MICROFINANCE NON-GOVERNMENTAL ORGANIZATIONS EVOLUTION TO COMMERCIAL BANKS: SOUTH AMERICAN CASE STUDY

By

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A THESIS PRESENTED TO THE GRADUATE SCHOOL
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To my parents, Olivia and Lorenzo Parajon

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This study measures the transition of non-governmental organizations' (NGOs') to commercial financial institutions from the institutionalist perspective, while the clientele effects as discussed in the welfare perspective remains an open question. I use financial ratios to analyze whether microfinance non-governmental organizations that have transitioned to commercial banks are profitable, sustainable, and more efficient with resources and administration. Profitability ratios demonstrate that microfinance institutions (MFIs) are profitable despite adverse conditions in the market place. As far as efficiency is concerned, the following year after privatization appears to be more efficient than the prior year of privatization, signaling that MFIs who transition to lending institutions are more efficient per unit of input to output. Financial management, on the other hand, takes a downturn in the transition from NGO to commercial financial institution. Finally, portfolio quality seems to be a positive and strong indicator of the transitioning process. However, portfolio quality benefits are not as strong as they appear.

Write offs suggest that portfolio at risk (PaR) results were weaker. Loan loss reserves and risk coverage (a function of loan reserves) both tended to increase, a sign that either managers are being conservative, losses are expected, or the state is requiring higher loan reserves. Nonetheless, portfolio quality does show considerable improvement, further reinforcing that the transitioning process is beneficial to improving efficiency in the microfinance institution.

CHAPTER 1
INTRODUCTION

Microfinance NGOs' Evolution to Commercial Banks

The birth of the microfinance industry in Latin America began in the early 1980s, when socially-minded NGOs began lending funds to lenders of low economic resources in Latin America. The bulk of these loans were funded primarily by soft loans and grants, governments, and large institutions like the Inter-American Development Bank and the World Bank. By the outset of the early 1990s, there were a few microfinance institutions (MFIs) that became financially independent from soft loans and grants and began to transition to becoming commercial banks.[1]

The reason for this transition was simple: if the microfinance NGOs did not develop into sustainable institutions, they would be running the risk of insolvency when donor interest changed.[2] To prosper, MFIs would need to leverage their funds with savings that could be turned into loans instead of relying on grants. In so doing, banks would minimize the risk that donors would divert funds at a future date and endanger the operations of the firm. In addition, by seeking profitable operations, banks would open the door of opportunity for investor funds and growth of the banks, along with depth of coverage in the industry. A further benefit from the commercialization of NGOs was better governance of financial institutions. NGOs have poor governance due to the lack of ownership and accountability. There are, in many cases, few accountability concerns

[1] Stauffenberg, 2003

[2] Stauffenberg, 2003

because of a lack of true ownership by other institutions or parties. By making the MFIs publicly owned by investors, the financial institutions would have more incentive to monitor operations adequately.[3] Prodem, one of the banks studied in this research, led the way in transition and opened the door to many other banks that would soon come. Bancosol, Caja Municipales, Corposol, and the now bankrupt Finansol followed Prodem in this change to commercial banking. This transition, though, would not come without a cost, as NGOs began losing certain benefits they previously enjoyed, such as tax exemptions.[4]

Synthesis of Related Literature

I will touch briefly on five of the six major topics in available literature, followed by an in-depth analysis of the sixth topic, sustainability and commercialization.

Products and Services of Microfinance Institutions

MFIs provide comparable products and services to traditional financial institutions. However, micro-credit loans are overwhelmingly the most common product.[5] Other products are now being offered by some MFIs as literature and demand have highlighted the need for products like savings, insurance, education, and equity services.[6] Eyiah (2001) develops Nourse's idea into a microfinance application in construction management. Eyiah develops a model for a relationship between small contractors and MFIs.[7, 8]

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[3]Stauffenberg, 2003

[4] Stauffenberg, 2003

[5] Nourse, 2001

[6] Nourse, 2001

[7] Eyiah, 2001

The need for financial services worldwide is obvious in the ubiquitous dubious loan and collection practices often offered by "loan sharks." Perry (2002) examines this issue by studying women in Senegal who use village bank money to become moneylenders profitably.[9] Ismail and Ahmad (1997) also study the issue of demand by focusing on pawnshops in Malaysia.[10] They conclude that pawnshops have increased in the role of financial services and will continue to grow in the future.

Collateral for most MFIs is often not required, as most customers, due to extreme poverty, do not have any to provide. Instead, MFIs use "social collateral." Group members must pay back their loans in order to maintain their standing in the community. Woolcock (2001) demonstrates how MFIs use this form of collateral by studying MFIs in Bangladesh and India.[11] Goldmark (2001) goes a step further by suggesting methods to build social collateral.[12]

The demand for savings also exists in many areas of the world. Grosh and Somolekae (1996) touch on this topic while discussing whether microfinance can be a catalyst for industrialization in Botswana.[13] They conclude savings are a key factor in the system required for industrialization.

Micro-insurance is in its infant stages. *Small Enterprise Development* (Volume 12, Number 1, 2001) dedicated an entire issue to this topic, concerning threats to and

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[8] Brau, 2004

[9] Perry, 2002

[10] Ismail & Ahmad, 1997

[11] Woolcock, 2001

[12] Goldmark, 2001

[13] Grosh & Somolekae, 1996

opportunities in the micro-insurance industry (micro-insurance, funeral insurance, agricultural micro-insurance, agricultural micro-insurance). [14]

A final product of important discussion is equity as a form of MF service. Pretes (2002) discusses equity grants as a legitimate option.[15] Pretes says that startup grants and equity are useful. Equity investors, he points out, receive their return intrinsically instead of financially as a form of a startup firm.

Microfinance Institutions Management

In this section we will discuss best practices for the MF industry. Before delving into this topic, it is important to note that as more literature becomes available, best practices will change to adapt to the new information on hand. Best practices should be pertinent to the specific geographic location in which the MFI resides. Bhatt and Tang (2001) discuss vehicles, technologies, and performance assessment.[16] They conclude that MFIs' future success is highly dependant on the tailoring of MFI products to specific products. Relevant factors include the optimal interest rate to charge customers; the structuring of loans to group lenders or individuals; the commercialization of MFIs (to be discussed later); loan size, growth, and credit scoring; and the lending relationship with customers.[17]

Microfinance institutions face an interesting predicament in determining what interest rates they will charge customers. Traditionally, financial institutions will charge the interest that maximizes wealth for the shareholder. However, if this is to be applied to

[14] Brau, 2004

[15] Pretes, 2002

[16] Bhatt and Tang, 2001

[17] Brau, 2004

MFIs, firms risk drifting away from their initial poverty alleviation goals while also pushing customers to delinquency. On the other hand, smaller loans require equal administration cost while yielding smaller revenues to the firm. [18]

Conning (1999) studies this problem of MFIs looking to simultaneously maximize impact, target the poor, and remain financially solvent.[19] Looking at 72 MFIs, Conning states that sustainable MFIs that target the poor must charge higher interest rates, have higher staff costs, and are less leveraged than MFIs that are not sustainable. In contrast, Hollis and Sweetman (1998) study Irish loan funds in the mid-19th century and conclude that financial institutions were able to loan funds to the very poor at competitive rates, for a profit, and without subsidies.[20]

Another topic is group lending versus lending to individuals. Gomez and Santor (2001) study determinants of self-employment success for micro-credit borrowers, and they stress that group lending has a positive correlation with this success.[21] Woolcock (1999) also touches on this topic, stating that performance is contingent upon the structure of cost, the depth of the social relationship among borrowers and program staff, and lending policies.[22] Armenariz de Aghion and Morduch (2000) discuss the system required for MFIs to penetrate new markets.[23] They focus on Eastern Europe, Russia, and

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[18] Brau, 2004

[19] Conning , 1999

[20] Hollis and Sweetman, 1998

[21] Gomez and Santor, 2001

[22] Woolcock, 1999

[23] Armenariz de Aghion and Morduch, 2000

China and state that direct monitoring and the use of non-refinancing threats are successful mechanisms for penetration.[24]

Clientele Targeting

The primary issues of discussion in MFI clientele targeting are lending to women versus men and lending to the marginally poor versus the very poor.

Gender targeting

Overwhelmingly, the bulk of MFI borrowers are women. It is commonly stated that women will use the funds in a wiser fashion then their husbands, leading to greater poverty alleviation. Pitt and Khandker (1998) test this notion in a thorough study.[25] They examine household expenditures, male and female labor divisions, the schooling of children, and non-land assets held by women as outcomes. Their conclusion states that all six of these areas are affected when women are the borrowers and that only one in six are affected when men borrow money. Kevane and Wydick (2001) follow Pitt and Khandker by testing the notion that women produce greater poverty alleviation while men produce greater economic growth.[26] They find no statistical difference in men vs. women generating sales. However, they do find a difference in employment generation, which they attribute to child bearing.

Mallick (2002) questions the efficacy of MF, suggesting that it can lead to gender conflict.[27] Hossain (2002) touches on each point of Mallick's assertions, rebuting his

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[24] Brau, 2004

[25] Pitt and Khandker, 1998

[26] Kevane and Wydick, 2001

[27] Mallick, 2002

points by stating that Mallick's conclusions are premature.[28] Hossain's assertions are worthy of mention, as equity investors who receive returns intrinsically are likely to refuse funding if they perceive that their intrinsic return is diminished.[29]

Very poor versus marginally poor targeting

At the heart of targeting the very poor vs. the marginally poor is the debate of sustainability and self-sufficiency. Marginally poor clients are able to borrow larger amounts of money, which yield larger returns to the MFI and require the same administrative costs as the smaller loans common to very poor borrowers. Navajas, Schreiner, Meyer, Gonzalez-Vega, and Rodriguez-Meza (2000) analyze cost to users, breadth, length and scope of output, along with worth to users.[30] They conclude that the majority of the households reached were households near the poverty line, that group lenders had a greater degree of depth in reaching the very poor in comparison to individual lenders, and finally, that urban borrowers were more likely to be borrowers—though rural borrowers were the poorest. Servon (1997)[31] is consistent with the result of Navajas, et al. Servon studied three MFIs in the U.S. and concludes that the MFIs concerned were serving the borderline of the mainstream economy, not the very poor. Servon states that MFI programs help change the mindset of clients by providing hope.

