit union location the survey team consisted of one team leader, hired from Lima, and 4-5 local students. In addition to supervising and implementing the survey in the designated credit union locations the survey team leaders also were responsible for the data entry. The data was entered in Lima at the FENACREP office.

SECTION IV: RESULTS AND FINDINGS

In this section we present the major findings of the survey which elucidate on the differences between members and non-members. The results are presented by overall sample size as well as by membership. Where there is significant difference from the overall sample, the results are further disaggregated by gender, income, and regions. The results though disaggregated by income distribution may introduce biases due to under or over reporting of income. The results presented for members and non-members were also tested for mean or median differences. This is done through the use of simple t-statistic to check if the difference is significantly different from zero.

The results are presented in four broad categories:

1. Income Distribution and Poverty Indicators
2. Member/Non-member Characteristics
3. Asset Distribution
4. Savings Behavior
5. Credit Supply and Demand

INCOME DISTRIBUTION AND POVERTY INDICATORS

For the purposes of this report income is calculated as a sum of all household income sources namely: agricultural, agricultural rental, business, residential rental, wage, remittances, pensions and other transfer incomes¹⁰. We first look into the general characteristics of per-capita income we then follow with a discussion of credit union reach in relation to poverty and extreme poverty indicators.

The median per capita income for the sample is 5000 Soles (US\$1056)¹¹. In other words, 50% of the sample respondents have household incomes less than 5000 Soles. This corresponds to US\$ 2.89 per day. The lowest median incomes are found among households in the credit union regions of San Pedro-Andahuaylas and Nstra. Sra. Del Rosario-Cajabamba, (US\$ 781 approximately US\$ 2.13 per day, and US\$ 1,219 approximately US\$ 3.33 per day respectively) as compared to the credit union region of Santo Domingo de Guzman-Cusco (US\$ 3,125 approximately US \$ 8.56

¹⁰ Unless otherwise specified we use per capita income. Per capita income is calculated by adjusting for family size (2 working adults).

¹¹ In our sample there are high or low outliers which make the average measure skewed towards the outliers. In this case median values of income, assets, and loans are more accurate measures of central tendency than mean.

per day), which has the highest incomes among the respondents. Comparing across membership categories it is clear that on average members hold higher income levels, 37%, than non-members.

Table 4.1: Median Household Per Capita Income (annual), 2005

Credit Unions	Overall		Member		Non-Member	
	Soles	\$	Soles	\$	Soles	\$
Overall	5,000	1,563	5,425	1,695	4,800	1,500
San Pío X	7,200	2,250	9,500	2,969	5,425	1,695
Nstra. Sra. Del Rosario	3,900	1,219	5,675	1,773	1,040	325
San Martín de Porres	5,550	1,734	5,300	1,656	5,580	1,744
San Cristo de Bagazán	4,800	1,500	5,040	1,575	4,800	1,500
San Cristobal de Huamanga	5,300	1,656	4,440	1,388	7,000	2,188
Santa María de Magdalena	6,000	1,875	6,150	1,922	5,000	1,563
San Pedro-Andahuaylas	2,500	781	2,675	836	2,125	664
Santo Domingo de Guzman	10,000	3,125	10,000	3,125	10,245	3,202

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

Business and wage salaries are the two most important income sources for the sampled households. The median income levels are comparable across both members and non-members with the exception of residential income and other income. The median annual business income for a family is 8,750 Soles (or US\$ 2,734) and median salary income for households is 21,600 Soles (US\$ 6,750). Wage income is higher than any other source of monthly income.

Table 4.2: Household* (Primary and Secondary) Median Incomes by Source (Soles)**

Variable	N	Overall		Member		Non-Member	
		Soles	US\$	Soles	US\$	Soles	US\$
Business Income	262	8,750	2,734	8,000	2,500	9,000	2,812
Agricultural Income	128	2,000	625	2,000	625	2,000	625
Agricultural Rental Income	28	700	218	800	250	500	156
Residential Rental Income	29	1000	312	700	218	3,000	937
Household Salaried Income (Annual)	241	21,600	6,750	21,600	6,750	21,600	6,750
Other Income (Annual)	91	7,200	2,250	9,480	2,962	4,800	1,500

*Note: Here the income is not per capita but rather total household income (the sum of all members of the households' income).

Note: multiple sources of income permitted. Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and * indicating significance at the 10%, 5%, and 1% level, respectively.

The survey obtained approximate values of all (business, agriculture, residential) assets owned by the respondents and/or other household members. We can see from Table 4.12 that 60% of the households engage in a business activity either as their primary or secondary occupation. On average member households own 1.25 businesses as 1.10 by non-member households. Businesses on average have 2.11 employees and operate predominately with family labor.

For agricultural activities 41% of the sample households' own agricultural land, however, only 33% of these households' actually engage in agricultural activities themselves. This said, more non-members engage in agricultural activities than members, 38% versus 28%. The main agricultural activities for farmers are basic grains, at 59%, and annual or semi-permanent crops, at

54 %. Tree crops such as coffee and cocoa are produced exclusively in the department of San Martín (in our sample). Notably more members, 27%, than non-members, 14%, engage in cash cultivation of coffee and cocoa. This could be, in part, because credit union San Martín de Porres provides business loans to coffee and cocoa exporters thus, creating incentives to invest in the planting of coffee and cocoa trees. Generally, coffee and cocoa production tend to have high front end fixed costs for planting and take between 3-4 years for peak production. Without agricultural credit it would be very difficult for farmers to bear the burden of these high fixed costs. Based on conversations with the Branch Manager of San Martín, the business loans are also extended to farmers engaging in basic grain cultivation (80% of agriculturalists in the sample engage in this activity), particularly member farmers who engage in the production of exotic rice varieties (export only). The regions of Ayacucho and Cusco engage predominantly in the production of basic grains, at 95% and 73% respectively, while the regions of Cajamarca and Apurímac diversify by engaging in both basic grains, 44% and 84% respectively, and annual/semi-permanent production, 71% and 60% respectively.

Table 4.3 Business and Agricultural Characteristics

	Overall	Members	Non-Members
Household Business Activity (%)	60	0.60	0.59
Number of Businesses	1.17	1.25	1.10**
Income & Costs			
Business income earned last year (mean Soles)	16,596	17,925	15,267
Costs of operating last year (mean Soles)	7,543	7,035	8,051
Staffing			
Number of employees	2.11	2.25	1.96
Number employees that are family	1.71	1.83	1.58
Owens Agricultural Land	41	0.37	0.44
Area in Agriculture (ha)	13.01	18.74	8.29
Title Status			
Definite title	59	59	59
Provisional title	20	18	21
Without title	21	23	20
Agricultural Land Cultivated	80	80	80
Engages in agricultural activity	33	28	38**
Type of activity (multiple choices permitted)			
Annual or semi-permanent crops (vegetables, potatoes, etc.)	59	60	57
Basic grains (maize, rice, legumes, quinoa etc.)	54	51	61
Tree crops (coffee, cocoa etc.)	21	27	14*
Agricultural Income			
Income from rented/leased land (mean Soles)	345	235	436
Net Agricultural income (mean Soles)	3,843	3,972	3,752

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

The vast majority of agricultural land owners have formal title to their lands. This is, in part, due to a strong push, in 1990's, towards formalizing land titles under Fujimoro's regime. Non-members on average tend to have land half the size of members, 8.29 as compared to 18.79 hectares. This is finding has important consequences for borrower behavior; titled land serves as an important source of collateral for many borrowers the lack of it would imply constrained access to credit. This issue will be taken up in greater depth later in this section. For the sample households' the net agricultural income is one half the magnitude of income generated from business¹².

¹² Note: This result should be interpreted with care. The sample is urban based and hence not many households engage in agricultural activity as their primary occupation.

The income data also reveals differences in terms of income¹³. For male members the median total household income is 11,730 Soles (US\$ 3,665) as compared to 10,000 Soles (US\$ 3,125), corresponding to a 17% difference in income. The gender differential for non-members is 9%, 10,000 Soles for male non-members versus 9,097 Soles for female non-members.

