The Structure of Rural Financial Markets in Mexico[1]

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1 Introduction

Throughout Latin American and the Caribbean deregulation of financial systems was an important move by governments in order to provide reliable and efficient financial institutions for rural households. The provision of reliable and efficient financial institutions in rural areas is critical in shaping income, poverty, and equity outcomes throughout this region. Unfortunately, until now, the lack of detailed micro-economic data has prevented the formation of a clear picture of the structure of rural financial markets after deregulation and their ability to reach marginalized rural households.

In recent years several studies have conducted national and regional household surveys in Mexico that provide micro-economic data on rural financial markets. These datasets permit us to evaluate the penetration of financial institutions in rural areas of Mexico. Evaluation of financial institutions in Mexico provides a good case study, since over the past thirty years Mexico has participated in liberalization of financial systems and promotion of sound savings and loan institutions through the Ley de Ahorro y Credito Popular (Popular Savings and Loan Law, LAyCP) in 2001. LAyCP has the objective of regulating the large number of popular savings and loans banks that have attempted to fill the gap created by the restriction of government credit programs. However, as common in other Latin American countries, while simultaneously promoting liberalization, Mexico has remained a force in providing financial services to marginalized areas.

The goal of this paper is to create a picture of financial markets in Mexico after deregulation and their penetration into rural areas. On the surface the picture that emerges is grime. Nearly 20 years after deregulation 74% of rural municipalities, defined as having less than 500,000 people, do not have the presence of commercial bank branches. Also 22% of the country's population has no access to commercial bank branches, which increases to 40% in the highly marginalized south and southeastern states are included (Castaneda Ramos and Ruiz Duran, 2006). While on the surface this picture is grime there is evidence of a surge in popular savings and loan banks, such as cajas solidarias or credit unions. These institutions generally service low income households and in the past five years are under the regulation by LAyCP. It is possible that when these institutions are evaluated the access to financial services will be higher and thus the picture not so grim.

We have four main objectives. First, we summarize the different roles that the Mexican state has played in the rural financial market over the past 30 years. We will see that the state has slowly begun to withdraw its role of directly providing credit to rural producers and in response the number of popular banks has increased in order to meet the demands for financial services of the rural population. Our second objective is to describe these popular banks, and their evolution and penetration into the rural areas. Having described the primary financial institutions, the third objective is to examine the degree to which rural households use savings and credit services offered by different financial institutions, including commercial, government and popular banks. This objective will be met using three large datasets that are nationally representative of Mexico we provide information on a household's demand for financial services. Finally, we will take a deeper look at the popular banks sector and address three questions:

1. What are the main reasons why households do not borrow or save?
2. Are there systematic differences in the characteristics of popular banks members vs. non-members?
3. What are the differences in the credit contract terms offered by popular banks vs. informal lenders?

This final objective will be met using two datasets that are unique in that they collect detailed information on households' participation in financial markets, reasons for non-participation, and the terms of credit contracts. Together the five datasets provide a descriptive view of the structure and penetration of financial markets into rural Mexico.

2 Role of the Mexican State in Rural Financial Market

The history of financial policy in Mexico is complex and the periods of pre-liberalization and post-liberalization are not distinct. The intention of the paper is not to describe in detail all of the state's intervention in the rural sector, but instead to concentrate on the key policies and changes that have affected Mexican rural financial markets and thus the demand for and the supply of credit. Therefore, it is possible, using broad brush strokes, to designate three main periods in describing the role of the Mexican state in rural finance between 1976 and 2006.

2.1 State-Led Approach

In the first period, which runs roughly from 1976 to 1988, the government followed what we term a state-led approach to rural finance. It was in 1976 that the government consolidated three different national agricultural banks, Banco Nacional de Crdito Agrcola (founded in 1926), Banco Nacional de Crdito Ejidal (founded in 1936), and Banco Nacional Agropecuario (founded in 1965), into one called Banco Nacional de Credito Rural (BANRURAL) (Pessah, 1987). As in many countries in Latin America the Mexican government identified lack of credit as a bottleneck to agricultural modernization for small scale farmers, mainly located in the ejdio sector. In response the government channeled massive amounts of subsidized credit to the rural sector. Furthermore, in 1979 the Mexican Food System (Sistema Alimentario Mexicano or SAM) was implemented to address the low productivity of the ejido sector in basic food groups. Through SAM BANRURAL increased its focus on supplying credit to rural producers (Wiggins and et al., 2002) and there was an instant impact on the total amount of rural credit supplied to farmers.

We find three immediate results: 1) Expansion in the volume of loans, 2) Increase in the number of hectares financed, and 3) Increase in the number of producers reached. From 1976 to 1981 the total amount of BANRURAL credit increased from 18,243.7 million to 26,658.4 million pesos (Myhre, 1994). There was also an increase in the percentage growth in credit given, from 9.1% between 1979 and 1980 to 27.2% from 1980 to 1981. Hectares financed increased from 3.9 to 6.9 million hectares. And the number of producers increased from 668 thousand to over 1.5 million (Munoz Rodriguez et al., 2002) during this time period. However, the debt crisis of 1982 bought about by the fall of international oil prices in 1981 and forced Mexico to default on its external debt. The debt crisis led to SAM being abandoned (Wiggins and et al., 2002) and from 1981 to 1987 farm policy was cut drastically. Therefore between 1982-1987, the percentage of credit from the development and commercial sector had a generally decline (Figure 1) but there was a drastic decline in the amount of volume of credit from Banrural (Figure 2). There was from more than 50,000 million pesos to approximately 30,000 million pesos. There was a slight decrease in the number of hectares financed, from 7.1 million hectares to 6 million, but rose again to 7 million hectares in 1987 (Figure 3).

Figure 1: Volume of Agricultural Credit Lent by Banking Sector

The Fideicomisos Institudos en Relacion con la Agricultura (FIRA) was another government organization, started 50 years ago, that provided credit to rural producers, but operated as a second floor institution. FIRA pro-

Figure 2: Amount of Credit lent By Banrural and FIRA (2000 Million Pesos)

vides discounted loans to commercial banks though four funds[2]. Loans were to be directed towards to agricultural producers for the financing of working capital, capital investment, or commercialization of agricultural products. However, to obtain these loans producers had to meet more stringent requirements than under Banrural. During the 1980s the volume of credit loaned via FIRA was consistently less than that of Banrural (Figure 2).