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[28] Hossain, 2002

[29] Brau, 2004

[30] Navajas, Schreiner, Meyer, Gonzalez-Vega, and Rodriguez-Meza, 2000

[31] Servon 1997

Policy and Microfinance Institutions

The pivotal question in addressing microfinance is whether this is an effective option in comparison to other poverty alleviation tools and programs. In addressing this question there tends to be a split, as many macroeconomist dismiss the notion of a bottom-up approach as not viable and a top-down approach as preferable (if not the only approach). In the other camp of economists, there is greater optimism about the success of a bottom-up approach to poverty alleviation and microfinance. [32]

Adams and Pischke (1992) compare micro-credit programs to earlier finance programs targeting the poor.[33] Adams and Pischke believe that, because of the similarities between micro-credit programs and previous small farmer debt programs, micro-credit is destined for failure and that therefore debt is not the solution for the poor. Buckley (1997) concludes that fundamental structural changes, along with a deeper understanding of informal sector behavior, are needed before the MF industry can succeed.[34] Schreiner (1999) also makes this point in his study of U.S. microenterprises. He concludes that borrowers were able to move from welfare to self-employment in only one in 100 cases.[35]

On the other camp of this argument are researchers like Woller and Woodworth (2001).[36] They argue that macro-economic approaches have suffered repeated failures. Woller and Woodworth do not reject macro-economic policies, but do strongly support

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[32] Brau, 2004

[33] Adams and Pischke, 1992

[34] Buckley, 1997

[35] Schreiner, 1999b

[36] Woller and Woodworth, 2001

microfinance as a viable option that has proven successful in many parts of the world. Weijland (1999) studies the effects of clustering groups and industrial development.[37] He concludes that clustering policies have experienced some success in Indonesia.

Microfinance Institutions Impact Assessment

There is no agreed upon optimal impact assessment method. Nonetheless, many researchers have made an effort to measure MF impact based on a variety of outcomes. Mosely (2001) uses income, assets, and vulnerability as measures of success.[38] He determines that assets and income level increased proportionate to initial poverty levels. MFI programs can lead to increased vulnerability as some borrowers reach high debt levels. McKerman (2002) also lends support to the MFI industry.[39] He finds positive and wide-reaching effects of participation and self-employment profits. Afrane (2002), in a study in Ghana and South Africa that uses case methods, concludes that there are definite improvements to the lives of participants.[40, 41]

On the other side of articles not supporting the MF industry are Sanders (2002) and Bhatt (1999).[42, 43] Sanders bring into question the efficiency of microenterprise as an antipoverty strategy. Bhatt (1999) finds mixed results, pointing out that some programs have worked while others have failed.

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[37] Weijland, 1999

[38] Mosely, 2001

[39] McKerman, 2002

[40] Afrane, 2002

[41] Brau, 2004

[42] Sanders, 2002

[43] Bhatt, 1999

Microfinance Institution Sustainability and Commercialization

On the topic of self-sufficiency there are mainly two competing ideologies, the Welfarist and the Institutionalist. I will briefly discuss these two ideologies and move on to discuss several articles that study sustainability as defined by the institutionalist.

The welfarist contends that subsidies are a form of equity investment. The investor in this case is not seeking monetary return, but instead receiving his return through an intrinsic fashion. The equity investors who invest in socially responsible firms are willing to accept a lower return in comparison to index funds that the investor may not consider socially responsible.[44, 45]

The institutionalist, on the other hand, believes that the firm ought to have the ability to cover its cost through its revenue. Hollis and Sweetman (1998) make this argument as they point out that subsidized MFIs are less stable and tend to suffer more mission drift in comparison to their peers who receive funds from depositors.[46] Hollis and Sweetman (1998) also point out in a previous article that Irish MFIs in the 1700s were resilient. They only succumbed after legislation, bank competition, and the potato famine colluded to create an infeasible environment. Patten, Rosenguard, and Johnston (2001), in a more recent article, discuss the resiliency of MFIs as they analyze the BRI during the East Asian financial crisis.[47] They conclude that the BRI performed well while large financial institutions performed poorly by measures of savings rates and repayments.

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[44] Woodworth, 2000

[45] Brau, 2004

[46] Hollis and Sweetman, 1998

[47] Patten, Rosenguard, and Johnston, 2001

The topic of the institutionalist versus the welfarist is not tested in this study, but rather this study test sustainability as defined by the institutionalist. In other words, this study will measure the transition of NGO's to commercial financial institutions from the perspective of the Institutionalist. The following are a group of articles pertaining to commercialization and sustainability as defined by the institutionalist.

The CGAP Occasional Paper "Commercialization and Mission Drift: The Transformation of Microfinance in Latin America," from January 2005, measures the impact of commercialization on MFIs.[48] The authors measure commercialization impact by the changing strategy and financial performance of various institutions in the late 1990s. Financial performance of MFIs in Latin America is measured against their peers in other regions of the world and commercial banks. This study demonstrates that not only were Latin American MFIs profitable when compared to their peers, but that in many cases they were outperforming commercial banks. Even low-end customer microfinance institutions, which tend to be less profitable, were found to be on their way to sustainability. Of the fifty-one Latin American MFIs that report to the *Microbanking Bulletin*, forty-one were self-sustainable.[49]

This growth in commercialization is leading to strong competition and what at first may appear to be a mission drift to larger loans. Larger loans provide a higher level of profitability in comparison to small size loans. However, Christen and Cook's study was unable to identify whether the increasing loan sizes were due to a mission drift or a natural growth of the financing needs of repeat customers.

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[48] Christen & Cook, 2001

[49] List of Participants in the MBB. Retrieved February 8, 2004 from http://www.mixmbb.org/en/membership/participating_mfisMBB10.html

In December 1996, CGAP published another article titled "Financial Sustainability, Targeting the Poorest, and Income Impact: Are There Trade-offs for Microfinance Institutions?" [50] This paper studied the findings of David Hulme and Paul Mosley, who asked in their book, "Can microfinance institutions achieve financial sustainability and reach the poorest of the poor? What are the tradeoffs in pursuing these two goals simultaneously?"

David Hulme and Paul Mosley studied thirteen MFI institutions in seven countries to comprehend "the impact of the institutions' design, management and policy environments on financial sustainability and on various measures of impact, including poverty."[51]

Hulme and Mosley compared the change in each impact variable from 1989–2003 in a random sample of 150 loan borrowers in a control group of 150 non-borrowers whose incomes, asset holdings, and access to infrastructure were comparable to the borrowers'.[52]

What Hulme and Mosley discovered was that institutions with high financial sustainability have lower levels of loans in arrears and dependence on subsidies in comparison to MFIs with low levels of financial sustainability. In addition, Hulme and Mosley discovered that high levels of sustainability are found in institutions that instill "best practices" policies such as higher interest rates, voluntary savings facilities,

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[50] Christen & Cook, 2001

[51] Christen & Cook, 2001

[52] Christen & Cook, 2001

frequent loan collection, and financial incentives to borrowers and staff to maximize repayment.

In March 1997, CGAP FOCUS Series 2 published an article titled "The Challenge of Growth for Microfinance Institutions: The Bancosol Experience." [53] Bancosol is the name that Prodem, one of the banks I will follow through transition, took after becoming a commercial MFI. This points to many problems and opportunities that Prodem experienced through transformation, among them a higher cost of funds. BancoSol switched from donor funds to more expensive commercial loans and savings deposits. The result of this was a sharp rise on the average cost of funds from 4% per year at time of transformation to 12% two years later. Also, the number of larger loans which have a lower interest rate, grew, thus lowering the profit yields by 13%. In addition to all this, the explosive growth from four branches prior to transformation to thirty-two branches in the following four years lowered productivity.[54] While BancoSol's costs were growing rapidly due to expansion, its expanded capacity was not immediately yielding sufficient loans in order to cover the higher cost of operation.

This thesis will attempt to answer whether banks that were formerly NGOs are profitable and sustainable, and whether this, the transition to regulated banks, improved the efficiency of resources, management and administration. This study will measure the transition of NGOs to commercial financial institutions from the perspective of the Institutionalist. In answering these questions, I contribute to the literature in the following ways: I will measure changes in portfolio quality, efficiency and productivity, financial

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[53] Chen, 1997

[54] Productivity is measured by portfolio outstanding per unit of inputs, such as branches or loan officers.

management, and profitability in specific banks that have transitioned from NGOs to commercial institutions.

Research Design

In measuring the profitability, sustainability, and efficiency of NGOs that have transitioned into regulated banks I followed the "Performance Indicators for Microfinance Institutions: Technical Guide." [55] I gauge four different sets of indicators: portfolio quality, efficiency and productivity, financial management, and profitability.

Portfolio quality is the largest source of risk for any finance institution. The biggest asset for an MFI is its portfolio of loans. Furthermore, many of these loans are not collateralized, and thus the quality of portfolio is crucial for the survival of any MFI or bank. In particular, portfolio at risk, or PaR, has emerged as a useful ratio. PaR measures the quality of the portfolio tainted by doubtful accounts. PaR is easily measured and comparable throughout the industry with other finance institutions.

The second set of indicators I am using involves efficiency and productivity ratios. These ratios measure the efficiency per unit of production of the bank and the management of assets. These ratios are not easily altered in comparison to profitability ratios, which are more susceptible to "creative accounting." The third set of indicators involves the performance of the financial managers. Even though financial management is a "back office function," the impact financial managers have directly affects the sustainability of the institution. As stated by the Inter Development Bank, "Errors in

[55] Janson & Abate, 2003.

liquidity or foreign exchange management can compromise an institution's credit operation and otherwise sound management."[56]

The final set of indicators measured is the profitability. This set of ratios tends to "summarize" all operations of the company into dollars and cents. Any record of poor management, use of resources, and portfolio quality will be reflected in the profitability of the bank. Also, records of growth and profitability indicate market penetration; if we assume penetration indicates serving the microfinance industry in ways that improve poverty alleviation, profitability is directly linked to the overriding goal of any MFI to strive for poverty alleviation through operations.

Data Collection

The samples in this study were gathered from the archives of *The Mixmarket: The Global information exchange for the microfinance industry*. The four banks Arequipa, Tacna, Prodem and Mibanco were chosen because of their geographical location in South America, along with the availability of their financial statements and mission statements.

Controlling for macro-economic fluctuations was a major concern. To minimize changes in financial data due to this factor, banks were chosen in the same economic region during the late 1990s. The specific sample dates for each bank are: Arequipa 1997, 1998, and 1999; Tacna 1996, 1997, and 1998; Prodem 1998, 1999, and 2000; and, Mibanco in 1998, 1999, and 2000.

South America was chosen due to its large number of MFIs. Peru and Bolivia were specifically targeted due to their geographical proximity.

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[56] Janson, 2003.

Many banks, unfortunately, do not provide financial statements while they are private. Thus, finding banks with this complete information in the same economic region was a difficult task. The financial statements that were sought were the year prior to commercialization, the year during commercialization and the year after commercialization. Mibanco, though used in this study, did not provide its financial statements for the year prior to privatization. However, the other two years were available and I chose to use the firm regardless.

A final factor in gathering the data sample was mission statement. All of the banks used in this study had 91%–100% of their operations in comprised by microfinance. In addition, the customer bases were similar, with an average loan per borrower ranging from Tacna's $994 to Prodem's $1,550.[57]

Hypotheses, Assumptions, and Limitations

The size of the microfinance industry is large, and given a lack of supply to meet the demand, microfinance banks can be self-sustainable in a commercial environment. The transition to a commercial environment will yield greater efficiency of administrative resources over the long run, due to the presence of ownership of the bank. In the short run, profitability will be affected negatively as banks transition from the safety of not-for-profit institutions to regulated banks.