We now turn to attention where in relation to conventional poverty indicators our sample of members and non-members belong. Table 4.4 summarizes the poverty analysis by region. The region of Cajamarca has the highest national incidence (of the sampled regions) of individuals below US\$ 2 per day, at 73% (41% live in extreme poverty US\$1 per day), followed closely by Ayacucho, at 70% (35% live in extreme poverty), and Apurímac, at 67% (33% live in extreme poverty).

Table 4.4 Poverty Indicators (using per capita income)

Department	National	Sample	Members	Non-Members
Apurímac	%	%	%	%
Overall Poverty less than \$2/day	67.2	45	46	44
Extreme less than \$1/day	33.1	34	34	33
Not extreme between \$1-2/day	34.1	11	11	11
Ayacucho				
Overall Poverty less than \$2/day	70.1	31	30	32
Extreme less than \$1/day	34.8	20	21	20
Not extreme between \$1-2/day	35.3	11	10	13
Cajamarca				
Overall Poverty less than \$2/day	73.3	27	18	35
Extreme less than \$1/day	41.5	26	18	32
Not extreme between \$1-2/day	31.8	2	0	3
Cusco				
Overall Poverty less than \$2/day	53.7	17	16	18
Extreme less than \$1/day	22	9	10	9
Not extreme between \$1-2/day	31.7	8	6	9
San Martín				
Overall Poverty less than \$2/day	60.5	37	31	42
Extreme less than \$1/day	24.5	29	26	31
Not extreme between \$1-2/day	36	8	5	11

While the national figures are really high our sample does not reflect the same level of poverty. As we can see in the table above only the department of Apurímac has the highest level of members below the poverty line while, Cajamarca has the only 18% below the poverty line although it has the highest incidence of poverty.

Table 4.5: Per capita Income Distribution (annual), 2005

Income Quartile Ranges			Median incomes within quartiles (Soles)
	in Soles	in US\$	
Q1	6,000 or Less	1,875 or less	2,155
Q2	6,001-14,400	1,875.3 -4,500	10,450
Q3	14,401-27,300	4,500.3-8,531.25	20,000
Q4	27,301 or more	8,531.3	40,650

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

¹³ Results not included in table.

This evidence suggests that the 8 surveyed credit unions, with an exception to San Pedro-Andahuaylas, serve the low and low-middle income segments of the Peruvian population, at less than third of the represented sample belonging to income classes below the poverty line¹⁴. This suggests that deepening access to financial services to the very poor segment of population the credit unions will have to spend dollars to increase participation from rural areas in these regions.

Finally, for the purposes of the rest of the analysis income quartiles are calculated so that sample is divided in four equal groups. The lower two quartiles have per capita income below the median income level, to represent 50% of the sample, and the higher two quartiles have per capita incomes above the median level. The cut-off points for each quartile are presented in Table 4.5.

MEMBER AND NON-MEMBER CHARACTERISTICS

The purpose of this section, based on evidence from the member/non-member survey data, is to answer two basic questions: How do members and non-members differ in their characteristics, both socio-economic and demographic?; Why do some choose to become members of the credits unions while others don't?

We begin by understanding the demographic differences between members and non-members. The vast majority of members (60%) travel less than 45 minutes get to the Credit Unions. Walking is the predominant mode of transportation for 44% of the members, and 42 % of the members rely on public transportation. Female members are more likely to walk to the Credit Unions at 52% as opposed to 36% of male members. Furthermore, 80% of members from Cajamarca walk to the Credit Unions versus over 60% of members relying on public transportation in the Departments of Ayacucho, Apurimac and Cusco. Most non-members were interviewed in the local town squares so it was hard to get a precise estimate of their distance to the Credit Union.

Table 4.6: Gender and Family Dynamics of Survey Respondent

Gender, Marital Status, and Family Size	Member	Non-Member	Overall
Sample Size	251	255	506
Sex of Respondent (% Male)	52	55	54
Family size of respondent (persons)	3.14	3.19	3.16
1-3 persons (%)	64	61	62
4-5 persons (%)	29	32	30
>5 persons (%)	8	7	8
Marital Status			
Single (%)	19	29***	24
Married or Common Law Unions (%)	72	63**	50
Divorce/Separated (%)	4	5	18
Widower/Widow (%)	5	3	4

Source: Own calculations from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

¹⁴ Note: If the credit unions are able to capture a more rural based membership, which is the case in San Pedro-Andahuaylas we would see better participation from the population below the poverty line.

As shown in Table 4.6 the gender ratio for the sample is 1.17 male/female as compared to 1.01 male/female¹⁵ at the national level. Clearly there is not an obvious gender bias in terms of members and non-member respondents. The percentage of women members is similar to that of men. However, equal representation in membership need not imply equal access to financial services¹⁶. There is a slight gender variation between members and non-members, however, the difference is not statistically significant.

In our sample the majority, 61-64%, of members and non-members have a family size of 3 persons. Less than 10%, of the sample, have more than 5 persons in their household. A majority of the respondents were either in married or common law relationships. More members tended to be in married/common law unions than non-members and this difference is statistically significant (72% versus 63% respectively). It is interesting to note that more non-members are single than members (29 % versus 19%).

Table 4.7: Age of Respondent

Age	Member	Non-Member	Overall
Sample Size	251	255	506
Average age of Respondent (years)	44.19	38.22***	41.71
Age < 35 years (%)	30	50***	40
Age 35-65 years (%)	63	45***	54
Age > 65 years (%)	7	5	6

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

The average age of all respondents is 42 years (Table 4.7). The average non-member is six years younger than a member (38 versus 44 years respectively). This difference is statistically significant at all conventional levels. The majority of members 63% are between 35-65 years old, productive/income generating years, whereas majority of non-members 50% are less than 35 years old, perhaps entering the productive/income-generating phase of life.

Table 4.8: Highest Level of Education of Respondent

Education, Language and Literacy	Membership		Gender		Overall
	M	NM	Female	Male	
Sample Size	250	256	234	272	506
Education and Literacy					
No education (%)	3	3	3	2	3
Primary (%)	20	25	33	22	22
Secondary (%)	28	30	27	32*	29
Technical /Vocational School (%)	16	16	18	14	16
University (%)	33**	27	29	30	30
Literacy (%)¹⁷	96	96	94	98**	96
Language					
Spanish (%)	71	82***	77	76	76
Quechua (%)	29	18***	23	24	24

¹⁵ Census INEI

¹⁶ Note: gender variation does play a role in occupational choices presented below in the report.

¹⁷ Note: Perú has high literacy rates at 96% urban and 83% rural in 2004 (Source INEI).

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

With a 96% literacy rate (national 95% male, 86% female¹⁸), only 3% of the respondents have no formal education, and a vast majority of respondents 57% have secondary education. 16% have technical education, and 30% had University level education (Table 4.8).

There are some regional variations that warrant mentioning; Cusco and Ayacucho (at 62% and 47% respectively) have the highest percentage of respondents with some or completed university level of education (Table 4.9). The most underdeveloped region Apurimac also has the vast majority, 72 percent, with less than secondary level education and the lowest literacy rate, 86 percent, in the sample. In the education attainment there are not very significant differences between members and non-members. Ayacucho and Apurimac are the only two regions with Quechua as main language (60% and 58% respectively). All other regions have Spanish as the predominant language among respondents.

Table 4.9 Regional Variation in Education

	Cajamarca	San Martin	Apurimac	Ayacucho	Cusco
No Education	2	2	11	1	0
Primary	24	29	34	18	2
Secondary	26	35	38	24	23
Technical School	18	25	6	11	14
University	27	10	11	47	62

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

A quick glance at Table 4.10 shows that the majority of members and non-members engage in some type of entrepreneurial activity as their primary occupation (38 and 42 percent respectively). Notably more members are, significantly, public sector salaried employees¹⁹ than non-members (25 and 15 percent respectively).

