Introduction

This paper quantitatively and qualitatively evaluates the Fundefir microfinance model. Fundefir, meaning "The Foundation for Rural Finance,"[1] is a Venezuelan organization that is innovatively addressing the financial needs of the poor. While typical microcredit organizations grant small loans to groups of five borrowers, Fundefir establishes communal banks, which are banks run by community residents to serve their local financial needs. By creating an integrated financial service rather than solely providing credit, Fundefir gives bank members simultaneous access to savings, investment, and credit. Without Fundefir's involvement, it is difficult if not impossible for community residents to access these services. Fundefir is also distinguished by its specific innovations, which include using community residents' savings to finance loans, providing loans for a variety of purposes, serving both genders, disbursing dividends, and building human capital in communities. This microfinance model is a new and highly effective approach to grassroots economic development.

Many citizens in developing countries have viable business or investment ideas but are unable to finance an initial investment, and thus remain impoverished. While governments and formal banks have struggled to provide credit services to the poor, community residents have developed their own financial systems. Microcredit loans, traditionally granted to a group of five borrowers, also serve community needs: they provide capital and planning assistance to develop motivated individuals' micro-investment projects. Politicians, economists, and international organizations recognize that microcredit loans reduce poverty by creating financial opportunities

[1] In Spanish, Fundefir is short for "La Fundación para el Finaciamiento Rural."

for low-income entrepreneurs. Currently, some microcredit organizations – Fundefir included – are evolving to offer a greater array of financial services such as savings and investment opportunities to the poor.

This analysis demonstrates that the Fundefir model produces a group of financially profitable banks run by well-trained community residents. To support this conclusion, the reader is introduced to the concepts of poverty, finance, and microcredit. Chapter 1 describes the basic problem of poverty and the financial systems that have developed to serve the poor. Chapter 2 explains the approaches and contributions of microcredit. Chapter 3 is an overview of how Fundefir establishes communal banks and what bank members think about the model. Chapter 4, the beginning of the quantitative analysis, statistically determines that Fundefir's communal banks are financially successful and are serving the needs of the poor. Chapter 5 considers why these banks are successful, and specifically whether the innovative features of providing loans for a broad range of purposes and to both genders are related to bank performance. Chapter 6 concludes by discussing Fundefir and the future of microfinance.

Chapter 1 – Financial Services for the Poor

1.1 The Basic Problem of Poverty

Many impoverished people live a subsistence lifestyle in which their earnings are so meager they survive on a day-to-day basis. Therefore, any decrease in earning capacity is severely harmful, and potentially life threatening. If crops under-perform or a vendor is unable to sell her goods in a market, the consequences are immediate: there will not be enough money to buy food. People are extremely vulnerable when all of their earnings must be used for immediate needs, preventing them from saving money for a future necessity or emergency. Poverty therefore acts as a trap – the poor are unable to make enough money to improve their situation because they need every cent they earn to survive another day.

In "The Mystery of Capital," Hernando DeSoto explores the relationship between poverty and capitalism. He observes that capitalism is only successful in developed countries that clearly define property rights (DeSoto 2000). Therefore, he considers the absence of property rights in developing countries to be a central problem that perpetuates poverty. Designated property rights would redefine the poor's informal assets as capital, which they could use as collateral to receive credit from formal banks. Allowing the poor to access credit, DeSoto argues, forms the basis for small-scale entrepreneurship. DeSoto's conclusion is that a formalization of property rights would help many poor emerge from the trap of poverty.

More generally, structural problems such as unequal income distribution, geographic or regional disadvantages, and a lack of education and skills can cause poverty on a large scale. Additionally, gender and racial discrimination deny resources to specific, targeted populations, making them particularly susceptible to poverty. Therefore, there is an acute need to help the disadvantaged escape from poverty by increasing their earnings.

Muhumud Yunus established the Grameen Bank, the most well-known microcredit organization, after he concluded that "people are poor because they have no money" (McMillan and Hanley 2003, 2). Redefining poverty as the victimization of the poor placed fault on societal structures and institutions rather than on poor people, paving the way for Yunus' Grameen Bank to offer financial services to the poor. Because the poor simply do not have money, Yunus set out to prove that they are not risky borrowers or prone to default on loans. Rather, when provided with funds, he predicted they would invest in income-generating projects to improve their standard of living. Yunus' new perspective on poverty has forced the financial world to consider the social good and even the profitability of lending to the poor.

While in Bangladesh, Yunus met hard-working people who were unable to escape from poverty. They lacked the initial capital to make income-generating investments, and were therefore reliant on moneylenders. Yunus further observed that the poor were forced into poverty because "they were dependent on traders to lend them materials and then buy back the finished products" (McMillan and Hanley 2003, 2). This demonstrates the poor's need for financial services not as charity, but rather as empowerment to use their own skills to increase their earnings.

According to World Bank statistics, poverty is increasing rapidly in Venezuela. The percentage of Venezuelans living below the poverty line – $2 a day – increased from 32.2% in 1991 to 48.5% in 1998 (World Bank 2005). In the same time period, the percentage living in extreme poverty – below $1 a day – increased from 11.8 percent to 23.5 percent. To further worsen the economic situation, the richest 20% of Venezuelans receive 53% of the income, while the poorest 20% earns only three percent of the country's income. These numbers show that nearly half the population is extremely vulnerable to severe poverty, and therefore

particularly threatened by emergencies and seasonal fluctuations in income.

People need to increase their incomes in order to emerge from poverty. To facilitate this, the poor need the same credit and savings opportunities as the rich, but on a smaller scale. While credit is an important tool to aid the poor, many poor people also have the desire for more basic savings opportunities. In most countries, the poor keep their savings in cash (usually under mattresses) or in investments that can be converted into cash when necessary, such as jewelry or livestock (Rutherford 2000). There is significant risk associated with both of these options because material goods can always be lost, stolen, or devalued.

It is important to note that those who are able to save do not live at the subsistence level – they are often able to pay for daily necessities and still save a small amount of money (even if only a few cents). In countries ranging from India to Bolivia, the poor have demonstrated their desire to save. A range of individuals and organizations – from moneylenders to formal banks – can provide such savings services.

1.2 Government and Bank Failures in Providing Financial Services to the Poor

There is a severe lack of institutionalized and reliable financial services for the poor. Microfinance institutions have concrete data that demonstrate the poor have high rates of loan repayment and widespread demand for credit (Microfinance Gateway 2006). This information, however, is not widely disseminated, so few are aware of the true demand for and profitability of such services. The perception persists that the poor are unreliable borrowers because they lack collateral, preventing them from "access [to] the larger financial sector because they don't have title to the land on which they live and work" (A Constrained Vision 2005). Due to these information deficiencies and to politically motivated intervention, the government and market's

allocation of financial services for lower income citizens is suboptimal or non-existent in most countries.

Government-run credit programs, a principal source of credit to the poor in many countries, “are not effective and tend to represent the state's interests more than those of the beneficiaries” (Ashoka 2000). For example, in the 1970s and 80s the Philippine government issued loans with interest rates lower than inflation rates, creating excess demand for loans and “pressure to allocate loans to politically favored residents, rather than to target groups” (Armendáriz de Aghion and Morduch 2005, 9). This government intervention ultimately harmed the poor because the below-market interest rates on loans undermined other credit associations and moneylenders. After the Philippine government eliminated alternative credit options, it proceeded to only serve a small, politically connected population. The Indian government spearheaded the similarly ill-fated Integrated Rural Development Program in the 1970s, which allocated credit to social targets of excluded groups and women (Armendáriz de Aghion and Morduch 2005). However, with its emphasis on social goals rather than economic efficiency, repayment rates plummeted. Eventually, the Indian government stopped funding the program. Even if governments were to successfully provide financial services to the poor, government funds would be unable to meet the worldwide demand for microcredit “estimated in the hundreds of millions of people” (Robinson 2001, 56).

Instead of helping the poor, government initiatives can propagate inequality when political motivations influence loans. As Adams, Graham, and Von Pischke conclude, government-led or -financed development banks disrupt rural financial markets “and ultimately undermine attempts to reduce poverty” (qtd. in Armendáriz de Aghion and Morduch 2005, 10). Another important consequence of government-subsidized loans is that formal bankers’

incentives to collect savings deposits decrease because the government is already providing this service. When government programs collapse, the poor are left with no formal potential savings opportunities (Armendáriz de Aghion and Morduch 2005). Formal banks also observe the failure of government programs to provide loans to the poor – failure that deters banks from trusting the poor.

Postal savings accounts are another government-run savings service. Postal savings accounts are provided in government post offices for people who lack access to banks. Using post offices that already exist in rural communities decreases the transaction costs of providing savings services to the poor. While countries such as Great Britain and the United States used postal savings systems in the early 1900s, postal savings is particularly prevalent in Japan. Currently, over $3 trillion are invested in Japanese postal savings accounts. Despite the success of this service in Japan, the Venezuelan government has not adopted such a system. The reason may be that postal savings accounts are vulnerable to inflation. When countries have rapidly spiraling rates of inflation above 100%, money invested in any savings account loses nearly all value. While inflation devalues all money, there is great discontent when the poor expect the government to safeguard their savings, only to find the $5 they invested only has the purchasing power of $1 the following week. Additionally, the citizens may have little faith in government development programs, and therefore would not use postal savings services that they expect would be unreliable.

Most formal financial institutions do not lend to the poor because they have not been exposed to conclusive evidence that the poor are reliable borrowers. Instead, banks maintain the traditional view that “it is neither important nor profitable for institutions to provide commercial financial services to low-income people” (Robinson 2001, 32). Because the majority of

microcredit organizations operate philanthropically, employing low interest rates and lenient repayment terms, most formal banks believe microcredit to be a money-losing service. Despite strong indicators that providing credit to the poor can be profitable, when large banks serve the poor they typically use "their corporate-responsibility or community-development departments, not their core for-profit banking operations" (The Economist 2005).

However, a growing number of microcredit institutions are concluding that "the best way to reach the vast number of poor people in the world is to become profitable and operate much like conventional rich-world financial firms" (The Economist 2005). Because the poor's demand for loans is greater than the current supply, this demand will only be met if organizations are profitable rather than reliant on limited donor funding. Also, forcing organizations and banks that serve the poor to be competitive in the market (rather than subsidized) will ensure they enforce repayment and charge competitive interest rates that will not create excessive demand for loans. Currently, some formal banks are profitably providing credit to the poor, demonstrating that the financial industry is becoming aware of the creditworthiness of the poor.

In the financial industry, women are routinely disadvantaged because formal banks consider men to be more reliable borrowers. This is due to cultural norms, gender discrimination, and the banks lacking information about female borrowers' creditworthiness. At the Microcredit Summit Campaign in 1997, close to three thousand people met to discuss the provision of microcredit services to 100 million of the world's poorest families, and to women in particular. The Campaign concluded that financial institutions discriminate against women "despite the fact that women have shown themselves to be very adept at saving, highly creative entrepreneurs, and consistent in ensuring that earnings go directly to meeting family needs" (The Microcredit Summit Campaign, "Plan of Action" 1997). While formal banks discriminate

against the poor regardless of gender, poor women are significantly less likely to receive financial assistance than poor men. This has prompted many non-governmental organizations to focus on providing financial services to poor women.

Even with complete information about the poor's high rates of loan repayment and reliability, most banks are not prepared to meet such needs. A majority of "banks are too remote, physically and socially, and do not like to accept tiny deposits" (Rutherford 2000, 15). Lack of infrastructure is a key obstacle many formal banks face in expanding services to the poor – it is impractical to build and staff offices in hundreds of rural communities. A bank representative earns the same salary regardless of whether he provides a poor person with a $10 loan or provides a rich company with a $10,000 loan. The larger loans create greater profits for the bank, explaining the focus on affluent clients. Therefore, even if it is profitable to provide credit to the poor, many formal banks are already using their existing resources to maximize capital. Serving the poor would require more hiring and new strategies, rather than a simple shift of resources and employees. If the bank employee who worked with rich clients were to instead spend his time giving loans to poor clients, the bank would lose money. However, the emerging innovations and findings in the microfinance field may help formal banks develop viable methods of serving the poor.

In the specific case of Venezuela, government and formal banks programs have been largely unsuccessful in providing credit to the poor. It is very expensive for governments or banks to provide poor citizens with financial services. Government programs have been inefficient largely due to the actions of corrupt politicians who either pocket money or target programs to their own interest groups.[2] Additionally, the entire Venezuelan banking system has

[2] Salomon Raydán, Fundefir's founder and director, provided this perspective on Venezuela.

been weakened by capital flight, making access to credit difficult for both consumers and businesses (World Bank 2005). Also, as Raydán notes, many banks due not serve the poor do to the high costs of establishing branch offices and employing personnel. Conversely, the poor do not use banks because most commercial banks charge high interest rates of 40-50% annually, charge fees for opening an account, or require a minimum account balance that the poor cannot meet. Another reason the poor do not use banks is the high cost of transport from one's community to the bank. This makes it difficult to retrieve one's savings – money invested in a bank 10 miles away is impossible to access in the case of an emergency. In general, the poor demand great liquidity of their assets to meet daily and emergency needs. These conflicting needs prompted the development of alternative credit services, and eventually microfinance organizations such as Fundefir.

1.3 The Evolution of Financial Services for the Poor

While microcredit is today's most publicized and highly subsidized financial service for the poor, it is by no means the only or even the first provider of credit. Nor is microcredit loans to entrepreneurs the only solution: people around the world demand credit for life cycle, emergency, and investment needs (Robinson 2001). In the 1850s a credit cooperative designed in Germany provided credit to the rural poor. This rudimentary model quickly spread around the world from Japan to Latin America, laying the groundwork for modern financial services (Armendáriz de Aghion and Morduch 2005). Today's organizations that provide the poor with financial assistance include deposit collectors, moneylenders, rotating savings and credit associations (ROSCAs), community funds, and microcredit loans. These financial organizations generate a large sum of money at once, provide savings services, or create investment

opportunities. For many, it is impossible to save at home due to the pressure from children and spouses to use the money for immediate purchases. Thus, those who wish to save look for occasions to do so outside of the home. Identifying the services the poor are currently using, demanding, and often paying for will help microfinance organizations develop in the direction that will best serve their customers.

One way the poor save outside the home is by agreeing to make regular savings deposits to a person who collects their money on a daily or weekly basis. This effectively locks them into an agreement to deposit, with penalties if they renege. For example, Stuart Rutherford (2000) reports that in India a woman named Jyothi makes her living as a wandering savings deposit collector. Jyothi's reliable reputation gives her the credibility she needs to collect her clients' savings. Her clients agree to deposit a set amount of money daily for a given length of time, and Jyothi arrives each day to collect the payment. When the contract is fulfilled, the client's savings are returned, minus Jyothi's 9% fee. This means that in order to have a safe place to save, the poor are paying a negative interest rate on their savings. A woman explained that she could not save enough money to school her children without Jyothi, and "slum dwellers in a neighboring slum where there is no Jyothi at work actually envied Jyothi's clients" (Rutherford 2000, 16).

Another popular but expensive solution to meeting immediate financial needs is to receive a loan from a moneylender. Unlike rich borrowers, the poor have few assets or savings to use as collateral. This makes the poor relatively risky borrowers because there is no monetary guarantee that they will repay a loan, so moneylenders charge high interest rates to compensate for the likelihood of default. Moneylenders' high interest rates also occur because they have to provide cash upfront for loans, while deposit collectors such as Jyothi use no capital of their own to operate (Robinson 2001).

In Venezuela, many moneylenders charge 20% monthly to ensure they recoup any losses from defaulting clients (Raydán 2000). When most moneylenders grant loans, they immediately deduct their interest charge from the capital they give the borrower. For example, if you request a loan of $10 from a moneylender with 20% interest, the lender deducts $2 and you receive $8. After a month, the moneylender returns to collect your payments until a total of $12 (the principal plus interest) is repaid.

Although moneylenders often charge seemingly exorbitant interest rates, the poor continue to use their services, demonstrating that the demand for credit is largely unmet. For example, a woman Yunus met in Bangladesh earned her living as a basket maker, but she had no initial capital to invest in basket-making supplies. She solved this problem by requesting a loan every morning from a moneylender with high interest rates, and paying back the initial sum plus interest at the end of the day. While this permitted her to purchase her materials, the moneylender's high interest rates consumed most of her earnings, leaving her with a personal profit of only $0.02 a day (McMillan and Hanley 2003). Also, powerful local landlords and employers often influence moneylenders to grant loans with unfavorable conditions to keep borrowers subservient and impoverished (Johnson and Rogaly 1997). High interest rates and unfavorable loan terms encourage the development of alternative credit opportunities.

In the absence of competition in the credit market, moneylenders can charge particularly high interest rates. When moneylenders have a monopoly on providing loans, the poor suffer greatly because fewer borrowers are able to enter the market. However, the presence of other credit associations or microcredit organizations lowers moneylenders' interest rates. Competition to lend to the poor creates incentives for each provider to lower interest rates and any fees they may charge in order to attract the greatest number of clients possible.

The Rotating Savings and Credit Association, or the ROSCA, is a widely used financial tool. Although ROSCAs operate around the world, they are particularly prevalent in India and Latin American cities. In a ROSCA, participants form a group and agree to contribute a given sum of money at a given interval. In a simple ROSCA, a group of 20 members could each agree to deposit $.50 each day. Each day, a total of $10 is saved, and one of the 20 members receives the full sum. After 20 days, each of the members will have taken the full sum, and the ROSCA will either end permanently or start again (Robinson 2001). This means that for the first set of members the ROSCA is primarily a form of borrowing (i.e. they are receiving more money than the one they have contributed), while for the last group of members it is mostly a form of savings.

ROSCAs vary in size, duration, purpose, and financial complexity. Some ROSCAs last just a week, while others last years. The long-term ROSCAs tend to focus on life-cycle needs, such as schooling for children or dowries. ROSCAs are community-run, and provide payment schedules to bind all members to regularly deposit their savings. A ROSCA's simple structure has advantages, such as a clear beginning and end, straightforward accounting, and no need to store the collected funds (Armendáriz de Aghion and Morduch 2005). When asked why they joined a ROSCA, of 308 respondents, 37% reported difficulty saving at home because money was used for small household needs, 22% reported difficulty saving alone without peer support, and 10% reported that they joined "as a response to household conflict, fear of theft, or demands by kin" (Gugerty 2003, 42). Mary Kay Gugerty concludes that "self-control problems are widespread and that savings commitment mechanisms are desired and appreciated by the poor" (2003, 48). In a 2002 study, Siwan Anderson and Jean-Marie Baland found that the majority of women joined a ROSCA to save, even though they were married. Anderson and Baland

conclude that an important reason women join ROSCAs is to prevent their husbands from accessing family savings. Although ROSCAs are highly successful, they do not provide financial flexibility or prolonged savings opportunities with the ability to withdraw funds when necessary. Also, many poor do not participate in ROSCAs because they do not have stable sources of income to make the regular deposits (Robinson 2001).

Credit cooperatives, another financial service, make credit and savings services more accessible around the world. These organizations are similar in structure to modern microfinance non-governmental organizations such as FINCA (The Foundation for International Community Assistance), Pro Mujer, and Freedom from Hunger (Armendáriz de Aghion and Morduch 2005). They provide village opportunities around the world and in Latin America, reaching the poor through savings and credit associations. Cooperatives, also called Funds, differ from ROSCAs in that "the savings that its members deposit accumulate in a 'Fund' from which members may borrow – but only if they wish to" (Rutherford 2000, 24). While cooperatives provide a wide-ranging service, they are far more difficult to manage than the services of deposit collectors, moneylenders, and ROSCAs. For example, a cooperative operating in Bangladesh had 23 members who committed to make weekly deposits of any amount for one year. Each member chose the amount she wanted to save in a given week, and a chairperson of the fund recorded and stored the savings. When the savings were great enough, members could take out loans at an interest of 5% a month for as long as a year. The cooperative's members decided who received loans and for how much, thus preventing someone from requesting a loan she could not reasonably repay within the year. At the end of the year, all loans were collected, and members received their savings plus interest on money they had deposited. The result was that members who deposited 10 taka weekly saved 520 taka over the

year, and received a profit of 60 taka from interest payments (Rutherford 2000). The cooperative allows members to borrow at lower rates than deposit collectors or moneylenders charge, and to even earn profits off their savings. This is possible because "fellow group members act as guarantors and monitors… their motivation is fueled by the promise of future access to credit if all group members repay" (Armendáriz de Aghion and Morduch 2005, 73).