I will like to note a few assumptions and limitations in this study. In comparing financial statements, and in the absence of strong regulation for uniformity in accounting standards, it is likely that some figures were accounted for differently. I will make a good faith effort were accounting figures were computed differently to recalculate figures in

[57] MixMarket (2005) Demand MFIs. Retrieved March 8, 2005, from http://www.mixmarket.org/en/demand/demand.quick.search.asp

accordance with CGAP accounting practices for microfinance institutions. Given that this study covers banks in Peru and Bolivia, it is limited in controlling for different maturity levels of markets and the effects on the different indicators. Bolivia is a more competitive environment and banks in Bolivia are less likely to exert profitability simply by raising interest rates on loans.

A second critical limitation of this study is the length of time banks are followed post transition. During the time of this study, the sample bank financial statements were unavailable for years beyond the year following the transition. Because of this data limitation, measuring longer run bank sustainability effects is problematic. However, the thesis provides evidence on shorter run sustainability and profitability effects in the year after transition, which may shed some additional light on longer term effects.

CHAPTER 2
BUSINESS ENVIROMENT

Industry

As mentioned before, Bancosol, Caja Municipales, Corposol and the now bankrupt Finansol followed Prodem into this transition to commercial banking.[1] The microfinance industry's success has also brought downscaling to the larger commercial banks. These other banks, like Banco Solidario of Ecuador, Banco de Trabajo of Peru, and the behemoth Banco de Credito of Peru, have all taken on micro-lending ventures in a widespread fashion. Table 2-1 shows the rapid commercialization of microfinance.[2]

Table 2-1. Rapid rate of commercialization in Latin America: A snap shot of mid-2001

Type of MFI	Number of MFIs	Number of Clients (Thousands)	Portfolio (US$ Millions)	Average Loan Size (US$ Millions)
Upgrade	40	572	538	976
Downscale	22	365	343	940
Total Regulated	62	937	902	962
Unregulated	114	870	288	332
Total	176	1806	1190	659

These data were taken from the most comprehensive survey of microfinance institutions in Latin America available. The survey was done by the Inter-Development Bank (IDB) and the Consultative Group to Assist the Poor (CGAP) and covers 176 MFIs in seventeen Latin American countries. The data refer to mid-2001 and clearly show the evolution from an non-governmental-organization-dominated industry ten years earlier to one in

[1] Janson, 2003.

[2] Christen & Cook, 2001.

which 62 regulated MFIs provide 76% of the credit flowing to microenterprises from all MFIs (regulated and unregulated) and reach 52% of the total clients served by all MFIs.

Uneven Distribution of Microfinance Institutions (MFIs) across Latin America

The level of microfinance penetration across Latin America is disproportionate and ranges from less than 1% to 28%. On average the level of penetration is 2.6%. Ironically, to the Inter-American Development Bank it is the small and medium-sized countries in Central America and South America that lead in the level of penetration; Venezuela, Brazil, Mexico, and Argentina, the largest countries in Latin America, have penetration rates below 1%. There are a plethora of reasons for this low penetration rate, but the primary cause is that no large NGOs have matured in these markets. Furthermore, large commercial banks have not shown any interest in entering this market, where large development banks dominate in providing assistance to low-income micro-businesses. Nevertheless, there are two large MFIs with promising hope: Compartamos in Mexico and Banco do Nordeste in Brazil. Table 2-2 shows the share of microenterprise in Latin America with MFI credit.[3]

Credit Unions

In order to discuss the microfinance industry in Latin America it is important to take credit unions and their role in the microlending industry into account by examining the growth, decline, and current state of credit unions. Credit unions were established in the 1950s, ’60s, and ’70s by Catholic priests, United States Agency for International Development (USAID) workers, and Peace Corps volunteers[4]. Management was often

[3] Stauffenberg, 2003

[4] Stauffenberg, 2003

poor, loans were frequently lost, and earnings, profit retention, and reserves were weak.[5] However, due to the continuous sums of soft loans and grants, credit unions grew until the 1980s.[6] In the 1980s, the soft loans and grants began to dry up in exchange for technical assistance money, as a push began to make the industry more responsible and self-sufficient. According to a top recent IDB CGAP survey of credit unions in seventeen countries in Latin America:

> These financial intermediaries provided loans to about 1.5 million micro-entrepreneurs at the end of 2001, almost as many as the 1.8 million served by the MFIs in the same year. Average loan size was US$ 1,044 for the credit unions, not too different from the $659 shown in Table 1 for the MFIs. Small and fragmentary survey evidence on the income levels of the CU and MFI clientele indicates that about 20-50% of each group is below the widely-used $2 per day per person poverty line.[7]

Even though the loan amounts are similar and the clientele are comparable in income level, between microfinance institutions and credit unions, the microfinance industry is currently growing on average by 18% versus 7% for credit unions.[8] Credit unions have many weaknesses in comparison to microfinance institutions. Two factors— the free rider problem and a lenient attitude toward delinquency— are prominent weaknesses of credit unions in comparison to MFIs. Given there is no ownership stake in credit unions (CUs) and they function as cooperatives, no one feels obliged to take the helm of these institutions since they will not reap any additional rewards.[9] A lenient attitude toward loan delinquency and rooted in the organization culture drives many CUs

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[5] Stauffenberg, 2003

[6] Stauffenberg, 2003

[7] Stauffenberg, 2003

[8] Stauffenberg, 2003

[9] Stauffenberg, 2003

to insolvency and subsequent bankruptcy.[10] Currently, there is a strong drive to clean up the credit union industry in Latin America, and significant progress has been made in Guatemala, Ecuador, and Nicaragua. In these countries, 15–25 credit unions were reorganized and strengthened, leading to double digit growth (20% instead of 7%).[11]

Table 2-2. Share of microenterprise in Latin America with MFI credit

Country	Date of Household Survey	Number of Single-person Firms	Number of Firms with 1–5 Employees	Total Number of Micro-enterprises	Number of Micro-enterprises with MFI Credit	Share of Micro-enterprises with MFI Credit
Bolivia	1998	1300313	62008	13623231	379117	27.83%
Nicaragua	1998	377148	40422	417,570	84285	20.18%
El Salvador	1998	606569	60617	667186	93808	14.06%
Honduras	1999	832941	58239	891180	107054	12.01%
Chile	1998	1069139	138045	1207184	82825	6.86%
Guatemala	1998	1328476	93238	1421714	71187	5.01%
Costa Rica	1998	232328	78891	311219	12794	4.11%
Ecuador	1998	1396139	298524	1694663	65719	3.88%
Dominican Republic	1998	1315016	77172	1392188	49437	3.55%
Colombia	1999	5726653	77152	6501805	219240	3.37%
Paraguay	1998	319113	668213	987326	30203	3.06%
Peru	1997	4102561	2763632	6866193	185431	2.70%
Panama	1999	267854	21150	289004	6390	2.21%
Mexico	1998	8503552	1770393	10273945	67249	0.65%
Uruguay	1998	314891	27018	341909	1600	0.47%
Brazil	1999	16567943	2421810	18989753	62485	0.33%
Argentina	1998	1807615	103555	1911170	4940	0.26%
Venezuela	1999	2906975	340296	3247271	2364	0.07%
Latin America Total Firms		48,975,375	9798375	58773600	2E+06	
Latin America -Weighted Average Share						2.60%
Latin America-Un-weighted Average Share						6.15%

Sources: Household surveys for number of microenterprises, Christen (2000) for number of microenterprises with MFI credit, except for Panama. Christen's data go to the second half of 1999 and cover most of the larger regulated financial institutions and NGOs lending to microenterprises, but not credit unions. Data for the number of microenterprises with MFI credit for Panama are obtained from the IDB loan files, refer to December 1999, and are as follows: Multi-credit Bank 3881, Credit Fundes 1549, and Mi Banco 960.

[10] Stauffenberg, 2003

[11] Stauffenberg, 2003.

Tables 2-3 and 2-4 highlight the rapid growth of MFIs in Latin America and the smaller growth of credit unions.

By the late 1990s, the microfinance and credit union industries in Latin America were leading the world in the critical area of sustainability. Table 2-5 highlights the return to microfinance in Latin America. Unfortunately, microfinance in Latin America went from outpacing the world in 1996–1999 to lagging behind the world average in 2001–2002.[12] During the previous years, microfinance exploded in growth, leading to increased competition and decreased profit. Oddly enough, the increased competition is affecting smaller MFIs more than their competing larger peers. The reason for this is simple: economies of scale. Larger MFIs can reduce their cost per loan and administrative cost.[13] The additional cost of one more customer loan, once an MFI is well established, is minimal in comparison to the profits it can earn.[14] Thus, the MFIs who have managed to grow are reaping the rewards of larger portfolios.

Increased Competition

As competition has increased, the drive to customize products has also increased. MFIs have switched from group loans to individual loans to meet the needs of their clients more efficiently.[15] In addition, group loans tend to perform poorly during economic downturns, as was the case between 1998–2002. In hard economic times, loan recipients feel they have a difficult enough time paying off their loans, much less trying

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[12] Ramirez, 2004.

[13] Stauffenberg, 2003.

[14] Stauffenberg, 2003.

[15] Stauffenberg, 2003

to pay for someone else's loan. When one or two people default on a group loan everyone tends to default on it, as well, exponentially increasing the cost to MFIs.[16]

Table 2-6 demonstrates the continuing preference of individual loans over group loans, as the number of individual loans hovers around 1 million and the number of group loans is about 350,000. Another interesting characteristic is an increasing preference on poverty lending using village bank loans. The use of village bank loans increased to 410,000 in the late 1990s versus 350,000 for group loans.[17] The focus on poverty is evident by the much smaller amount of loans and by the rural location of these loans.

Village banking also is changing due to competition as the maximum loan size has increased from about $300 to $1,000.[18] In addition, loan maturities have been

Table 2-3. Rapid growth of MFIs

Year	Number of Microenterprises
Dec-98	1,520,000
Dec-00	1914000
3-Jun	3241000
Total Growth (1998-2003)	113%
Average annual growth	18.30%

Source: IDB and CGAP surveys of 17 L.A. countries

Table 2-4. Slower credit union growth

Year	Microlending Portfolio is US$ and Growth
Dec-99	$2.41 Billion
3-Dec	$3.13 Billion
Total Growth (1999-2003)	29.90%
Average annual growth	6.75%

Source: DGRB and IDB surveys of eight Latin American countries

[16] Stauffenberg, 2003

[17] Stauffenberg, 2003

[18] Stauffenberg, 2003

Table 2-5. Returns of microfinance in Latin America: 1996–99 versus 2001–2002 (%)

		Adjusted ROA in 1996–99	Adjusted ROA in 2001–02
	All MFIs and CUs, Worldwide	-4.5	0.1
	All MFIs and CUs, Latin America	2.4	-0.1
5 Latin American Sub Groups	Credit Unions (CUs)	4.2	-0.5
	MFIs: large, broad based	3.1	5.3
	MFIs: medium-sized, broad based	1.3	3.6
	MFIs: medium-sized, low-end	2.3	-2.9
	MFIs: small, low-end	-9.4	-12.8

Sources: Second column from Christen 2000, second column from *Microbanking Bulletin (July 2003)*.