By the end of the state-led approach there was a general cut in development aid and Salinas' administration began to abolish the majority of government policies that supported agricultural production and push more open and market oriented policies. This brings us into the liberalization period. Symbolic of liberalization was the 1994 adoption of the North American Free Trade Agreement (NAFTA)[3]. While we will not discuss the effect of NAFTA on agricultural producers, the reforms taken by the government under NAFTA is a underlying thread that ties together between all the major policies during this period.

[2] The funds are: 1) EL FOndo de Garantia y Fomento para la Agricultura, Ganadaria y Avicultura, 2) El Fondo Especial para Financiamientos Agropecuarios, 3) El Fondo de Asistencia Tecnica y Garantia para los Creditos Agropecuarios and 4) El fideicomiso for the development of fishery.

[3] There were four main effects of NAFTA on agricultural households: 1. Privatization of common property land, 2. Decoupled transfer payments for subsistence crops, 3. State stopped being a supplier of agricultural inputs and buyer of outputs, and 4. Dismantling of price supports.

Figure 3: Amount of Hectares financed by Banrural (1,000 has)

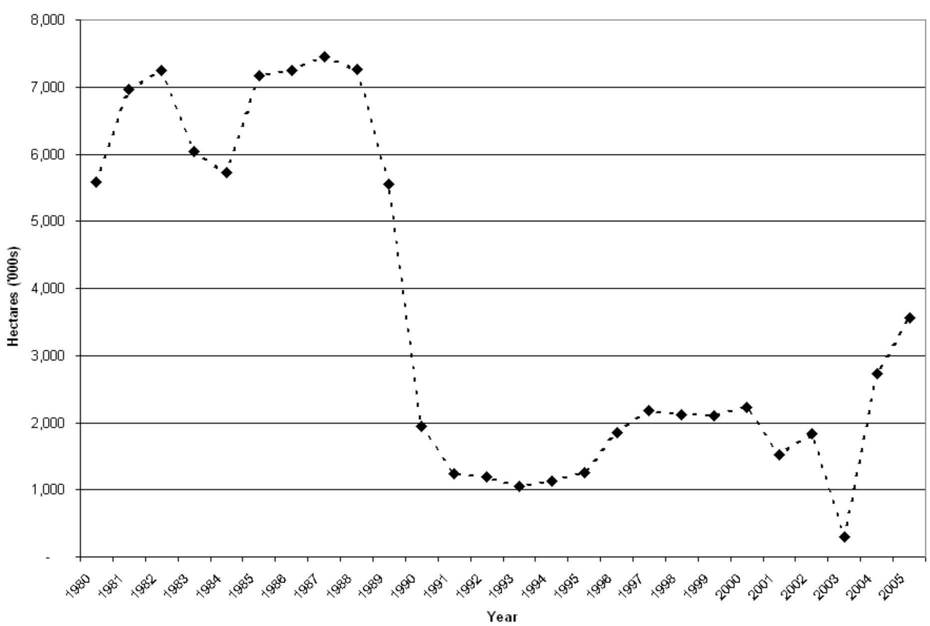
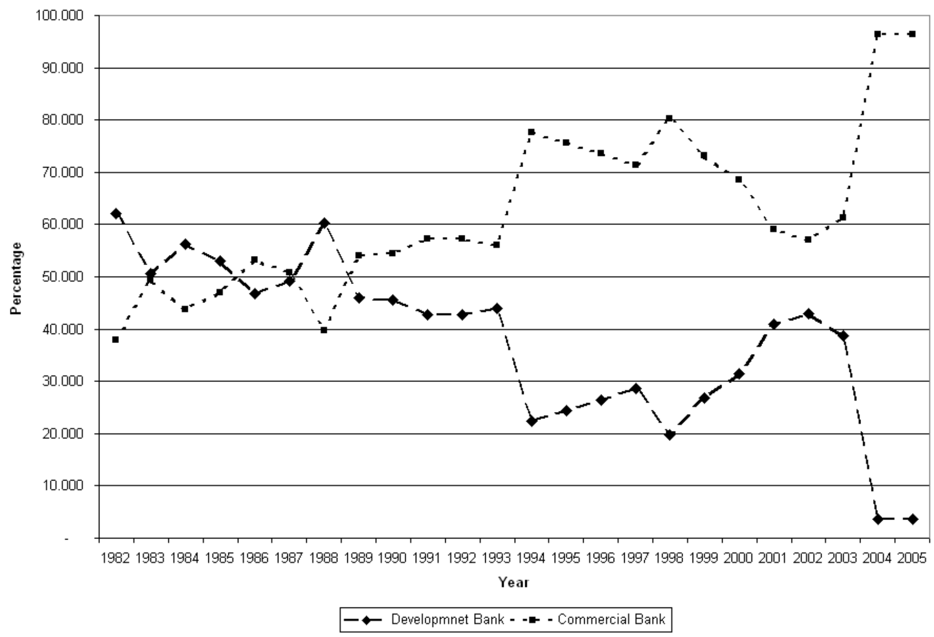