The principal disadvantages of the cooperative are the increased oversight and paperwork responsibilities for the director. A cooperative is not as financially transparent as a ROSCA, where all deposits are immediately given to a member. If poorly managed, a cooperative is vulnerable to fraud because no one oversees the director's bookkeeping. Credit cooperatives face difficulties as they grow, such as ensuring the reliability of a large number of borrowers through common relationships and trust. Also, many cooperatives use voting to determine loan allocation. While this encourages active participation, members typically receive a number of votes corresponding to the amount of their savings. This gives richer members a huge advantage – they can use their above-average number of votes to ensure they receive loans whenever and for however much they desire. This drawback has caused the failure of many agricultural cooperatives in Mexico (Stavenhagen 1975).

The poor who lack steady incomes typically do not join cooperatives because they cannot deposit savings on a regular basis. Many other poor with steady incomes chose to not invest in ROSCAs because the money is in essence sunk for a set period of time. While this produces the desired lump sum of money, it also means that the poor's savings are inaccessible during the period of the ROSCA. Poor who anticipate a financial need or are concerned about having access to money in the case of emergency often prefer to save on their own.

A Bangladeshi financial organization called SafeSave, which is very similar to Fundefir, gives members the opportunity to deposit in any amount and at any time desired (Rutherford 2000). SafeSave is also very similar to the cooperative, with the exception that there is no uniformity or regularity of deposits. To supervise members' autonomy, SafeSave solicits deposits by visiting members daily, a strategy which, although time consuming, compels people to save. While SafeSave's flexibility abandons discipline-promoting strategies of regular and uniform deposits, SafeSave's clients do not fail to save. Rather, results demonstrate that "the frequent opportunity to save – having someone knock on your door each day – is an equally good, or even better, way of maximizing savings, as compared to the obligation of paying a set sum at a set interval" (Rutherford 2000, 28). While effective, SafeSave's time consuming method of collecting savings makes this model difficult to sustain and expand.

Different types of loan, savings, and investment services are needed to address specific regional or local financial demands. For example, a moneylender's or deposit collector's services may be more appropriate in cities where people do not know each other well. Conversely, ROSCAs may be more appropriate in city slums where people might not know each other well. ROSCAs may be more appropriate in workplaces or villages where locals trust each other and need short-term opportunities to save. Kinship networks, friends and family might provide financial services in emergencies. Thus, when comparing the merits of different financial services, it is imperative to consider what audience is being served. What is best for rural Venezuelans is not necessarily best for Caracas residents.

Chapter 2 – Microcredit

2.1 What is Microcredit?

Microcredit, also referred to as microfinance, microlending, and microbanking, is a method both public and private organizations use to help the poor accumulate capital or borrow in times of need. Microcredit, when available, empowers the poor. The key is scale: organizations grant small loans to start or expand small businesses (Grameen Bank 2005). Most loans are given for income-generating projects, such as investment in cooking supplies, livestock, new farm equipment, renting or constructing a store, etc. Loan recipients usually make immediate profits, which they use to repay the initial loan and accumulate additional earnings in the long run. For example, in Venezuela, many women with no savings rent expensive stalls in the market every day. However, using a loan from a microcredit organization, a woman can instead buy her own stall, earn more money every day, pay back her loan, and begin accumulating personal profits. To serve the widespread demand for credit, an estimated 10,000 microfinance institutions exist, helping over 16 million poor people in developing countries (United Nations Capital Development Fund 2005). The United Nations recognized this contribution, naming 2005 the "International Year of Microcredit."

Microcredit organizations must find methods to ensure the reliability of their borrowers. In any loan organization, preventing default on the loans is a main priority. Particularly for microcredit groups reliant on donor funding to operate, it is essential to recoup the value of the loans. To ensure high rates of loan repayment, many lenders require either a group of lenders to be mutually responsible for the repayment of each other's loans, a small amount of capital as a deposit, or a community-based association of borrowers to disperse loans among themselves. Measures such as these increase the likelihood of loan repayment. The result is that microcredit

organizations have higher rates of loan repayment than the formal banking sector in many developed and developing countries (Microfinance Gateway 2006).

Many microcredit organizations work with other service providers to help address the poor's non-financial needs. For example, organizations such as microcredit provider Freedom From Hunger offer a "credit with education" program in which women who receive loans also learn about health, nutrition, family planning, and sound business practices at their weekly meetings (Freedom From Hunger 2005). Hundreds of other organizations work with microfinance organizations, or MFIs, to offer literacy programs, health care services, and general education to credit recipients. By pairing credit provision with services that improve borrowers' education and standard of living, borrowers have even more tools to work their way out of poverty.

2.2 The Innovation of Group Lending

Group lending is the central strategy of most microcredit providers. In the group lending, or joint-liability model, "individuals without collateral get together and form groups with the aim of obtaining loans from a lender" (Armendáriz de Aghion and Morduch 2005, 86). Many microcredit organizations assemble community residents into groups of five people, making the entire group responsible for the repayment of each member's loan. Groups can "help reduce costs, mobilize funds, improve monitoring, and deploy informal community-based enforcement mechanisms" (Armendáriz de Aghion and Morduch 2005, 58). The benefits of this joint liability increase loan repayment rates and make it a substitute for traditional forms of loan insurance.

Group lending protects a microcredit organization in three ways: by reducing moral hazard, adverse selection, and enforcement problems (Armendáriz de Aghion and Morduch

2005). Moral hazard arises when "banks are unable to ensure that customers are making the full effort required for their investment projects to be successful," or when borrowers try to abscond with the bank's money (Armendáriz de Aghion and Morduch 2005, 7). The group lending structure decreases moral hazard by creating joint responsibility for each loan, which compels individuals to form groups of reliable borrowers with viable investment projects. Secondly, group lending mitigates adverse selection, which occurs when the lenders lack the information to distinguish between safe and excessively risky borrowers. When a bank cannot differentiate between types of borrowers, it charges high interest rates to compensate for the risk of default, which drives "safer customers [who are unable to pay high interest rates] out of the credit market" (Armendáriz de Aghion and Morduch 2005, 7). Forcing group members to be responsible for each other's repayment effectively provides information about borrowers' reliability – more risky borrowers have trouble convincing groups to include them because no one wants to be responsible for repaying their loans. Thirdly, joint liability decreases enforcement problems because when members self-regulate the organization can avoid an extensive financial background check of each credit applicant. Also, if a borrower does not repay, the group lending structure places the burden of the unpaid funds on other group members rather than on the financial organization.

Group lending is an important innovation that has allowed microcredit providers to ensure that borrowers take loan repayment seriously, to weed out the majority of risky borrowers, and to have a clear procedure for recouping the loan value in the event of borrower default. Monica Brand, Vice President of Marketing and Product Development at the major microfinance organization Accion International, agrees that group lending is a valuable tool.

According to Brand, “although assets are typically real items of value that can be seized upon default, Accion International considers the relationships the poor maintain in their communities to be a type of asset” to ensure borrower reliability (2004).

2.3 The Grameen Bank and FINCA: Microcredit Models

The microcredit providers Grameen Bank and FINCA built upon the community-based financial innovations discussed in Section 1.3 to provide credit to the poor. The main difference between these organizations is that Grameen grants loans in Bangladesh to groups of five borrowers, while FINCA establishes village banks in the Americas, Africa, and Eurasia that serve 20-30 members. Both organizations use joint liability to ensure repayment, rely on external capital to fund the loans they grant, provide only income-generating loans, and primarily serve female borrowers.

The Grameen Bank pioneered the development of group lending microcredit in Bangladesh in 1983. The majority of microcredit organizations operating today use Grameen as a model of how to provide credit to the poor. Grameen serves self-selected groups of five borrowers, 95% of whom are female, who want loans for income-generating investments (Yunus and Jolis 1999). While Grameen will also work with groups of men, it does not allow a group of borrowers to include both genders.

Grameen’s focus is on providing credit to the poor. Two members of the group receive credit simultaneously, and repay the loan over the course of 50 weeks. At that point, two more members of the group can receive loans. Groups form “development centers” that meet with a Grameen Bank liaison weekly to enforce loan repayment and provide support for members. With 1267 branches and services in 46,000 villages, Grameen now serves over 3.7 million

borrowers. As a result, Grameen is a model for many successful microcredit organizations around the world.

The reason Grameen's model has not spread even more is because total subsidies to the organization "evaluated at the economic opportunity cost of capital amounted to about US $26 - $30 million" (Morduch 1999b, 1). It costs approximately $.20 in overhead costs to lend one dollar of credit. Grameen's fame and proven results increase donor and government confidence, creating a steady inflow of capital and support to the organization. While Grameen uses its millions of dollars in subsidies and donations to provide its services at low cost to borrowers, other MFIs do not have such resources. Newer or smaller MFIs lack credibility and proven success, so they must find financially solvent methods of providing credit to the poor.

Grameen's group meetings can have varied effects. Group meetings can be negative if members consider them to be time consuming and a hassle due to transportation difficulties. On the other hand, many participants report that group meetings provide them with business and emotional support from fellow borrowers (Yunus and Jolis 1999). Many female borrowers look forward to the meetings as an opportunity to assert their independence and discuss their projects with other bank members. Groups also have the tangible benefit of making financial transactions transparent and open to all members.

While 98% of Grameen's loans are repaid, preliminary studies surprisingly conclude this is not due to the group lending innovation. Although the Grameen Bank's policy requires group-liability, in a 1996 study Pankaj Jain concluded "the Grameen Bank, in practice, does not enforce its acclaimed policy of making five-member groups jointly responsible for repayment of loans." Jain identifies repeated supervision, locally responsive administration, clear communication, training of functionaries in the organization's structure, and boosting of morale of field

functionaries as key components of Grameen's successful model (1996). This finding is important because organizations that seek to replicate Grameen's approach need to consider its larger organizational structure rather than simply the group lending policy. Jain's study shows that more research is needed to determine the impact of group lending agreements on reliability of borrowers.

One problem with Grameen's lending approach is that it does not allow legitimate reasons for default (Armendáriz de Aghion and Morduch 2005). For example, if someone defaults because she invested in seeds during a drought year, this does not mean she is an inherently unreliable borrower. Such circumstantial defaults exclude potentially reliable borrowers from the lending pool because they had bad luck or made a poor decision once. This may create a deadweight loss, or a loss of well-being to society when a potentially good client is excluded from receiving future loans (Armendáriz de Aghion and Morduch 2005). However, Armendáriz de Aghion and Morduch do not address the possibility that a more lenient default policy could encourage higher rates of default.

Another problem with the Grameen Bank's use of group lending is that it does not allow for asymmetrical borrowing. Asymmetrical borrowing is when one person wants a significantly larger loan than her group, thus forcing the group to either convince her to request a smaller loan or agree to guarantee her disproportionately large loan. Many group members are reluctant to guarantee loans that are double or triple the size of their own, which prevents many borrowers from benefiting from larger loans. Despite these drawbacks, Grameen is able to effectively reach millions of poor borrowers with basic credit services.

FINCA, the Foundation for International Community Assistance, is a leading microcredit model that helped shape Raydán's vision of Fundefir. Since 1984, FINCA has created over

20,000 village banks that operate in Latin America, Africa, and Eurasia. FINCA has a particularly strong presence in Latin America, where it serves 141,617 people, over 42% of its total clientele.

To begin a village bank, a FINCA employee finds a group of 20 to 30 community residents interested in receiving credit and meeting on a weekly basis. Once established, members make weekly savings deposits of any amount to demonstrate their commitment to the program. After three weeks of deposits, members can receive loans from FINCA. FINCA supplies the capital for the loans, but the "village banks are democratic, self-managed, grassroots organizations that elect their own leaders, select their own members, determine their own bylaws, and do their own bookkeeping and fund management" (Darsney 2005). While members deposit small amounts of money during the group meetings, it is ultimately FINCA that supplies the $50-$100 necessary for each loan. While FINCA relies heavily on donor funding, it charges borrowers market interest rates on most loans to counter inflationary rises in monetary value and to cover some of the costs of providing the loan.

To ensure the loans will be repaid to FINCA, all village bank members sign a joint responsibility agreement. The agreement states that if one member either misses a regularly scheduled payment or defaults on the loan entirely, the entire group is responsible for repayment (Darsney 2005). In FINCA's model, neighbors "come together to guarantee one another's loans, and work together to ensure that the bank runs smoothly," which increases loan repayment rates (FINCA 2005). Also, allowing borrowers to share "their problems, challenges and successes, [teaches] clients to learn and progress together" (FINCA 2005).

FINCA loans money for income-generating projects to female entrepreneurs. The self-employment loans FINCA grants are for any activity expected to generate additional income and

savings for the borrower (Darsney 2005). This allows members to receive loans for anything from buying a new plough to purchasing clothing to sell in their store. The village banks are comprised almost entirely of women – FINCA data from 2004 reported that over 90% of all clients were female (FINCA 2005). FINCA gives preference to women because "of their role as the primary caregiver; furthermore, women are believed to more effectively manage scarce resources in comparison to their male counterparts" (Darsney 2005). Also, FINCA founder John Hatch believes that "the fastest way to affect the welfare of children [is] through aid to their mothers" (FINCA 2005). In a survey of 1,010 participants in El Salvador, before joining a village banking group, "57 percent of participants spent less than $12.50 per week on food for their families. Once they had joined a group, 90 percent spent more than $12.50, and 43 percent spent more than $25.00—effectively doubling the amount they were able to spend to feed their families" (FINCA 2005). Findings such as this demonstrate the wide-reaching effects of FINCA's microcredit work.

FINCA is currently expanding its services to provide more than just credit. FINCA's status as a nonprofit organization legally prevents it from accepting savings. In 2004, FINCA converted programs in Ecuador, Uganda, and Kyrgyzstan from credit-only services into regulated microfinance deposit-taking institutions. These FINCA programs "can accept savings from the public, then lend those savings to fuel much faster program outreach" (FINCA 2005). After this change, the programs' growth rates and client retention rates rose as much as 20% in the first quarter. Also, FINCA is partnering with African insurance companies to offer health and life insurance products. By bundling different types of services together, FINCA is providing an enhanced selection of development resources to the poor. FINCA plans to experiment further with providing bundled financial and health or education services to the poor.

2.4 Microfinance: The Provision of Comprehensive Financial Services

In recent years, microcredit has evolved to offer a broader range of services to the poor such as credit, savings, and insurance opportunities. Although the terms "microcredit" and "microfinance" are often used interchangeably, they describe two distinct services. Microcredit is the provision of "small loans to a client made by a bank or other institution. Microcredit can be offered, often without collateral, to an individual or through group lending" (Microfinance Gateway 2006). Microfinance is a more comprehensive provision of financial services. A microfinance institution, or MFI, provides "loans, savings, insurance, transfer services, and other financial products targeted at low-income clients" (Microfinance Gateway 2006).

While the provision of small loans for income-generating purposes remains paramount in microfinance institutions' missions, it is increasingly recognized that the poor demand more financial services than just loans. Section 1.3 discusses the broad range of informal financial institutions that serve the poor's credit and savings needs.

2.5 Potential for Profitability: A Paradigm Shift

The latest development in microfinance is the concept that providing credit to the poor can be a profitable venture. Research is demonstrating that formal banks and non-governmental organizations (NGOs) are successfully making helping the poor a profitable business. While some worry this will create a backlash of criticism for taking money from the poor, a profitable microfinance provider can expand to reach more poor customers by extending its operations to new communities and providing its services to those who are able to pay for them. According to Nancy Barry, President of the microcredit organization Women's World Banking (WWB), "a

paradigm shift is occurring in retail banking with the poor. Organizations are moving from a compliance culture of low interest rates and low repayment rates to sustainable microfinance with interest rates to cover costs and enable profits" (2006).

With joint-liability strategies in place to ensure borrower reliability, the first step to profitability is to charge interest. Charging interest on loans mitigates currency inflation that devalues the currency and helps cover the costs of providing the financial service. The inflation rate of consumer prices in Venezuela during 2005 was 15.70%, which means that at the end of the year money was worth a seventh of its original value (CIA World Factbook). Understanding that the purchasing power of Venezuelan currency decreases over a year, the poor are willing to pay interest on their loans. This shows that it is often "the availability rather than the cost of credit to poor people which is the constraining factor" (Johnson and Rogaly 1997, 57). Organizations that charge interest rates report high repayment rates, showing that interest rates do not deter many reliable borrowers from participating. This finding is encouraging many non-profit organizations to begin charging interest on loans to recoup losses, and even to venture into the for-profit field.

Although this breakthrough actually occurred in the 1980s, it has been difficult for organizations to adopt new strategies to become profitable. Providers had to develop "organizational structures and management resources capable of delivering microfinance… throughout an entire country" (Robinson 2001, 32). As microcredit organizations compete for funding, they are more inclined to try alternative models. This helps explain the growing number of for-profit credit providers.

MicroRate, the first agency to rate MFIs, allows donors and investors to measure the risk and profitability of over 200 MFIs in Latin America and Africa. MicroRate objectively

measures the performance of MFIs, finding that the three most profitable Latin American organizations in 2001 were BancoSol, Caja los Andes, and Caja Municipal Arequipa. Their gross loan portfolios, or the sum of their loans issued, were $81 million, $52.6 million, and $50.1 million, respectively (MicroRate 2001). MicroRate evaluated a sample of 29 microfinance groups, concluding that the financial institutions' loan portfolios grew 22% on average, and the number of borrowers increased 14% (2001). This means the MFIs would double the amount of loans they disbursed in slightly more than 4 years and would double its borrower base in around 6 years (the growth rate is compounded each year). These positive indicators demonstrate that a large group of MFIs in Latin America are already profitable, that the most profitable MFIs are increasing their earnings, and that MFIs are reaching greater numbers of poor borrowers.

Recently, organizations such as Mexico's Grupo Elektra are exploring the dual provision of commercial and financial services to the poor. Grupo Elektra has a retail division, commercial services, and a financial division. The group's current goal is to use its widely recognized brand name to offer a bundle of services to the poor. In 2002, Grupo Elektra launched Banco Azteca to offer credit services to the poor. According to Grupo Elektra's Chief Executive Officer Javier Sarro, the bank now "has a presence in the majority of Grupo Elektra's 1,000 stores in Mexico and opens 50,000 new savings accounts and 80,000 new loans every week" (2006). Banco Azteca also offers basic insurance, medical coverage, and free entrepreneurship training to its low- and middle-income clients. While Grupo Elektra is a unique combination of retail and financial services, it is an excellent example of how organizations can provide an array of services to the poor to ensure profitability and reach larger audiences.

Achieving financial profitability has significant benefits, but a for-profit motive may shift the focus of microcredit organizations away from the poor. An argument has been made that the

"will lead MFIs up-market, to serve better off clients who can absorb larger loan amounts" (Microfinance Gateway 2006). This is known as the "crowding out" effect because richer borrowers are preferred over poor – but reliable – borrowers. This could eventually result in the poor's exclusion from the credit market if microcredit organizations are not made accountable to poor borrowers.

2.6 Critiques of Microfinance

Microcredit's most basic challenge is to prevent people from behaving opportunistically when given access to other people's money. While loaning money to a family member is a relatively safe transaction because the lender can determine whether the borrower is trusted and likely to repay, other types of loans are more difficult to guarantee. Without collateral, microcredit providers must seek alternative ways to guarantee repayment. This is why microcredit providers attempt to develop systems to ensure reliability, such as the previously discussed group lending model. However, there is no way for a microcredit provider, or even a family member, to have perfect information about a borrower's likelihood of repayment. Even in group lending models, borrowers can collude to coordinate mutual non-repayment of their loans. Thus, credit providers must rely on available information to make their decisions, and constantly explore new, innovative ways to ensure repayment. Many microcredit organizations that are poorly managed do not provide proper incentives for borrowers to repay loans. When loans are not repaid, the organization's financial resources are severely depleted, preventing it from dispersing more loans. Additionally, if credit recipients observe that default is not punished, reliable borrowers will lose the incentive to repay their loans.

A fundamental critique of microcredit is that it does not reach the poorest of the poor. This is entirely accurate. Microcredit does not help the most destitute, who need more basic services such as immediate relief, health, water projects and education (Microfinance Gateway 2006). Although credit programs allow the poor to improve their financial situation, these services do not solve the immediate need for basic food and shelter. In these instances, "government and donor subsidies and charitable contributions are appropriate" (Robinson 2001, 56). Additionally, the majority of MFIs still require the recipient to propose a viable investment or produce some form of collateral (Microfinance Gateway 2006). While microfinance is not the solution to the deepest poverty, it is successfully improving the lives of millions of moderately poor people around the world. When families are operating near the subsistence level, microfinance has the potential to positively expand their opportunities and resources, moving them away from the risky threshold or extreme poverty.