Table 2-6. MFI lending by loan mythology and location of client

Type of Loan	Number of MFIs Making These Loans	Total Number of Borrowers	Total Loan Portfolio ($Million)	Average Loan Balance	Share of Clients in Rural Areas
Individual Loans	155	984,167	964	980	8%
Group Loans	75	350,607	115	329	17
Village Bank Loans	47	410,352	61	150	29
All Loans (All MFIs)	176	1,745,126	1140	653	14

Sources: All data from the IDB/CGAP inventory of 176 MFIs in seven Latin American Countries

lengthened; payments made less frequently and saving requirements have been reduced.[19] Some village banks have even offered group and individual loans to retain clients.[20] There are also a number of changes to products and loan making techniques that have come about due to the competition in microfinance. Alvaro Ramirez details the following in his paper *The Microfinance Experience in Latin America and the Caribbean*:

- As noted in an IDB paper done two years ago on equipment finance in Latin America (Westley, 2003), 23 of the 25 leading MFIs and CUs surveyed offered equipment loans or leases with at least 2-year maturities. We've come a long way from those early days when a common complaint was that short-term working capital loans were the only kind of loan one could find at many MFIs.

- Lines of credit are offered by a number of the regulated Bolivian (and other) MFIs to their preferred customers, this eliminating the need for a client to reapply for a loan when their old one expires.

[19] Stauffenberg, 2003

[20] Stauffenberg, 2003

- Some MFIs, such as Banco ADEMI in the Dominican Republic, even offer credit cards to qualified clients.
- A number of Accion International affiliates and others are developing credit-scoring models and are also utilizing PDAs such as Palm Pilot. Both are designed to cut costs and reduce client delay in accessing a loan.
- Some IPC affiliates, such as Financiera Calpia in El Salvador and Caja Los Andes in Bolivia, are offering agricultural production loans.
- Other MFIs, such as Financiera Confia in Nicaragua and Banco Ademi in the Dominican Republic, are branching out into housing loans.

In addition to these changes MFIs are starting to develop more traditional banking services. Based on nine major markets of MFIs,[21] savings deposits have increased from $500 million in 2000 to $1.3 billion in 2003.[22] Although checking services are in an infancy stage, MFIs are increasingly providing the one-stop shopping that clients demand.[23] This fast pace of growth is also forcing NGOs to become commercial institutions, as the need for funds outgrows donations. Table 2-7 shows the fast increase in MFI savings and checking accounts.

Table 2-7. Deposits in nine microfinance markets (US$ millions, end-of-year values)

	2000	2001	2002	2003
Checking Accounts	4	5.6	1.4	1.7
Savings Accounts	118	165	254	321
Certificates of Deposit	395	513	619	867
Total	517	683	874	1190

Performance of Latin American MFIs Versus Asian MFIs

In order to measure the performance and vitality of the Latin American microfinance industry, it is important to compare it to another region of the world; I arbitrarily chose the Asian microfinance industry. The following set of information is

[21] Bolivia, Nicaragua, Ecuador, Guatemala, Colombia, El Salvador, Honduras, Paraguay, and Peru

[22] Stauffenberg, 2003

[23] Stauffenberg, 2003

taken from the July 2003 *Microbanking Bulletin*. The *Microbanking Bulletin* covers fifty Latin American MFIs and twenty-two Asian MFIs. Although microfinance got a head start in Asia before Latin America, the average age of MFIs reporting to the *Microbanking Bulletin* is twelve years in Latin America and nine years in Asia.

Overall Financial Performance

The two most important indicators that give a picture of a microfinance institutions are the portfolio at risk and return on assets. The portfolio at risk, as previously stated in the synthesis of related literature, tells how much the institution is getting back from the money it loaned out. The return on assets ratio lets the analyst learn the efficiency at which the institution is using its resources. In both cases, Asia is beating out Latin America, though it is important to note that in neither case is the welfare of the institutions at stake, given delinquency rates are 2% and 4%, respectively.[24]

Outreach

The number of total clients is much larger in Asia than in Latin America. This is not so extraordinary, given the large population differences between Asian and Latin American countries. The size of the loans is also larger in Latin America. This is also not so surprising, because of the extremely poor nature of the microentrepreneur in Asia. In effect, the larger loan size compensates for the smaller number of clients in Latin America. Table 2-8 gives us a snapshot of the average MFI reporting to the *Microbanking Bulletin* in July 2003, both in Latin America and Asia.[25]

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[24] Ramirez, 2004

[25] Ramirez, 2004

Table 2-8. Profile of the average MFI reporting to the Microbanking Bulletin (July 2003)

	ALL MFIs		Financially Sustainable MFIs	
	Asia	Latin America	Asia	Latin America
Adjusted ROA (%)	2.1	-0.1	5.5	4.4
Adjusted ROE (%)	10.3	1.1	16.9	16
Portfolio at risk (%> 30 days)	2.5	4.9	2.4	3.7
No. of active borrowers	32915	13755	183,171	31010
Total loan portfolio (US$ million)	4.9	8.6	16.5	20.8
Average loan balance (US$)	195	816	277	900
Deposits/Loans (%)	15	29	27	36
Debt/Equity (leverage ratio)	1.6	2.7	2.4	3.4
No. of voluntary savers	18374	2422	186,289	2961
Total voluntary savings (US$ 1000)	816	3185	2400	9658
Average savings balance (US$)	39	741	61	809
Operating expense/Loan portfolio (%)	22	27	16	21
Borrowers/ Loan officers (%)	307	353	465	398
Borrowers/Staff members (%)	149	128	148	140
Adjusted cost per borrower (US$)	35	195	36	171
Yield on gross loan portfolio-nominal (%)	36	44	35	41
Yield on gross loan portfolio—real (%)	30	35	29	33

Sources: *Microbanking Bulletin* (July 2003)

Funding

Latin America is further ahead than Asia in terms of the amount of loans financed from savings. This is likely due to the further development and age of the average MFI in that region. The natural course of an MFI is to start out as an NGO, with some type of grant base money, and as it matures, to tap into the more expensive but more abundant savings deposits for capital. In this case, too, Latin America is leading with a leverage ratio of 2.7, versus 1.6 for MFIs in Asia.[26]

[26] Ramirez, 2004

Savings Outreach

Savings deposits are both necessary for MFIs to leverage their loan portfolio and an importantsource of savings accounts for the community. Although there are fewer clients in Latin America, their accounts are larger. A typical MFI in Latin America in total has larger savings deposits than one in Asia.[27]

Efficiency

Average cost in Asian MFIs is lower in Asia than in Latin America: 22% versus 27%, respectively. This is likely due to the economies of scale factors that affect MFIs—the more clients there are, the more cost is distributed. Thus, the smaller client base of Latin America MFIs works against them when it comes to average cost.[28]

Another way of disseminating this economy of scale factor is by looking at the numbers of borrowers per loan officer. Here, Latin America seems to be slightly edging out Asia. On the other hand, if you look at the ratio of borrowers to staff members, which includes all MFI personnel, Asian MFIs are more efficient despite having a larger clientele to service. As Alvaro Ramirez of the Inter-American Development Bank put it, "This greater Asian efficiency may reflect economies of scale in delivering both loan and deposit services. Or it could simply be due to the Asian MFI's more productive use of its non-lending personnel for reasons other than economies of scale (better management, systems, etc.).[29] [30]

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[27] Ramirez, 2004

[28] Ramirez, 2004

[29] Stauffenberg, 2003

[30] Ramirez, 2004

Loans Rates Changed

Latin American MFIs charge 5%–8% more for their loans than their Asian counterparts, even when inflation is accounted for. These higher interest charges are the outcome of the higher operating cost of Latin American MFIs. This indicates that the higher ROA in Asia is not due to Asian MFIs charging more for their products or being much more efficient. Instead, it may be that Latin American MFIs have higher delinquency rates and are increasingly relying on more expensive commercial capital like savings.[31]

Capital Markets

The following is a short summary of the capital markets in Peru and Bolivia. In any future scenario it seems intuitive to think of mature financial institutions issuing bonds for capital use in microfinance operations. Nonetheless, as evidenced by this brief description of the capital markets, this phenomenon is probably not likely to develop in the near future—especially in Bolivia, where the stock exchange is in an infant stage.

Peru: Capital Markets

There is only one stock exchange in Peru, the Lima Stock Exchange (LSE). Before the 1990s, much of the capital that was raised in Peru was done in the form of corporate bonds. The reason for this is simple: the Peruvian government subsidized interest and thus bonds were a cheaper form of capital than equity. During the 1990s, that began to change. In the 1980s, the proportion of GDP in the LSE was hovering around 5%; by the late 1990s, it was more like 27%. Unfortunately, the late 1990s saw the disaster of President Fujimori, who along with his top intelligence chief, Montesinos, is said to have

[31] Ramirez, 2004

pillaged the treasury coffers of $2 billion. Since that time the LSE has recovered, growing to $10.5 billion in 2000, $10.9 billion in 2001, and $12.6 billion in 2002.[32]

The most important sectors in the LSE are industrials (38%), mining (16%), banks and financial institutions (12%), and utilities (5.5%). In the beginning of 2003, the 230 companies listed with the LSE and 21 had listed debt instruments. The volume traded was $2.9 billion in 2002.[33]

Bolivia: Capital Markets

In 1976 the initial plans for the Bolivian Stock Exchange, Bolsa Boliviana de Valores S.A., were formulated, and in 1979 the first shareholder meetings took place. However, it was not until 1989 that trading officially began to take place. Today there are eighteen companies listed on the Bolsa Boliviana de Valores. As of December 2004, the Bolivia Stock Market Capitalization was $1.35 billion, or 5.74% of the Bolivian GDP.[34]

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[32] Olaechea 2004

[33] Olaechea 2004

[34] Origenes de la Bolsa (n.d.)

CHAPTER 3
TESTING THE HYPOTHESIS

Chapter 3 tests the hypothesis and is divided into two main sections. The first section asks whether non-governmental organizations (NGOs) that transition into regulated microfinance institutions (MFIs) are profitable and self-sustainable. This section measures profitability and sustainability by using return on equity, return on assets, and portfolio yield. The second section asks, "Will the transition to a regulated bank improve efficiency of resources and administration?" Efficiency is measured through operating expense, financial expense, cost of funds, liquidity, debt/equity, portfolio-at-risk, write-offs, loan loss reserve, and risk coverage. Before the analysis of each ratio I will include a brief description of the ratio, the importance of its usage, and any complications I experienced in gathering this information.