Figure 4: Percentage of Agricultural Credit from Banking Sector

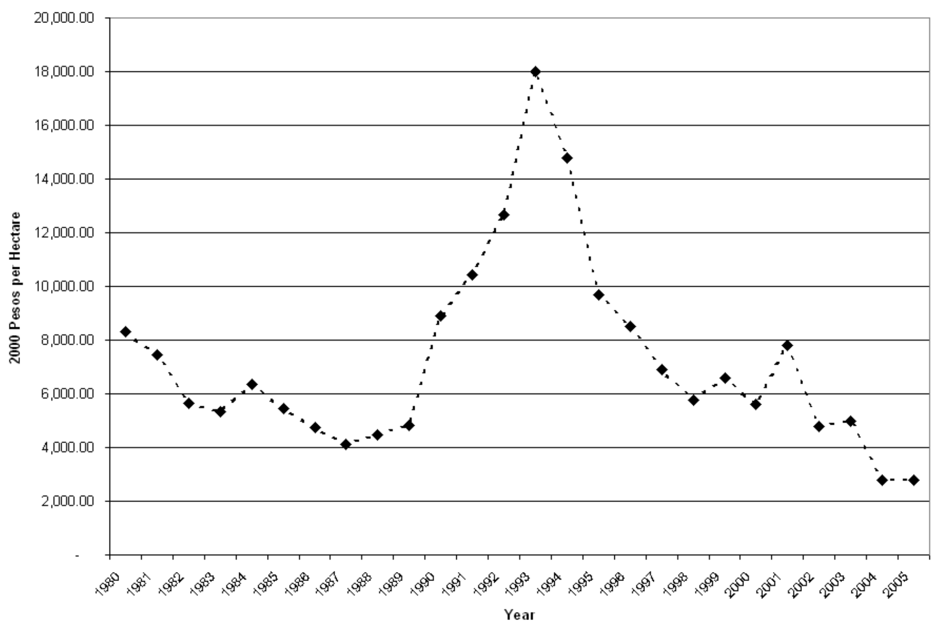


2.2 Liberalization reform period

The liberalization reform period is a time of transition from the state-led development program to the more open and market oriented economic liberalization policies which were implemented in the 1990s. We focus on two main events within this transitional period that symbolize how the state transitioned out of state-run development programs. The first is the restructuring of BANRURAL and the second is the creation of a new government program called Crdito a la Palabra (CAP).

The most dramatic change for the rural sector was the reclassification of

Figure 5: Amount of Banrural Funding per Hectare (2000 Pesos)



producers that were eligible for loans from BANRURAL in 1989. Four types of producers were classified via restructuring (Myhre, 1997) based on their economic potential. BANRURAL divested themselves of all but one of these groups of producers.

Farmers in the first two classifications no longer qualified for subsidized loans and instead were to meet credit needs in the commercial sector. The first classification of producers, were commercial producers who had been reliable BANRURAL clients. There were an estimated 75,000-150,000 producers who would now obtain credit at newly privatized commercial banks. Small and medium sized producers and ejidatarios were the second classification of producers. Their credit needs would be attended by the commercial banking sector and they would receive loans at commercial banks via FIRA subsidized loans. There were an estimated 500,000-600,000 producers in this group. The final classification of producers, estimated at 1.1 million, also was no longer eligible for BANRURAL loans.

The third classification of producers was the only group that was eligible for BANRURAL loans. This group consisted of small producers and it is estimated that 400,000-600,000 producer were in this range. The reclassification of BANRURAL borrowers meant that only 25% of producers that previously had access to BANRURAL credit were still eligible for BANRURAL credit. The effects of the policies were immediate and drastic. The number of borrowers eligible went from 800,000 to 224,000 (Myhre, 1998). Between 1988 and 1991 the number of hectares financed decreased from 7.2 million hectares to just over one million. The percentage of agricultural credit given by the development bank decreased steadily, after a large drop between 1989 and 1990 (Figure 4). The reduction in volume is even more drastic, from over 30,000 million pesos to approximately 10,000 million pesos (Figure 2). What is interesting is that even though the number of producers and volume of credit has reduced drastically the amount financed per hectare actually increased over this time period from 4,000 pesos in 1989 to a high of 18,000 pesos in 1994 (Figure 5).

However, commercial farmers found that restructuring made it easier to access loans, since FIRA's operations were expanded into giving discounted loans to commercial banks. The total amount of loans given by FIRA actually doubled between 1988 and 1993 (Myhre, 1998). In 1989 the volume of FIRA credit actually surpassed that of Banrural and FIRA had positive growth in the volume of loans, while Banrural had negative growth.

While the state dramatically reduced Banrrual credit availability to subsistence producers and agricultural credit became easier to obtain for commercial farmers, the state initiated Crdito a la Palabra (Credit against one's word, CAP), directed by the National Solidarity Program (PRONASOL) in 1989. The goal of CAP was to reach producers outside the domain of both state and commercial financed agricultural credit[4].

CAP was designed to finance production on up to three hectares of land for ejiditarios or any individual that was dedicated to agricultural production. Loans were given directly to the producer by the community, or municipality. The only requirement by borrowers was their word that the loan would be used for agricultural production and be repaid to the community at the end of the agricultural cycle (SEDESOL, 2006).

Between 1995 and 2000 CAP financed, on average 608,839 producers per year on 1.3 million hectares, which equals 2.1 hectares of land per producer. The average loan size per hectare was 350 pesos per hectare produced and only rose to 550 in early 2000s. While CAP was able to reach many of the producers that were displaced by BANRURAL, then number of producers, amount of acreage financed and the loan amounts per hectare were not sufficient to overcome the loss of finance that occurred with the dismantling of BANRURAL loans. In 1991 only 27% of the acreage loss were recovered via CAP. Furthermore, the average funding per hectare in 2000 pesos was over 10,000 pesos for Banrural loans and only 1,500 pesos for CAP loans.

At the end of the agricultural cycle the loans were to be repaid to the municipality, or community, which could use the funds for three purposes:

[4]Another program that was initiated to fund agricultural production was PROCAMPO. While PROCAMPO is an important cash inflow we will not discuss it here since it is a direct transfer to producers and not a loan.

1) Development of productive activities, 2) Infrastructure improvements in the community, or 3) Creation of cajas solidarias (Myhre, 1998; SEDESOL, 2006). The creation of caja solidarias with CAP funds is one of the most important developments of this program and the growth symbolizes the surge in local savings and loans institutions over this time period.

Cajas solidarias created out of CAP funds were able to receive technical support from the government via the program FONAES. However, each caja solidaria maintained its autonomy and ability to create its own savings and lending projects. Technical support and administrative assistant was provided by creating a multi-tiered structure for caja solidarias. The first tier is the community caja, or the caja local, where the member makes initial contact with the caja. The second tier is the caja solidaria, the regional caja, where the loans are regulated and the physical office is located. The third tier is comprised of state coordinators that monitor the regional popular banks. Fourth, is a group of state coordinators and finally state coordinators meet at the national level (Munoz Rodriguez et al., 2002).