Table 4.10: Primary Occupational Choices of Respondent

Occupational Choice	Membership		Gender		Income Quartiles				Overall
	M	NM	Female	Male	Q1	Q2	Q3	Q4	
Sample Size	250	256	234	272	130	126	124	126	506
Agriculture	8	12	5	15***	26	6	7	1	10
Business	38	42	47	35***	42	34	44	40	40
Public Sector salaried	25	15***	15	24**	5	20	27	28	20
Private Sector salaried	11	12	9	14	7	16	10	13	11
Family worker without pay	0	1	0	0	1	1	0	0	0
Homemaker	8	6	15	0***	10	9	2	7	7
Unemployed	1	2	1	1	1	2	1	2	1
Student	2	7***	5	4	3	6	3	6	5
Retiree	6	4	3	7*	5	6	5	3	5

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

¹⁸ World Development Indicators online.

¹⁹ This could be because state employed members have their salaries directly deposited in Credit Unions.

Very few of the members are agricultural producers²⁰, only 8%, while 16%²¹ of the total population engages in agriculture. The distance from the credit unions and menu of services available in part explains the low representation of agriculturists. *Caja rurales*, *Caja municipales* and *Banco Nacional* are the three primary sources of formal agricultural credit for most rural farmers (Boucher, 2000). Currently only one participating credit union, San Pedro-Andahuaylas explicitly offers small agricultural loans²² and another offers some credit to agricultural producers through small business loans. Based on conversations with credit union branch managers, in Perú, there is a real need for the credit unions to expand their services to small-scale agricultural producers. It is also important to note that majority of the agricultural producers belong to the bottom quartile of income distribution.

Male respondents show a significant preference to public sector salaried employment (24%), business (35%), and agriculture (15%). Interestingly, more female respondents prefer business as a primary occupation (47 versus 35 percent of male respondents). Women's role in business is statistically significant. The primary difference in occupations by gender is that 15% of women report their occupation as "homemakers".

Table 4.11: Member Characteristics

	Member	Gender		Income Quartile			
		Female	Male	Q1	Q2	Q3	Q4
Sample Size	250						
Years Member	7.29	6.74	7.80	6.47	6.02	6.71	9.44
Reason For Being a Member							
Savings/Interest	29	31	27	27	21	34	31
Loans	60	57	64	55	64	61	61
Remittance	0	1	0	0	2	0	0
Insurance	2	3	1	2	3	0	1
Checking	0	0	1	2	0	0	0
Security of savings/withdrawal	2	2	3	4	3	0	1
Loyalty/Reputation	1	3	1*	0	5	2	0
Other	5	6	5	11	2	3	5
Members of additional Credit Unions	10	7	3*	2	5	5	8

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

In summary, demographically members and non-members differ in following demographic areas. Non-members ages indicate that they are entering the productive/income generating stages of life whereas, members are predominantly in their productive stage of life. The credit unions need to tailor their menu of services to include agricultural producers.

We now turn our attention to examine why some respondents choose to become members and others do not. Members' most commonly cited reason for choosing the credit union as their

²⁰ Note we would expect a lower percent of non-members as agriculturalists because of sample bias. Most non-members were randomly sampled from areas close to the credit union. As agriculture producers live in fairly remote areas this bias is reasonable.

²¹ INEI: Economic Statistics online

²² Note: San Martin de Porres also offers agricultural credit but only to export oriented cash croppers. These loans are made under the category of small enterprise loans and not agricultural credit.

primary financial institution is secure access to credit. Most members, 60 percent, who deposit their savings in the credit union do so to meet their borrowing needs. This suggests that the sampled credit unions attract more borrowers than savers. The secondary reasons for selecting the credit unions are savings and interest, 30 percent. With increasing emphasis on savings mobilization the fact that a third of the members' choose to save at a credit union is encouraging. On average members are affiliated with the credit union for 7 years, however, loyalty and reputation seem not to play an important role for members. This finding is suggestive of members' focusing more on services offered by the institution.

Table 4.12: Reasons for not being a Member

Principal reasons for not being a member	Not Member	Gender	
		Female	Male
Costly to be a member of the Credit Union	9	13	5**
The Credit Union is very far	6	5	6
Very Complicated to be a member	18	20	17
Bad Reputation	4	4	4
Bad Personal experience	10	9	11
Lack of services or security	54	49	58

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

Non-members, on the other hand, choose not save in credit unions primarily due to lack of security and services, 54 percent. As mentioned in the preceding sections the Peruvian credit union system suffered a heavy blow due to the hyperinflationary episode. Several non-members on the field mentioned that they felt insecure saving their money at the credit unions, 10 percent of non-members had direct bad experiences with credit unions. The second most important reason for not joining the credit union is the perception that membership procedures are too complicated, 18 percent, tying into the complicated procedure is the idea that non-members perceive the cost of becoming a member very expensive, 9 percent. One reason for this is a lack of clear understanding of what programmed savings/mandatory shares accounts really offer. A simple solution would be to have informational seminars that explain what participating in these programs entails.

Table 4.13: Basic Services Desired By Potential Members

Motivation for becoming a member	Not Member
Savings with interest & security	33
Loans	49
Remittance	1
Insurance	7
Checking	1
Bank Reputation	1

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

We also asked a series of questions to non-members' about what would motivate them to become members. The top ranking reason was access to credit, 49 percent²³. The second most predominant motivating factor is savings accounts that offer interest. Currently, of the 8 pilot credit unions, two credit unions do not offer savings accounts with interest. In order to mobilize savings, savings accounts with competitive interest rates are integral. Interest rates have to look more attractive than those of other financial institutions to motivate a shift towards mobilizing deposits in a credit union. In addition, withdrawal ease and checking services are some of the advantages that other financial institutions have and credit unions need to incorporate them in their system. Some of the larger credit unions, San Martín de Porres-Tarapoto; San Cristobal de Huamanga and Santa María de Magdalena-Ayacucho; and Santo Domingo de Guzmán-Cusco; offer a variety of savings services such as basic savings account with a nominal interest rate of 2%, fixed deposit accounts with higher interest rates, 5-7%, and fixed term accounts with varying interest rates, 5-10% depending on term.

Table 4.14: Additional Services Desired by Members and Non-Members*

Additional services desired by respondents members and potentials	Member		Overall
	M	NM	
No opinion	14	21**	18
Automatic Teller	39	23***	30
Technical Assistance	14	16	15
Seminars Promoting Savings	12	17*	14
Seminars on Input/Output markets	4	12***	8
Credit in inputs	8	6	7
Other Services	10	5**	8

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

*Members were asked what services they would like in addition to existing services. Non-members were asked what services would motivate them to become members.

Both members and non-members rated their preferences for additional services that they would like the credit union to include. A third of the total sample preferred automatic teller services, 39 percent of members rated this as the most desired service. Technical assistance rates as the second most important service desired by members and non-members, at 14 and 16 percent respectively. By technical assistance we mean information about how to make small businesses operationally successful or in the case of agriculture retaining an agronomist on staff who can conduct field visits and provide advice as needed.

To sum up, higher returns on savings (particularly on large accounts, easy access to money, checking services, and financial security are factors that could attract potential members.

HOUSEHOLD ASSETS

The survey captured approximate values of all (business, agricultural and residential) assets owned by the respondents and other family members within the household. Thus total wealth is calculated as a sum of all business, agricultural and residential assets. Table 4.15 presents the

²³ We discuss access to credit for members' and non-members' in greater depth later in the section under the heading Credit Supply and Demand.

wealth levels by category. The median wealth levels of respondent households is 34,425 Soles (US\$ 10,758). As with income non-members' asset levels are lower than members' asset level in nearly all categories of wealth.