Are NGOs That Transition into Regulated MFIs Profitable and Self-Sustainable?

This part of the research will attempt to answer the question of profitability and sustainability. However, no study of profitability ratios for microfinance institutions should be taken independently of efficiency, productivity, financial management, and portfolio quality ratios. These ratios will be discussed when analyzing whether transitioned MFIs are more efficient. This second part of the research completes the study of profitability by shedding light on profitability information that is not given by the profitability ratios, while also answering the questions of efficiency after transition.

In studying the profitability of the MFIs, I used a set of profitability ratios to gauge the profitability of the banks. Efficiency and productivity indicators had to be taken into

consideration along with portfolio at risk (PaR) ratios, since many profitability indicators can be strongly manipulated. These manipulations include adjusting the loan loss reserves, changing the amount of write-offs and other creative techniques. Financial management is another factor that needs to be taken into account. Today, most MFIs work in a sellers' market where inefficient operations can still run highly profitable enterprises. However, as the industry matures, more competitors enter into the market, and subsidies run out, financial management will become an essential skill MFIs need if they want to be profitable.[1]

Return on Equity (ROE) = Net Income/Equity

ROE is a measure of the return on equity calculated by dividing net income by period average equity. In this case, I was forced to use period equity versus period average equity because of my inability to gather the additional information needed to calculate period average equity.[2]

Return on equity is especially important for private, for-profit institutions with real non-corporate owners; to these individuals, ROE measures the return on their investment.

Figure 3-1 is a chart of the sample corporations used in this study and their ROEs during three critical years of operation: the year prior to becoming for-profit, the year of the transition (strike year), and the year following the transition. In two of the four cases, the year preceding the transition tended to be the most profitable year. The reason for this may lie in the added cost of becoming a private bank. Not-for-profit MFIs do not pay

[1] In analyzing profitability, I looked at return on equity, return on assets, and portfolio yield

[2] Period average equity is the average of the current and previous years' equity.

taxes and have a lower reporting cost associated with governing bodies overseeing the industry.

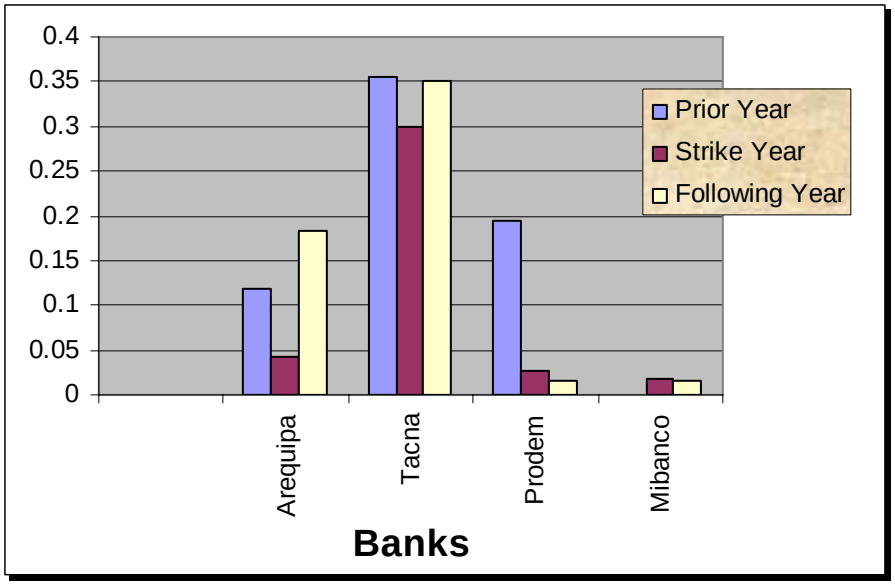

Figure 3-1. Return on equity

Return on equity has been a surprising number for the industry. In 2000 only one out of twenty leading MFIs showed a loss. Despite the economic recessions in the Andean region during the time,[3] Mibanco, Tacna, Arequipa, and Prodem, which reside in this region, all showed positive returns. In most cases, MFIs outperformed conventional banks by wide margins.

Nonetheless, as noted by Abate and Jansson in their 2001 article "Performance Indicators for Microfinance Institutions," "NGOs have achieved higher returns on equity than formalized MFIs even though the NGOs operate in significantly lower debt-equity ratios…Supervised institutions tend to operate in more competitive markets, where portfolio yields are lower."[4]

[3] The data used in this study was from 1996–2000.

[4] Jansson & Abate, 2003

Return on Assets (ROA) = Net Income/ Assets

Return on assets, like return on equity, measures profitability by looking at the efficiency of the assets used. It incorporates not just profitability but also how well management is using its the institution's assets. Surprisingly, NGOs have generally outperformed commercial MFIs in their use of assets. The reason for this is their inability to access capital and assets, thus forcing the institutions to maximize the funds and resources available.

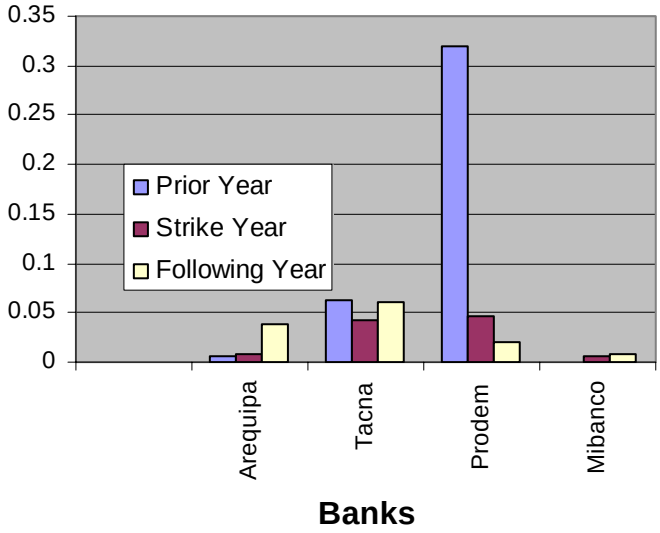

Figure 3-2. Return on assets

Figure 3-2 demonstrates the return on assets for the sample used. A striking and apparent feature in this graph is Prodem's performance for the year prior to privatization, when Prodem's ROA is exponentially larger than during other years and has a higher performance than any of the other banks' best years. The reason is simply that Prodem used a much lower reserve to estimate losses. Provision for doubtful accounts reflects negatively toward the bank's net income and is a fast way to show profitability at the bank's discretion.

Even if we remove Prodem's first-year performance, it is still difficult to recognize a pattern in the bank's operation. We can conclude one important fact: all banks are returning positive ROAs for all the years measured. Figure 3-3 shows the ROA minus Prodem's first-year performance.

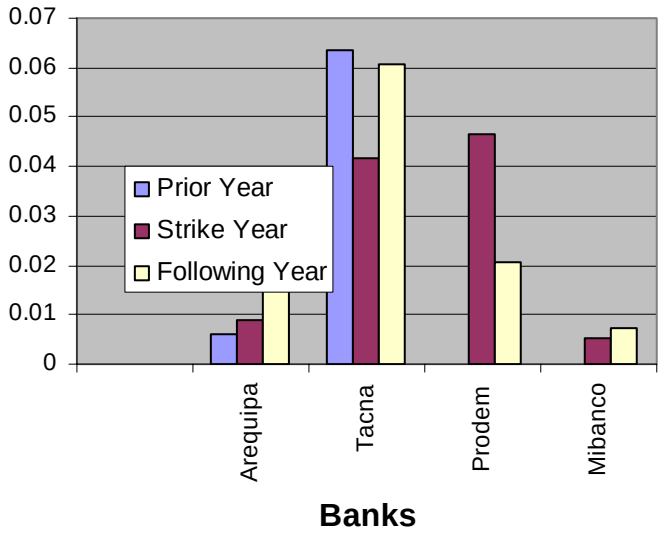

Figure 3-3. Return on assets

Portfolio Yield= Interest and Fee Income/ Gross Portfolio.

The portfolio yield is a measure of interest payments received from clients during a specific period. Unlike return on equity and assets, which rely on net income to measure profitability, portfolio yield derives profitability from interest and fees earned from operations. This indicator is less susceptible to accounting discrepancies and other creative accounting practices. In addition, it is measured prior to taxes and is thus exclusive of tax changes and regulatory expenses due to privatization. Figure 3-4 demonstrates the result of the sample portfolio yield.

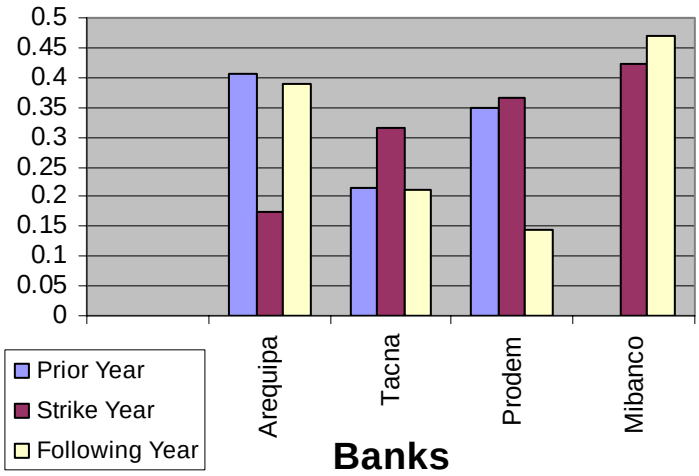

Figure 3-4. Portfolio yield

With the exception of Arequipa, the rest of the banks' highest year of portfolio yield was either the year of privatization or the following year. As these banks are maturing, efficiency is improving, which in turn has generated increasing profits.

What portfolio yield, ROA, and ROE demonstrate is that MFIs are profitable despite adverse conditions in the marketplace.

Will the Transition to a Regulated Bank Improve Efficiency of Resources and Administration?

Efficiency and Productivity

Efficiency and Productivity measure how streamlined the operations of an MFI are set up. This section will measure the amount of output per unit of input, while taking into account the cost of the units. These ratios are less easily manipulated and thus more transparent than profitability. MFIs in general have less efficient operations than commercial banks. The reason for this is that a loan of $200 takes nearly the same amount of labor as a loan of $200,000. Many MFIs have an administrative cost of 15 to

30%, whereas banks average 1.5%–3%.[5] This section takes into account the operating expense ratio.

Operating expense ratio= operating expenses/gross portfolio. The operating expense ratio is an efficiency indicator of the MFI. It measures the firm's cost of delivering the lending product to the customer. The lower the indicator, the more efficiently the firm is running. The ratio is calculated by dividing all expenses related to the operation of the firm, including salaries, depreciation, and board fees, by the gross portfolio. Provision expenses, interest and extraordinary expenses are excluded. Figure 3-5 shows the operating expense ratio for this study.