In 1993 the first caja solidaria was created using CAP funds and by the end of the year there were 49 cajas solidarias in 19 Mexican states (Munoz Rodriguez et al., 2002). The rise of the caja solidarias between 1993 and 1999 and the rise of caja locales from Table 1. From 1993 until 2000 there was an increase of cajas solidarias from 49 to 216 and membership increased from

Table 1: Evolution of Cajas Solidarias

	1993	1994	1995	1996	1997	1998	1999	2000
# Cajas Solidarias	49	120	1117	133	155	159	176	216
# Cajas Locales	2,338	nd	2,551	2,579	2,889	2,924	3,244	3,692
# Members ('000s)	251	97	115	126	143	145	167	202
# Savings Accounts	n.d.	n.d.	4,100	7,700	13,200	20,124	26,863	n.d

Source: (Bank, 2000; SEDESOL, 2006)

25,154 to 201,582 persons (SEDESOL, 2006). The number of cajas locales increased from 2,338 to 3,700 in 2000 (SEDESOL, 2006). While, the loan size did not increase much over the time period, the number of savings accounts and the average deposit size increased substantially. The number of savings accounts increased from 4,100 to 26,863 (Bank, 2000). This amounts to an increase of 1.5 million dollars in savings to 11 million dollar between 1995 and 2002 (Bank, 2000).

The increase in savings accounts indicates that there was an unmet demand for methods to save outside of the household[5]. Since cajas solidarias, once established, could also be used by non-producer households, they were able to provide financial services to a larger segment of the population than

[5]During this time period savings accounts in Banrural also increased from 212,000 accounts to 482,000 (Celarie, 2002).

was possible by BANRURAL.

Furthermore, the growth typifies the emergence of a new breed of local grass-roots financial institutions. The types of local financial institutions are numerous and to be more concise we term these institutions, including cajas solidarias, as popular savings and loan banks or CACPs (Cajas de Ahorro y Crédito Popular). During this time period growth of the CACPs grew dramatically. In section three we will cover the mix of CACP institutions and explore how they have filled the void created by restriction of agricultural credit.

While NAFTA is symbolic of the transition from state-led to open and liberalization policies, the devaluation of the peso in 1994 is symbolic of the crisis that permeated the financial sector throughout the final years of this period. In 1994 the devaluation of the peso had four main effects. First, agricultural credit provided by both the development and commercial sector drastically declines (Figure 1). Second, there is negative growth of FIRA funds (Figures 5). Third, decline in amount of acreage financed by Banrural (Figure 3). Finally, the growth of CACPs was tempered by the peso devaluation, since many borrowers were unable to repay loans, but they were further impacted by the rash of CACP frauds that occurred in the late 1990s (discussed in section 3) that derailed public confidence and restricted participation in the CACP sector.

The liberalization period began with a broad array of reforms that changed the manner in which producers were able to fund agricultural activities. However, the period is defined by the economic crisis that decreased overall agricultural credit for rural households and producers of all levels. This brings us to the final period, the post-liberalization period.

2.3 Post-Liberalization Period

In the 2000s the government enacted another series of reforms to deepen the reforms of economic liberalization but also as a means to address the specific crisis that defined the end of the 1990s. The government set up to reform both agricultural credit and set up a system of regulation of the CACPs. However, we will also see while the government made two steps forwards in addressing these issues, they also took one step back in another.

First, an additional reduction in the state's direct role as a credit provider occurred with the 2002 replacement of BANRURAL with a smaller leaner agricultural bank called Financiera Rural. There were three main changes to the structure of BANRURAL. First, borrowers that had previously defaulted on any BARURAL loan were no longer eligible for Financiera Rural loans. Second, funds are now provided by a line item in the government's budget. In other words, Financiera Rural could not take deposits or have outside investment as a means of funding; all funding now comes from the state. Finally, Financiera Rural had to remain financial sound; it could not borrow to keep itself afoot (IADB, 2003).

We find that in the early 2000s the amount of agricultural credit lent by the development bank sector remained steady, but declined after the introduction of Financiera Rural (Figure 1). The number of hectares financed decreased with the introduction of Financiera Rural, but increased to higher levels than the BANRURAL level in 2001 (Figure 3). The volume of FIRA's loans increased over this time period, but did not reach the levels prior to 1994 (Figure 2).

The main initiate of the post-liberalization period was the state increased its role in providing technical assistance and regulation to make sure CACPs could make the jump into being formal and sustainable financial institutions. The need for regulation of CACPs became painfully clear in the late 1990s when a rash of popular banks frauds occurred throughout the country. Originally only two savings and loan societies went bankrupt in February 1999. These two societies had branches in 28 states and had over 200,000 members. However, by 2000 the number of CACPs frauds accumulated. For example, in the Caja de Ahorro El Sol went bankrupt in Northeast Mexico. This CACP has 97 branches in six states and over 5.5 million pesos (Benquet and Trujillo, 2003). Both the cries for regulation from CACPs that imposed internal regulation and the desire of the government to protect borrowers initiated the passing of the Ley de Ahorro y Credito Popular (LAyCP) was passed in 2001.

The LAyCP requires each CACP to be supervised by a federation, which are approved by the National Banking and Securities Commission (CNBV). These regulated CACPs are termed popular savings and loan entities (Entidades de Ahorro y Credito Popular, EACPs) and it is important to note that regulation was required of both rural and urban CACPs. The law combines all CACPs under the umbrella of two types of regulated entities: 1) Popular savings and loan cooperative societies (Socidades de Cooperativas de Ahorro y Credito Poular) and 2) Popular financial societies (Socidedades Finanacieras Populares) (Klaehn et al., 2006; Bank, 2002). The first type of entity is for non-profit institutions and the second is formed of partial for-profit institutions owned by share-holders.

Each EACP must demonstrate financial viability, be regulated and supervised by a federation, and purchase private deposit insurance (World Bank, 2001). The deadline to comply with LAyCP was June 2005; however the deadline was extended to December 2008 for institutions which were showing good faith in attempting to reach the necessary regulations (Klaehn et al., 2006). Currently 12 federations have been authorized to regulate CACPs, and 83 EACPs have received approval. To date 317 EACPs have affiliated with a federation and are at various stages of being approved by the federation or by CNBV (DOF, 2 March 2006).