Table 4.15: Asset Ownership (in Soles: Exchange US\$ 1=3.2 Soles)

Asset Type	N	Overall	Member			Non-Member		
			Overall	Female	Male	Overall	Female	Male
Total Business Assets	259	7600	8955	8000	10000	7000	5500	8000
Value of building and land	137	8000	8750	8000	10000	5000	5000	4000
Value of machinery	135	2500	3000	2500	3500	2000	1950	2000
Value of vehicles	39	8000	8000	10000	8000	4500	12000	4000
Value in inventory	165	4000	6000	2800	10000	2500*	2000	3500
Total Agricultural Assets	252	8935	12100	10000	14040	7300	6100	7537
Value of Livestock	175	710	1575	1660	1470	480	575	395
Value of Equipment	151	380	550	775	550	300*	200	350
Value of Ag.land	184	10000	15000	11000	15000	8000	10000	8000
Total Residential Wealth	389	30000	40000	18000	16000	20000	25000	20000
Value of Own House	357	25000	32300	42500	30000	20000	25000	20000
Value of Other Property	116	19000	17000	12000	3250	20000	16500	14000
Value of Private Vehicles	24	8500	8000	40000	30000	14000	20000	15000
Total Assets	506	34425	45000	44349	46772	24537	21545	25000

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

As in the case of income, Table 4.15 reveals that female credit union members tend to belong to households that are poorer in terms of their ownership of assets. In almost all classification of assets female members have lower levels of assets than male members. For example, female member respondents have median assets worth 44,349 Soles (US\$ 13,859) while male member respondents have 46,772 Soles (US\$ 14,616). That is, in terms of the median total assets this corresponds to a 5% difference between male and female members. For non-members the gender difference in terms of median total assets is 16%, however, female non-members tend to have higher residential assets than male non-members.

SAVINGS BEHAVIOR

All members must have a mandatory shares account in the credit union as part of a membership requirement. In addition, over 40 percent of the member respondents have other family members with savings accounts as well. On the other hand, we can see that only 20 percent of non-members have any type of savings accounts and only 26 percent of the non-members' family have savings accounts.

Table 4.16: Respondents Saving Account (%)

Savings Account	Membership		Income				Overall
	M	NM	Q1	Q2	Q3	Q4	
Sample Size	250	256	129	131	120	126	506
Respondent	100	20***	51	56	55	65	57
Other Family Member	43	26***	18	26	44	49	34

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

When non-members were explicitly asked why they do not save a vast majority, 41 percent, responded that their income levels were simply too low to sustain a savings account. Another 20 percent of non-members' stated that they were "*not in the habit of saving*" and 11 percent stated that "*do not know how to save*". This clearly suggests that efforts need to be channeled in attracting potential members and dispersing educational information on the importance of savings.

Segregating the sample by income quartile provides a clearer story. The bottom two quartiles of income are more likely to have very little income and not know how to save as their primary reasons for not saving whereas, the upper two quartiles are more likely to not be in the habit of saving. For the upper two quartiles finding other investments more profitable is also a strong deterrent from saving. Thus, targeting the two groups with different saving mobilization strategies would be worthwhile. That is, for the bottom two income quartiles information on mandatory shares and programmed savings would seem appropriate while, the top two income quartiles may benefit from high return long-term deposits.

Table 4.17: Reason For Not Having An Account (Non-Members)

Reason for not Saving	Non-member	Female	Male	Q1	Q2	Q3	Q4	Overall
Very little income	41	46	39	61	46	30	24	42
Not in the habit of saving	23	21	22	6	18	32	37	22
Financial Institutions are not safe	5	6	4	5	7	4	5	5
Other investments more profitable/Interests on Savings too low	11	8	14	8	9	16	15	12
Don't know how to save	11	12	9	13	14	6	5	10
Other reason for not saving	10	6	12	6	5	13	15	9

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

Interestingly, not many members hold deposit accounts in other financial institutions. Across all income quartiles the predominant savings institution for respondents is the credit union. A mere 8% of member respondents have accounts in private banks and 0% have accounts in state banks. In comparison, 60 % of non-members hold deposits in private banks and another 44% hold accounts in state banks. The patterns across income quartiles remain the same for members.

Table 4.18: Respondents Savings Account Institutions (multiple choices permissible)

Respondent	Income Quartile								Overall	
	Q1		Q2		Q3		Q4			
	M	NM	M	NM	M	NM	M	NM	M	NM
Credit Union	98%	0%	98%	0%	98%	0%	98%	0%	100%	0%
State Banks	0%	60%	0%	18%	0%	45%	0%	55%	0%	44%***
Private Banks	6%	50%	11%	91%	6%	55%	8%	45%	8%	60%***

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

Note: All 250 members have at least a mandatory shares account. Only, 121 respondents have additional savings accounts

Less than half of member respondents' have family members with savings accounts, 42 percent. On the other hand, only 26% of non-member's families have savings accounts of their own. Other members of the respondent families accounts also reveal similar trends. Member respondent's families tend to also hold savings accounts primarily in credit unions, 78 percent. Respondent's

families belonging to the lowest income quartile have the lowest participation rate at 69 percent as compared to other income quartiles, which are close to 80 percent participation in savings.

Interestingly, non-member families have savings accounts, if at all, at credit unions even if the respondents do not, 45 percent. In addition, non-member's families have accounts in private banks, 31 percent, as well as state banks, 4 percent.

Table 4.19: Other Family Members' Savings Accounts

Other family members	Income Quartile								Overall	
	Q1		Q2		Q3		Q4			
	M	NM	M	NM	M	NM	M	NM	M	NM
Credit Union	69%	25%	81%	58%	80%	48%	78%	41%	78%	45%
State Bank	0%	25%	0%	0%	0%	0%	3%	5%	1%	4%
Private Bank	6%	38%	5%	25%	10%	32%	13%	32%	9%	31%

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively. Note: Members' family N=107 and Non-members' family N=67

Table 4.20 presents information on the amounts held in savings, in different types of accounts deposits, mandatory shares, basic savings, and checking, by member and non-member households. Majority, 51percent, of members had less than 500 soles (approximately, \$166 US) in their savings²⁴. One reason for low level of savings is that households use their savings accounts to deposit their paycheck and withdraw from this account regularly for monthly expenses. In addition, a vast majority of members did not have accounts other than their mandatory shares accounts, 52 percent. The balances in mandatory shares accounts tend to be less than \$300 per person. However, only a third of member households hold amounts greater than 2000 Soles (approximately \$600 US).

Disaggregating by income quartiles shows a slightly positive correlation with the amount of savings held by members. The top two quartiles of income show amounts greater than 2000 Soles, however, the bottom quartile also has members with savings greater than 2000 Soles. As mentioned before only a fifth of the non-members hold savings accounts of any type. However, the non-members who do have accounts tend have accounts that include basic savings, 85 percent, savings plus accounts with higher returns, 28 percent, and fixed term deposits, 31 percent. The highest saving level is found in the highest income quartile and the lowest savings in the lowest income quartile.

The data presented in this section clearly demonstrates that credit unions hold exclusive share of deposit accounts of their membership. This, in part, is a consequence of the fact that access to credit union loans is explicitly tied to the maintenance of the deposit accounts. As noted earlier in the section a members' primary motivation for choosing the credit union as its financial institution was access to credit. By maintaining a mandatory shares account and or additional savings accounts members retain access to credit. This suggests, during the course of the project in Perú, that there is a need for continued efforts to increase savings among large and small shareholders by improving savings services and attracting new members.

²⁴ Note: the survey team members randomly checked a sample of the 30 interviewed members information on loans and savings against the credit union's database. Most responses were accurate within acceptable margin of error.