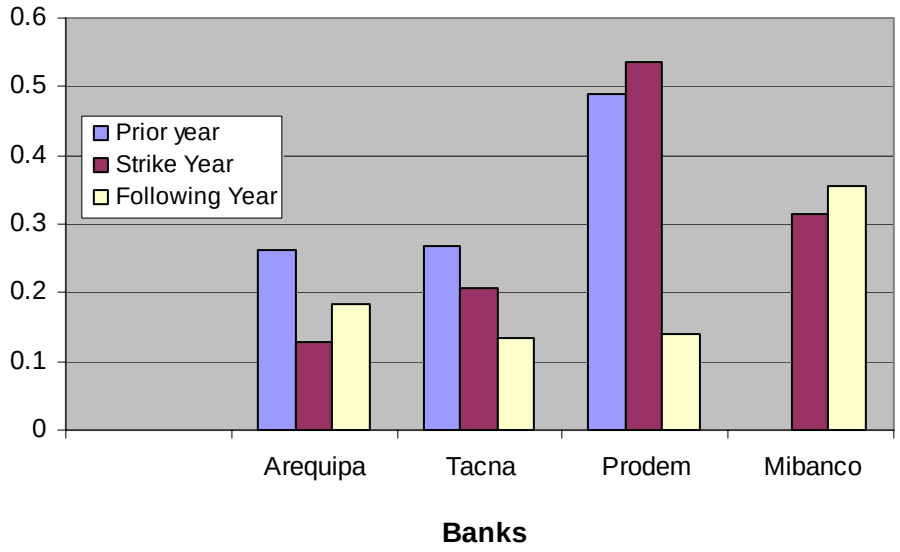

Figure 3-5. Operating expense ratio

In three out of the four cases, the operating expense ratio was lower in the year of operation following privatization than the first year. Due to an absence of information it was impossible to evaluate Mibanco's prior year of operation. It is even more important to note the lower operation ratio by Arequipa and Tacna over Prodem and Mibanco.

[5] Economies of scale are a factor to a certain extent. In loan portfolios less than about $2 to $3 million, larger operations tend gain from economies of scale.

Arequipa and Tacna have portfolios of $3–4 million in comparison to Mibanco's $6 million and Prodem's $146 million. Microfinance institutions with smaller portfolios tend to have less efficient operations due to economies of scale. Conversely, in these particular cases, economies of scale did not translate into more efficient operations by Mibanco and Prodem. One possibility may lay in the size of the loans given by the other operations: lending institutions with higher loans tend to have higher efficiency. It may be possible that Prodem is simply lending in smaller increments of cash than Arequipa and Tacna. Nevertheless, despite economies of scale, the year after privatization appears to be more efficient than the year just prior to privatization, signaling that MFIs that transition into lending institutions are more efficient than those that do are not private.

Financial Management

Financial management assures a firm has enough liquidity to meet its liabilities and issue loans to clients. The ability or inability to maintain adequate liquidity can impact a firm's growth or demise. These functions become more important as MFIs transition into regulated banks and begin to take in savings deposits. Prodem, for example, had no savings in 1999, the year of transition, and $112 million in 2000, the year after transition. Financial management incorporates the managing of foreign exchange risk and dollar duration incompatibilities of assets to liabilities. Four ratios are analyzed: financial expense, cost of funds, liquidity, and the debt/equity ratio.

Financial expense ratio = interest and fee expenses/gross portfolio

The financial expense ratio is calculated by taking interest and fee expenses and dividing them by the gross portfolio. This ratio accounts for the total interest expense incurred by the financial institution to fund its loan portfolio. This ratio, unlike the portfolio yield (which measures income generated by the portfolio), measures the lending

rate an MFI has to charge in order to cover its cost. This ratio says little about the financial condition of the firm; the firm may have a high financial expense ratio but still be quite profitable, as in Mibanco's case. Mibanco has a high financial expense ratio in the year following transition, but also has the highest portfolio yield out of any of the years measured for all the institutions in this study. Figure 3-6 shows the result of the financial expense ratio of the banks studied.

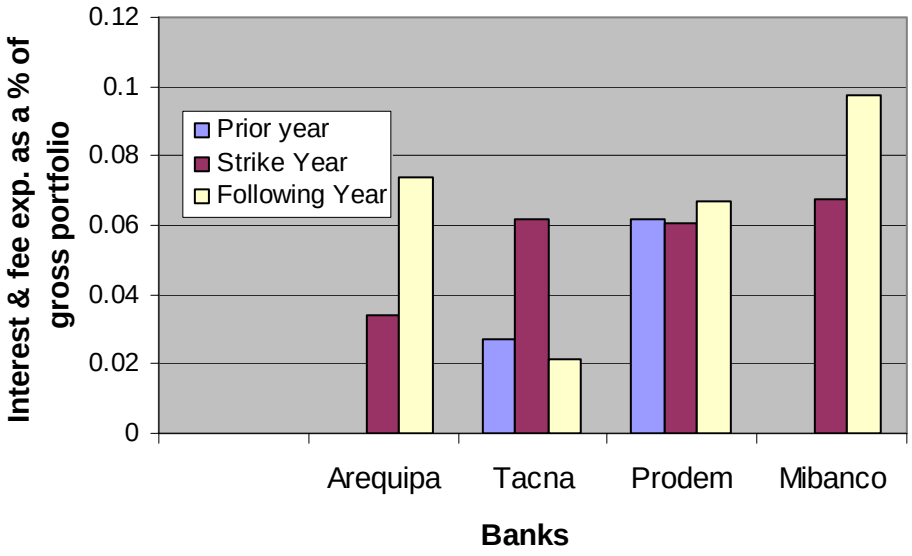

Figure 3-6. Financial expense ratio

The amount an institution has to charge was highest in three out of the four banks in the year following transition. The year oftransition was also higher than the year before the transition three out of four times. Though it was not possible to gather this information for the year prior to transition for Arequipa and Mibanco, this chart does hint that the amount an institution has to charge increases as the institution transitions from an NGO to a formalized lending institution.

Cost of funds ratio = interest and fee expenses on funding liabilities/funding liabilities

The cost of funds ratio is calculated by taking the interest and fee expenses on funding liabilities and dividing it by funding liabilities. The funding liabilities denominator includes deposits, commercial funds, subsidized funds, and quasi-capital.

The cost of funds ratio calculates the cost of the institution's borrowed funds. This measures whether the institution has gained access to low-cost sources of funds, such as savings. The mobilization of funds such as savings with low interest can be much more lucrative than using high-interest loans and is a major benefit of becoming a formalized financial institution and bank.

Although this ratio can be largely useful, many of the institutions involved in the study received subsidized loans, and thus the real market value of their funds is shielded and the cost of funds is driven down. Figure 3-7 illustrates the cost of funds ratio results.

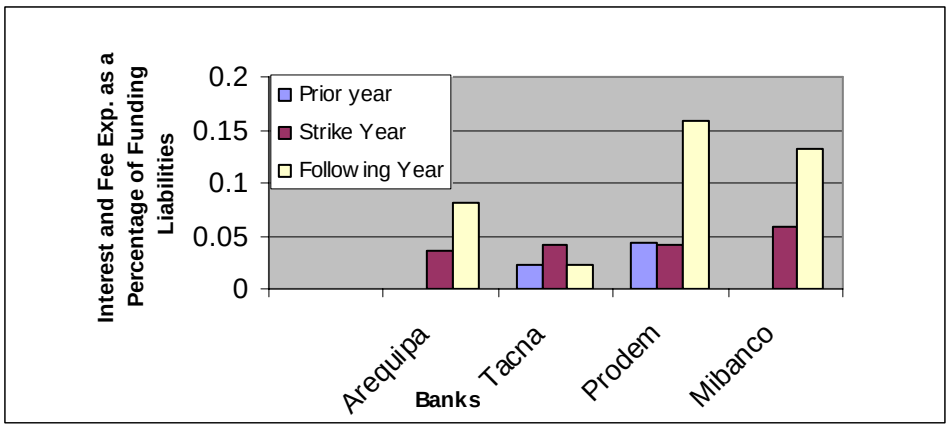

Figure 3-7. Cost of funds ratio

The cost of funds ratio appears to go up significantly in the year following the transition for all the banks, with the exception of Tacna. One reason may be that only one of the banks had gathered significant savings to drive down the cost of funds expense. However, the strongest factor lies in the significant drop in donations. Arequipa went

from receiving $22,536 in 1996 and $22,536 in 1997 to receiving $0 in 1998 and 1999, the year of transition and the following year, respectively. Tacna also went from receiving $25,391 in the year before transition and $25,391 the transition year to receiving $0 in the year following the transition. Prodem also showed a significant drop in reserves—$13.3 million—that was likely triggered by a drop in donations. It is possible that these banks have not had time to offset the loss of donations by the gains in savings deposits and their cost of funds will therefore decrease as they mature and savings go up.

Liquidity ratio = cash and bank current accounts + readily marketable investments/total assets

The liquidity ratio is calculated by dividing the total cash and marketable securities of the firm by the total assets. The liquidity ratio tells us the ability of the firm to meet its short-term liabilities and unplanned expenses. The information that can be derived from this ratio is not definitive. A low or high liquidity ratio doesn’t indicate a positive or negative sign, so this ratio must be used in addition to other indicators. A high liquidity ratio may indicate the firm is predicting a high level of activity or it can indicate poor usage of resources. Nonetheless, low liquidity ratios should be a cause for concern, given many of these institutions have open credit lines with customers and these credit lines can quickly harm the liquidity situation of a firm with low liquidity. Figure 3-8 shows the liquidity results for the firms studied.

The significant difference between Prodem and the rest of the banks in the year following the transition is that Prodem managed to capitalize on the opportunity to gather savings. The liquidity position of Prodem is exponentially increasing. However, if Prodem does not mobilize these funds it will be paying out interest while not

accumulating enough revenue on these assets to cover the cost of savings. From the year prior to transition until the year after transition the portfolio of loans of Prodem grew from $146 million to $152 million, a mere 4% increase. On the other hand, the cash taken in grew from $22 million to $31 million, an almost 50% increase.