Some researchers contend that microfinance will not extricate the poor from poverty. In a 1999 article, Jonathan Morduch argues that microfinance helps individuals, but "making a real dent in poverty will require increasing overall levels of economic growth and employment generation. Microfinance may be able to help some households take advantage of those processes, but nothing so far suggests that it will ever drive them" (Morduch 1999a, 43). While Morduch is correct that microfinance will not guarantee widespread economic development, studies show that the availability of a microcredit loan encourages people to act upon their entrepreneurial ideas (DeSoto 2000). Without defining what a "real dent in poverty" means, Morduch's argument is not convincing.

Critics of microcredit, such as Dale Adams of Ohio State University, also observe that lending programs can sink the poor further into debt. Many microcredit organizations grant

loans to people without stable incomes, which can exacerbate “debt and poverty by loans that [the poor] cannot repay” (Microfinance Gateway 2006). Adams considers this so problematic that he calls microcredit “microdebt” (2005). While some poor do fall into debt after receiving microcredit loans, credit providers have an incentive to ensure borrower reliability to prevent default both for the good of the borrower and for the financial success of the organization. Critics also argue that microfinance organizations charge excessive interest rates, but such criticisms typically do not consider currency inflation, which renders most real interest rates actually quite low if not insignificant.

Making MFIs profitable and sustainable business ventures would eliminate the grounds of many of the above criticisms. Currently, microfinance organizations are highly subsidized by governments, international organizations, and donors. While many critics note that microfinance does not help the poorest of the poor, most researchers and politicians agree that microfinance is a valuable service because it is a low-cost solution to providing the credit that millions of poor demand. The concern therefore lies in resource allocation. Because funding for nonprofit work is limited, difficult choices need to be made about which populations and organizations deserve funding. If more MFIs continue to become financially solvent or profitable, they would not require external funding. This would make microfinance an even more a positive and productive movement in the field of international economic development.

Chapter 3 – Fundefir

This chapter examines Fundefir's strategies, strengths, and weaknesses. I explain how Fundefir began, how it operates, the structure of its communal banks, community leaders' opinions of the banks, and the limitations of this model. Chapters 4 and 5 will proceed to statistically analyze the financial performance of Fundefir's communal banks. In spring 2005 I spent three months working for Fundefir and saw the model's impact. My evaluation of Fundefir's work will utilize this personal experience. In addition, Fundefir staff members provided documents, publications, and advice to inform this analysis. The experience also provided me with an understanding of the Venezuelan social and economic reality, and the overall environment and challenges that Fundefir seeks to address.

3.1 Fundefir's Inception

Fundefir, the "Foundation for Rural Finance," built upon the existing microcredit framework to create a new approach that is serving citizens in Venezuela and throughout the world. Fundefir's successful communal banking model provides the poor with extensive financial services, and in doing so challenges traditional microcredit strategies. Fundefir's banks enjoy high rates of loan repayment, significant community participation, and leadership positions for community residents (Fundefir 2005).

Fundefir's charismatic director and founder, Salomón Raydán, drew upon his personal work history and the examples of organizations such as the Grameen Bank and FINCA to create a new type of microfinance service in Venezuela. Growing up, Raydán's mother contributed to the household income with profits from her small clothing business. After his studies, Raydán worked with a government-led microcredit program for farmers until his frustration with the

model's inefficiencies led him to take a different job (Ashoka 2001). Later in his career, Raydán's experiences coalesced and prompted him to design his own microfinance approach.

When Raydán began to develop Fundefir's communal banks, he was recognized as an Ashoka Fellow. Ashoka is a prestigious organization that gives monetary grants to "social entrepreneurs" to expand the socially advantageous service they are providing to their community or region. Ashoka identifies socially-minded innovators around the world who work on projects as diverse as special education to rural electrification. Those selected as Ashoka Fellows benefit from increased credibility for their organization, additional funding, and consulting support. Additionally, the 2001 World Bank Development Marketplace Competition and the Magazine Fast 50 recognized Fundefir's model as one of the most important innovations in the field of microfinance.

3.2 How Fundefir Works: The Umbrella Organization

Fundefir is a non-governmental organization established by Raydán in 1996 to "alleviate the problems of poverty in Venezuela" (Fundefir 2005). Fundefir addresses poverty through a comprehensive communal banking service that allows the poor to access capital for loans, savings, and investment. Fundefir innovatively organizes community residents' savings in a bank that accepts savings, grants credits, provides loans to both men and women, provides loans for all purposes, and disburses dividends to members. While other organizations may practice one or two of these innovations, Fundefir's important contribution to the field of microfinance is that it combines this set of community-based services to create a highly successful method of serving large numbers of poor borrowers and investors. The economic benefits of Fundefir's model directly affect bank members and spill over to all the community residents. By

resourcefully responding to demand for financial services, Fundefir is instigating empowerment at the grassroots level.

Raydán based Fundefir's model on elements of the Grameen Bank and FINCA's approaches. Many of the innovative elements in Fundefir's strategy are also present in FINCA. While the Grameen Bank and Fundefir share the basic goal of providing credit to the poor, they differ significantly in how they provide the service. FINCA and Fundefir, on the other hand, both use community banking methods to reach poor borrowers, grant credits, and collect savings deposits. One main distinction is that Grameen and FINCA rely on external donor funding to provide the capital for their credits, while Fundefir banks collect community savings and then loan these funds back to residents. Fundefir is unique in providing loans for non income-generating uses such as consumption, construction, and medical expenses. Also, neither Grameen nor FINCA loan significant amounts of money to men. Therefore, while both Grameen and FINCA helped shape Fundefir's strategies, Fundefir has combined these approaches and extended the microfinance model by incorporating novel elements.

Fundefir's philosophy is that if given a loan, the poor have the necessary entrepreneurial tools to succeed. Further, Raydán believes that communities already possess the necessary elements to "find their own answers and elevate the quality of life of their residents" (Fundefir 2005). This logic is the basis of Fundefir's strategy to not use external funding to grant loans. Raydán argues that the supply of money in communities is equal to the demand for credit – all that is needed is a bank to redistribute the money from those who wish to save and loan their excesses of capital to those who wish to borrow.

3.3 Fundefir's Communal Banks

Fundefir's operating strategy is to establish communal banks called "Bankomunales"[3] in poor communities. Since 1996, Fundefir has established over 80 communal banks that are operating successfully throughout Venezuela. The model is currently being tested in other South American countries and even in Europe. Once operational, these banks provide residents with access to investment and credit services. Fundefir goes well beyond the conventional microfinance model to build a grassroots, community-based financial infrastructure. Fundefir – the NGO, not the bank – exists *not* to grant loans, but rather to establish Bankomunales. It is then the responsibility of community-led Bankomunales to grant loans. These banks encourage investment and lending, both of which stimulate economic development in the communities.

Fundefir exercises no direct control over the Bankomunales. Instead, the NGO acts as an adviser. To clarify, Fundefir is not an official bank because it does not actually grant credit – instead, it organizes community groups for "auto-finance." Fundefir's 15 to 20 employees work in communities to teach interested residents how to start a bank, giving those community leaders the support and training they need, and providing long-term support to the banks (such as consultation about changing interest rates). Fundefir relies on outside funding to support its personnel, who create and supervise the communal banks. The money Fundefir receives supports the NGO's overhead costs but is never given away in the form of a loan to an individual or a bank.

Fundefir's modest sources of funding are philanthropic departments of Venezuelan oil companies. This unlikely pairing of oil and micro loans demonstrates the NGO's creativity and resourcefulness in acquiring funding. Fundefir also received a grant from Ashoka to support its

[3] In Spanish, Bankomunales means "bancos comunales," which directly translates to "communal banks."

work. Fundefir benefits from receiving money from companies and organizations rather than from individual donors. Donors often want a personal and direct connection to a project, which is difficult because donations go entirely to Fundefir's "overhead" costs, rather than to the banks or to individual loan recipients.

In addition to advising its banks on financial issues, Fundefir collects data on each of the Bankomunales and computerizes the banks' financial transactions. This helps Fundefir evaluate the successes of its Bankomunales (and thus garner future funding by documenting the model's results) and stay up-to-date on bank transactions. If a problem develops, such as if a treasurer miscalculates the bank's total amount of monetary holdings, Fundefir will notify the bank of this record-keeping error. This supervision helps identify and solve problems at their early stages, rather than months later when an accounting error can become nearly impossible to rectify. Each bank has high numbers of transactions, including deposits, withdrawals, loans, interest payments, loan repayments, and dividend payments. This constant flow of money makes the bookkeeping a tedious task, particularly because in the absence of computers, many rural banks keep their records by hand. The Bankomunales therefore benefit greatly from Fundefir's continued oversight.

3.4 How Bankomunales Work

Fundefir's communal banks are the truly innovative aspect of the organization: the banks grant loans using bank members' savings (no external funding used for loans), provide loans for non income-generating purposes, serve both men and women, and disburse dividends based on members' shares in the bank.

Each bank's operations are individualized, but share many common elements. To establish each bank, a Fundefir "promoter" arrives in a community, meets with community residents and leaders, and gauges interest in the creation of a communal bank. The promoter then works with a small group of three to five community members to lay the framework for the bank, train the leaders, and create a transparent financial record of bank transactions. At this point, it is up to the bank's leaders to convince other residents to invest their savings in the bank. From the bank's inception, this strategy emphasizes community leaders' central role; the Fundefir promoter serves only as an advisor or consultant for the bank throughout the process.

Once the bank leaders achieve community buy-in from their families, neighbors, and friends, these members of the community invest their savings in the bank. To invest, individuals purchase $5 shares in the bank. Each bank member has an active, participatory role in the bank and votes on key decisions such as what interest rates to charge, the rules of bank transactions, and the amount of money disbursed in loans. In addition to these decision-making responsibilities, each person who purchases shares in the bank is eligible to receive loans five times greater than the amount he/she invested. The loans are drawn from the pooled savings of all the bank members, which means that members of the bank are both lenders and recipients of credit. It also means that the money members are loaned belongs to their neighbors, which inspires near-perfect repayment rates (Fundefir 2005).

Fundefir decision to grant loans using only community residents' savings is an important divergence from typical microfinance models. The alternative is to rely on donor funds to provide initial capital for loans. The latter is the basis of lending at the Grameen Bank and FINCA, although they are currently exploring the profit opportunities in serving the poor.

When Fundefir began, the government promised to give the NGO money to grant loans (using external money for credit, which is the traditional MFI approach). However, the government was severely delayed in giving Fundefir this money, so out of necessity the first Bankomunales established were exclusively reliant on funds already possessed by community residents. When the government financial support materialized a year later, Fundefir established a second group of banks using external money to grant loans. The result surprised many: external-credit based banks were *less* successful and had significantly lower rates of loan repayment than Fundefir's original banks (Abad 2004). Consequently, Fundefir decided its Bankomunales should solely utilize money already present in the communities.

The Bankomunales are based on the simple logic that the poor have moments of financial excess and financial need, just as the rich have. For example, after collecting the harvest it may be possible to save, while a loan may be needed in unexpected misfortunes such as medical emergencies. The Bankomunal model balances brief financial excesses with the need for credit. A proven example that the poor have capacity to save money is that they traditionally received – and paid back – loans from moneylenders with extremely high interest rates.

The reason the Bankomunales charge high interest rates is due to two factors - high national inflation rates and the goal of the bank members to earn returns on their savings (Fundefir 2005). Most Bankomunales charge interest rates of 5% monthly, or 60% annually. Interest rates are relative, and depend on macroeconomic conditions between one year, or even one season, and another. With 30% or 40% annual inflation, the Bankomunales' annual interest rate of 60% is not particularly high. Additionally, this is the interest rate that members chose, and Raydán notes that it should be respected because the bank members are aware of their own needs (2005).

Bank members vote on the interest rate for their Bankomunal, which makes the bank responsive to the demands for credit and the desire of members to receive returns on their investment. As recipients of credit, members want low interest rates, but as lenders they want high interest rates (Raydán 2000). This conflict of interests balances the ultimate decision, resulting in an interest rate that is acceptable to both borrowers and lenders, who are ultimately the same people. As discussed in Section 1.2, formal banks charge commissions and require guarantees for loans, thus excluding the poor from their services. Moneylenders, another possible source of credit, often charge interest rates four times greater than the Bankomunales'. Ultimately, the interest rates members pay are returned to them when they receive dividends for their shares. A bonus of organizing their own bank is that the poor reap the profits of investing their own savings, rather than allowing a formal bank to make this profit (Raydán 2000).

Fundefir's Bankomunales give bank members access to credit for income-generating projects, as well as daily and emergency needs. Fundefir has not observed a notable difference in repayment rates for micro-enterprise loan requests and general loan requests (Raydán 2006). Further, Fundefir has demonstrated the importance of offering credit for a variety of needs by proving the poor desire such a service. Fundefir's data on its Bankomunales shows that although demand for credit to start or improve businesses is high, this demand comprises less than half of the loans requested (Raydán 2006). This shows that the poor want loans for a wide variety of reasons.

Another distinguishing feature of the Bankomunales is the population they serve – both men and women. Distinct from other MFIs' practices, Fundefir's banks provide loans to both genders without a preference in favor of women. Both male and female community residents can fully participate in the bank by buying shares, voting on decisions, and receiving loans.

Although most MFIs prefer to loan to women based on evidence that women are more likely to repay loans and invest profits in their families than men are, Fundefir's approach has resulted in nearly equal rates of loan repayment between the genders. This experience indicates that men can be responsible borrowers under the right conditions.

While Bankomunales focus on providing financial services, they also contribute significantly to community development. These benefits stem from the positive externalities of the bank's framework – the training of leaders, the empowerment of members, and the positive economic effects of loans in the community. By building human capital in the communities, Bankomunales create a well-trained and informed population. Such education facilitates further economic and social change.

Another positive side effect of Bankomunales' activities is the injection of dividends into the local economy. At the end of the year, a bank's interest profits are distributed between the members in the form of dividends. Thus, not only do residents have access to credit and savings services, but everyone who invests money in the bank makes a profit on their money. This in turn encourages further investment. Typically, Bankomunales distribute dividends one year after the purchase of the share. While most of the banks distribute dividends in this manner, each has its own rules according to members' preferences. Some Bankomunales disburse all dividends at the end of the calendar year, others every six months, and still others monthly. Regardless of the when they are distributed, approximately 70% of dividends are reinvested in the bank, allowing members to take out larger loans and earn greater dividends the following year (Raydán 2006). The dividends that are not reinvested in the bank are most commonly used to buy "luxury" goods – such as new clothing and new household items. Reinvestment in the bank combined with these consumption purchases economically revitalizes the community.

As discussed earlier, a basic problem of microcredit is that people behave opportunistically with other people's money. Fundefir's use of the poor's own savings to finance loans is an innovative method that ensures high rates of loan repayment. Because banks use only money from the community, members feel a strong sense of ownership of the Bankomunales and the loans the banks disburse.

3.5 Comments From Communal Bank Leaders

Fundefir organizes an annual meeting for leaders from all the communal banks to discuss the successes and shortcomings of their banks. During the September 2006 summit, Fundefir distributed a written questionnaire to better understand bank leaders' opinions about the role of the Bankomunales in their communities. Thirty-five bank leaders responded to questions about what credit providers were present in the community before the Bankomunal, how community opinion of the bank changed since its establishment, why the respondent decided to become a bank leader, what benefits the bank offers the community, and what changes could be made to improve the banks. After evaluating the responses, Fundefir President Raydán described the results of this survey to me (see Appendix A).

The clear tone of the responses is that the Bankomunales are a source of pride and accomplishment in the community. While working with Fundefir, I spoke informally with many bank members who agreed that being a member of the Bankomunal improved their life and gained them newfound respect in the community. Many bank members even displayed signs on their houses saying "Proud to be a member of the Bankomunal."

Bank leaders reported that credit services were inadequate before the establishment of their Bankomunal. Of the 35 respondents, 20 noted that moneylenders operated in their

communities. However, moneylenders charged particularly high interest rates, which many community residents were unable or unwilling to pay. Bank leaders commonly reported monthly interest rates of 20-30% – four to six times greater than the Bankomunal rate. Only two respondents had experience with credit organizations, and both were unsatisfied with the efficiency and service they received. Therefore, the arrival of the Bankomunal was an important financial development in most communities.

The majority of community residents doubted the legitimacy of the new Bankomunales in their neighborhoods. Nearly all respondents reported that the bank suffered an initial lack of credibility – which ranged from concerns about whether the bank would generate profits to fears as grave as whether the bank would steal residents' money. According to one respondent, "many people thought the banks would be a waste of time and never be able to loan money." After the community leaders garnered support among their peers, the banks began to grant their first credits and demonstrate their legitimacy. In a short time, residents shifted from skepticism to a desire to be bank members. As banks granted more and larger loans, they gained the respect and admiration of both bank members and other community residents. After a year, banks disbursed their first dividends, which further heightened interest in membership. As a bank leader noted, "now when I walk down the street everyone asks me if they can be a member of the Bankomunal." Others noted that while "at first people said the Bankomunal was just a cooperative, now they see it in another light, as a real bank." Many people also state that the banks revitalize their community's economy, thereby "solving our financial problems and providing us with a better future."

The respondents were also asked to explain why they personally decided to be bank leaders. Interestingly, the most common response was not pay, prestige, or education; instead it

was a sense of responsibility to the community and the bank. Individuals commented that they felt obliged to help the bank, because doing so "creates our own organization that allows us to help ourselves in moments of need." Another leader agreed, stating that "I am a social activist, and I knew that helping the bank would help the community." Others mentioned a desire to learn about how banks function. A respondent who saw a Bankomunal in another community decided, "we need a bank like that in my town," and proceeded to spearhead working with a Fundefir promoter to establish a Bankomunal.

The presence of the Bankomunales creates significant benefits for members and entire communities. The most commonly mentioned benefits are an elimination of reliance on moneylenders, the creation of jobs and small businesses, community unification, and loans to solve people's immediate and long-term problems. As one leader commented, "the Bankomunal has been the push we needed to begin our small businesses." Image 1, A Loan to Make Bread, shows a bank member who used her loan to buy a bread machine. This purchase

Image 1: A Loan to Make Bread

replaced hours of manual labor, allowing her to increase her bread production. She is now the primary provider of bread for her community. She commented that she would have never been able to buy the machine without the help of a loan from her bank. According to

Image 2: They Told Me I Couldn't Do It

another bank member, photographed in Image 2, They Told Me I Couldn't Do It, "I could never have opened my own video rental store without a loan from my bank to buy all the movies. My father told me it was a bad idea that wouldn't work. Now everyone comes to my store to rent movies and use my long-distance phone service."

Access to credit for consumption is also important to many leaders, such as one who wrote, "without the Bankomunal we would not have a source of immediate credit to resolve our problems and emergencies." Other leaders noted that the Bankomunales transform disorganized communities into a cohesive group of "united, responsible, and proud" bank members.

Bank leaders also said dividends demonstrated that the banks were successful. Twenty-seven of 35 respondents, or 77.1% of the bank leaders interviewed, commented that most members of their banks use their dividends to purchase more shares in the bank. Five respondents said the majority of their bank members used dividends for consumption purchases, and 3 respondents cited other uses. This information provides a strong indication that community residents are confident in the performance of their banks. If members were not confident that their investment in the bank would appreciate (or at least be safe), they would be more likely to use their dividends to purchase consumer items rather than more shares.

While the banks are clearly well received and important in the communities, leaders had several suggestions for how to improve the bank model. One suggestion was to find a way to decrease bank members' apathy and encourage better participation during weekly meetings. Another idea was to grant credits based on the urgency of need, rather than based on when the application was submitted. This would make the bank particularly responsive to emergency demands for credit, and would disadvantage members who wanted to make a longer-term investment in expanding their business (for which there is no immediate, pressing need). Another interesting suggestion was to develop a procedure for revoking the bank membership of borrowers who had made late payments on a number of loans. The elimination of such members would allow banks to function more smoothly and extend credit to more members. While these respondents suggested improvements on the Bankomunal model, the vast majority said that their bank was already running well and serving their needs, and there was nothing they wished to change. One Bankomunal leader said "this is the first time we have been responsible for our success, without relying on others. We can point to our Bankomunal and say: Look – we did it! We're moving forward." Another respondent simply said: "I love my Bankomunal."