Tabel 4.20: Amount Held in Savings by Households (multiple selections possible)

Membership	Overall	Income Quartiles			
		Q1	Q2	Q3	Q4
Member					
0 – 500 Soles	51%	54%	55%	48%	43%
500 – 1000 Soles	34%	21%	9%	28%	10%
1000 – 2000 Soles	28%	4%	23%	10%	30%
2000 – 5000 Soles	21%	17%	9%	21%	23%
5000 – 10000 Soles	7%	13%	5%	10%	5%
10000 – 50000 Soles	3%	4%	0%	0%	3%
> 50000 Soles	0.8%	0%	0%	3%	0%
Non-Member					
0 – 500 Soles	45%	44%	19%	38%	22%
500 – 1000 Soles	29%	33%	31%	31%	44%
1000 – 2000 Soles	25%	11%	25%	15%	22%
2000 – 5000 Soles	19%	0%	25%	15%	11%
5000 – 10000 Soles	9%	11%	19%	0%	11%
10000 – 50000 Soles	5%	0%	6%	0%	11%
> 50000 Soles	0%	0%	0%	0%	0%

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

However, in addition to ensuring the loyalty of its current members, credit unions do need to disseminate information about savings to non-member, particularly those who do not have any accounts currently. For example, two non-members interviewed had the following comments to make:

“No conozco nada de la cooperativa, aunque sí he escuchado sobre ella... ¿de verdad da préstamos?” Interviewee No. 107

“I don’t know anything about the credit union, i have heard about them... really they give loans?”

“Para ser socio debería rebajarse el monto de ingreso, me parece que es muy alto” Interviewee No. 204

“To become a member you have to be willing to let them garnish your wages, this seems very costly to me”.

Both these comments suggest that there is a level of ignorance with regards to services, specifically mandatory shares, offered to members and benefits, such as access to credit and health service, associated with being a member. The lack of clear understanding about credit unions may be the principal deterrent for non-members. More efforts need to be made to properly advertise the services available at credit unions and the benefits associated with being a member.

CREDIT SUPPLY AND DEMAND

Credit Unions in Perú all offer loans for consumption, business, small micro-enterprises, and housing loans. Only two of the selected 8 credit unions offer agricultural loans namely: San

Pedro-Andahuaylas and San Martin de Porres-Taropoto, San Martin only offers loans to agricultural export producers.

Of the 250 members, 85 percent have a positive supply of credit (a loan size greater than zero), while 46 percent of non-members report positive supply of credit. It is important to note that not having a positive supply does not mean that respondents have constrained access to credit. It is possible that some respondents simply have zero demand for credit. Before we turn our attention to understanding whose access to credit is constrained. Let explore the class of members and non-members who have both a positive demand and supply of credit.

A large percent of sampled member households', 85 percent, have participated in credit markets as compared to 46 percent of non-member households'. On average member households have two loans and credit unions are the predominant source of credit, 90 percent. Furthermore, another 21 percent borrow from other banking institutions. In addition, from Table 4.20, it is clear that supplier credit is not an important source of credit for member households. Loans from input suppliers are reported by only 7% of the member households. The data presented in Table 4.21 and 4.22 suggests that the credit unions are able to meet most of the credit needs of their members.

Table 4.21: Loan Source for Respondent Households (multiple sources allowed)

Membership		Income Quartiles				Overall
		Q1	Q2	Q3	Q4	
Member households	N	43	51	53	67	214
	Number of Loans	1.95	2.02	3.17	2.72	2.51
	Source of Loans					
	Credit Union	86	90	91	93	90
	State and Private Banks	14	20	25	34	24
Non-Members households	N	15	25	41	38	119
	Number of Loans	1.33	1.36	1.63	1.76	1.58
	Source of Loans					
	Credit Union	20	32	24	11	21
	State Bank	60	60	56	76	64
	Private Banks	20	20	24	21	22

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

The most important source of credit for non-members are banks, such as *caja rurales*, *caja municipales*, *banco nacional*, etc., at 64%. The second most important source for non-members are credit unions, through other family members, and private banks, 21 and 22 percent respectively. Another source of credit for non-member households are supplier credit, 12 percent. We will explore in greater depth whether the lack of participation in credit market means that access to credit is limited or if there simply is no demand for credit. Note in our sample no member/non-member households' borrow from informal sources.

Note the lack of participation in the informal credit sector is an interesting finding because other studies (Boucher, 2000, and Trevelli et. al. 2001) report the existence of a very vibrant informal credit sector in Perú. For our analysis the lack of participation in the informal sector signals two things: a) a distinct urban bias. b) the lack of representation of the agricultural sector. Generally, participation in the informal credit sector is greatest in rural areas in developing countries because

of distances to formal financial institutions, and other reasons such as transaction costs (or paperwork), and lack of collateral assets.

Table 4.22: Supplier Credit or In-kind Loans for Respondent Households

	Membership		Overall
	M	NM	
Input Loan	7	12	9
Number of Input Loans	1.06	1.13	1.10

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

Given that the survey data contains a few extreme values (high or low loan amounts), the median loan is probably a more accurate measure of central tendency than the mean loan. Credit union loans for members larger are than other bank loans: the median credit union loan is 5,000 Soles (US\$ 1,562) in size compared to bank loans of 3,900 Soles (US\$ 1,218)²⁵. For members, however, there is a clear positive correlation with income quartile in terms of loan size. Members of bottom two quartiles have access to a median loan size of 3,200 Soles (US\$ 1,000) from the credit union, whereas members from the top two quartiles have access to more than twice that amount. This bias exists to a lesser extent with other bank loans as well.

Non-member respondents have access to credit union loans only through their family members who are members. On average bank loans of non-members are larger than that of credit union members, 7,750 Soles (US\$ 2,421) compared to 5,000 Soles. For borrowers from the lower to quartile this difference in bank loan size versus credit union loan size is quite dramatic, 3,200 Soles (US\$ 1,000) versus 8500 Soles (US\$ 2,656).

Table 4.23: Loan Size by Member and Lender

Loan amounts for Respondents	Income Quartiles				Overall
	Q1	Q2	Q3	Q4	
Member	Median	Median	Median	Median	Median
Credit Union Loan	3,200	3,200	7,000	7,000	5,000
State Bank Loan	2,000	2,500	4,000	5,300	3,900
Private Bank Loan	0	2,000	1,500	10,000	6,000
Non-member					
Credit Union Loan	-	-	-	-	-
State Bank Loan	8,500	5,000	7,500	9,500	7,750
Private Bank Loan	300	2,500	2,000	2,500	2,000

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

Families of credit union members in the bottom two income quartiles on average have loan sizes smaller than the respondents, less than 2,400 Soles (US\$750). The positive correlation continues for other family members in terms of loan size regardless of membership status.

²⁵ Very few members borrowed from other sources of loans, however, the median amount for the four borrowers is 6,000 Soles (US \$ 1,850), however if one outlier with exceptionally large bank loan is dropped this median amount drops to 2,000 Soles.

As in many Latin American countries interest rates on loans are exceptionally high. We found that respondents did not provide accurate information on interest rates. For this reason we interviewed all lenders in the area for more accurate information on interest rates offered. Traditionally, credit unions offer below-market interest rates on loans, an average of 36% annual rates. There are regional variations in interest rates, the credit unions in Cajamarca offered the lowest interest rate at 24-30% annual rates and San Martin had the highest interest rates at 50-60% annual. Formal Banks, on the other, ranged between 42% and 55%, the lower interest range corresponds to loans offered by *Caja rurales* and the higher interest rate corresponds with *Caja municipales* and *Banco Nacional*.

Table 4.24: Loan Size by Member and Lender

Loan amounts for other family	Income Quartiles				Overall
	Q1	Q2	Q3	Q4	
Member	Median	Median	Median	Median	Median
Credit Union Loan	1,800	2,400	2,500	6,150	6,078
State Bank Loan	700	0	4,000	7,500	8,270
Private Bank Loan	750		24,200	-	12,475
Non-member					
Credit Union Loan	1,000	1,650	3,698	8,000	6,118
State Bank Loan	1,600	6,000	4,000	3,500	6,157
Private Bank Loan		600	2,000	2,500	2,900

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

The average term on credit union loans is 18 month as compared to formal banks with terms between 12-18 months the difference in loan term is not significant between financial institutions. However, a large majority of member respondents borrowed multiple short-term loans, usually between \$300-\$500, within the year for a term of 3-4months.