While the downsizing of BANRURAL into Financiera Rural and the creation of the savings and credit law is a step towards liberalization, the Mexican government also has taken a step back with the creation of the national Mexican bank, BANSEFI (Banco del Ahorro Nacional y Servicios Financieros), formerly Patronato del Ahorro Nacional (PAHNAL). The main role of BANSEFI is to coordinate and monitor the incorporation of these institutions into the LAyCP. But an important goal of BANSEFI is to increase the number of savings accounts amongst the rural population. A means to this objective is the creation of savings accounts in which to coordinate the government's conditional cash transfer programs, such as Oportunidades (formerly known as Progresa). Oportunidades' clients can access funds via the savings accounts instead of receiving the funds as municipality offices on designated days. As of 2000 BANSEFI had over two million accounts, compared to 950,000 clients serviced by PAHNAL. However, the entrance of Bansefi and the targeting of marginalized households create competition for savings services with local financial institutions.

The picture that emerges from this discussion is that there has been a significant reduction in the state's role as a direct credit provider. One of the unique Mexican characteristics is that this reduction has by no means been complete. The state continues to operate Financiera Rural and directly supply loans to producers. Furthermore, the state has created a multitude of rural development programs that have a credit objective, such as, alianza para el campo and procampo. In the interest of time we do not discuss all these programs. In addition the creation of BANSEFI has created direct competition with local financial markets. Therefore, as the state tentatively withdrawals into a more regulatory role it still maintains a steady hand in providing savings and loans services to the rural sector.

3 Overview of Mexican Popular Savings and Credit Banks (CACPs)

By the end of the 1990s the rural financial sector had a fragmented market and few financial institutions were working in or providing credit to rural areas. Producers that had been accustomed to working with BANRURAL now had to learn how to manage a new set of government programs and institutions in order to fund their agricultural activities. While CACPs had always existed in Mexico, in the 1990s their importance in providing financial services to the rural sector increased, because of the withdrawal of the commercial and development banks from rural areas. CACPs generally service low-income sectors.

In order to discuss how the CACPS evolved we use the organizational structure of the LAyCP. Each of the EACPs designed by the LAyCP have a unique set of CACPS that have evolved under different circumstances[6]. We briefly cover the origin of these institutions and their coverage in Mexico.

The first EACP, cooperative savings and loan societies, is formed by credit unions and savings and loan societies (SAPs). In 1926 the Ley de Agricola in 1926 authorized the government to channel credit to groups for their distribution amongst members. In 1932 the Ley General de Instituciones de Crédito formally legalized these groups as credit unions, but it was not into 1975 that the first agricultural credit union was founded. In 1985 the National Union of Regional Campesina Organizations (Union Nacional de Organizaciones Regionales Campesinas) was formed by 24 organizations in 14 Mexican states. UNORCA's goal was to promote the participation of producers in principal decisions, such as production, distribution and financing. In 1988 there was a surge of growth in credit unions with the withdrawal of the state from agricultural credit. In 1991 UNORCA was transformed into AMUCSS (Asociacin Mexicana del Uniones del Sector Social). It was not until 1993 that the law was altered to allow credit unions to begin to capture

[6]For an in depth analysis of non-bank financial institutions please see Muoz Rodriguez, et. al, 2002.

savings and provide lending services to its members (Benquet and Trujillo, 2003; Munoz Rodriguez et al., 2002).

SAPs were historically formed from cajas de ahorro or groups of individuals united by their workplace. The Ley Federal de Trabajo set up regulations for businesses to withdraw monies from an employee's wages in order to generate workplace savings accounts. In 1991 cajas de ahorro legally were regulated under the name of SAP by the Ley General de Organizaciones Auxiliares de Credito.

In the second EACP, cooperative savings and loan entities, there are three types of CACPs. The first one, cajas solidarias, was discussed in the previous section. Second, are the cajas populares that originated with the Catholic Church. In 1949 a priest, Pedro Velaquez, was determined to provide a system of financial services similar to those offered in the US and Canada. He sent two priests to the US and Canada to study credit unions and in1951 the first caja popular was stared in Mexico City. In 1954 the Consejo Central de Cajas Populares was founded and in 1964 the Meixcan Confederation of popular banks met and set up developed a set of rules and regulations in which to organize numerous cajas. In 1971 a meeting of the caja populars directors decided to move away from the Catholic Church and have more autonomy. At this point several the numerous cajas populares either joined the confederation or remained regulated by local standard.

The final type of CACP that forms a part of this EACP are Savings and Loan cooperatives. Savings and loans societies were stared in order to provide savings and loans to groups of individuals without. To my knowledge there is little information on its evolution, but with the Ley general de Socidedes Cooperativas these became legal entities.

The information on the number and extent of CACPs is scant and mixed. From Table 2 we can see that the number of CACPs ranges from 666 to 1,235. In the 1999 economic census of financial institutions there were an estimated 666 credit unions and cajas de ahorro. The economic census does not provide information on caja solidarias, so this is a lower bound estimate (INEGI, 1999). However, a 2002 census revealed that there were 630 institutions that serviced seven percent of the economically active population, or approximately 2.3 million people (Bank, 2002) of which 340,000 belong to caja solidarias (Klaehn et al., 2006) However, another study found that there were an estimated 800 non-bank financial institutions. It is hard to know exactly how many there are and how many of these are financially viable. It is important to note that Table 2 contains popular banks that service both rural and urban areas.

Only one study, to our knowledge, has provided a census of institutions that provided financial services to rural Mexico (Macayo et al., 2002). There are an estimated 726 institutions that provide savings and credit services

Table 2: How many Cajas are there?

	# Institutions	Caja Solidaria	Caja Popular	Credit Union
Gavito-Mohar (2002)	630	210	388	32
INEGI (1999)	666	NA	471	195
?	737	300	300	137
Benquet and Trujillo (2003)	800	207	585	32-80
Bank (2002)	1,039	176	793	70
Munoz Rodriguez et al. (2002)	1,235	179	900	156

to rural areas of Mexico. Of these institutions, 322 provide both savings and loan services, 32 promote savings and give out credit, and 372 only provide credit services. The majority of loans were provided by institutions' that only provided credit services, 54.8%. Of these institutions the majority of members were in government institutions, excluding BANRURAL (See Table 3). However, the majority of savings and loans were provided by non-governmental savings and loan institutions. There were an estimated 839 thousand clients that were attended by savings and loans institutions, with an average savings of 1,400 pesos per member(See Table 3). The amount of loans provided is 70% of the total. This data shows that the majority of loans and saving services are being offered by the popular banking sector.