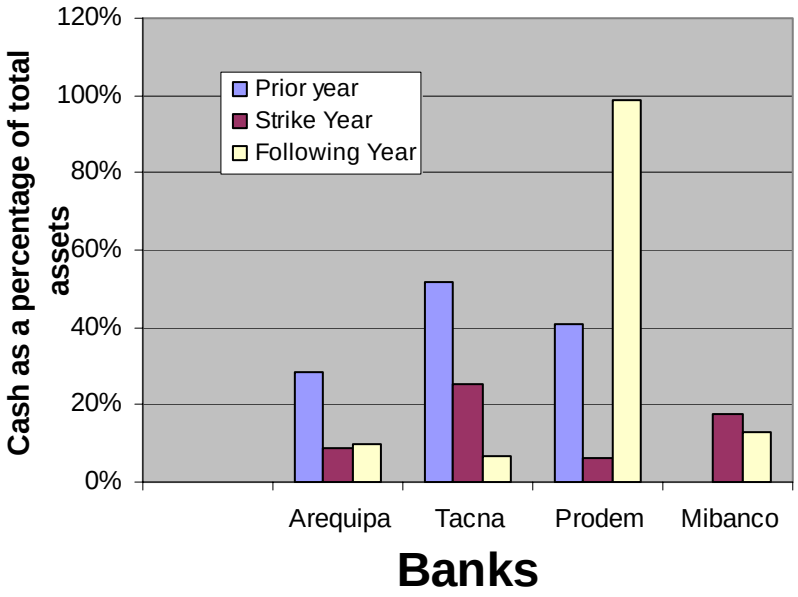

Figure 3-8. Liquidity ratio

The rest of the banks are neither accumulating nor gathering donations. This is leading to a significant drop in the liquidity positions of Mibanco, Arequipa, and Tacna in the year following transition. A possible explanation may lie in the quality of portfolios. If the rest of the banks are screening customers more carefully, they may not want or need to maintain higher sums of cash for reserves. In addition, less liquidity is required for state-regulated financial institutions than for NGOs. The following study of debt to equity and portfolio quality ratios will examine these topics.

Debt/equity ratio = total liabilities/total equity

The debt to equity ratio is calculated by taking total liabilities as a percentage of total equity. The debt to equity ratio is one of the most commonly used and simplest

ratios as it is a measure of total capital adequacy. This ratio is of special interest to any institution lending to an MFI because it lets them know how much of a “safety cushion” the MFI has in sustaining losses. Rapid changes in debt/equity in MFIs may be a signal the institution is approaching the limits of its borrowing, which will have negative impact on future growth. Figure 3-9 shows the results of the debt/equity ratio calculations.

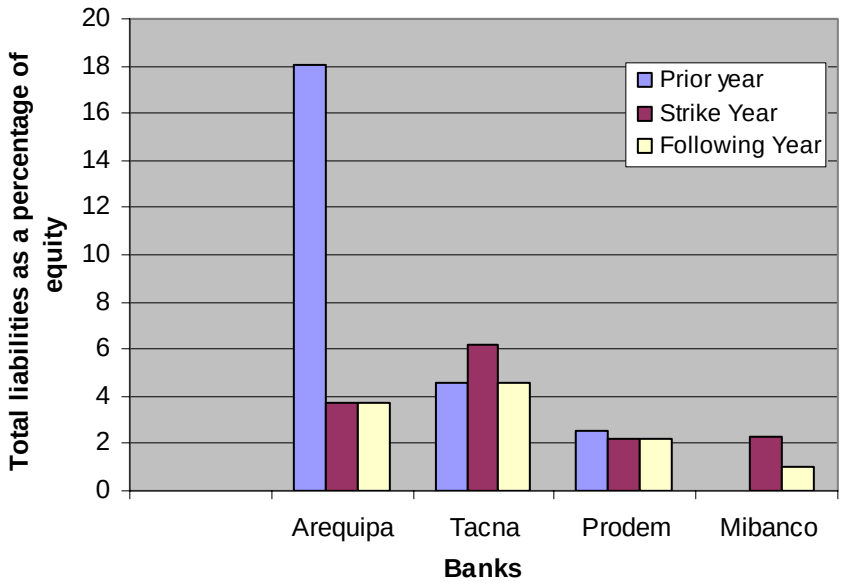

Figure 3-9. Debt/equity ratio

The ability to borrow more assets is a major incentive for MFIs to transition into the realm of banking laws. Lending institutions might renege at 1:1 debt to equity ratio to an NGO, but may be more comfortable lending at a much higher rate once the NGO transitions into a regulated bank. The Microrate 20, a benchmark of microfinance institutions, has an average debt to equity ratio of 3:8. In this case, though, transitioning to formalized lending institutions has not translated to higher debt/equity ratios, meaning these firms are not taking advantage of the cheaper borrowing available, reinforcing the cost of funds ratio results. An increase in the debt/equity ratios together with a decrease in cost of funds ratios would signal that firms have access to cheaper capital and are

effectively taking advantage of the opportunity to borrow at cheaper rates; however, this is not the case. The costs of funds have risen while the debt/equity ratio has dropped. In addition, liquidity has deteriorated in three out of the four cases. It appears, from this study, that the financial management of these banks has suffered in the transition from NGO to formal financial institution.

Portfolio Quality

Portfolio quality is by far one of the most important indicators of the MFI; the portfolio of the institutions is its largest and most important asset. For microfinance institutions, more than for commercial banks, the quality of the portfolio is important. The reason for this is that due to MFI clientele poverty levels, many loans are not collateralized.

Portfolio at risk is the most important indicator of portfolio quality, as it is easy to measure and understand. The amount of the portfolio that is compromised by arrears is divided by the total amount of the portfolio. Arrears are determined by loans that are with thirty days or more behind in repayment. MFI institutions have managed to maintain high portfolio quality, better than those of commercial banks. In addition to portfolio at risk, I also used loan loss reserve ratio, risk coverage ratio, and write off ratio to measure portfolio quality.

Portfolio at risk = (outstanding balance on arrears over 30 days + all refinanced loans)/ total outstanding gross portfolio

Many portfolio at risk ratios are commonly used, using minimum arrears timeframes ranging from 30 to 120 days. This portfolio at risk (PaR) measure includes all loans over 30 days, and was calculated by dividing the total loans in arrears over 30 days by the total gross portfolio. In this study, the financial statements of these firms did not

specify the restructured-refinanced loans in the financial notes. Therefore, risk is underestimated, as customers who are in jeopardy of defaulting may refinance their loans and thus restart the amount of time left before payment.

The portfolio at risk is a first line measure of trouble, as in general the longer a loan is in arrears the less likely it is to be paid. The PaR measures not only the immediate threat of loan defaults but also the threat of future loan defaults. Leading MFIs hold a portfolio risk of between 3–6%, while a smaller group of MFIs have a portfolio risk that exceeds 10%. Figure 3-10 has the results of the portfolio at risk calculations.

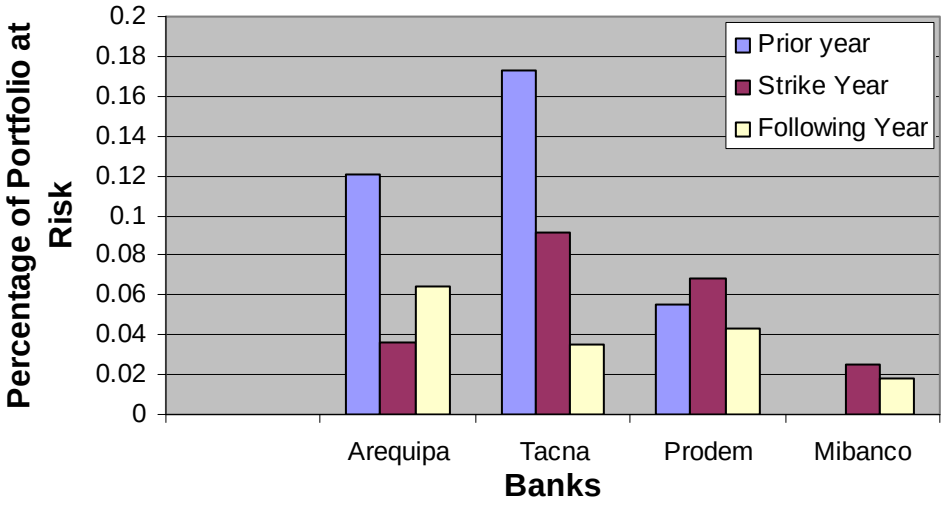

Figure 3-10. Portfolio at risk

Portfolio at risk is one of the most positive indicators in this study. For all the banks studied, portfolio at risk drops significantly from the year prior of transition in comparison to the following year after transition. This would shed a positive light on the negative liquidity position of three out of the four banks. Portfolio quality has drastically improved, demonstrating that banks have improved in their ability to screen customers and thus predict cash needs for reserves.

One important note to add to this study is that the frequency of payment is not included and may be misleading. If, for example, payments to loans are required every week as opposed to every six months, arrears on the latter will likely be more damaging to the firm and pose a greater threat.

Nonetheless, there are many things this chart does not take into account. The amount of write-offs needs to be analyzed when looking at this chart, since write-offs will show lower portfolio at risk and misrepresent the amount of risk in the portfolio.

Write-off ratio = write-offs for the period/gross portfolio

The write-off ratio is calculated by dividing the write-offs for a given year by the total gross portfolio. It is a measure of the amount of write-offs undertaken by a firm per year, and does not affect net income or total assets, since an expected sum has already been expended through the loan loss reserve ratio. On the other hand, write-offs can be a tool to mislead investors into thinking the quality of the portfolio is better by simply removing the loans on the portfolio that will likely not be paid. In the case of FinAmerica in Colombia, a large impairment charge was taken to account for a large bulk of bad loans, a result of a restructuring-refinance strategy gone seriously awry. Although FinAmerica would likely not use this strategy of restructuring defaulted loans again, the loss of assets was real and management should still be held accountable. The write-off ratio also shows firms that refuse to write off loans so as not to present the true assets of the firm. This other extreme is also dangerous, as it hides from potential and actual investors the true risk profile of the company. The write-off ratio and the portfolio at risk ratio together are a great indicator of the health of the firm's portfolio. Figure 3-11 demonstrates the result of the write-off ratio calculations.

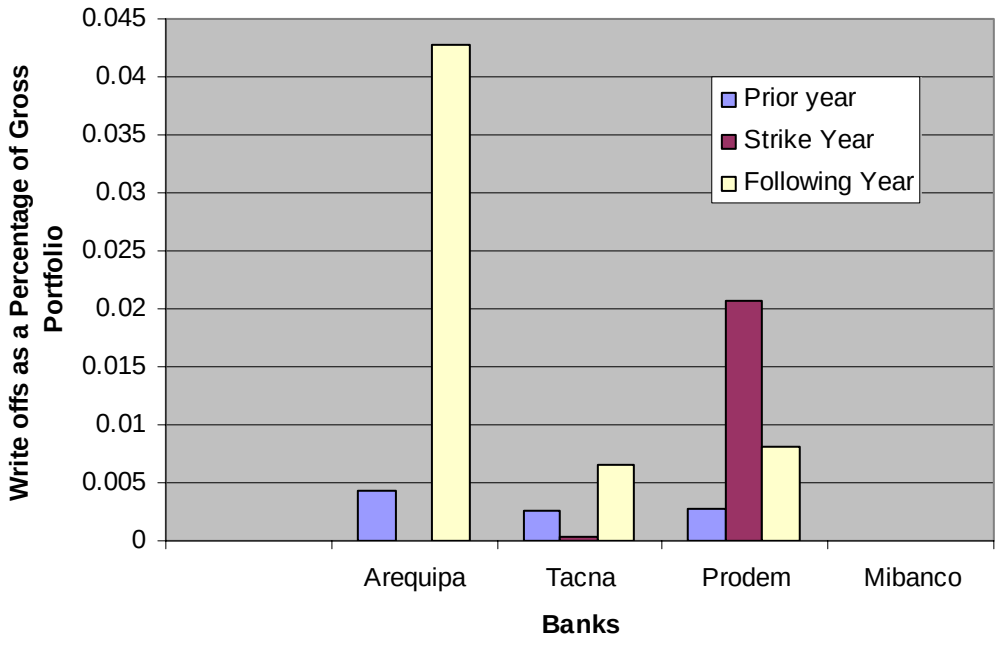

Figure 3-11. Write-off ratio

MiBanco did not state in any year what its write-offs were and Arequipa did not undertake any write-offs during the year of transition. This chart definitely points to some questions about Arequipa's portrayal of 6% portfolio at risk in the year following transition. It is likely that Arequipa's portfolio at risk was downplayed bywrite-offs, and Prodem also understated its PaR during the year of transition. The rest of the years were in line with international norms of write-offs, ranging from 2.8% to 6%, with the exception of Tacna's year of transition. This chart explains more about the inaccuracies of the PaR than whether write-offs move downward or upward with transition. What can be derived is that the picture of a decreasing PaR is not as accurate as these banks have portrayed. More specifically, it addresses the PaR during, Arequipa's year post-transition and Prodem's year of transition.