3.6 Limitations of the Model

While bank leaders clearly appreciate the presence of the Bankomunales in their communities, there are limitations to the model. First, a Fundefir representative must physically go to each community to start a communal bank. While this has proven effective, it prevents the establishment of banks in distant areas or other countries. Opening new branch offices of Fundefir would facilitate wider expansion. Another limitation is funding. While the Bankomunales all operate without external funding, Fundefir itself relies on donor contributions

to cover the cost of establishing and advising the banks. Therefore, while the banks are independently financially profitable, Fundefir has no means of making profits. Fundefir has not encountered problems in generating sufficient funding, but this could potentially be a concern if the oil market suffers price shocks, as Fundefir is primarily funded by oil companies' philanthropic departments.

The number of members in each bank is another limiting feature of Fundefir's model. While Bankomunales do not set a maximum number of members, Fundefir recommends between 40 and 50 members, with no more than 100. The logic behind this restriction is that as banks grow in size, it becomes more difficult for members to monitor each other. Bankomunales function on the peer-monitoring system in which, in the case of a late payment, individuals pressure other members into repaying their loans. Limiting membership therefore has the benefit of improving borrowers' rates of loan repayment, but prevents many community residents from participating in the bank. This reduces the number of people a bank can reach, and as a result constrains the potential economic impact of each bank.

Dale Adams mentioned other problems that develop as credit unions grow in size and monetary value that apply to Fundefir as well. Larger organizations "are forced to rely on paid rather than voluntary managers" (Adams 1995). Although Bankomunal members vote on whether to pay a salary to bank leaders, the decision is not always truly voluntary. In the event of bank difficulties such as disorganized granting of credit or high frequencies of late payments, banks are sometimes compelled to pay a bank leader to take a more active, time-intensive role in monitoring the bank. However, many smaller banks will also pay their leaders a small stipend as compensation for their time. Another concern Adams notes is rising inflation. Although

Venezuela's inflation rates have hovered near 15% in recent years, the leadership of President Hugo Chavez could create unpredictable economic problems.

A benefit of having formal banks is that they can use their network of offices to transfer money to where it will produce the greatest profits. By moving money from a community where there are few credit requests (where bank members invest primarily for savings opportunity) to a community where there is a greater demand for credit allows formal banks to maximize its profits. At individual Bankomunales, money not demanded in credits simply sits in bank reserves. This eliminates Bankomunales' opportunity for arbitrage. While transferring money between communities would allow investors to receive the greatest profit possible on their investment (interest payments are greater if the money is constantly loaned out), this would require the creation of significant institutional structures. The use of external funds to grant credits may also decrease the motivation for repayment because the money no longer belongs to the community residents.

While these limitations are important, this chapter demonstrated that Fundefir employees and bank leaders express strong satisfaction with the model and its results. The structure of Bankomunales provides both credit and investment opportunities, which bank leaders say is a great asset to the community. However, the question still remains of whether Fundefir's financial benefits match its social impact.

Chapter 4 – Success of Fundefir's Communal Banks

Fundefir's communal banking model is innovative, but is it successful? I define success as positive financial performance. Therefore, a successful bank is one that experiences a high yield of shares, increasing total assets, growth in capital, and low percentages of late payments on loans. Using this definition, I will determine the success of Fundefir's model by evaluating the financial performance of 14 Bankomunales over a one-year period. In addition to examining financial indicators, I consider how effectively the banks meet the needs of the poor for different types of loans.

While this analysis cannot unequivocally conclude whether Fundefir's communal banks reduce poverty, thriving banks strongly indicate that members are experiencing financial gains. This analysis was conducted without systematic information about the characteristics of individual banks' leadership, communities, or residents. However, the Sections 3.4 and 3.5 provide a general sense of the feeling of empowerment experienced by members in Bankomunales and the general characteristics of the communities where they operate. Assessing the success of a financial institution is difficult due to some methodological difficulties. There is the possibility that a selection bias exists in bank membership. Possibly those who join already have slightly higher incomes or healthier families. Therefore, no evaluation can be made about the ability of Fundefir's model to reduce poverty. The following assessment of the model is therefore based on the financial performance of banks, which result in direct economic repercussions for bank members and other community residents.

4.1 Selection of Sample

This analysis examines data from 14 Bankomunales over a one-year period. While Fundefir has established 82 banks, the time constraints of this study made it impossible to include data from all the banks. Therefore, a smaller sample size was appropriate. Raydán specifically recommended these 14 banks for statistical analysis because they provide a balanced sample of all the banks that is not biased in favor of any particular variable. The data used in this study was provided in a de-identified format with approval from the individual banks (see Appendix A). The banks vary greatly in age, financial size, membership, location, and loan repayment rates. Variation in the sample is important because it demonstrates the successes and shortcomings of banks operating in different conditions. For the purposes of this study, capturing variance is more informative than conducting a best practice analysis in which only the most financially successful banks would be examined. In a best practice analysis, banks experiencing low yields of shares or significant late payments would not be included, and hence any inferences about the relative success of the model of microlending would be misleadingly optimistic.

The time period of 12 months, beginning in April 2004 and ending in March 2005, was selected to provide sufficient information for analysis. The specific period of April through March was chosen because in earlier months, banks' financial records were not computerized. The goal was to have as many observations as possible within the period of one year. A 12-month period of analysis was selected to observe the banks over an entire year, resulting in a more accurate description of "normal" bank performance. Thus, if a bank had exceptionally high or low performance in one month or one quarter, this activity would not mistakenly be

considered typical for that bank. Also, a one-year period allows an analysis of annual trends, which is particularly important in the event of seasonal variation.

4.2 Variables in the Data Set

The data are organized by bank and by month to allow for comparisons both between banks and over time. For each bank, the following variables are reported for each month: yield of shares, total bank assets, growth in capital, amount of late payments, and uses of loans. For explanations of how variables are calculated, see Appendix B.

An important feature of the data is that loans are distinguished by categories that describe the use or purpose of the loan. When banks grant loans, they ask the borrower to what use he or she will put the funds, and then classify the loan accordingly into one of 10 categories. For the ease of the reader, in this analysis all monetary amounts of loans and other variables have been converted from Venezuelan currency to the US dollar at the exchange rate of 2,000 Bolivares = $US 1.[4]

4.3 Descriptive Statistics: Heterogeneity of the Sample

Before considering whether the banks are financially successful, it is helpful to understand the nature of the sample. The table below provides summary statistics of the 14 banks for the year of this analysis, showing significant variation in all categories. The age of

[4] This exchange rate is based on exchange rates reported by the CIA World Factbook. In 2004, $US 1 = 1,891.3 Bolivares, while in 2005, $US 1 = 2,089.8 Bolivares. As my data set spans both years, I approximate the two exchange rates as $US 1 ≅ 2,000 Bolivares. This is the exchange rate used in all calculations of $US throughout the paper.

banks ranges from establishment 12 to 52 months prior to the end of this analysis.[5] The number and amount of credits (or loans) banks grant during the year also vary – while average credit size of all banks is $93.93, average credits at the 14 individual banks range from $25 to $157. The percentage of male members in banks ranges from 27% to 54%, but only one bank has over 50% male membership. On average, banks have 37% male membership. The average number of shares members own is 7 (which at $5 a share are worth $35), although members of larger banks tend to own more shares than members of smaller banks. Late payments, calculated as the percentage of total loans that are overdue, vary dramatically, ranging from 0% to 51.4%. The average percent of late payments in all banks is 9.81%. While annual bank expenses range from $0 to $4.28 per member, banks typically spend $1.19 per member. Several banks report no annual expenses or operating costs, which is possible because Fundefir provides its banks advice and support free of charge. Fundefir provides the same service to all the banks, which means that banks with annual expenses of $3 or $4 per member are typically purchasing equipment for the bank or financially compensating one or more bank leaders for their work.

[5] The "Age of the Bank" variable is difficult to understand: it is calculated by subtracting the date of establishment of the bank from the date at the end of this analysis, 3/31/05. For example, Bank 1 was established on 11/01/03, so the difference between 11/03 and 3/31/05 is 17 months, which is the "age" of the bank.

Table 1: Bank Summary Statistics

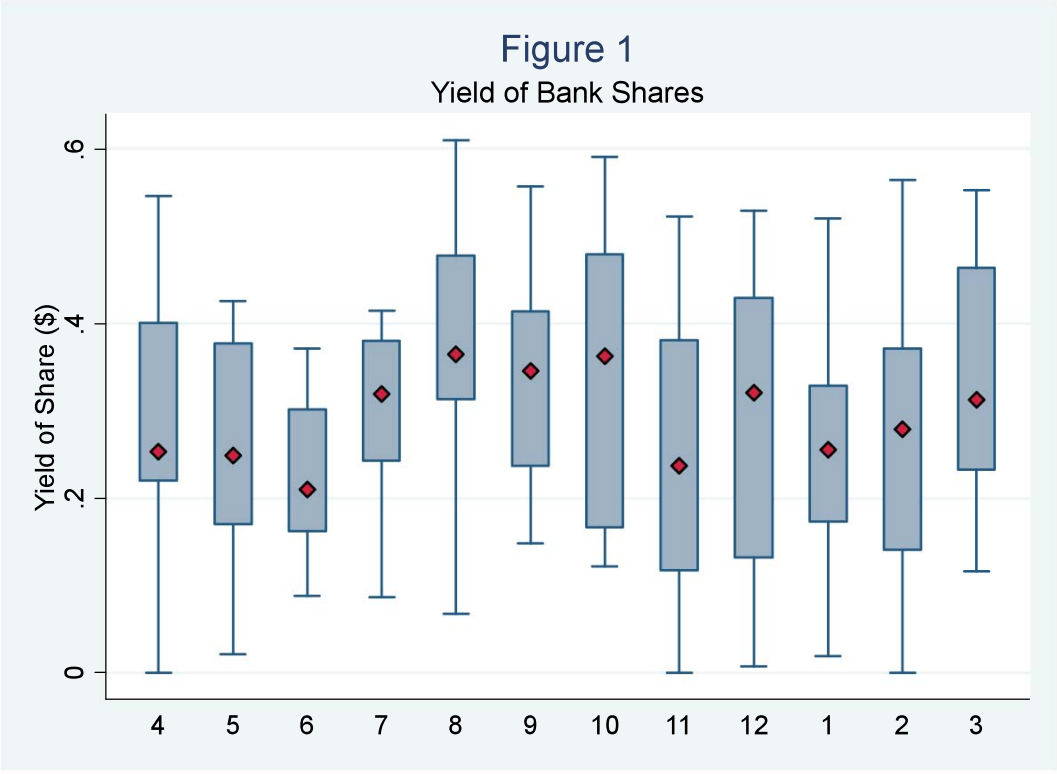
Bank	Bank Age (in mths)	# Mem-bers	# Credits Granted	Total Credits Granted $US	Ave Credit Size $US	% Male Members	Ave Shares/ Member	Yield of Share in 1 Year	Late Payments as % of Total Credits	Bank Expenses Per Member $US
1	17	46	98	5980	61	34.8	4	3.48	9.1	2.00
2	15	42	72	5685	79	35.7	6	4.68	0	4.28
3	13	44	105	3580	34	54.6	2	3.96	0.3	1.13
4	29	83	92	10908	119	28.9	7	3.96	3.9	1.51
5	52	113	178	25208	142	32.7	11	3.60	10.1	0
6	52	27	17	2420	142	44.4	8	1.80	39.6	2.93
7	46	61	134	9400	70	39.3	7	3.36	4.8	0
8	45	101	245	38540	157	37.6	12	2.76	3.4	0
9	45	38	9	1000	111	39.5	5	1.08	0	1.30
10	45	49	81	8300	102	28.6	9	2.04	6.0	0
11	44	55	41	3780	92	27.3	4	4.44	51.4	0
12	18	63	257	33660	131	30.2	17	4.92	0.3	2.45
13	13	30	42	1052	25	40.0	2	2.88	2.2	0.84
14	12	54	68	3392	50	46.3	3	3.24	2.4	0.05

These data indicate that the sample of banks is heterogeneous, with variation in membership, credits granted, yield of shares, late payments, and bank expenses. This understanding of the characteristics of the sample informs the following analysis of how financially successful the banks are.

4.4 Are the Bankomunales Successful?

The data show that during the 12 months of this study, the 14 Bankomunales were highly successful. According to my definition, this means that the banks enjoy high yield of shares, increasing total assets, growth in capital, and few late payments on loans. This analysis shows that each bank performed successfully over the year, although some banks performed far better than others. Additionally, much of the variation in financial success occurred within specific months, such as when late payments increased after Christmas. This section provides an in-depth analysis of banks' success, according to the variables defined above.

Many graphs will be presented in the form of box plots such as Figure 1 below. In these box plots, 50% of the observations in each month are enclosed by the shaded blue box. The x-axis is the horizontal axis of the graph showing the month. Month 4 is April, month 5 is May, and so forth. The y-axis is the vertical axis of the graph that measures a second variable, such as "Yield of Share" in Figure 1. Lines extend above and below the shaded boxes, representing the upper and lower 25% of the observations. The length of the boxes and the extending lines is indicative of the dispersion of observations in each month. For example, in Figure 1, month 6 is marked by a small box and short extending lines, showing that observations are relatively uniform during that month. Conversely, month 12's long box and extending lines indicate greater dispersion of observations. The line or diamond symbol in the middle of the shaded blue box marks the median or average of the y-axis variable in a given month.



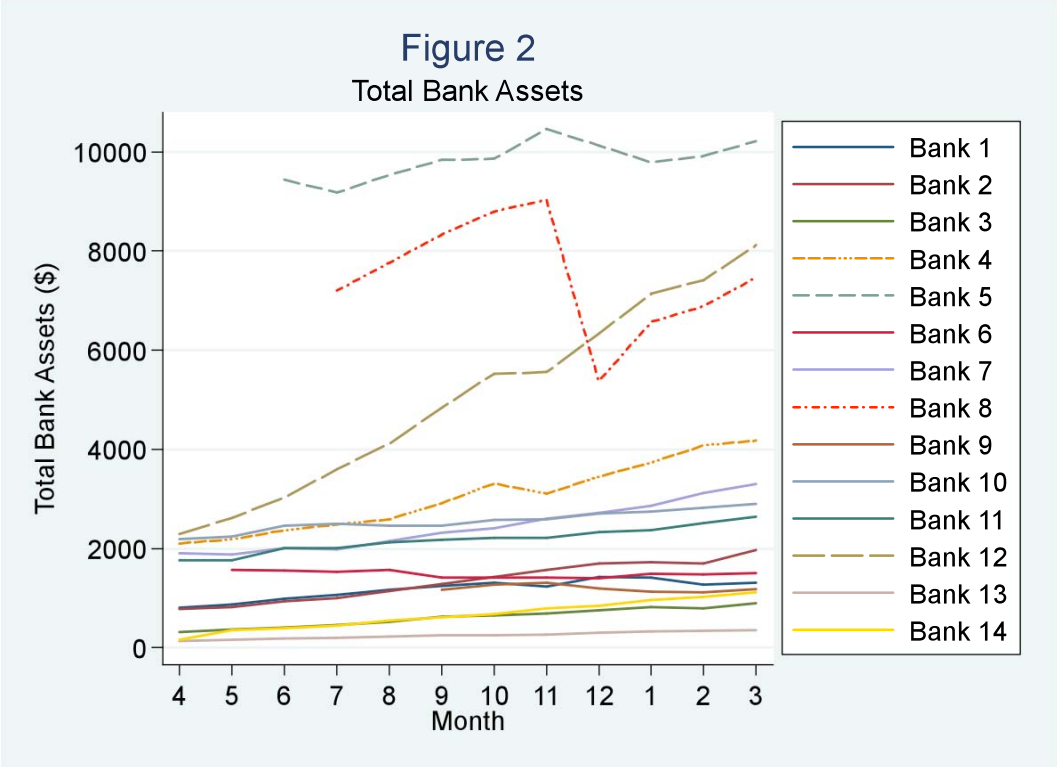
Yield of shares is one indicator of financial success. Each share in a Bankomunal is worth approximately $5.00. The reason this is an investment rather than simple savings is that the shares yield profits at the end of the year. The yield of a share is the sum of all interest payments borrowers make on their loans, minus any costs of the bank, divided by the total number of shares in the bank. In these 14 banks, the yield of an average share is $0.30 monthly, or $3.60 annually.

This statistic is consistent with performance throughout Fundefir's Bankomunal population. According to Raydán, at the end of a year, the return on shares in a bank typically ranges from 50%-70%, or $2.50-$3.50 a year. While these earnings reflect high interest rates, Raydán notes "it is important to remember that the Bankomunal is focused on creating profits for its members, and so even though interest rates are high for borrowers, this money returns to members in the dividends from their shares."

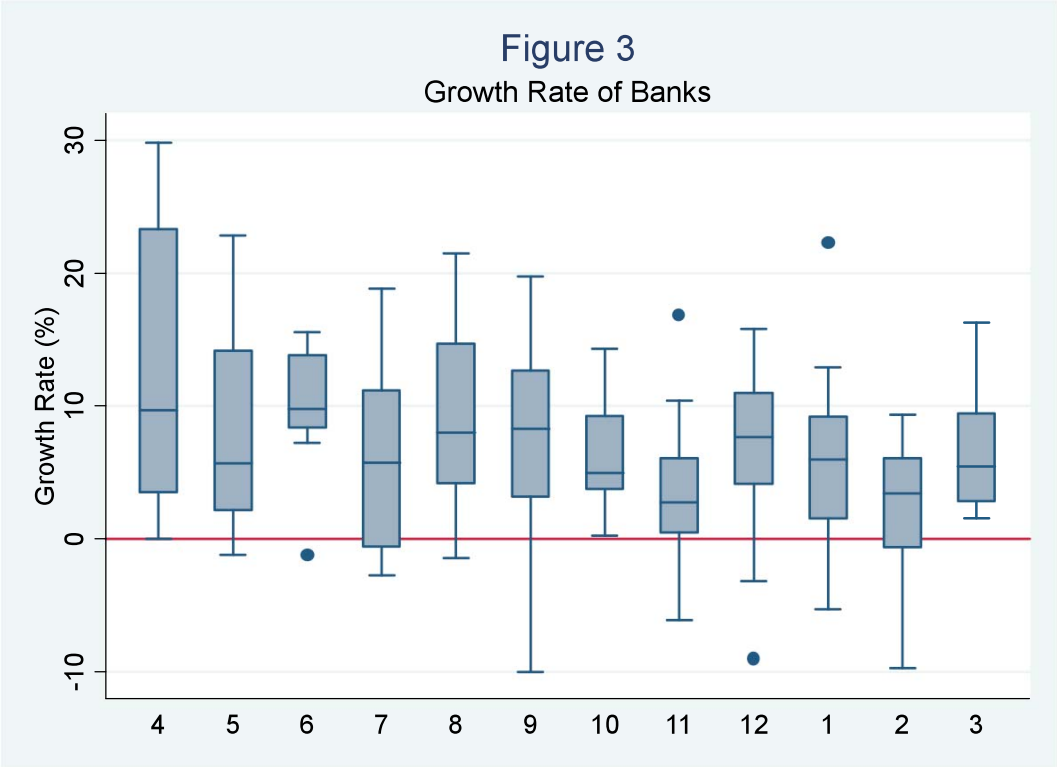
Figure 1 also shows that the yield of shares is relatively constant over the year, with the average value consistently falling between $0.20 and $0.40 a month. A line is drawn on the graph to connect the median yield of shares every month. The line is a visual tool to highlight the consistency of the yield of shares over the year. This indicates that members can expect regular returns from their investment in the bank, with slightly higher returns in August through October. There are no other seasonal trends apparent in an analysis of individual banks' performance.

The increase in a bank's total assets during the year offers a second indicator of financial success, as shown in Figure 2. A bank's assets are the sum of members' money invested in bank shares and retained interest payments on loans. Increases in total assets are therefore caused by members investing more money in the bank, by new members joining and investing money in

the bank, or by members taking out more loans and making interest payments (which are included as part of the bank's assets until they are disbursed). The sustained increase in assets shown in Figure 2 is indicative of members' confidence in the banks. As banks' total assets increase, they are able to grant more loans and better serve their members. Figure 2 shows that in all cases except one, banks' total assets increased over the year. In the majority of banks, total assets increased by consistently, demonstrating financial success.



A bank's rate of growth offers another measure of members' confidence. The growth indicator represents the growth in total bank assets over the period of one month. Figure 3 shows that on average, banks' total assets grow consistently over the study period.