The majority of institutions that service rural areas are caja solidarias but they have the lowest percentage of savings and loans, as compared to the total, 12% and 14.5% respectively. The majority of loans were provided by

Table 3: Types of Financial Institutions in Rural Areas

Name	Members	Savings ('000s of pesos)	%	Credit ('000s of pesos)	% Total
Rural Savings and Loans	838,951	2,012,418	60	5,936,714	70
Government Institutions (except BANRURAL)	2,975,549	147,269	1	1,046,034	12
BANRURAL	153,408	1,189,863	36	1,568,015	18

Source:(Macayo et al., 2002)

the institution with the lowest number of members and a small percentage of the savings (See Table 4). One reason for this disparity is that credit unions service rural populations that have a higher level of income than the caja solidarias. While, the cooperatives have only three institutions, they have 37.6% of the total savings and 25.8% of total loans. These entitites are primarily located in Oaxaca (16.9%), Jalisco (11.3%), Nayarit (6.5%) and Durango (5.4%) (Macayo et al., 2002).

Secondary data provides a picture of the main players in rural markets, but it does not provide any information on the types of households that are members of popular banks nor what types of financial services households demand. We also do not know the terms of contracts and services offered by popular banks as compared to commercial or government institutions. Fi-

Table 4: Rural Institutions that provide savings and loan services

	Number	%	Members	%	Savings ('000s of pesos)	%	Loans ('000s of pesos)	%
Caja Solidarias	216	67.1	203,416	35.7	240,063	12	384,419	14.5
Saving and Loan Societies (SAPs)	3	0.9	37,686	24.1	754,669	37.6	684,189	25.8
Saving and Loan Cooperatives	60	18.6	148,074	26	848,823	42.3	586,619	22.1
Credit Unions	13	4.0	44,169	7.7	83,759	4.2	934,256	35.2
Others	30	9.3	36,892	6.5	78,266	3.9	62,810	2.4

Source: (Macayo et al., 2002)

nally, the available information does not provide any detail on informal credit and savings vehicles, which are a critical component of financial services in rural areas. Therefore, we must turn our focus towards household survey data to understand household demand for financial services, contract terms for loans, and the prevalence of informal lenders. In this paper we draw from five datasets to investigate not only the penetration of rural financial markets, but also the characteristics of rural households that demand financial services.

4 Data Description

In this paper we utilize five household surveys that provide information on the supply of and demand for financial services (See Table 5). The first three surveys have significant coverage of rural Mexico. First, the Mexican family life survey (ENNViH) was run by the IberoAmerican University in Mexico City and their primary objective is to evaluate the welfare of households over time. The survey has the geographic coverage of 30 states and over 4,000 households that live in villages with less than 15,000 people. The Progresa evaluation survey was designed to evaluate the impact of Mexico's conditional cash transfer program. The most recent round of rural surveys, 1993, contains information on over 34,000 households. The National Rural Household survey was jointly run by Colegio de Mexico and Ed at UC-Davis in 2002 and was designed to capture in depth labor market participation and migration experiences of rural households. It has information on just 1760 rural households. While none of these surveys had as a primary objective an exploration of financial markets, they do contain varying degrees of information on savings and credit.

There are also two recent surveys designed with the specific objective of exploring rural financial markets. The COLMEX survey drew a random sample of 600 rural households in 20 villages in the state of Oaxaca. Oaxaca was chosen for the study because it has a diverse mixture of land tenure and agricultural crops and it has a large population of popular banks. The BANSEFI survey, which includes a panel of 2,700 rural households, was designed to evaluate the impact of the popular saving and credit law. The national survey was conducted by BANSEFI in 26 states. It is important

Table 5: Mexican Household Datasets

Datasets	# States	Def. Rural	# Localities		# HHs		Year
			Total	Rural	Total	Rural	
Mexican Family Life (ENNViH)	30	<15,000	150	95	8,436	4,232	2002 & 2005
Progresa Evaluation	7	500-2,500	657	657	34,203	34,203	1997-2003
Natl Rural Household ENHRUM	14	500-2,500	80	80	1,760	1,760	2002
COLMEX	1	500-2,500	10	10	600	800	2005, 2006
BANSEFI	26	500-10,000	345	179	5,768	2,729	2004-2006

to note that the Mexican government popular banks survey has a response based sampling design. As a result we are unable to use this dataset to estimate participation rates.

The question we now take up is what fraction of rural households borrow from and save in rural financial markets.

5 Participation of rural in the credit and savings markets

To evaluate participation in the credit and savings markets we draw on three surveys that are nationally representative and the COLMEX survey.

5.1 Participation in the Credit Market

In order to investigate the penetration of popular banks into rural areas we analyze the participation of households in credit markets across six sectors, commercial banks, government banks, government programs, NGOs, popular banks and informal lenders. The first thing we note is that in the 12 months prior to the survey, the majority of households did not borrow from any of the three sectors (See Table 6). Second, we note the extremely low participation rate in the institutional credit sector. In the progresa survey for example, less than 1 percent had a bank loan, while 1 percent had a loan from a popular banks. However, in the COLMEX survey we see a slightly higher percentage with popular banks loans, this reflects the fact that the popular banks movement is relatively active in the state of Oaxaca, where the survey was conducted.

Of households that borrow the informal sector is the most important sector. The informal sector includes a heterogeneous mix of lenders from moneylenders to family members and friends. In the ENHRUM survey a quarter of the households have a loan from the informal sector.