Table 4.25: Loan Use by Activity

Loan Use	Membership		Overall
	M	NM	
Business/Commercial	50	55	51
Agricultural	11	05*	09
Housing	18	22	20
Consumption	38	27**	34
Other	06	03	05

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

The most common purpose for borrowing, across both members and non-members, was business and commercial loans, 51 percent. Consumption loans are the second most important use for loan, 34 percent, followed by housing loans at 20 percent. Consumption loans are more significant amongst members as compared to non-members, 38 versus 27 percent, Agriculture account only for 9 percent of the volume of loans dispersed. This is not surprising for two reasons: First, our sample of non-members has an urban bias; Second, currently only two credit unions offer any form of agricultural loans. This said, 11 percent of members versus 5 percent of non-members borrowed for agricultural purposes, the difference is statistically significant.

For the purposes of Table 4.26 the different types of collateral considered are property (agricultural, residential, and business land), machinery, promissory notes, and group reputation (in the case of group loans if one member fails to pay they place the entire group in jeopardy). The percentage of banks requiring collateral is lower than credit unions but the difference is not significant. The comparison is based on a small number of bank loans thus; the results should be interpreted with care. The most common form of collateral for credit unions was mandatory savings²⁶ in combination of promissory notes. Larger loans with the credit unions required physical assets as collateral. Banks on the other hand relied on promissory notes for smaller loans and larger loans are fully collateralized with land assets.

Table 4.26: Collateral Requirements

Collateral Requirement	Membership		Overall
	M	NM	
No Collateral	16	19	17
Mandatory Savings	14	3***	10
Residential land/House	23	36***	28
Agricultural Land	02	1	02
Business Deed	7	10	8
Machinery or Vehicle	2	1	02
Cosignee/Promisory note	46	37	43
Grupo Solidario	03	00*	02
Other	17	11	15

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

ACCESS TO CREDIT MARKETS

The financial market can be said to work well for household if the supply meets or exceeds the demand of the household. A not-rationed household does not necessarily obtain a loan. In contrast, the financial market does not work well for the household if the market supply of liquidity falls short of the demand of the household. Households for which this condition holds are *rationed* because although the household demands credit (meaning it is not too pricey or expensive), the market does not supply it. Hence there must be some other non-price factor that is constraining the household's access to credit.

While there is an abundance of theory about when non-price rationing will occur, and when it will be wealth-biased, the key question is the empirical one about the nature of credit markets in the selected credit union location in Perú. To answer this question, it is necessary to be able to distinguish which of our survey households are not-rationed and which are rationed. In order to classify households, the survey contained a special credit module that asked a sequence of questions designed to ascertain a household's credit market status. A household was classified as: not-rationed if they responded that they either had a loan or that they did not want or need

²⁶ Note even though Table 4.20 does not explicitly reflect this, credit unions loans are not advanced without mandatory savings accounts. That is membership (via mandatory shares accounts) is a pre-requisite to access to credit. For some members the balance in the mandatory accounts serves as a proxy for collateral. Members did not have a clear understanding that this was a requirement and hence collateral.

loans; partially rationed if they responded that they received a loan amount less than the associated demand; fully-rationed if they responded that they did not possess enough collateral to secure a loan or that the transaction costs to secure a loan were too high. In this analysis we do not treat transaction costs as distinct from lack of collateral. In Figure 4.1 we provide a brief summary of the different rationing categories.

To this end, this section is dedicated to how income or wealth and access to credit are related. Note that in this section, for households that do not report any borrowing we sought to identify their perceived rationing status.

Figure 4.1 Rationing Status Classification

Let S denote notional supply of credit and D denote notional demand for credit		
	Not Rationed	Rationed
With Loans: S ≥ 0	D = S ≥ 0 Note: These individuals received the loan amount they requested.	D > S ≥ 0 Note: These individuals received loan amounts less than what they requested.
Without Loans: S ≥ 0 or S ≤ 0	S > D ≤ 0 Note: These individuals have a positive supply but choose not to borrow because they can self-finance or the cost of credit is too high.	D > S ≤ 0 Note1: These individuals have a positive demand but do not have access to loans. Note2: Here there are two groups of individuals: those that applied for credit but were their application was denied; and those that did not apply because they perceived their application would be rejected.

Source: Author

A quick look at Table 4.27 reveals that a large percent, 66 percent, of member households are not-rationed as compared to 47 percent of non-member households. Furthermore, over a third of non-member, 38 percent, are fully rationed (without access to any loans) and 15 percent are partially rationed. In contrast a higher percent, 21%, of member households are partially rationed (where demand exceeds amount supplied) and only 12 percent of member households are fully rationed. This suggests that credit unions are able provide access to credit where other formal financial institutions do not.

Disaggregating by age we can see that a higher percent of younger credit union members, 19 percent, are fully rationed as compared to 10 percent of credit union members in their productive income-generating phase are fully rationed. Credit union members approaching retiring years tend not to be fully rationed. In contrast non-members have severely constrained access to credit with over a third of the non-member households fully rationed regardless of age. However, disaggregating by age for non-members does exhibit a decreasing trend in the fully rationed category. It is clear that there are not any significant gender differences in terms of credit access for member households. For non-members, however, more female respondents reported being rationed, 45 percent, as compared to 33 percent of male respondents.

Occupation categories reveal that for members family workers without pay and unemployed are the most likely to be fully rationed. Majority of members, 60 percent or more, do not have any

constraints in terms of credit access. Notably, for members, not many agriculturalist report being constrained access to credit. This, in part, is because a very few respondents in the sample, 8 percent members, were agriculturalists. In terms of sampling there is an urban bias because most agricultural producers were located in remote areas that required over 4 hours in travel time to the credit union. In addition, with the exception of two credit unions, agricultural loans are simply not offered in the selected credit unions. Non-members, on the other hand, reveal that agricultural producers face the highest constraints in terms of access to credit, 55 percent.

Table 4.27: Rationing by Household Characteristics

Classification	Members N=250			Non-Members N=256		
	Rationing Categories			Rationing Categories		
	Not	Partial	Full	Not	Partial	Full
Overall (Rows sum to 100%)	66%	21%	12%	47%	15%	38%
Age (Rows sum to 100%)						
Age <35	64%	15%	19%	44%	15%	41%
Age 35-65	65%	24%	10%	51%	11%	37%
Age >65	82%	17%	0%	46%	21%	33%
Sex (Rows sum to 100%)						
Male	66%	22%	10%	50%	16%	33%
Female	67%	22%	11%	44%	11%	45%
Occupation (Rows sum to 100%)						
Agriculture	67%	19%	14%	29%	16%	55%
Business	66%	23%	11%	50%	11%	39%
Public Sector salaried	70%	24%	6%	68%	13%	18%
Private Sector salaried	61%	25%	14%	40%	20%	40%
Family worker without pay	65%	10%	25%	0%	50%	50%
Homemaker	100%	0%	0%	31%	19%	50%
Unemployed	40%	0%	60%	50%	0%	50%
Student	73%	27%	0%	44%	22%	33%
Retiree	67%	19%	14%	70%	0%	30%
Wealth Quartile (column adds to 100%)						
1	22%	9%	37%	26%	39%	35%
2	20%	22%	20%	26%	25%	30%
3	28%	39%	23%	20%	14%	22%
4	30%	28%	20%	28%	22%	13%
Income Quartiles (column adds to 100%)						
1	17%	30%	40%	20%	25%	41%
2	27%	20%	17%	25%	36%	22%
3	24%	22%	23%	33%	17%	19%
4	32%	28%	20%	22%	22%	17%

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

Patterns of wealth and income bias clearly exist for members and non-members in the fully rationed and not-rationed categories. The highest percentage of households that are fully rationed belong to the lower two quartiles of the sample, 57% of member respondents and 65% of non-members. In contrast the largest group of non-rationed households belong to the upper quartiles of income and wealth, 58% of member respondents and 48% of non-member respondents.

In order to fully understand the rationing status of non-borrowers, we included in the survey questions regarding the respondents perceptions why they believed their application for credit would be rejected or approved. The results of these questions are presented in Table 4.28.