The horizontal line set at a zero percent growth is included to show that the median rate of growth in each month was positive. While average growth was 7.13% over the year, growth was strongest between April and September. In addition to this seasonal pattern of high growth in the spring, growth rates vary significantly between banks. Some banks experienced growth as high as 119%, or as low as -41%. Figure 3 charts strong growth rates for all the banks over time, suggesting that the banks are stable and attractive institutional mechanisms for community saving and investment.

The percentage of banks' late payments shows interesting variation over time. This percentage is calculated as the total amount of late payments (in dollars) divided by the total amount of capital to recoup (see Appendix B for calculations). The amount of late payments is the principal of the loans plus any unpaid interest on the loans. The capital banks have to recoup in any given month is the sum all outstanding loans plus all loans that are past due. This

percentage compares late payments to the total amount of money the bank has lent borrowers for each month. Reporting late payments as a percentage rather than as a dollar amount shows how important the late payments are for the bank – late payments of $100 are extremely important in a bank where total loans are $150, but not as important in a bank where total loans are $1,000.

Because a member continues to pay interest on an overdue loan, late payments are not particularly detrimental to a bank's profits (assuming that the borrower eventually repays, rather than defaulting). Late payments are, however, an indicator of problems because when members are unable to repay loans on time, this prevents others from accessing those funds. Also, high percentages of late payments raise concerns about a bank's criteria for selecting its members.

First, it should be noted that late payments occurred routinely in all months. It appears that a certain percentage of late payments on loans is typical for most banks throughout the year. On average, late payments occurred on 10.78% of all loans made by banks. Figures 4 and 5 both chart late payments over time, but 4 distinguishes between the length of time loans have been late, while 5 focuses on variation in late payments between banks and over time.

In both graphs, late payments are difficult to measure because an outstanding payment will be recorded as late in every month it remains unpaid. For example, if a member does not remit her loan repayment of $50, this will register as a late payment of $50 for each month it is overdue. Therefore, while a high incidence of late payments is indicative of bank members' unreliability, it is often the case that several loans will continue to be unpaid for an extended period, thus raising the percentage of late payments in each month. Therefore, Figure 4 accurately represents the frequency of late payments in different banks and in each month.

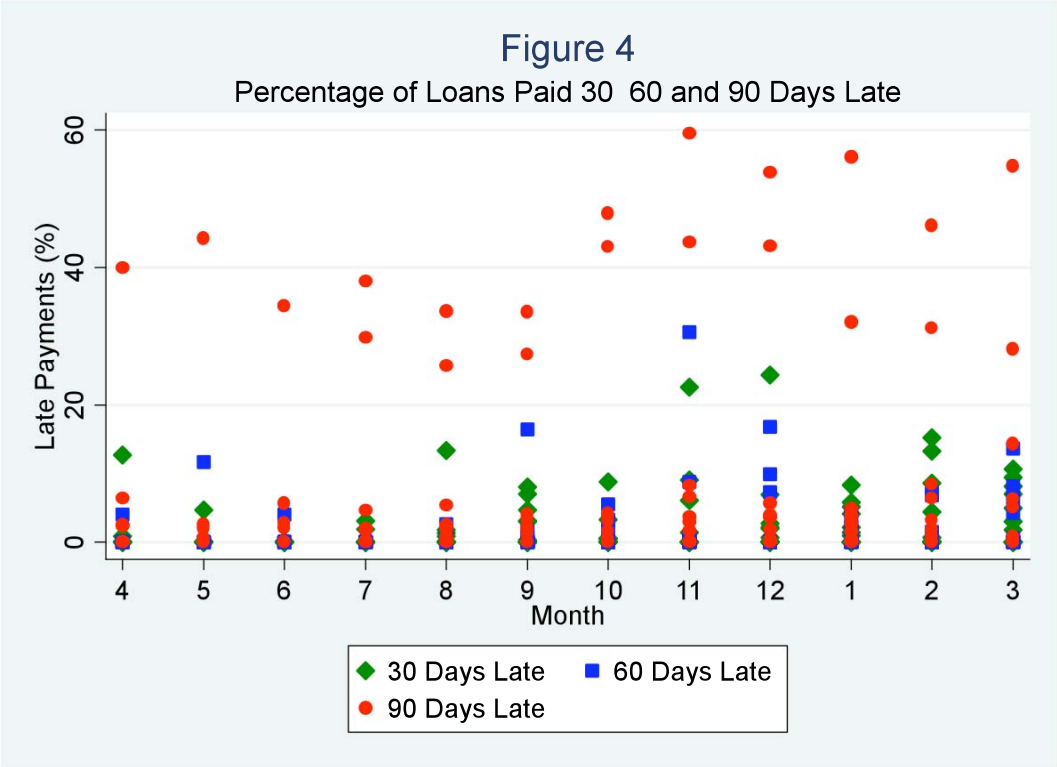


Figure 4 separates the observations into categories of late payments of 30, 60, and 90 days. These categories are represented by three different colors, and all 14 banks' late payments are graphed for each category of late payments. Therefore, the number of total observations in each month is: (3 categories of late payments)(14 banks)=42 observations. Forty-two distinct points are not visible in each month graphed in Figure 4 because the points are superimposed when the percentage of late payments is the same. This means that the cluster of points between 0% and 13% is in reality the vast majority of percentages of late payments. Additionally, a small group of outlying late payments hovers around 40% throughout the year.

A closer examination of the percentage of late payments in Figure 4 reveals that the majority of late payments above 15% share commonalities. While late payments of 15% to 25% were sometimes 60 days late, the majority of late payments above 15% occurred in the 90-day late period. Looking specifically at late payments near 40% of total loans, it is apparent that two

sets of points remained at this abnormally high level throughout the year. This suggests that the high percentage of late payments observed is an artifact of two idiosyncratic banks, rather than a characteristic of the entire sample. When examined, the data reveal that high percentages of late payments were isolated in Banks 6 and 11. In these banks, several large, outstanding loans remained unpaid throughout the year and were thereby classified as 90-day late payments each month.

Differences between late payments of 30, 60, and 90 days can also be examined statistically. Overall, 1.75% of all the money granted in loans is 30 days late, with a standard deviation of 3.97. Of all the funds granted in loans, 2.22% were 60 days late with a standard deviation of 13.83, and 6.81% were 90 days late with a standard deviation of 14.14. First, these numbers mean that 90-day late payments were over three times as frequent as 30 and 60-day late payments. This is because once a loan is 90 days overdue, it continues to appear as a 90-day late payment until it is repaid, whereas a 30-day late payment becomes a 60-day late payment in the following month. The percentages of 60 and 90-day late payments have large standard deviations as mentioned above, demonstrating the high variability or dispersion in late payments during those periods. Conversely, the percentage of 30-day late payments has a standard deviation of only 3.97, which means 30-day late payments are highly concentrated near 1.75%. This variability is readily apparent in the points in the upper segments of Figure 4.

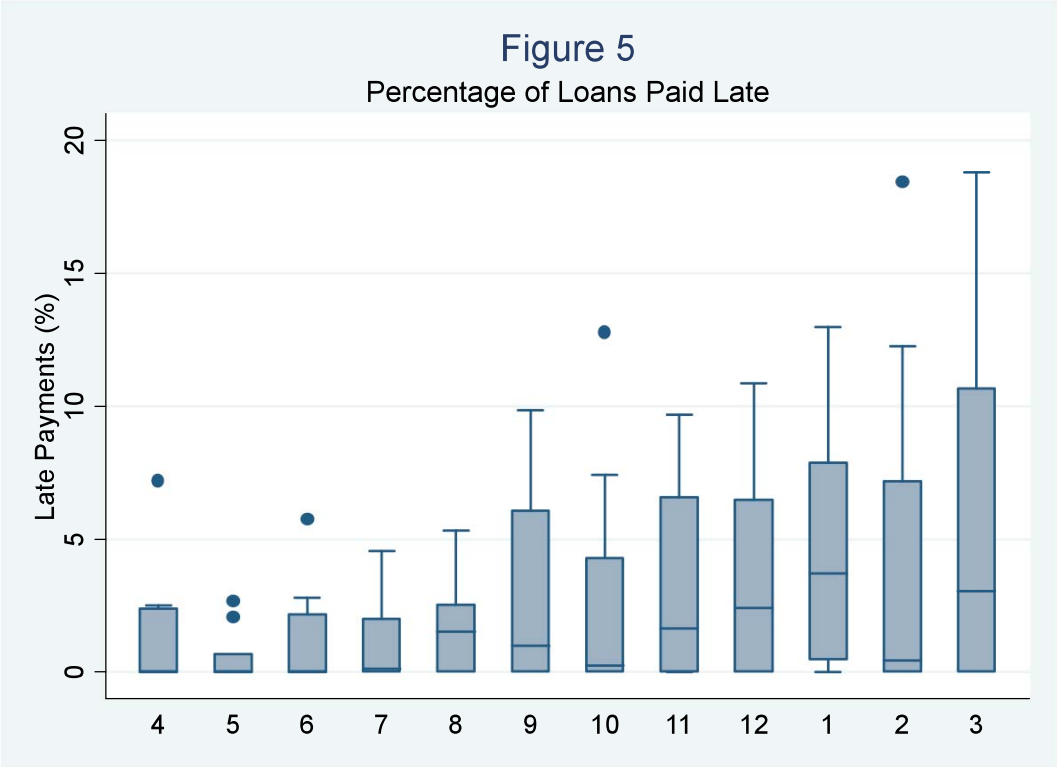


Figure 5 provides similar data about late payments in the form of a box plot. In this graph, the abnormally high 90-day late payments of two banks have been excluded. The resulting graph shows that late payments were more frequent in November through March, with mean late payments peaking at 12.7% in December and 12.4% in March.

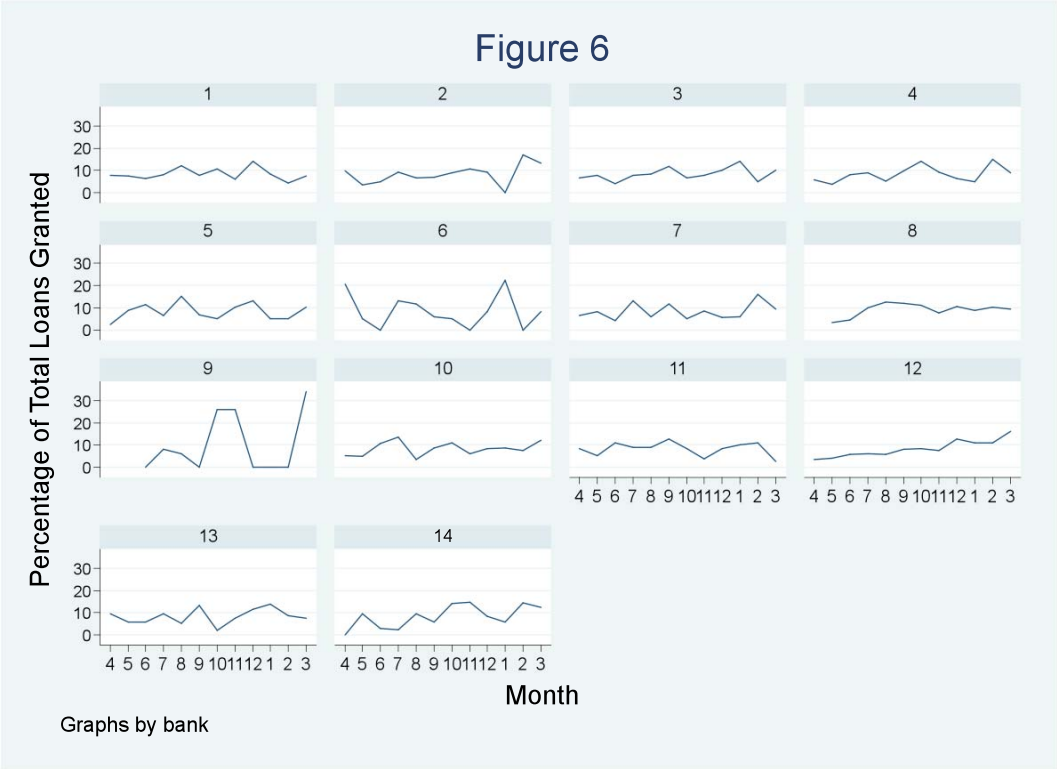
When considering causes of seasonal variation in these late payments, it is necessary to remember that the average amount of time to repay a loan is two months, only after which is it classified as late. This means that a loan made in mid-September will be current until November, and then classified as late in December. Therefore, the high percentage of late payments observed in December originates in September loans, and the late payments in March originate in December loans. In Venezuela, the school year begins in September, leading many parents to request loans for children's schooling. Parents may also request loans for consumption or business purposes because the money normally allocated to such expenses has

been directed toward schooling. Late payments on these loans help explain the exceptionally high percentage of late payments in December. Christmas is another season when people request loans they have difficulty repaying. Many of the loans made in December are used for holiday purchases. A loan to help make ends meet in December will become late in March, which helps explain the spike in late payments observed in March. These and other seasonal trends in loan uses will be discussed further in Chapter 5.

Another interesting feature of Figure 5 is the significantly greater dispersion of late payments in February and March. In these two months, while median late payments remain low, there is wider distribution of late payments, meaning that some banks have particularly high percentages of late payments while most others have low percentages. The other 10 months of the year show little variation in either median late payments or the distribution of late payments across banks, demonstrating that late payments are uncommon in most of the year.

4.5 How Are the Loans Used?

As background knowledge, it is helpful to understand annual patterns in the demand for loans. Figure 6 shows the percentage of total loans granted in each month, with a separate graph for each bank.

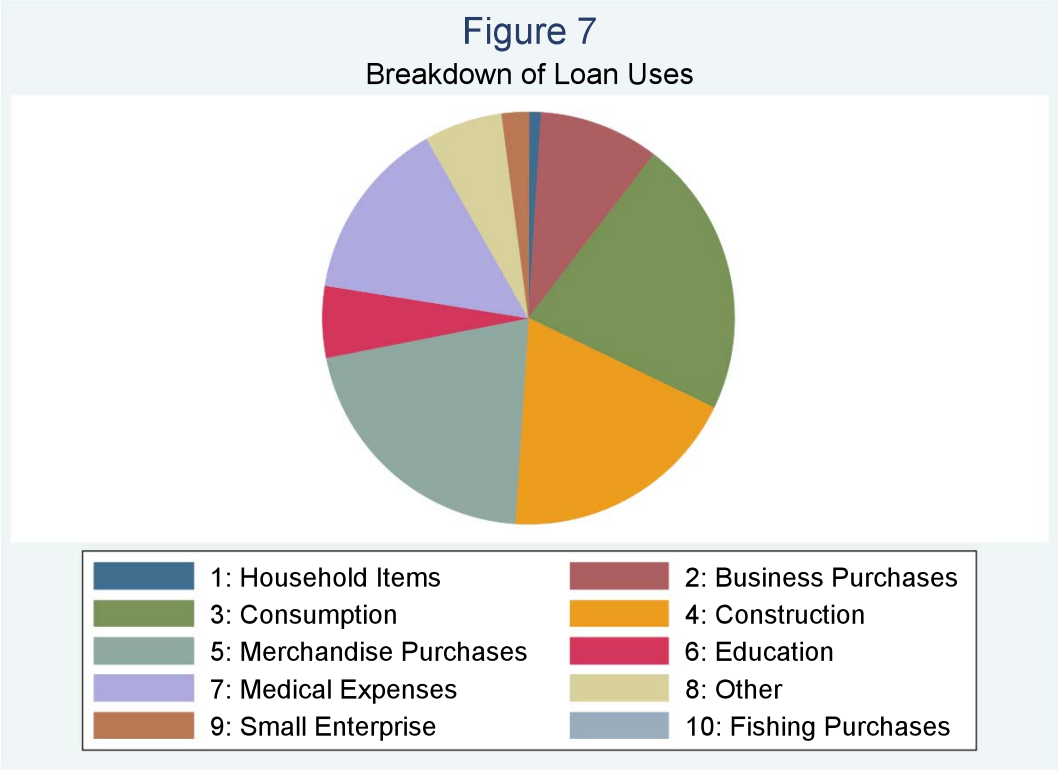


For example, in Bank 1, approximately 8% of the loans granted during the year were in month 4. Overall, Figure 6 shows that loans were disbursed regularly throughout the year. The individual graphs show that in every month of the year, most banks granted between 7% and 11% of their total annual loans. Also, many banks showed a slight increase in loans demanded near month 12, which was probably due to increased demand for loans during the holiday season. Additional variation occurs on the level of the individual banks, and is due to cycles of economic activity in a specific community or region. While general seasonal trends can be explained by evaluating the data, there is no basis in this study to determine the causes of trends that are specific to individual banks. Such variation is only possible to understand with full knowledge of the nature of the communities. In general, smaller banks will also be more susceptible to variation.

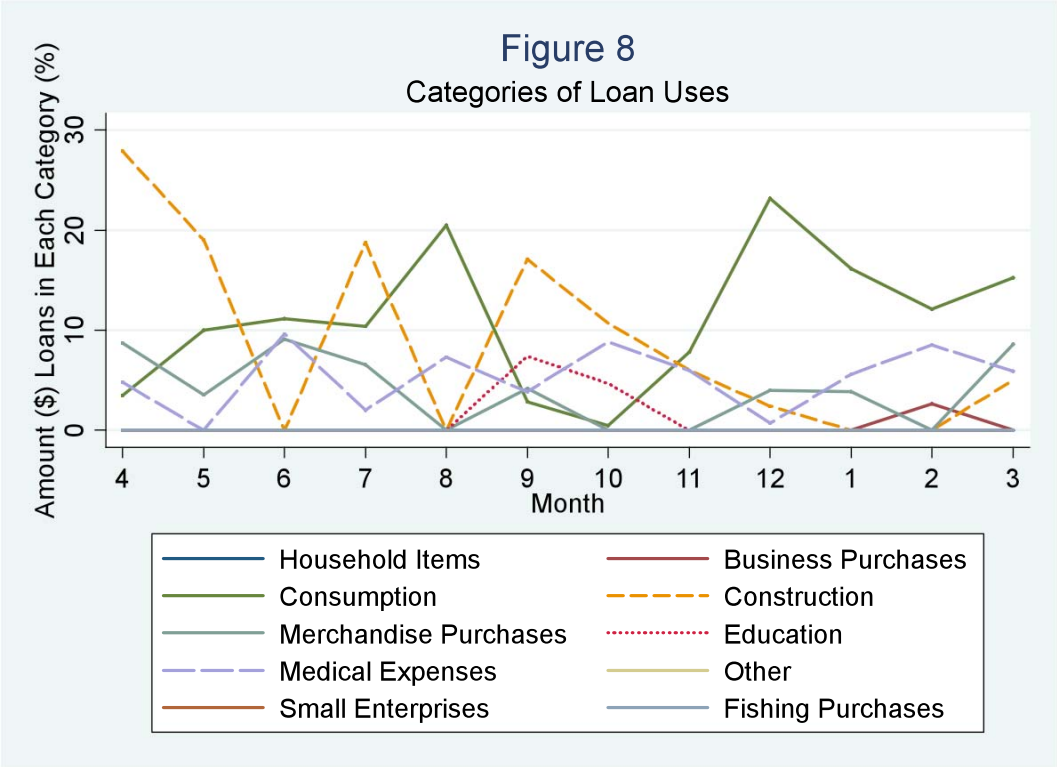
Having observed these moderate seasonal trends, Figure 7 proceeds to examine variation between different categories of loans. Figure 7 shows the amount of loans in dollars banks granted in each of the 10 loan categories (see Appendix B for calculations of weighted values of loans). In Figure 7, it is clear that consumption, construction, and merchandise purchases are the three most demanded types of loans – comprising over 50% of the total loans demanded.

Figure 7

Breakdown of Loan Uses



Having observed little seasonal difference in the monthly amount of loans granted, it is interesting to examine the month-to-month variation in the types of loans granted. In Figure 8, the y-axis measures the percentage of total loans that are granted for the individual categories of loan use. In other words, during month 4, an average of 28% of all loans made by the 14 banks were for construction purposes. While some banks gave 45% of their loans for construction needs in month 4, others gave 0% or 5%. The value of 28% is the average for all banks.