The majority of household do not have loans. There is similarity across the surveys in non-participation in the credit market. In the ENNViH, the progressa and the colmex survey about 80 percent of households did not

Table 6: Household Participation in Credit Market(active loans)

<table>
<tr><th>Loan Sources</th><th>ENHRUM (2002)</th><th>Ennvih (2002)</th><th>Progresa (2003)</th><th>COLMEX (2005)</th></tr>
<tr><td>Commercial Bank</td><td rowspan="5">2</td><td>0.5</td><td>0.1</td><td>0</td></tr>
<tr><td>Government Bank</td><td>N.D</td><td>0.1</td><td>0.6</td></tr>
<tr><td>Government Program</td><td>N.D</td><td>1.4</td><td>0</td></tr>
<tr><td>NGO</td><td>N.D</td><td>N.D</td><td>0.6</td></tr>
<tr><td>Caja</td><td>1.5</td><td>0.7</td><td>6</td></tr>
<tr><td>Informal</td><td>26</td><td>15</td><td>11</td><td>13</td></tr>
<tr><td>None</td><td>72</td><td>83</td><td>87</td><td>81</td></tr>
</table>

borrow at all.

Households rarely have loans from two types of sectors. There is very little overlap in the loan sources.

5.1.1 Reasons for Non-Participation

The results of Table 6 lead us to ask the questions: Why, if there was such a huge surge in the popular banks sector, there is such a low participation rate amongst households?

The first intuitive explanation for non-participation in the popular banks credit market is that many of the rural households are quantity rationed, i.e. they simply do not qualify for a popular banks loan at going credit contract rates. Of the surveys only the COLMEX survey asks about non-participation rates in the credit market. In the survey households that do not have a popular banks loan were asked if they believed they could get a loan from a popular banks. 41% of non-borrowers said no they could not get a loan, while 59% said that popular banks would lend to them. This suggests that the primary reason for not borrowing is not quantity rationing.

So why don't households borrow? Reasons fall into three main categories. First, 66% of non-borrowing households with a positive loan supply said that the interest rate was too high. For these households the credit market is working well, i.e. at the going price for the loan the household determines that the price was too high and they do not purchase the loan. The second reason mentioned was transaction costs. 22% of households were discouraged from borrowing because transaction costs were too high. Finally, 12% were unwilling to risk the collateral required by the popular banks, i.e. were risk rationed. In other words, under perfect information the household would obtain the loan, but because of information asymmetries the credit contract terms that are required by the lender are deemed too risky by the household and thus the household withdraws from market.

Taken together these responses suggest that the majority of households are rationed by something other than the interest rates, whether it be quantity, transaction costs, or risk. Therefore households that fall within these categories often turn to the informal sector for their credit needs. This is not necessarily a bad thing if there are no systematic differences between the credit contract terms of popular banks and informal loans that may explain these types of rationing. If, for example, the informal sector offers a readily available close substitute, then we might be too concerned about rationing in the popular banks credit market. We can now turn to differences in credit contract terms between the popular banks and informal sector to determine if there are systematic differences.

5.1.2 Credit Contract Terms

Using information on credit contract terms from the Bansefi survey and the Colmex survey we make three observations (See Table 7). First, under general credit contract terms, we see that popular banks loans are larger and have a longer loan term and their annual interest rates are lower. Second, the cost of getting a popular banks loan is larger than an informal loan. It takes on average six days longer to receive a popular banks loan and an individual needs to pay higher document costs.

Finally, popular banks loans require more collateral than informal loans. 21% of popular banks loans required that the borrower have a land or house title. But most importantly 69% of popular banks loans required a co-signer. The collateral that the household stands to loose is not in monetary terms, but instead is in the form of social capital. Also having a co-signer is a scarce

Table 7: Credit Contract Terms

Credit Contract Terms	Caja (N=682)	Informal (N=1,493)
Conventional Contract Terms Loan		
Size (pesos)	17,000	4,000
Loan term (# months)	15	6
Annual IR*	46	118
Transaction Costs		
No. Days to receive Loan	10	4
Document cost (pesos)**	12	0
Risk Sharing Rules		
Title (Land or House)(%)**	21	14
Co-Signer (%)	69	23
No guarantee requirement (%)	36	91

* Based on loans that charge interest rates
**BANSEFI survey does not specify if title was mortgaged
Source: 2005 Colmex Survey and 2004 Bansefi Survey

asset, because co-signers usually have to be a popular banks member and not be a member of the borrower's household. These credit contract terms limit not only the ability of many households to get a popular banks loan, but also the willingness to accept the loan terms.

The general necessity to have a co-signer who is also a popular banks member leads us to the question of what are the systematic differences between popular banks members and non-members. We evaluate data from the Bansefi survey because it was designed specifically to answer this question.

Table 8: Members vs. Non-Members

	Member	Non-Member
# of Adults	3	3
# of Children	1.5	1.6
Age of Household head	49	48
Education of Household Head	5.7	4.5**
% Own a Business	40	26**
% Farm	40	39
Total Area (has)	5.3	3.9**
% with Intl. Remittances	18	13**

**Means between caja member and non-member are different at the .05 significance level

Source: 2004 Bansefi Survey

5.1.3 Members vs. Non-Members

We find that households are not different in their family structure, but popular banks member households have higher levels of education, more likely to be involved in micro-enterprises and if they farm have larger farm plots (See Table 8). Furthermore we find that a higher percentage of popular banks members received remittances from migrants in the US. Given the dramatic increase in migration and remittances in rural Mexico, the relationship between financial markets and remittance is of crucial importance. We will look at this topic more in-depth later in the paper.

5.2 Participation in the savings market

Participation in the credit market is only half of the picture of financial markets. We now turn to participation of households in the savings market. We find a similar picture on the savings side that was found in the credit market. Here we look at percentage of households that save in either formal or informal institutions outside of the household (See Table 9). With the exception of the Progresa survey we see slightly greater participation in banks and popular banks then we did under credit. Still the vast majority do not save outside of the home.