Table 4.28: Perceptions About Rationing Status

Reasons for Rationing Status	Overall %		Income Quartiles (%)							
			Q1		Q2		Q3		Q4	
	M	NM	M	NM	M	NM	M	NM	M	NM
Not-Rationed: Never Applied										
Sufficient Collateral	37	33	6	18	43	26	30	43	62	48
Complete Documentation	7	8	11	6	10	9	0	3	5	15
Ability to repay	29	26	33	32	24	30	50	23	19	19
No Default	16	26	39	41	14	22	0	23	5	15
High Interest	11	6	11	3	10	13	20	7	10	4
Partially Rationed										
Lack of Collateral	15	31	18	0	0	50	8	25	29	25
Incomplete Titling	4	46	0	100	0	25	0	75	14	25
Repayment Capacity	64	8	64	0	90	25	58	0	50	0
Demanded too much	2	15	0	0	10	0	0	0	0	50
Don't Know	4		9		0		8		0	
Other	11		9		0		25		7	
Fully Rationed: Application Denied										
Lack of Collateral	25	55	0	60	33	67	25	29	50	75
Incomplete Titling	38	14	60	20	33	17	50	14	0	0
Repayment Capacity	13	14	40	0	0	0	0	29	0	25
Prior Default	6	5	0	0	33	17	0	0	0	0
Don't Know	6	9	0	20	0	0	25	14	0	0
Other	13	5	0	0	0	0	0	14	50	0
Fully Rationed: Never Applied										
Lack of Collateral	10	30	0	27	50	36	0	50	0	11
Complicated Process	30	17	0	12	0	14	100	13	50	44
Repayment Capacity	20	23	25	27	50	21	0	25	0	11
Small Loan request	10	3	25	3	0	7	0	0	0	0
Don't know How to Apply	10	11	0	9	0	0	0	12	50	33
Default	20	16	50	21	0	21	0	0	0	0

Source: Own calculation from the 2006 Perú member/non-member survey. Note: Stars indicate statistically significant differences between members and non-members with *, **, and *** indicating significance at the 10%, 5%, and 1% level, respectively.

Let us begin by examining the class of respondent households who did not borrow but perceived that their application for a loan would have been approved. These households believed their application would have been approved for the following reasons: sufficient collateral assets, 37% members and 33% non-members; the capacity to repay the solicited amount, 29% members versus 26% non-members; and good credit history, 16% members and 26% non members. Some respondents did not participate in the credit market, but would have been approved, because the price of credit, interest rate, was too high. This is group of respondents for whom the credit market is functions.

Within this subgroup of respondents households in the bottom two quartiles of wealth the perceived reasons tend to be a clean credit history and capacity to repay. On the other hand, the top two quartiles of income state that sufficient collateral assets as the main reason. This finding is consistent with the idea that households belonging to the lower two quartiles often seek small loans which means repayment history and capacity to repay are the primary tools used to approve loans. On the other hand, households belonging to the upper two quartiles of wealth often solicit large loans, which requires posting substantial physical assets as collateral.

Turning next to respondent households that have access to some loans but not to the full amount demanded. For members, the restriction of loan supply is primarily due to repayment capabilities across all income quartiles. For non-members, on the other hand, improper titling of land assets and or insufficient collateral is the primary reason for loan supply restrictions.

Fully rationed, that is households' with no supply of credit, belong to two separate categories: those that applied and were rejected; those that did not apply because they perceived they would be rejected. Households belonging to the former group were rejected because of insufficient collateral assets, incomplete documentation, and inability to repay. These reasons make up about 85% of the fully-rationed households' with applications denied. Non-applicants, on the other hand, did not apply because they found the process of application too complicated or lacked information on how to apply, 40% members and 28% non-members; perceived lack of repayment capacity, 20% members and 23 non-members; and prior default, 20% members and 16% non-members.

SECTION V: CONCLUSIONS

The survey results presented point to several key differences between members and non-members. We this section by first listing the key findings, then interpreting the results and providing a discussion on how this information may help develop a marketing plan for the participating credit unions.

Demographic Differences

Non-members tend to be substantially younger, entering the productive income generating stages of life, than members who are largely older and in the income-generating phase of life. Suggesting a need for a targeted effort to recruit younger non-members. In terms of education, members are more likely to have university level of education than non-members 33% versus 27%. Aside for this, there is no significant variation between members and non-members education attainment rates. Non-members are more likely to be Quechua speakers than non-members, 18% versus 29%.

Occupational choices reveal that a greater percent of non-members engage in business as their primary occupation, 42% versus 38%, and a higher percent of members are public sector wage earners, 25% versus 15%. In our sample very few members and non-members are agriculturalists, 8% and 12% respectively. Suggesting a real need for target services to include the agricultural sector. 60% of members cited that the reason for choosing the credit union as their primary financial institutions was access to credit. The secondary reason was savings services. On the other hand, 64% of non-members cited lack of services, security of fund, and bad personal experience as the primary motivation for not being a member of the credit union.

Based on 83% percent of non-members, who suggested that if savings were secure and had high returns and credit was accessible then they would be interested in joining the credit unions it is vital for credit unions to build a reputation and trust within the communities they operate in.

There is not an obvious gender bias in terms of members and non-members. Furthermore, the percentage of female members is similar to that of men. However, equal representation need not imply equal access to financial services. Gender differences play a role in occupational choices.

Finally, respondents showed a strong preference to a degree of automation in transactions, 30%. This is because most members have to currently wait in long lines for simple withdrawal or deposit transactions. Respondents also expressed interest in educational seminars that would explain different savings and loan services available.

Income and Asset Difference

On average members have larger median incomes than non-members, a difference of 37%. The asset levels and land holdings of non-members also tend to be lower than members. Among members female members tend to belong to households' with lower levels of assets than male members. In addition, female members tend to have 17% income than male members. The non-member gender differential in terms of income is 9%, with females earning less than males.

By and large credit unions serve low to low-middle income households. Only San Pedro-Andahuaylas has a good participation rates from households below the poverty line, 46%. On the other hand, the department of Cajamarca has the largest incidence of population below the poverty line, 73%, and yet the credit unions in Cajamarca have the lowest participation, 18%, from households with per capita income below the poverty line.

Savings Behavior Differences

The credit unions hold the dominant share of savings/deposit accounts of their membership. All members are required to have a mandatory shares account. Most members have additional savings accounts such as basic savings with withdrawals and fixed deposit accounts. Only 20% of non-members have savings accounts and 26% of families of non-members have savings accounts.

The primary reasons non-members cite for the lack of savings accounts are: Not developing a habit of savings, these non-member respondents also belonged to the upper two quartiles of the income spectrum; or Lacking information on how to initiate a savings behavior and these respondents were in the bottom two quartiles of the income spectrum.

Loan Behavior Differences

Credit union members by and large have access to some credit, 85 % participated in the loan market versus 46% of non-members. Members also tended to borrow almost exclusively from credit unions, 90%. An often cited reason for becoming a credit union member is easy access to credit. The most common purpose for credit is consumption and business activities. The survey respondents did not seek after input supplier credit. The volume of credit dispersed for agricultural credit by any source was also really minimal. This can be explained by the inadequate representation of the agricultural sector in our sample. However, it should also deepen our awareness that if very few members are agriculturalist then it is likely that this sector has constrained access to financial services.

On average loans received by non-members from banks were larger in size than loans received by members from credit unions. The loan sizes are positively related to wealth. It is clear from the data that low-income households have a smaller share of number and volume of loans dispersed. For borrowers belonging to the lower two quartiles of wealth there is an interesting trade off. Members in this category tend to receive loans that are smaller while non-members receive bank loans that are larger. However, for the same group the credit unions offer interest rates that are substantially lower than the banks. That is poorer borrowers get large loan with higher interest rates from formal banks while poorer borrowers get smaller loans with lower interest rates from credit unions. This is an important distinction because the extension of smaller loans by credit unions deter default.