Loan loss reserve ratio = loan loss reserves/ total outstanding gross portfolio

The loan loss reserve ratio is calculated by dividing the loan loss reserve ratio by the total outstanding gross portfolio. When used with other ratios it is a helpful tool in gauging future loan losses. Nonetheless, some institutions may be over- or under-reserved.

In this study, we can begin to see whether future losses are expected to decrease or increase. Figure 3-12 shows the result of the loan loss reserve ratios. The result of this analysis is bleak. The expected losses two years after the transition seem to be increasing. All of the firms with the exception of Tacna seem to be increasing their reserves in anticipation of future losses. This is contradictory to what I expected: instead of losses decreasing as a percentage of the portfolio, they are increasing. This also shows that low liquidity is not a function of the fact that fewer reserves are needed (as a result of better screening), but rather of the inability to obtain funds. This is also in contradiction to the decreasing PaR. If the PaR were in fact decreasing, these firms would not have the need to increase their reserves unless they are mandated by the state to do so. The loan loss reserves also indicate that the quality of these MFIs' portfolios may be deteriorating.

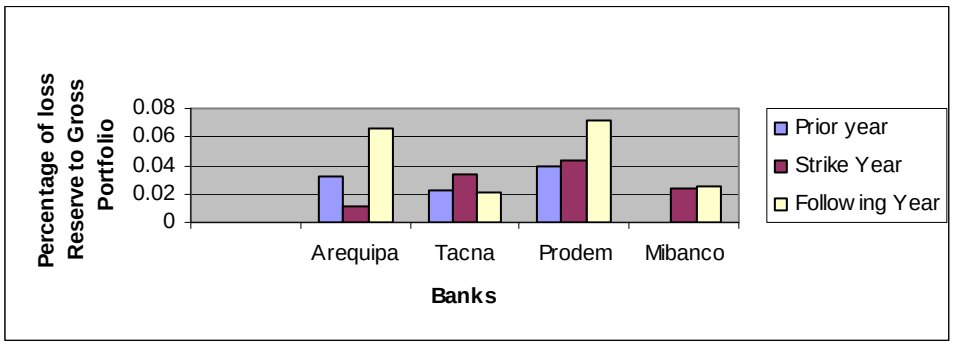

Figure 3-12. Loan loss reserve ratio

Risk coverage ratio = loan loss reserve/(outstanding balance on arrears over 30 days + refinance loans)

The risk coverage ratio divides loan loss reserves by the outstanding balance on arrears plus the restructured loans. This ratio measures what percentage of the arrears is covered by the loan loss reserve account, and is an indicator of how prepared the firm is for a worst-case scenario analysis. In the case of all the firms in the study, the amount of loans restructured or refinanced is not known, so once again, risk may be understated, as some of the loans may be in arrears and thus be unaccounted for in this ratio. The risk coverage ratio should be taken into account in tandem with PaR and write off ratios. A loan reserve can artificially inflate the profit of the firm by assuming fewer losses are expected. Figure 3-13 shows the results of the risk coverage ratio calculation.

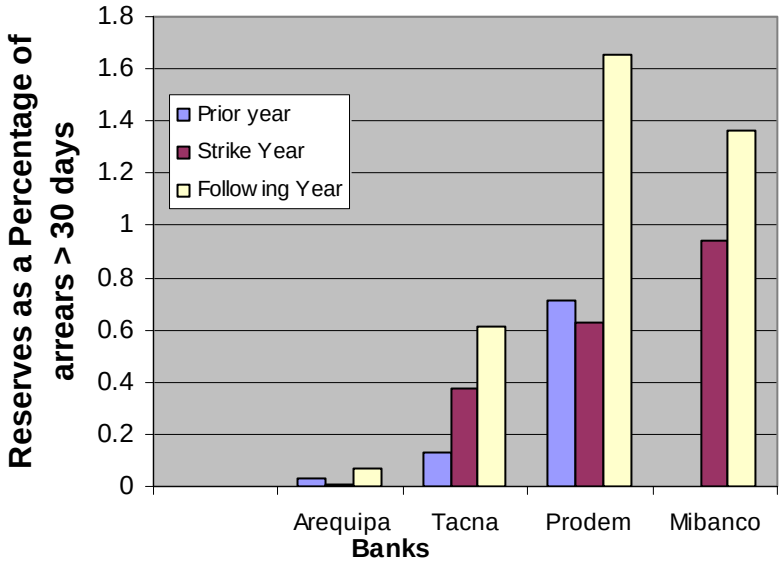

Figure 3-13. Risk coverage ratio

The risk coverage ratio should range from 80% to 120%. Most notably among the four firms studied here, Arequipa has maintained extremely low reserves. This practice, along with the high write-offs, is skewing the true portfolio at risk ratio, and it is likely that the risk of the firm is much higher. Tacna has also maintained low risk coverage that

may be under-representing the true risk of the institution, though it may also be a function of good client screening. The alarming trend to notice is that the risk coverage for every firm is highest in the year following its transition to public institution, which could indicate that managers are preparing the institutions for future downturns. It may also be that managers being conservative because they are not sure what portion of their portfolio will default. This conservatism should be looked at as more positive than negative.

PaR ratios appear to be a positive and strong indicator of the transitioning process. However, portfolio quality benefits are likely not as strong as they appear to be shown. Write-offs seem to indicate PaR results are weaker. Loan loss reserves and risk coverage (a function of loan reserves) both tended to go up, a sign either that managers are being conservative, losses are expected or the state is requiring higher loan reserves.

CHAPTER 4
CONCLUSION

This paper tested commercialization and sustainability as defined by the institutionalist. It asked and tested two questions: “Are NGOs that transition into regulated MFIs profitable and self-sustainable?” and ”Will the transition to a regulated bank improve efficiency of resources and administration?”

In answering the first question, I found my results mostly consistent with CGAP (2005) and my hypothesis that MFIs can be self-sustainable in a commercial environment based on the three years of study. Banks that transitioned were profitable and sustainable. Return on equity was inconclusive. In two of the four cases, the year precluding the transition tended to be the most profitable year. The reason for this may lie in the added cost of becoming a private bank. However, every year measured signaled positive ROE for all the banks. Return on assets was not indicative of a trend in any direction. Again, it is important to note the important fact that all banks were returning positive return on asset ratios for all the years measured. From this, we can conclude MFI resiliency as private and commercial entities. It is also important to note that post-transition long term time series data would likely be better suited to answer longer term questions related to sustainability and profitability. However, long term time series data was unavailable at the time of this thesis. Portfolio yield was indicative of a positive trend during commercialization. With the exception of Arequipa, all of the banks’ highest year of portfolio yield was either the year of privatization or the following year. What

Portfolio Yield, ROA and ROE demonstrate is that MFIs are profitable despite adverse conditions in the market place.

In answering the second question, I found my results to be less consistent with my hypothesis. I hypothesized that the transition to a commercial environment will yield greater efficiency of administrative resources over the long run horizon due to the presence of ownership of the bank. On the one hand, the operating expense ratio was lower in the following year of operation than the first year in three out of the four cases. This signaled that MFIs that transition into commercial institutions are more efficient. On the other hand, financial expense and cost of funds was highest in three out of the four banks the year after transition. This is most likely due to the loss of subsidies and the inability of banks to supplement this loss with an increase in savings. This last point is reinforced by the liquidity ratio. With the exception of Prodem, all of the banks' liquidity position decreased in comparison to their prior liquidity position in years prior to commercialization. Prodem has managed to capitalize on the opportunity to gather savings. Debt to equity ratio also reinforces that this commercialization has not translated to higher debt/equity ratios, meaning these firms are not taking advantage of the cheaper borrowing. With the exception of Prodem, the banks are neither accumulating nor gathering donations. A possible explanation might be that the banks are screening their customers better; they may not want or need to maintain higher sums of cash for reserves.

Portfolio quality seems to support this notion. For all the banks studied, portfolio at risk drops significantly from the year prior to transition in comparison to the following year after transition. Portfolio quality has drastically improved, demonstrating that banks

have improved in their ability to screen customers and thus predict cash needs for reserves.

The validity of portfolio at risk (PaR) is put into question as we look further at the write-off, loan loss reserve, and risk coverage ratios. Analysis of write-offs demonstrates that the expected losses two years after the transition seem to be increasing. This poses the question, is the low liquidity a function of fewer reserves needed as a result of better screening, or rather the inability to obtain funds? Risk coverage shows an alarming trend: for every firm, risk coverage is highest in the year following the transition, a possible indicator that managers are preparing the institutions for future downturns. It may also be that managers are being conservative because they are not certain what portion of their portfolio will default. This conservatism should be taken in a positive light. Portfolio at risk ratios appear to be a positive and strong indicator of the transitioning process. Portfolio at risk reinforces the fact that the transitioning process is beneficial to improving efficiency in the microfinance institution, yet portfolio quality benefits are likely not as strong as they appear to be shown. Micro Finance attempts to address poverty by providing micro-loans to poor merchants. This study examines the privatization movement during the late 1990s and focuses on bank financial affects corresponding to this transition. The clientele effects remain an open, interesting question for future research.

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BIOGRAPHICAL SKETCH

Amilcar Levy Parajon was born in San Pedro Sula, Honduras. He later moved to the United States with his Parents and graduated high school from Hialeah High in Hialeah, Florida. Levy went on to Broward Community College and then transferred to the University of Florida, where he earned an undergraduate degree in finance. After earning his degree, he worked in the investment banking industry raising capital for start-up technology companies. Levy also started up a company to provide exporting shipping services from the U.S. to Honduras. He went on to graduate school earning concurrent degrees in Finance and Latin American Studies while simultaneously working for a large fortune 500 technology firm.