Even though there has been tremendous growth in the popular banks sector, coverage of the popular banks sector in rural areas is still very limited. On the credit side part of this could be explained by the inability to qualify for a loan, but on the savings side qualification is not a necessity. Only the Colmex survey includes questions to understand non-participation. There are four main reasons. First, two-thirds of households did not save because they did not have excess liquidity. This explanation can have two plausible explanations. It could imply that households are poor and cannot save at all, or it could indicate that households prefer to save within the household (e.g. invest in livestock, jewelry, or other assets) since the interest rates given by the popular banks are too low. Therefore, after investing at home there

Table 9: Participation in the Savings Market (%)

	ENNViH (2002)	ENHRUM (2002)	Progresa (2003)	Colmex (2005)
Bank	6	12	1	1
Caja	4	N.D.	<1	13
ROSCA (Tanda)	16	NA	<1	7
None	74	88	98	81

is no excess liquidity. 16 percent of households mentioned that the cost of getting to a popular banks were too high. Third, nine percent pointed to fees and commissions. This is not surprising since these households are very poor and seek to deposit in very small amounts. Finally five percent were worried about losing their money in the popular banks.

6 Remittances and Financial Services

One characteristic that has been a common denominator is that households who receive international remittances also are more likely to be members of a popular banks. However, even though remittance receivers have a higher participation in the popular banks market it is interesting to note that there is a large unmet demand of remittance receivers through the local popular banks (See Table 10). Only four percent of households got remittances through the popular banks.

Table 10: Participation in Migration and Remittances by Caja Membership

	Member	Non-Member
% with		
Intl. Migrant*	37	25**
National Migrant*	24	21
International Rem.	19	15**
National Rem.	6.4	5.9
% Receiving Rem. Via...		
Bank	43	27
Caja	4	4

*Data only from COLMEX Survey

**Means between caja member and non-caja member are statistically different

2005 COLMEX Survey and 2004 Govt. Caja Survey

In interviews with popular banks managers we have learned that the fixed cost of adopting wire transfer technologies and the complexity of contracting with a money transfer service limits their ability to channel remittances. This is significant because popular banks can use remittances as a signal of credit worthiness and also as a form of collateral, thus increase the available line of credit for rural households. This is an area for future research.

7 Conclusions

The relationship between the Mexican State and rural financial markets has undergone significant changes in recent years. With respect to the important sector of small farmers, the state has largely, although not completely, withdrawn from directly providing credit to instead indirectly strengthening financial markets by protecting property rights and extending its regulatory reach to the popular banks sector.

There has been an impressive local grass roots in response to the opening provided by the state in the form of the emerging popular banks sector. However, in spite of the growth of the popular banks sector rural financial markets remain extremely shallow. The large surveys we examined show that less than five percent of rural households participate in the institutional sector. However, few of the surveys provided in-depth analysis on why households have no participation in financial services. This is a key component missing from the national surveys. Future surveys must include questions on reasons for non-participation in order to evaluate why rural households continue to be shut out of the financial markets.

We conclude with two key questions. As we move into the next administration several important policy questions remain open. First, what accounts for the long delays in the implementation of the popular credit and savings law? Might the excessive costs of formalizing popular banks reduce their viability and their capacity to expand service to the rural poor? Second, does the state undermine the emergence of a property based financial market by sending mixed signals about its role? In particular the state seems to undermine the incentives for popular banks to actively capture savings by continuing to operate its state run savings bank and in continuing to provide subsidized credit lines to the popular banks sector.

References

Bank, W., 2000: Mexico: Rural finance: Savings movilization potential and deposit instruments in marginal areas.

Bank, W., 2002: Technical assistance project, report no. 23868-me.

Benquet, F. M. and J. M. H. Trujillo, 2003: *Crdito, seguro y ahorro rural : las vas de la autonoma*. Universidad Autnoma Metropolitana Azcapotzalco, Mexico, 1 edition.

Castaneda Ramos, G. and C. Ruiz Duran, 2006: El sistema financiero mexicano: Acceso a los servicios de ahorro, credito y medios de pago por parte de los grupos de bajos ingresos.

Celarie, N. H., 2002: El microfinanciamiento y la politica gubernamental. 57.

Gavito-Mohar, J., 2002: Censo de las sociedades con actividades de ahorro y credito popular (acp). *El Mercado de Valores*, **62**(8), 41–46.

IADB, 2003: Mexico: Rural financial system consolidation program, loan proposal. Technical report, IADB.

INEGI, 1999: Xii censo de servicios: Servicios financieros censos economicos 1999.

Klaehn, J., B. Helms, and R. Deshpande, 2006: Mexico: Country-leval savings assessment.

Macayo, K. B., A. B. Gutierrez, A. Z. Alarcon, M. A. G. Alcantara, J. Ulloa, and M. Ulloa, 2002: Diagnostico de entidades de ahorro y credito del sector rural. *El Mercado de Valores*, **62**(8), 23–29.

Munoz Rodriguez, M., V. H. Santoyo Corts, and J. R. Altamirano Crdenas, 2002: *Mercados e instituciones financieras rurales : una nueva arquitectura financiera rural para Mxico*. Universidad Autonoma Chapingo, Centro de Investigaciones Econmicas, Sociales y Tecnologicas de la Agroindustria y la Agricultura Mundial, Chapingo, Mexico.

Myhre, D., 1994: The politics of globalization in rural mexico: Campesino initiatives to restructure the agricultural credit system. In *The Global Restructuring of Agro-Food Systems*, McMichael, P., editor, volume 1. Cornell University Publishing Press, Ithca, 303.

Myhre, D., 1997: Creditos agricolas adecuados: pieza faltante de la reforma agraria mexicana. *Financiamiento RURAL*, **15**, 9–25.

Myhre, D., 1998: The achilles' heel of the reforms: The rural finance system. In *The Transformation of Rural Mexico: Reforming the Ejido Sector*, Cornelius, W. A. and Myhre, D., editors, volume 1. Center for U.S.-Mexican Studies, University of California, San Diego, La Jolla, San Diego, CA, 39-65.

Pessah, R., 1987: Channeling credit to the countryside. In *Food Policy in Mexico: The Search for Self-Sufficiency*, Austin, J. E. and Esteva, G., editors, volume 1. Cornell University Press, Ithaca, New York, 92-110.

SEDESOL, 2006: *La Poltica Social del Gobierno de Mxico Resultados 1995-2000 y retos futuros*. SEDESOL, Mexico City.

Wiggins, S. and et al., 2002: Agricultural policy reform and rural livelihoods in central mexico. *Journal of Development Studies. April*, **38**(4), 179–202.