A third of credit union member households are rationed out of the credit market in some sense, either partially or fully-rationed, 21% and 12% respectively. It is also clearly apparent from the data presented that low-income households are more likely to face constrained access to credit than the high-income counterparts. Approximately, 57% members and 65% non-members of these households belong in the bottom two quartiles of income. In contrast, 66% members and 55% non-members belonging to the upper quartiles of income are not rationed from the credit markets. The urban-based sample does not allow us to create a precise picture of the rationing status of agricultural producers. This said, 55 % of non-member agriculturalists are rationed out of the credit markets. A pronounced gender bias exists amongst non-members; 45% of female non-members are fully rationed as opposed to 33% of male non-members.

Among the rejected applicants, members attribute their rationing status to their lack of repayment capabilities, 64%, while non-members, 77%, cite the lack of collateral assets and legal documentation as explanation for their rationed state. Among the fully-rationed non-applicants, members cite that the process of application and knowledge of how to apply as the primary deterrent for applying for credit, 40%. For non-members, the complicated process of seeking credit accounts for 28% while the vast majority believe that their applications, if they chose to apply, would be denied because of lack of assets or repayment capabilities, 53%.

Discussion of results

These results provide the basis for some recommendations worth considering, even if the results do not fully establish their likely efficacy. First for non-members, credit unions might play an active role in convincing potential member about the safety in investing in credit unions. For example, participating in an outreach program that allows potential members to raise questions about what measures are taken to keep their savings safe as well as inviting long standing members to recount their experiences at the credit unions. In addition, credit unions could improve their image by volunteering to help build a healthier environment in the community. For example, creating a member project day where interested members and staff members get together to take on a small project to improve the community itself.

Second, the credit unions need to deepen access to savings and credit to include the rural and urban poor. In these 5 regions the population below the poverty line are greater than 60 percent (with a third below the extreme poverty line US\$ 1 per day). Increasing participation through savings mobilization and access to credit would be a necessary first step to any poverty alleviation strategy.

Third, credit unions can also target their services to attract a younger non-member clientele as their savings mobilization strategy. This could include providing small incentives for opening a

mandatory shares account such as a pen or a phone card. Such efforts need to be coupled with providing the informational sessions that clearly explain the benefits of being a member and the types of services currently offered. From the sample data, it is clear that non-savers do not have clear information on saving or the type of services offered by the credit unions. Furthermore, not many individuals including members know the differences between a mandatory shares accounts and savings accounts. In addition, the differences between formal banking institutions and credit unions should also be made clear. Thus, using a variety of advertising mediums, carefully designed to get the message across age, gender, sector, and income classes, the credit unions need to develop a marketing strategy and budget dollars to implement it so as to attract diverse group to the credit union.

Fourth, much like the *Caja rurales* and *Caja municipales* the credit unions need to develop a special team whose sole purpose is to attract the agriculture sector to the credit unions. This strategy needs proper securing and management of budget allocated specifically for this purpose. For example, the aforementioned financial intermediaries have a field officer and an agronomist on staff. The primary function of the field officer is to drive out to remote areas, provide, collect and monitor loans. In Perú, given its geography and terrain such measures are absolutely necessary to include the agricultural sector in its poverty reduction strategy. Any literature on development would confirm that the vast majority of the rural poor tend to be small-scale agriculturalists whose primary mode of operation is sustenance farming.

Fifth, we have also identified a class of non-members who did not apply for loans in the formal sector or credit unions because they did not desire it and did not think they qualified to receive it. These households belong to the lowest wealth class in our sample and their operations were small. If for these groups the intervention goal is poverty alleviation then a possible intervention might be to invest in mobilizing savings, providing small loans coupled with technical assistance that would promote capacity building, and education all of which would raise the productivity of this group.

In conclusion, there is a potential for many forms of intervention to increase participation and improve access to financial services for the poor. The healthy development of financial markets depends on developing innovative approaches to lending and savings that blend public-private sector coordination. Building such partnerships with small-scale and large-scale producers has the potential to be welfare enhancing and improve access to financial services for the poor.

ANNEX:

A. Survey Details:

Survey Team Members: The survey team consisted of one US based consultant, hired by WOCCU, 5 Survey team leaders hired in Lima and 21 local hired survey staff.

Location	Team Leaders
Cusco –Team Leader/Float Local Team Members	Milagro Chavez Iriarte Gary Ugarte Quispe Ronald Ugarte Quispe Maria Nathaly Campos Rosa Ines Polo Velasco
Apurimac--Team Leader Local Team Members	Juan Carlos Perez Melgar Edu Hurtado Miguel Altamirano Medino Ronald Moreno Aparca Roy Silvera Huayhuas
Ayacucho –Team Leader Local Team Members	Jonathan Berrios Peña Gabriela Lozano Vivanco Kay Jeri Lagos Mari Luz Oriundo Yanett Coronado
San Martin – Team Leader Local Team Members	Marco Arbulu Freddy De Melendez C Renzo Vasquez Jaclyn Baquero Jhon Echevarría
Cajamarca – Team Leader Local Team Members	Omar Cavero Karina Lingan Ronald Olartegui Martín Herrera Cecilia Cerna Huamán Lourdes Barrantes
WOCCU Consultant	Reka Sundaram-Stukel

Survey Implementation Issues:

During my meeting with Jorge Sanchez of FENACREP on July, 11, 2005 we realized that the strategy for implementing the survey needed to be modified. The eight selected credit unions were located in 5 distinct Departamentos. Access to these locations via land appeared to be challenging both in terms of the mountains terrains as well as travel times. Given these travel constraints Jorge and the WOCCU consultant deemed it impossible to maintain the integrity of the project via land travel. We proposed to enlist the help of local Branch Managers to hire short-term survey teams on site. What follows is a modified implementation of the survey with the appropriate budgetary changes.

We planned to have 4 main team leaders and one floating team leader that traveled to the various locations whose primary function was to fill in where needed as well as prepare the data entry phase. Our basic approach was to stagger the survey teams so that the WOCCU consultant could visit all the locations. We had requested the branch managers to assist us in contracting students

at the local universities in each department. All the branch managers agreed to and provided us with the appropriate assistance.

Schedule for the Survey Implementation:

Monday July 31-August 1: Training in FENACREP offices

Team Leader 1 Omar: Travels by plane to Cajamarca August 2-10

Cooperativa San Pio X: August 2-5;

Branch Manager Estuardo Muñoz:

Travel to Cajabamba August 6 by bus takes about 5 hours

Nuestra Señora Del Rosario: August 6-9;

Branch Manager: Percy Escobedo

Return to Lima on the 10th via plane with 120 surveys.

Team Leader 2 Marco Arbulú: Travels by plane to San Martin August 3-11

Cooperativa San Martin de Porres –Tarapoto 3-7

Branch Manager Jose Luis Sanchez

Travel to Rioja by bus 3-4 hours: Aug. 8

Cooperativa San Cristo de Bagazan Aug 8-10.

Branch Manager: Rolando Reategui

Return to Lima on the 11th via plane with 120 surveys

Team Leader 3 Jonathan Berrios: Travels by plane to Ayacucho 6-11

Cooperativa San Cristobal de Huamanga

Branch Manager: Raul Najarro

Cooperativa Santa Maria de Magdalena

Branch Manager: Carlos Pozo

Return to Lima on the 11th via plane with 105 surveys

Team Leader 5 Juan Carlos Perez: Apurimac 6-10 Travels by plane

Cooperativa San Pedro-Andahuaylas will organize the survey team

Branch Manager: Delesmiro Romero

Return to Lima on the 10th via plane with 60 surveys

WOCCU Consultant and Milagros Chavez's Travel Schedule:

July 31-August 1 Lima

August 2 Cajamarca

August 3 Lima

August 4 San Martin

August 5 Lima

August 6 - 7 Apurimac

August 11 -12 Train for Data entry:

Team Leader 1-4 begin data entry on the 13th of August.

Team Leader 5 Milagros Chavez: Travels to Cusco

August 13-17: Jorge Sanchez and Reka Sundaram-Stukel for Cusco

Cooperativa Santo Domingo de Guzman

Branch Manager: Manuel Calderon will organize the survey team.

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