Several seasonal trends in different categories of loans can be seen in Figure 8. There was a significant decrease in the demand for consumption loans in September through November. However, the demand for consumption loans increased twofold in December, probably because people needed funds for Christmas purchases. In April and May, there was a slight increase in demand for construction loans. This is likely to be the case because construction projects are easier to undertake in mild spring weather than during winter or summer. Loans to purchase merchandise for sale also varied greatly over the year, being most demanded in April through September, and least demanded between November and March. This suggests that business owners purchased less new merchandise after November because they already owned the goods they planed to sell for the holidays, and sales are typically low after the holiday season. Education loans show particularly dramatic trends: only in September and October were the median percentages of loans for education above zero. The Venezuelan school

year begins in mid September, which clearly accounts for the increase in loan requests. Demand for other loans, such as business purchases, medical expenses, and household items remained relatively constant throughout the year.

This overview of loan uses throughout the year demonstrates that loans for consumption, construction, and merchandise purchases comprise the majority of the loans. Also, examination of trends in individual banks and seasons shows significant variation in both the amount and the type of loans demanded. This evidence is important because it demonstrates that the poor demand credit for a wide range of uses, monetary amounts, and seasonal needs throughout the year.

The indicators of success discussed in Sections 4.3 and 4.4 demonstrate that the sample of banks examined was financially successful during the time period of this study. While an examination of the aggregate sample indicates the banks are successful, a closer study of the data showed variation in the performance of different banks, as demonstrated in the box plot and graphs of individual banks' performance. This evidence, augmented by the findings in Section 4.5 about significant demand and variation in the categories of loans, shows that Bankomunales operate successfully while providing credit for a range of needs. Bankomunales are vital, sustainable, and profitable financial institutions that disburse many loans, consistently achieve high levels of repayment, and satisfy a broad range of needs within their communities.

Chapter 5 – Why Are the Bankomunales Successful?

In the aggregate, the pattern emerging from this examination of 14 Fundefir Bankomunales is one of financial growth and strong performance. However, it is important to recognize that while some banks achieved rapid financial success, others developed more slowly. This performance differential raises the question of what determines success. It appears that the Fundefir Bankomunal model is working exceptionally well in certain communities, and falling behind expectations in others.

The question of why banks perform well is intriguing, especially because Fundefir's model is so innovative. Before considering whether the innovative features of Fundefir's communal banks impact banks' success, it is necessary to control for the age and size of banks. Section 2.1, therefore, will examine the relationship of these control factors to banks' financial success.

With control factors taken into account, it will be possible to consider other explanations of why Fundefir's banks are successful. Fundefir's model, as discussed in Chapter 3, diverges from the typical microfinance approach. The conventional wisdom in the field of microfinance is that borrowers are more reliable when their loans are used for income-generating purposes and when they are female. Because Fundefir Bankomunales provide loans for non income-generating uses and to men, this would be expected to harm banks' financial performance. According to this line of argument, the incidence of loans for non income-generating purposes and loans to men would be expected to depress yield of shares, total assets, and growth, and to increase the incidence of late payments in banks. This chapter statistically analyzes these hypotheses to determine the nature of the relationship between financial performance and both loan purpose and gender of borrowers.

In the following analysis, correlation coefficients are calculated to measure the relationship between variables and banks' financial success. A correlation coefficient indicates the strength and direction of a relationship between two variables. A correlation near zero means the variables are minimally related, while a correlation near one means they are highly related. I also include the degree of confidence of the correlation to show whether the relationship has statistical significance at the 90% level. As my sample size of 14 banks is small, most of the correlation coefficients are not statistically significant. Another reason few results will be statistically significant is because the following graphs contain outliers. Given my small data set, it is unclear whether the exclusion of such outliers may be a mistake, as they may in fact be representative of the larger sample. Although I use correlations to describe my data, this is not a hypothesis-testing study. The correlations are included as part of an exploratory analysis of these data. It is also important to note that correlation does not imply causation – just because the correlation coefficient is high does not mean one variable influences the behavior of the other. When assessing the importance of correlation coefficients in my analysis, I use Aron Cohen's suggested interpretations (1988):

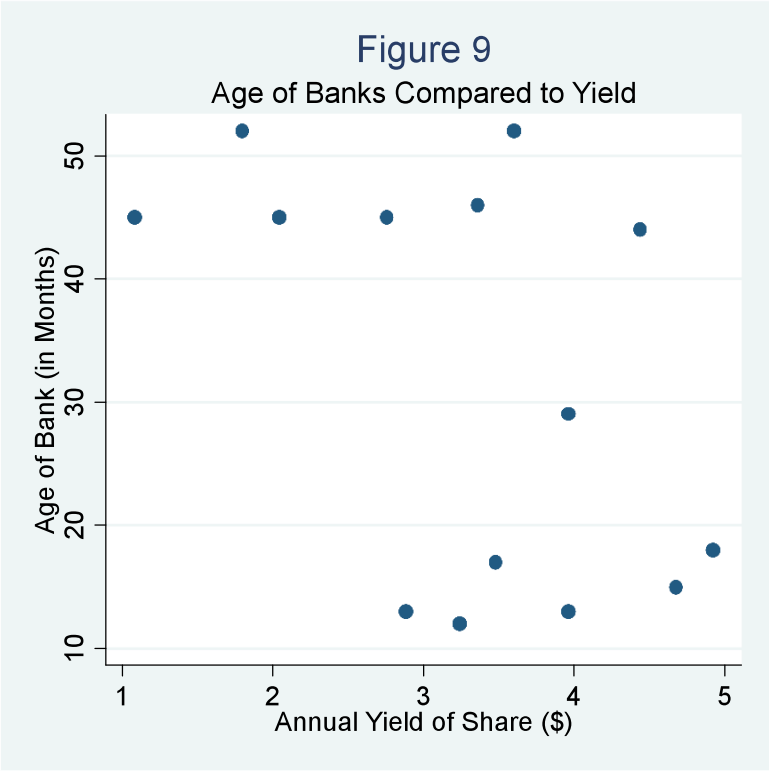
- Small correlation: -0.29 to -0.10 or 0.10 to 0.29
- Medium correlation: -0.49 to -0.30 or 0.30 to 0.49
- Large correlation: -0.50 to -1.00 or 0.50 to 1.00

5.1 Control Variables

Yield, total bank assets, growth, and low late payments demonstrate that the banks are financially successful, but not *why* they are successful. One possible reason is that the more successful banks operate in different conditions than less successful banks. For example, it could be hypothesized that age determines success, leading older banks with a larger experience base to outperform younger banks. A second possibility is that total financial assets determine

success, leading banks that attract more deposits and offer more loans to outperform banks brokering fewer financial resources. To evaluate these two possibilities, this analysis begins by evaluating their causal impact on bank performance. While yield, bank assets, growth, and late payments are all measures of financial success, yield of shares is the strongest single indicator of financial performance. Yield is the best measure because high yield of shares means that a bank is functioning smoothly and granting many credits. To evaluate whether bank age and average credit size are related to banks' success, this analysis assesses the association of these variables with the yield of shares.

Figure 9 compares the control variable bank age to the annual yield of a share. Bank age is measured in months, and is the age of banks at the end of the period of this analysis (3/31/05).



For example, if a bank were established on 3/31/04, it would be charted as 12 months old in Figure 9. The annual yield of a bank's share is the sum of the shares' yields in each month. Each point in Figure 9 represents the annual yield of a share in one of the 14 banks. In Figure 9, a group of seven banks fell between 44 and 52 months of age, as plotted in the upper quadrant of the graph. While these banks had approximately the same age, the yield of their shares varied dramatically, from $1.08-$4.44. The correlation

coefficient of bank age and yield is -0.49 with a 99% level of significance, creating downward-sloping correlation evident in Figure 9. This statistic indicates that there is a moderate negative relationship between bank age and yield, suggesting that younger banks are slightly more likely than older banks to achieve higher yields.

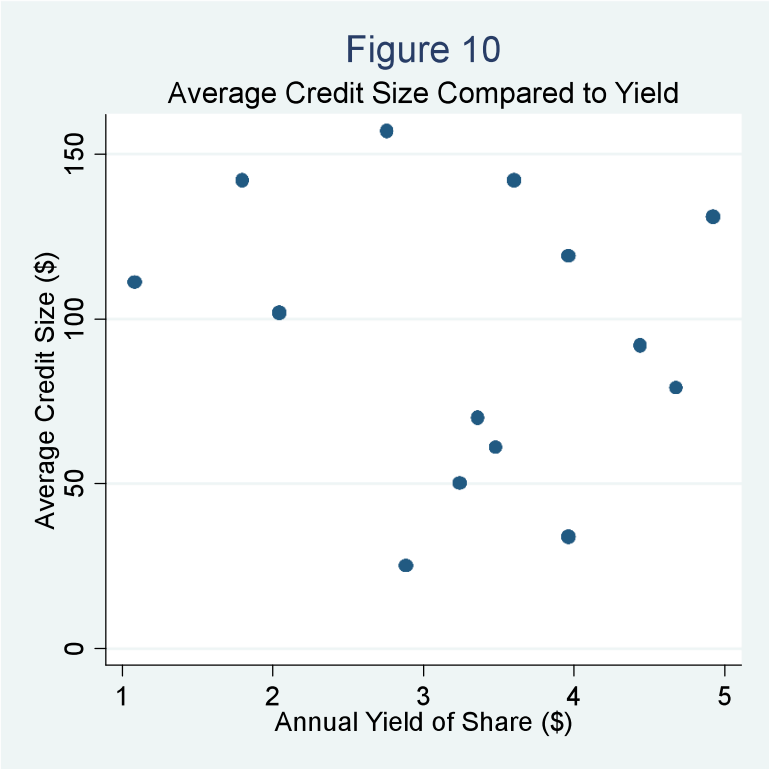


Figure 10 plots the relationship between average credit size and annual yield of shares. Average credit size is the amount of money each bank grants for an average loan. There appears to be a small negative relationship between yield and credit size – as credit size increases, shares are worth less. The correlation coefficient between yield and credit size is -0.17 with significance at the 90% level, supporting the conclusion that the average number of credits a bank grants has only a small effect upon its financial success.

In sum, this examination of control variables found that banks' financial performance is modestly related to their age, and minimally related to average credit size. While there appears to be correlation between these variables and financial success, the results are not sufficiently strong to conclude that banks' levels of success are driven by age or average credit size.

Therefore, the possible effects of loan use and gender upon bank performance should be explored.

5.2 Effects of Loan Use on Banks' Financial Success

Loaning money to the poor for micro-investment purposes is commonly thought to improve repayment rates and financial performance. Both formal banks and microfinance organizations claim that loans for income-generating purposes are more productive and profitable than other types of loans. While this opinion is not widely researched, it is commonly acknowledged that a credit received to start a new business is more likely to be repaid than a loan for consumption. It can be expected that if a borrower has plans to start a business, she will be more judicious in her use of money than a borrower who wants to buy a new item such as a television. Formal banks that serve richer borrowers do not maintain this view, instead actively granting credits for consumption or other non income-generating purposes. Because formal banks expect richer borrowers to be able to repay their loans, there is rarely a bias against providing credit for many uses. While there are benefits to facilitating the purchase of consumption items, microcredit organizations expect that credits granted to micro entrepreneurs will lead to higher rates of loan repayment and overall financial success of their organizations. Javier Sarro of Grupo Elektra supports this view, noting that "we would much rather loan money for the poor's microenterprise investments than for their consumption" (2006). The following analysis statistically examines the hypothesis that it is financially advantageous to loan for income-generating investments only, and seeks to confirm or disconfirm its applicability to Fundefir's communal banks. To do this, I evaluate the demand for non income-generating loans, and the effect of such loans on yield of shares, total bank assets, growth, and late payments.

The first step is to determine which of the 10 loan uses are income-generating and which are non income-generating. Among these loan categories, businesses purchases, merchandise purchases, small enterprises, and fishing purchases are designated as income-generating uses. **These are clearly income-generating purposes, and it is highly probable that banks classified such loans correctly.** The remaining six categories – household items, consumption, construction, education, medical expenses, and other – are classified as non income-generating loans. Figure 11 contrasts the amount of money granted for income-generating and non income-generating loans. Non income-generating loans comprise 68.82% of total loans, while income-generating loans account for only 31.18%. This means that borrowers demand loans for many purposes, but predominately for non income-generating uses.

Figure 11
Demand for Income-Generating Loans

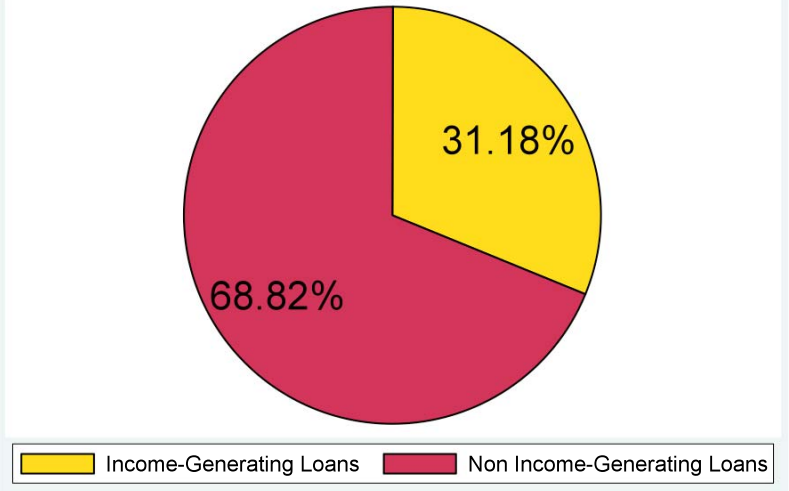
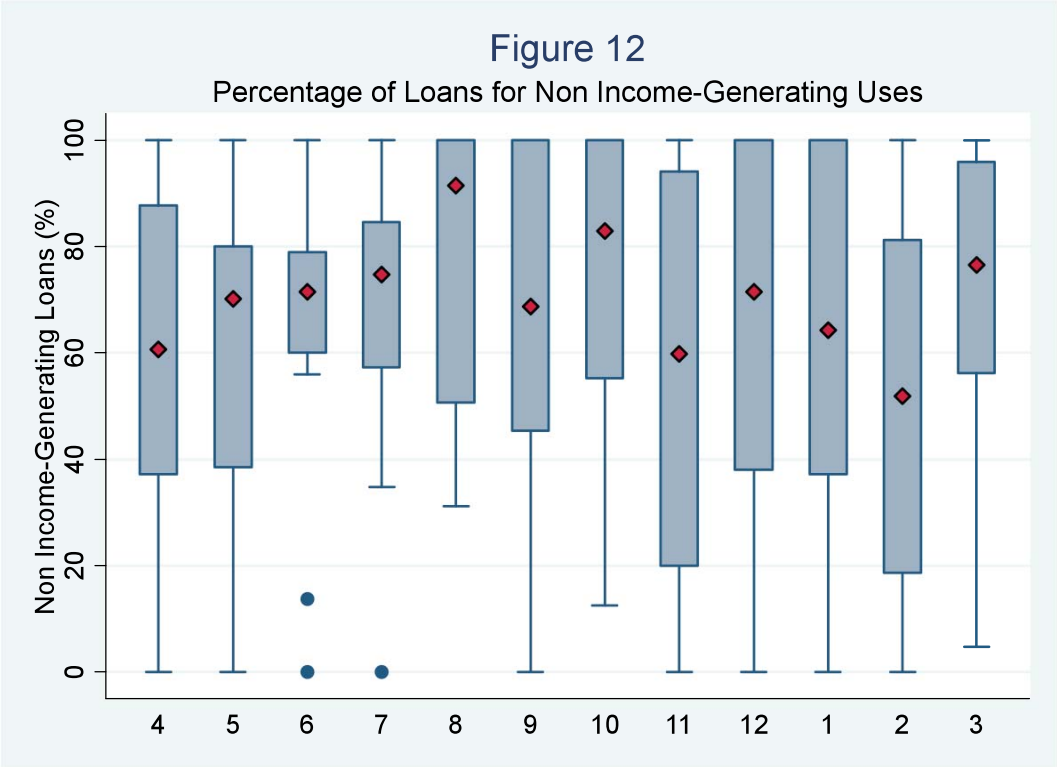
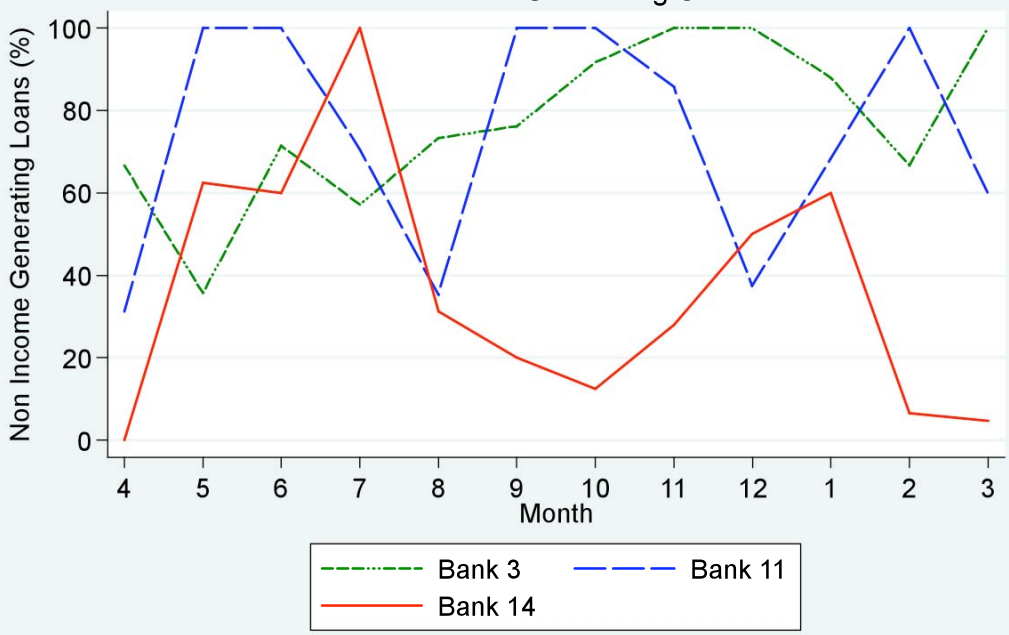


Figure 12 shows the percentage of non income-generating loans granted in each month. While non income-generating loans comprise a greater percentage of loans requested in August and October than in November or February, in all months non income-generating loans are at least 50% of total loans. The lack of significant variation in demand for non income-generating loans over time shows that such loans are important in all seasons.



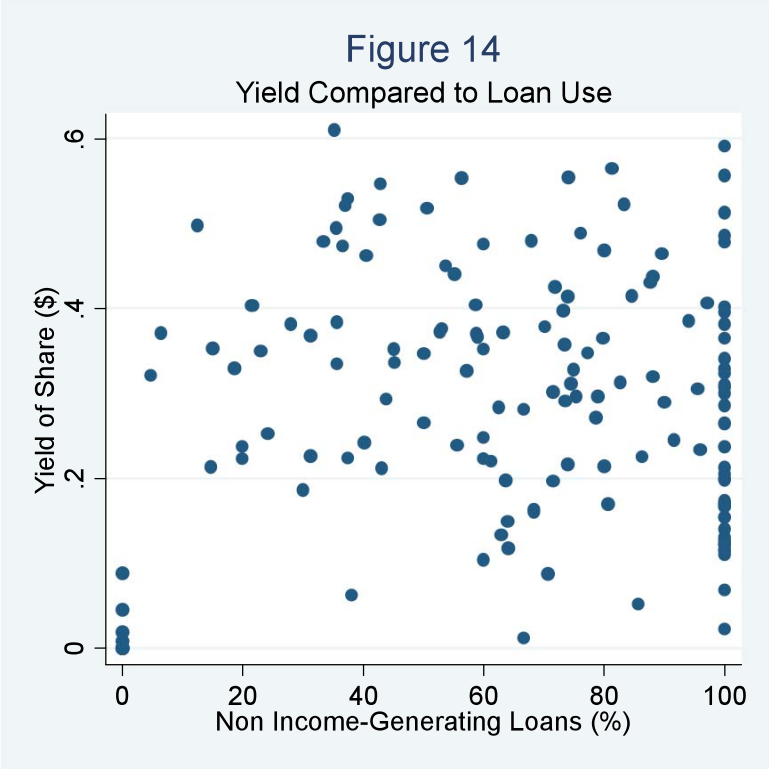
The pattern of demand for non income-generating loans varies greatly by bank. Figure 13 shows data from banks 3, 11, and 14, which demonstrate patterns that are representative of all 14 banks. While banks exhibit distinct monthly trends in the percentage of non income-generating loans they grant, there is no consistent seasonal variation. Instead, in an average month some banks give 100% of loans for non income-generating uses while others give 80%, 40%, or 0%.

Figure 13



Despite monthly variation in different banks, it is clear that demand for non income-generating loans is significant throughout the year. Overall, 68.82% of loans borrowers request are non income-generating, or consumption loans. Having identified this importance, the ensuing graphs examine the effect non income-generating loans have on banks' financial yield, total assets, growth, and percentage of late payments.

The yield of shares in the banks does not appear to be affected by the percentage of non income-generating loans. Figure 14 compares yield of shares on the y-axis with non income-generating loans (as a percentage of total loans) on the x-axis. For example, the x-axis value of 60 means that 60% of the loans the bank grants are for non income-generating uses. There are 12 points plotted for each of the 14 banks, creating 168 total data points. Each point shows the percentage of non income-generating loans granted during a month of a bank's performance, and the yield of a share in that month. The correlation coefficient of these variables is 0.08, but is not

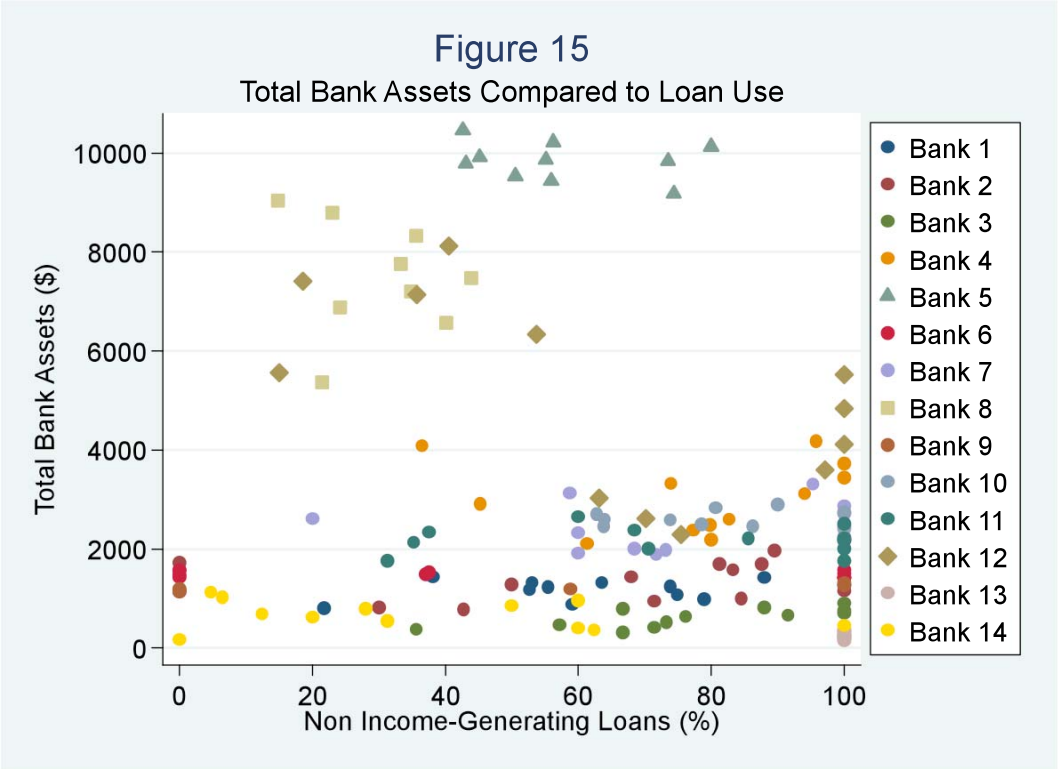


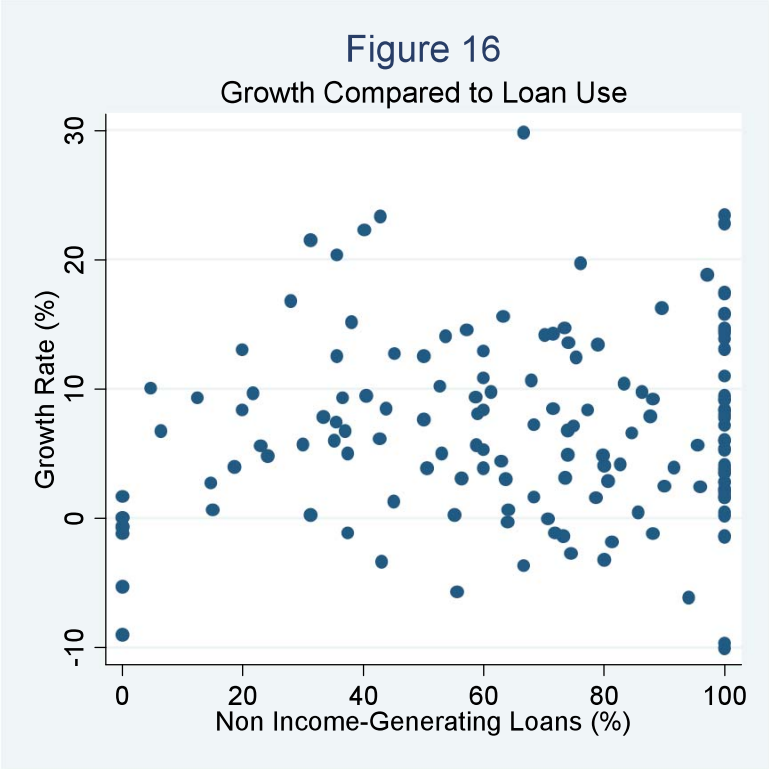
significant at the 90% level. While the correlation coefficient suggests that there is no systematic relationship between these variables, there is not great confidence in this conclusion. However, Figure 14 indicates that the uses to which borrowers put loans appear to be unrelated to the yields achieved for bank shares.

Total bank assets, another indicator of financial success, are slightly negatively related to the percentage of non income-generating loans. Although it is difficult to see from looking at Figure 15, total bank assets tend to be smaller when banks grant more non income-generating loans. The reason this relationship is difficult to discern visually is due to the great number of points clustered where the percentage of non income-generating loans equals 100. The correlation coefficient is -0.20, a small relationship, and is significant at the 90% level. While most banks do experience a small negative relationship between assets and non income-generating investments, three banks diverge from this association. In Section 4.3, Figure 15 showed that three banks had significantly above-average assets, and it is these same three banks that produced the points in Figure 15 where total assets are greater than $5,000. In these banks,

there is a positive association in which greater bank assets accompany a higher percentage of non income-generating loans. While a positive trend is apparent in three cases, the majority of banks experiences a mild negative correlation. Therefore, non income-generating loans do not appear to greatly impact total bank assets.

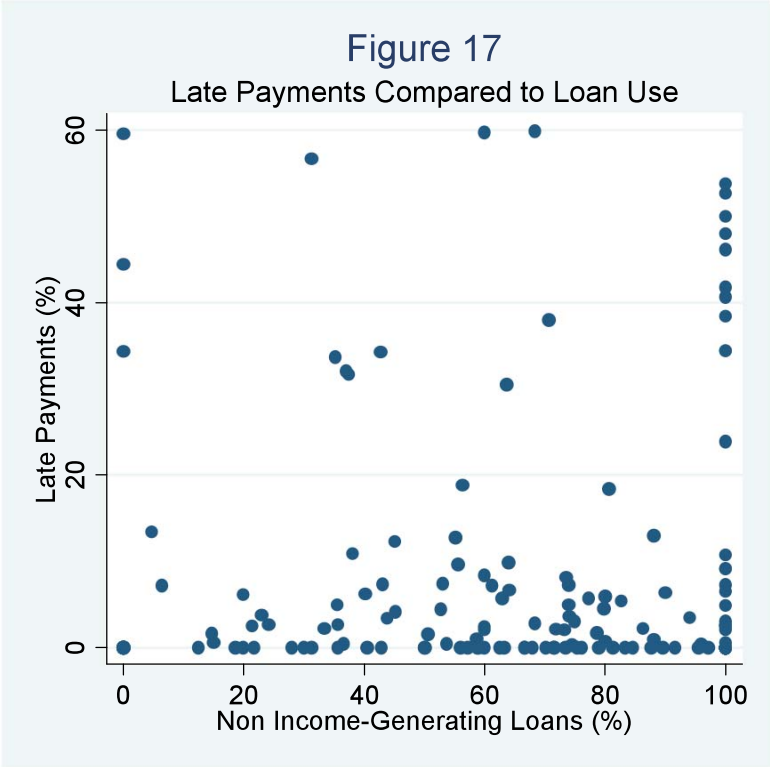
Figure 15





Growth is consistent regardless of loans for the percentage of non income-generating uses. On average, growth is 7.13%, which remains relatively constant even when more loans are directed toward non income-generating uses increases. In Figure 16, the correlation coefficient is 0.07 and is not significant at the 90% level, which indicates the lack of a systematic relationship between the variables. This uniformity in growth shows that the type of loans a bank grants has little impact on its growth.

Similarly, the frequency of late payments evidences no systematic relationship to the percent of non income-generating loans banks grant. In Figure 17, the majority of late payments are below 10%, and are observed with similar frequency across the x-axis. While there are fewer late payments when 0% to 20% of loans are given for non income-generating purposes, late payments are basically constant between 20% and 100% non income-generating loans. 10.78% is the average percentage of monthly payments that are late, which means that late payments above 10% are particularly problematic. There is not, however, any trend evident in late payments above 10%. Such payments occur at similar frequencies whether 0% or 100% of loans are non income-generating. This finding is supported by a low correlation coefficient of 0.03, which, while not significant with 90% confidence, indicates little relationship. Figure 17



therefore shows that the percentage of late payments does not appear to be related to the percentage of non income-generating loans banks grant.

5.3 Discussion of the Effects of Loan Use

These findings do not support the hypothesis that granting certain kinds of loans diminishes a bank's performance. Leading microfinance organizations and associations such as the Microfinance Gateway (2006) assert that "microcredit serves best those who have identified an economic opportunity and who are in a position to capitalize on that opportunity if they are provided with a small amount of ready cash." However, this analysis indicates that loans for non income-generating purposes had little impact on the financial performance of Fundefir banks. The correlation coefficient for non income-generating loans is only for total assets, but even then the correlation is small and there are alternative trends evident in individual bank activities. Slight positive relationships exist between non income-generating loans and yield of shares,

growth, and late payments, but in no instance do these associations appear large enough to have an influence on the performance of banks.

Of particular importance is this study's preliminary finding that the incidence of late payments is unrelated to the type of loans banks grant. The most compelling argument favoring provision of income-generating or micro-enterprise credit is that borrowers will earn immediate profits from such loans. Giving a borrower money to improve her daily earnings appears to be a logically "safer" investment than giving her money to buy a television. However, the analyses presented here show that the poor are responsible borrowers who are equally likely to repay loans for consumption and loans for investment purposes.

Also, because 68.82% of loans that poor borrowers demand are for consumption, provision of such credit is inherently a socially "successful" service. Bankomunales rarely decline loans to members, so this percentage can be assumed to be representative of real demand for credit. Most government programs, formal banks, and microfinance groups that provide credit grant money exclusively for investment purposes. The high demand for non income-generating loans shows that credit should be provided for a wider range of purposes to serve the needs of the poor. Just by doing this – not to mention the financial success of such loans – Fundefir's Bankomunales are successful in comprehensively serving the poor.

5.4 Effects of the Gender of the Loan Recipient on Banks' Financial Success

Fundefir aims to offer credit services to all the poor, and therefore encourages both men and women to join the communal banks. Although most banks grant the majority of their credits to women, have a majority of female members, and are run by women, men are also welcome to participate, receive loans, and take on leadership roles. In Fundefir banks, men typically receive

over 30% of the money the bank grants in credits. While the degree of men's involvement varies in different banks, there are no institutional features of the Fundefir model that preclude men from participating. Conversely, many microfinance organizations exclusively serve women. In a study of the largest 34 microcredit organizations, 80% of the clients were female (Mody 2000). Researchers list the main reasons for this focus on women as financial profits, female empowerment, and social benefits.

The literature strongly suggests that women are more reliable borrowers, which means they are financially profitable for microcredit organizations. Researchers such as Khandker, Khalily, and Khan (1995) conclude that women are more likely to repay loans on time than male borrowers. In this study of the Grameen Bank, 1.3% of female borrowers made late payments on loans, compared to 15.3% of male borrowers who made late payments. Armendáriz de Aghion and Morduch support this finding's applicability to Latin America: "the field experience of Grameen replications in southern Mexico indicates a similar pattern, and evidence from credit scoring regressions using data from Latin American microlenders confirms this tendency too" (2005, 183). A study of Guatemalan microcredit showed that women missed loan payments less frequently than men (Kevane and Wydick 2001). While Kevane and Wydick conclude that "gender differences in economic responses to credit access are surprisingly small," their data show that women experience fewer difficulties repaying loans than male borrowers. Armendáriz de Aghion and Morduch also propose that women experience higher rates of loan repayment because they are more conservative in their investment strategies and are more influenced by peer pressure (2005). Information such as this prompts microcredit organizations with scarce financial resources to loan to women in hopes of greater financial viability achieved through

higher loan repayment rates. If fewer borrowers make fewer late payments, the microcredit organization can continually circulate its funds to reach larger numbers of borrowers.

Another financial motivation to lend to women is that females tend to work out of the home, while men often travel to other places to use their loans. Because women are typically in the care giving role in the household, they are compelled to remain physically close to their household and child-rearing responsibilities. Therefore, it is easier for microcredit organizations to monitor women or to encourage regular peer monitoring within the group of borrowers (Armendáriz de Aghion and Morduch 2005). The improved ability to monitor women allows microcredit organizations to loan to women with greater confidence than when they loan to men.

The concept of empowering females by helping them start businesses is appealing to many donors and organizations. Such organizations often argue that women are acutely disadvantaged by poverty, and therefore deserve special help. In most developing countries, women are heavily dependent on men. This creates a gender imbalance in the household that severely disadvantages women, giving them little authority or control. A study in Bangladesh reports that 40% of women had little or no control over their family's investment decisions (Goetz and Gupta 1996). This raises the question of whether providing a microfinance service focused on women would simply result in their husbands making the investment decisions on the woman's behalf. While this may be the case, 60% of the women in the Bangladesh study exercise some degree of financial control, indicating that microcredit loans can directly help them gain greater financial authority in the family. Additionally, because women are more likely to share their loans with men than vice-versa, if microcredit were targeted to men, women would be less able to participate than if it were biased in favor of women (Kabeer 2001). Microcredit loans can address women's issues by offering women financial opportunities to manage money

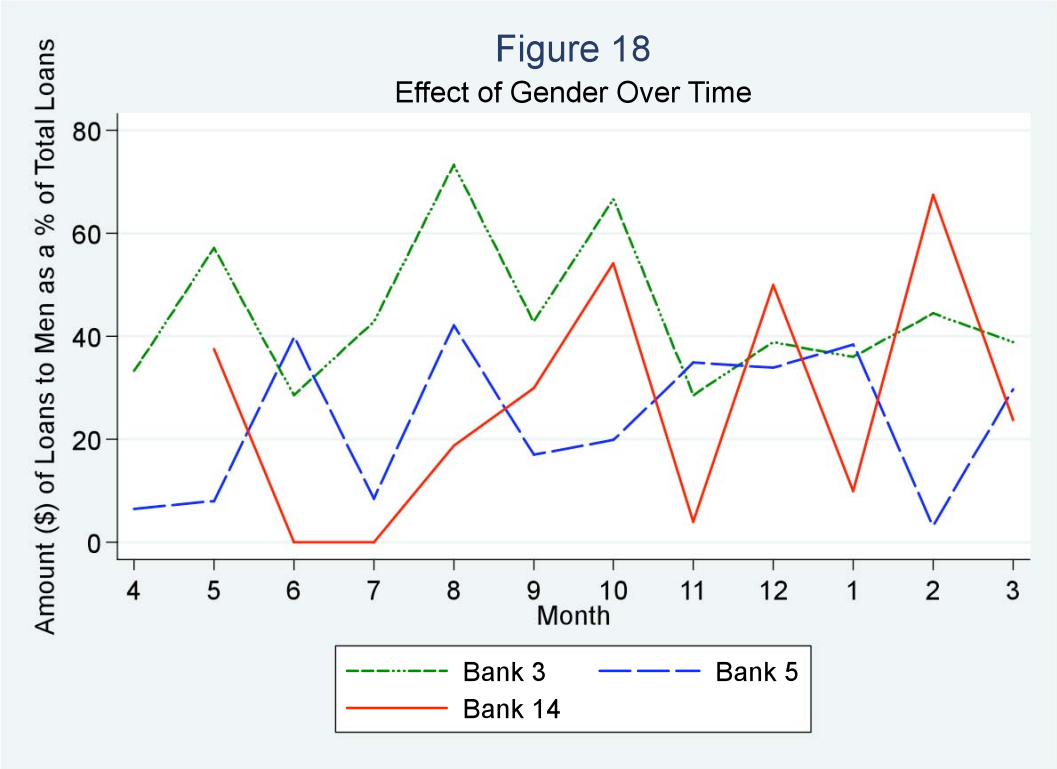
and start their own businesses. This gives them greater independence and self-confidence, as well as a closer connection with the other female borrowers.

Social issues are also an important benefit of loaning to women. According to Nancy Barry, President of the microcredit organization Women's World Banking (WWB), "granting loans to women has significant repercussions on their families. Profits that women earn will directly impact their children" (2006). A study conducted in Brazil indicates that poor children's health is more likely to improve if the mother controls the profits from a micro enterprise (Thomas 1990). Additionally, when women control the money it has an impact on health 20 times greater than if the man controls the money (Thomas 1990). It is due to this social impact that organizations such as the Grameen Bank, ProMujer, and WWB serve a female audience.

This research – primarily the studies that women are more reliable borrowers – leads to the following hypothesis: providing loans to men will decrease banks' financial success. The data in this sample do not allow an assessment of the female empowerment and social benefits, so discussion is limited to the financial implications of loaning to men. If women were more likely to repay loans, directing a greater percentage of loans to women increase repayment rates. Observing high rates of loan repayment would make other residents more inclined to invest their money in such a bank, thus widening its membership base and allowing it to provide more credits. If women are more consistent borrowers, their reliability will also allow MFIs to rotate credit funds to more people and collect greater interest payments. The following analysis evaluates the applicability of this hypothesis to Fundefir's banks by considering how loans to men affect banks' yield, total assets, growth, and late payments. Data limitations preclude the direct evaluation of the effect of gender upon loan repayment. However, insight into this

relationship can be obtained by evaluating the aggregate effects across banks that have different proportions of male and female borrowers.

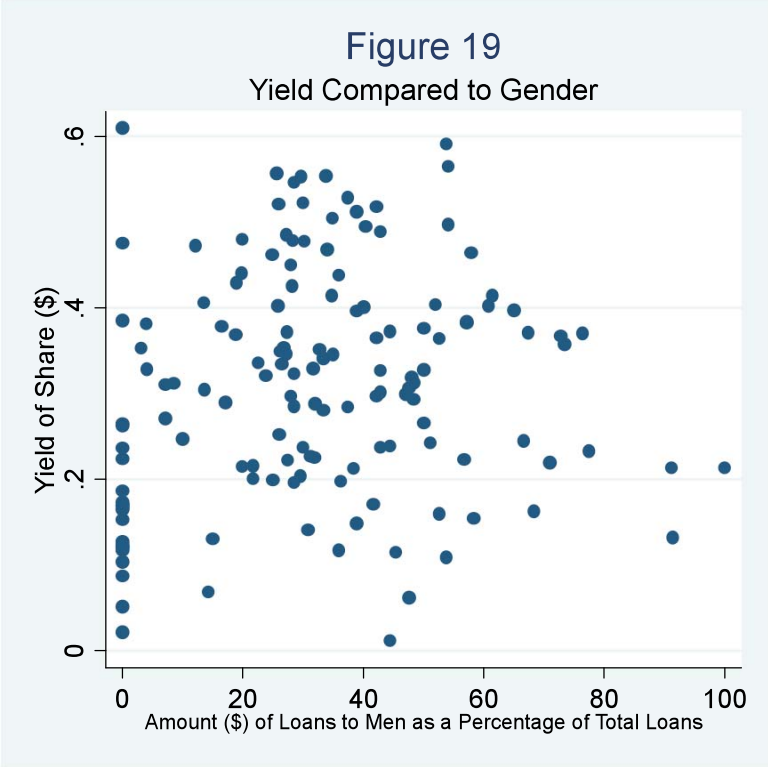
First, it is helpful to understand men's financial role in the banks. Figure 18 shows the monetary amount of loans men receive as a percentage of the total amount of loans.



On average, men receive 32.89% of the total amount of money granted in loans. While there is significant variation over time, averaging the credits granted at all 14 banks demonstrates that men consistently receive 20% to 35% of the total loans. This means that men are a large and important customer segment for the banks. While the aggregate trend is relatively constant, individual banks' amount of loans to men varies greatly over time. Bank 5 in Figure 18 shows this variation – in May it grants 14% of total monthly loans to men, 40% in June, and 15% in July. This shows that the Bankomunal model allows the percentage of loans given to men to fluctuate based on demand, rather than maintaining a set monthly quota of loans for men. The

openness of the model helps Bankomunales meet the poor's demands for credit throughout the year. This also helps free up capital to be directed to where it can be the mot profitable.

The percentage of male borrowers does not appear to affect the yield of shares. When looking at Figure 19, it is difficult to see whether there is an association between yield and the percentage of male borrowers.

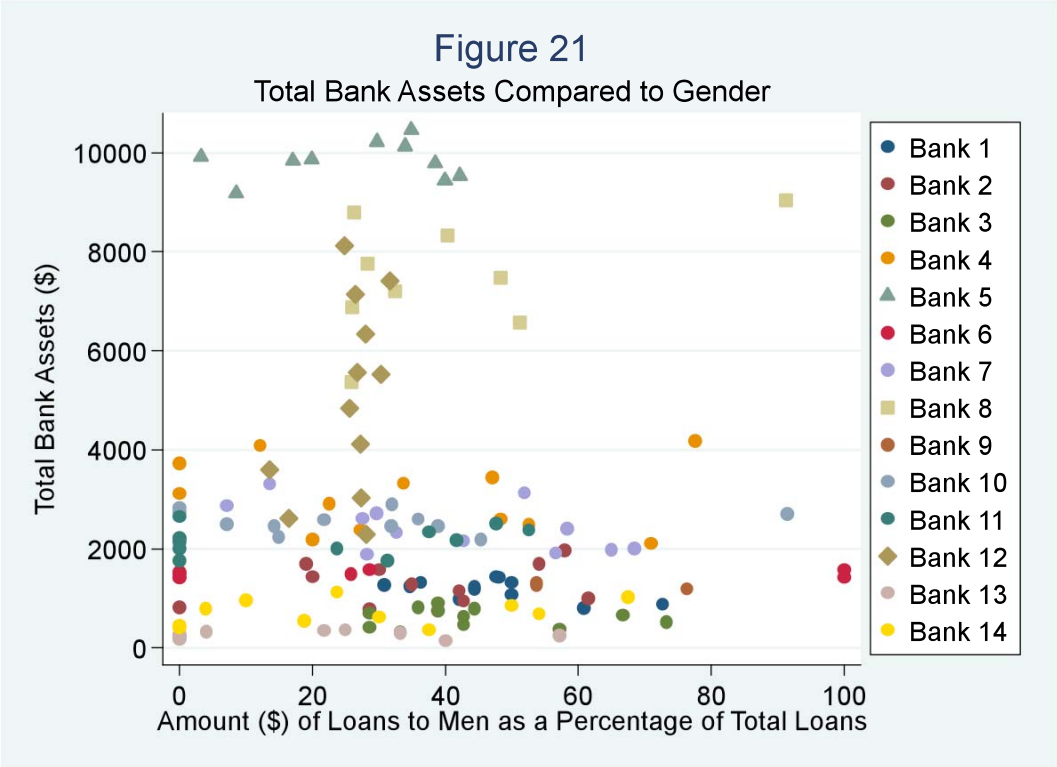


While the correlation coefficient of 0.09 means the variables are not systematically related, a potential trend could be embedded in Figure 19 based on individual bank patterns. As the correlation is not statistically significant at the 90% level, it is necessary to explore any potential grouping by bank in this particular graph. For example, even though there is no clear relationship in Figure 19 that as more money is lent to men the yield of shares decreases, it is possible that such a trend could occur in many individual banks. This is possible because banks' data is clustered in different areas of the graph. Therefore, it is helpful to consider the yield of shares in individual banks.

Figure 20 shows the same information as Figure 19, but separates the results by bank.

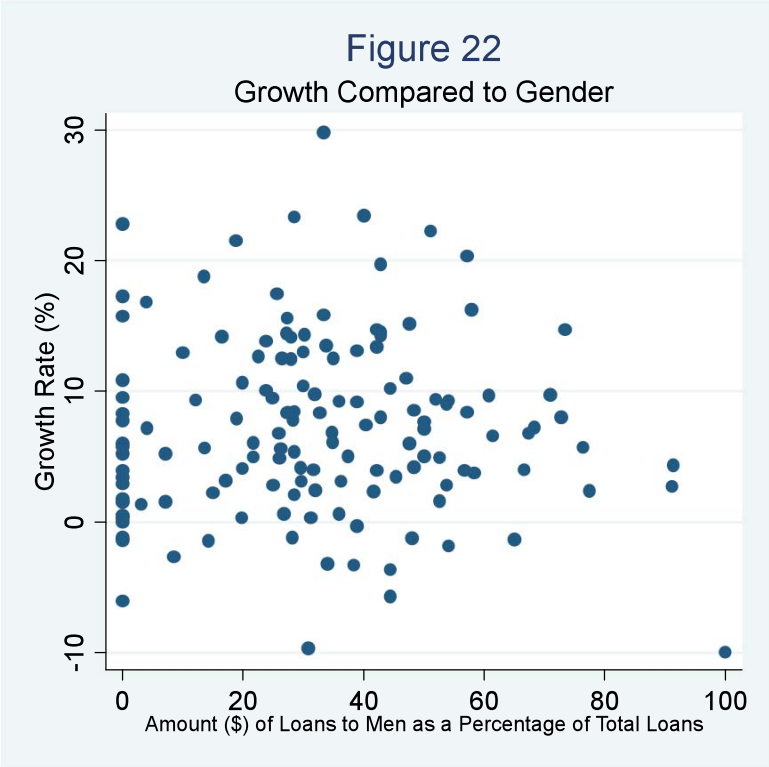
Only in the graph of Bank 8 does it appear that granting more money to men decreases yield. Conversely, in other graphs such as those of Banks 2, 13, and 14, it appears that granting more loans to men actually increases yield. Most graphs reveal no systematic relationship between the variables. When considered as a group, these line graphs imply that individual banks do not experience a strong relationship between yield and gender, as the correlation coefficient of 0.09 suggests. The amount of money banks grant to men varies considerably, but appears to be unrelated to any systematic increase or decrease in yield of shares.

Banks' total assets show little relationship to the percentage of money loaned to men. Figure 21 identifies banks by color, showing that three banks have assets greater than $5000.

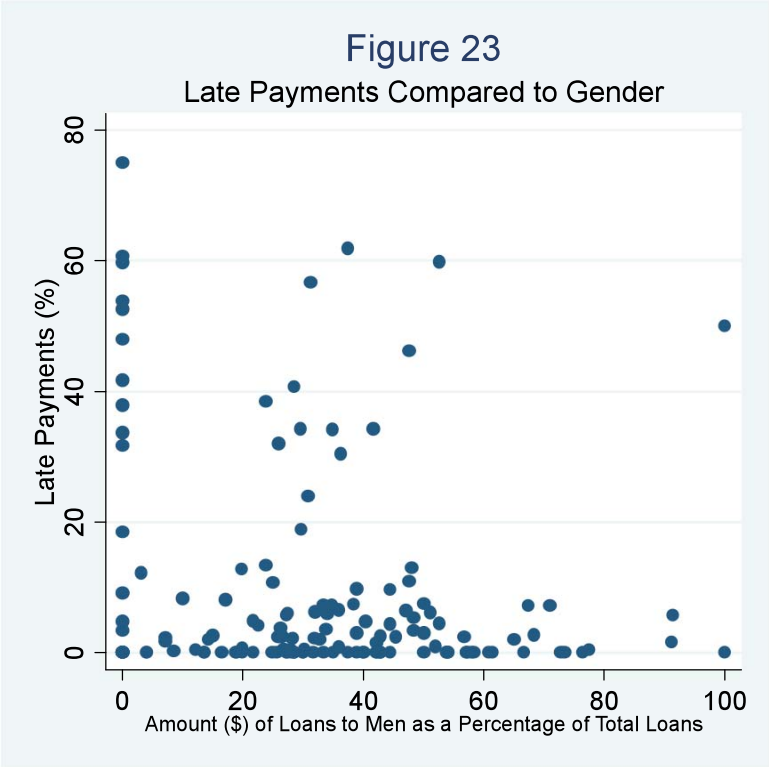


In these banks, the percentage of loans men receive has no impact on total assets. The correlation coefficient of -0.02, while not confident at the 90% level, indicates that there is no systematic relationship between a bank's assets and the percentage of loans it grants to men. Rather, each bank's assets remains remarkably constant regardless of the percentage of loans it grants to men.

There appears to be no systematic relationship between growth and the percentage of loans granted to men in the graph of Figure 22. The average growth rate of all banks, 7.13%, is constant regardless of the percentage of loans given to men. The correlation coefficient of 0.00, while not statistically significant at the 90% level, still supports this conclusion. This implies that granting loans to men does not inhibit banks' growth.



Late payments, the final indicator of banks' financial success, appear to have a small relationship with the percentage of loans men receive. In Figure 23, the correlation coefficient of these variables is -0.20 with statistical significance at the 90% level, which, while notable, is still a minor association. This relationship is not particularly evident in the late payments above 20%. Many of these points are generated by Bank 11, which exhibits a pattern where late payments increase as more money is loaned to men.



Surprisingly, when men receive 0% of loans, the percentage of late payments is often high, as shown by the points in the upper left-hand corner of the scatter plot. In such instances, loaning 100% of funds to women appears to increase the percentage of late payments. Overall, low levels of late payments are most prevalent when 2% to 80% of loans are given to men, illustrating the conclusion that gender of loan recipient does not strongly impact the percentage of late payments.

5.5 Discussion of Effects of Gender

Based on the statistical analysis of the impact of men as borrowers, it appears that issuing loans to men did not affect banks' financial success. When higher percentages of loans were given to men, there was no apparent influence on yield of shares, banks' total assets, or growth. Late payments were shown to increase slightly when men received greater percentages of loans. However, the correlation coefficient of late payments and money loaned to men was only -0.20, and does not signify a large concern about loaning to men. Therefore, this preliminary analysis concludes that including men in bank operations and as borrowers has nearly no negative effect

on bank performance. Further, the Bankomunal model is uniquely able to include all the citizens of a community who desire access to credit and investment opportunities.

Concerns raised in the literature about men's financial performance therefore have little applicability to Fundefir's model. As men appear to be successful financial customers, the presence of male borrowers is unlikely to deter other residents from joining the bank. Similarly, as men do not have disproportionately high rates of late payments, loaning money to men does indicate they will make late payments, which would prevent other bank members from receiving loans. While the concern raised by Naila Kabeer that men make take control of money loaned to women is important, allowing men to participate in the banks would help eliminate such a dynamic because they could receive their own loans. This in turn further empowers women. Bank members are both women and men who are committed to being responsible savers and borrowers, as supported by the indication of this analysis that men do not decrease banks' financial success.

This analysis of loan use and gender provides powerful evidence that neither factor appears to harm banks' financial performance. Therefore, despite the predictions of microfinance organizations and researchers, Fundefir's innovative elements appear to have no discernable effect – positive or negative – on the success of banks. Instead, Fundefir's approach allows each bank to serve more clients: those who demand loans for a wide variety of purposes, and those of both genders. Additionally, while there are important empowerment and social reasons to focus microcredit services on women, doing so excludes impoverished men who could also benefit from receiving loans. In serving both genders, Fundefir promotes community unity and a more vibrant local economy.

Chapter 6 – Concluding Discussion

This paper considered why microfinance is necessary and the ways in which Fundefir improves on traditional credit models, concluding that when possible, organizations should consider adopting Fundefir's innovative approach. Chapters 1 and 2 demonstrated the need for microfinance services, and Chapter 3 explained how Fundefir's comprehensive service was serving the poor's needs and empowering communities. Chapter 4 and 5 then showed that a sample of Fundefir banks was financially successful and that loaning money for non income-generating uses and loaning to men did not detract from this success. Therefore, Chapter 5 concluded that it appears Fundefir's innovations allow its banks to reach a larger audience of borrowers and investors with no significant drawbacks.

6.1 Implications of Analysis

The primary contribution of this study is the preliminary finding that Fundefir's innovative structure, banks, and lending policies are financially successful. While research and the literature strongly predict that loaning money for income-generating purposes is the most productive and reliable investment, the data reported here surprisingly suggest that Fundefir banks are just as financially successful when they grant loans for non income-generating purposes as when they grant income-generating loans. Additionally, the prevalent view in the microfinance field is that women are more reliable borrowers. However, in this analysis, Fundefir banks were found to be as financially successful when they directed larger percentages of total loans to men as when women were the primary beneficiaries.

Although the data at hand cannot fully explain this departure from microfinance theory, nor is it possible to infer from one experience that the conventional view is incorrect, it seems

plausible to speculate that Fundefir's special institutional characteristics could account for banks' high levels of success. In contrast to the mainstream microfinance model's focus on dispensing foreign largess to individual recipients, Fundefir's approach galvanizes the grass-roots construction of a series of community-based institutions. The wider the scope of loan types a Bankomunal supports, the broader its grass-roots base, the stronger the community's support, and the greater the stigma associated with loan default. These conclusions challenge the vast majority of microfinance research, demonstrating that Fundefir's approach has the potential to impact the norms of the field.

These findings offer policy implications for other microfinance organizations. Given the high transaction costs in providing microcredit services in poor communities, serving new audiences in places where MFIs already have lending infrastructure established is relatively cheap. Therefore, at low cost, organizations could refocus existing community operations, providing credit to the poor for a variety of needs and to both genders. However, MFIs must first consider whether Fundefir's model is pertinent to their local and regional needs. For example, the goals of each organization – such as whether it aims to help women or to help the poor – shape the decision of whether expanding the client base is desirable. Also, gender dynamics in the specific region and country are important: if men are particularly dominant and women particularly weak, it is possible that allowing men to participate would significantly change the nature of the Bankomunal. As mentioned above, the institutional characteristics of the banks probably play a large role in their financial success. Additionally, it is important to remember that microfinance is not the only or the most appropriate form of intervention. Sometimes, decreasing poverty requires other state-led or market-provided development initiatives.

6.2 Suggestions for Future Research

While this study draws preliminary conclusions about the effects of loaning money for consumption purposes and to both genders, additional research must be done to statistically evaluate the nature of the relationship between these elements and banks' financial success. This analysis would assemble larger data sets, employ more sophisticated multivariate analyses, include appropriate statistical controls, and test formal hypotheses. It would also be useful to compare levels of poverty and economic development trends in communities served by Fundefir with those in communities where Bankomunales have not been established. Such information would allow more definitive conclusions to be drawn about the potential of Fundefir's model to reduce poverty.

The impact of non-monetary factors was not considered in this analysis. Such factors include the differences in geographic location, bank leaders, bank members, seasonal trends in employment, and idiosyncratic events such as disease outbreaks or weather events that affect large numbers of people in that community. It would also be ideal to gather more fine-grained data including information about each loan that banks granted over time, including the loan amount, the purpose, the gender of recipient, the repayment schedule, and the socioeconomic status of the borrower's family before and after receiving the loan. Information of this sort would allow an analysis of the direct effects of loan use and gender on banks' financial performance, and on individuals' well-being, rather than the inferences from aggregated data and the approximation of trends used in this analysis.

Additionally, further research needs to be conducted to determine whether Fundefir's innovative elements are successful only in the communal banking structure, or whether they apply to different lending models. It is clear that the communal banks promote a unique sense of

community that relies on members' shared interests. This may be the strongest determinant of banks' success, and thus lending for a wider audience may not be financially sustainable in other settings. The community banks encourage residents to pool their savings in a communal fund, as do ROSCAs and credit cooperatives. While this reliance on community-based funding to grant loans is impressively self-sufficient and sustainable for long-term lending, other communities and individuals can benefit from lending but may not be able to participate in Fundefir's model. For example, Fundefir's model relies on community knowledge, trust, and enforcement mechanisms, which are significantly more difficult to achieve in large cities where borrowers do not know each other. Even individuals in small communities may be unable to participate in a Bankomunal if they are cannot attend the mandatory meetings or if they are unable to save the initial $5 needed to purchase a share in the bank. These and other borrowers may be better served through other microfinance models or by loans on an individual basis. That said, the significant benefits of Fundefir's communal banking model – particularly its sustainability, financial success, and flexibility for community residents – distinguish this option from models that deliver only credit, without building a financial infrastructure.

6.3 The Future of Microfinance

With global demand for microcredit unmet, innovative approaches such as Fundefir's communal banks are pivotal to improving the credit services offered to the poor. An estimated 400 to 500 million households desire microcredit, "of which only around 30 million are reported to have access to sustainable microfinance services in 2002" (United Nations Capital Development Fund 2005). When such large numbers of people demand credit, governments and donors alone cannot finance its provision. Thus, MFIs must continue to move toward more self-

sufficient structures, possibly relying, as Fundefir does, on the funds already existing in communities. Some MFIs have developed an alternative to relying on donor funds and have attained profitably by financing loan portfolios with savings, commercial debt, and for-profit investment (Robinson 2001). Such models represent a globally affordable alternative to subsidized microcredit loans to the poor. Fundefir's approach is similar, except that instead of Fundefir headquarters reaping the profits of savings and credit provision, community residents themselves profit. This exploratory analysis strongly indicates that Fundefir's Bankomunales provide highly demanded financial services to large numbers of poor borrowers. It will be exciting to see whether Fundefir's financially successful model spreads beyond Venezuela to other Latin American countries.

***** Three questions about the general conclusions (which you do not need to answer): is there something you might want to say about the couple of banks with late payments? For example, could there be ways to mitigate the risks, or buy some type of insurance against default that would cripple this individual banks? A related issue, could you discuss the drawbacks of each bank working autonomously, particularly in regard, for example, to the bank that had a big employment shock? Again, could some mechanisms be devised to share or pool risks? Finally, could the high yield of the shares be enough to eventually pay for the services provided by Fundefir, in order to make it completely non dependent on donors?

This is a great thesis. You should be proud. And you should take a break, you have earned it.

Appendix A: Consent Form (received via email)

I, Salomón Raydán, Director of Fundefir, authorize Lauren Meyer to use the data we have collected on the financial transactions of fourteen communal banks in Venezuela. I will provide her this data in a de-identified format to protect the identities of the bank members.

I am aware of the goals of her senior thesis, and I approve of her goals of statistical and qualitative analysis. I will be giving her two sets of de-identified data: 1) banks' financial transaction records, and 2) reports on surveys completed by bank leaders regarding their experiences in the bank. She has no direct relationship with either of these data sets.

Please contact me if you have additional questions.

Sincerely, Salomón Raydán
salomonr@fundefir.org.ve

Appendix B: Calculations of Important Variables

Use of loans: I collected raw data on 10 categories of loan uses, including the number and currency amount of loans in each month. I then weighted the data in each month to allow comparison of the data – otherwise, for example, 100% of the loans in May could be for income-generating purposes, but maybe the there was only one loan given that month for $1.00. This would over-represent the importance of income-generating loans. Therefore, I calculated a weight for each bank: weight = (total amount in Bolivares of all loans in month X)/(total amount in Bolivares of all loans in year). I then calculated a weighted value for the use of each category of loan in a given month: (weight for bank)(% of amount of loans given for Y purpose in X month). For example, if in October loans for household items comprise 21.88% of the total amount of loans in that month, I multiply the (weight)(21.88%).

Growth: if x=present month, then [total bank assets(x) – total bank assets(x-1)]/[total bank assets (x-1)]. This means I divided, for example, the bank assets of (June-May) by the bank assets in May.

Late payments: Late payments can be 30, 60, or 90 days late. The amount of late payments can be misleading if, for example, a late payment of $100 is made in a bank. Alone, knowing $100 is late does not allow comparison between banks because it is unclear how important the $100 is. Each month, the bank could be lending $50,000 or $100, in which cases $100 late has very different importance. Therefore, I divide the late payments in each month (either total late payments or late payments of either 30, 60, or 90 days) by the total amount of money the bank has out in loans that month: [late payments(x days late)]/[amount of capital to recuperate(in a given month)].