

## Community Development Financial Institutions: Issues of Performance and Governance

Valentina Hartarska  
Assistant Professor  
Department of Ag. Economics & Rural Sociology  
Auburn University,  
210 Comer Hall,  
Auburn, Al 36849,  
phone 334 844 5666,  
fax 334 844 5639,  
e-mail: hartarska@auburn.edu .

September 16, 2005

(Preliminary Version; please do not cite without permission)

### **Abstract:**

CDFI serve an important social function because by providing access to financial services to underserved low-income individuals and families. Understanding what governance mechanisms promote efficient use of scarce resources that these organizations possess matters because only sustainable institutions have the potential to revitalize low-income communities and change low-income individuals' lives in the long-term. The focus of this paper is on evaluating the impact of board size and composition on the performance of CDFIs. The results show that CDFIs with larger boards have better outreach, while diverse boards may not be best able to guarantee that CDFIs will achieve their stated objectives.

Financial support this research was provided by the Center for Financial Research at the Federal Deposit Insurance Corporation.

# **Community Development Financial Institutions: Issues of Performance and Governance**

## **Introduction**

Nationwide, low-income individuals and communities find it increasingly challenging to access financial services offered by conventional financial institutions, as these institutions streamline their operations to become more competitive in the global environment. Non-traditional financial institutions, such as Community Development Financial Institutions (CDFIs), improve low-income individuals' access to finance by providing affordable banking services and low-cost housing, by financing small businesses, and by offering community services that help stabilize neighborhoods and alleviate poverty.

More than 1000 such organizations are currently active in the US and a survey of 442 of them shows that, in 2002, these organizations held \$10.2 billion in assets, provided \$2.6 billion in financing to underserved individuals and communities, extended loans to over 7,800 businesses, and helped create and support over 34,000 jobs (2002 Industry Report available at [www.cdfi.org](http://www.cdfi.org)). These numbers show that CDFIs expand the frontier of finance and offer services to underserved population of which an estimated 10 percent of the do not even have a bank account (Quercia et al., 2002; Benjamin et al, 2004).

At the present very little is known about CDFIs. There is a lack of clarity regarding these organizations' role within the financial system, and in particular their relationship to mainstream lenders and investors. For example, it is not clear if CDFIs and banks are competitors or partners or perhaps something else. As Benjamin et al., (2004) observe, such questions are complex because they involve ideological, political, and fiscal complexities. Moreover, lack of good data on CDFIs limits the ability to analyze these organizations' role, performance, and impact on their clients.

Better understanding of the objectives of the role of these organizations and better ways to measure their performance may provide insight into the impact of various policy initiatives on the CDFI industry, such as expanding the definition of community development to include all individuals in rural areas, changing the definition of a small bank to \$1 billion dollars in asset, instituting a requirement the banks with assets between \$ 250 million and \$1 billion dollars are to be involved in only one instead of the previously required three activities of development lending, investment, and services.

While it is undoubtedly important to encourage lending to underserved individuals and communities, it is also important to understand what makes a well run CDFI. The disciplining role of market forces is attenuated in the CDFI industry because many CDFIs are non-profits, quasi-governmental organizations or credit unions. Thus, understanding what governance structures are most conducive to efficient use of scarce financial resources is especially important to ensuring stakeholders that these organizations are properly run.

CDFIs strive to achieve outreach and sustainability and measure returns in both financial and social terms. In organizations with dual objectives, the market forces cannot play their usual disciplining role, and the board of directors plays more important role (Holmstrom, 1999). Thus, the ability of the board to steer the organization toward achieving the double bottom line of outreach and profitability will likely impact the success of the CDFI.

This paper focuses on the role of the CDFI boards. The corporate governance literature recognizes board size and board diversity as two mechanisms that affect firm performance. The empirical analysis focuses on evaluating the impact of these two governance mechanisms. Performance measured in terms of outreach, sustainability, and efficiency is modeled as a function of board size, measured by the number of board members, and diversity, measured the proportion of women and minorities on the board, as well as key CDFI characteristics such as CDFI size, CDFI age, and risk characteristics. The results support the argument that

organizations with multiple objectives, such as CDFIs, benefit from larger boards, and that board diversity may not be the best mechanism to promote both outreach and sustainability.

The rest of the paper is organized as follows: part two provides a brief overview of the CDFI industry, part three presents the framework of analysis, part four describes the data, part five discusses the results, and part five concludes.

### **Overview of Community Development Financial Institutions**

CDFIs expand the frontier of finance by providing financial services to low-income communities and individuals who have always had limited access to financial services, affordable credit, and investment capital. The concept of community development dates back to the 1800s, but the modern CDFI industry started to take shape in late 1960s and early 1970s. In the 1990s, the industry expanded dramatically with the creation of a government agency (CDFI Fund) with the authority to provide funding to individual CDFIs and their partners, and with the change in the Community Reinvestment Act (CRA) that explicitly recognized loans and investments in CDFIs as a qualified CRA activity (CDFI Report). Improved enforcement of the CRA during this time period also contributed for the expansion of the industry (Benjamin et al., 2004). Although the growing record of success inspires confidence in the industry and attracts additional lenders, little is known about these organizations' performance and governance.

The CDFI industry consists of several organizational types—community development banks (CDBs), community development credit unions (CDCUs), community development venture capital funds (CDVCs), and community development loan fund (CDLF)s. The focus of this research will be on comparing the efficiency and the impact of board size and diversity of community development banks with that of non-bank CDFIs.

Community Development Banks differ slightly from Community Banks. Community

Banks are usually defined as banks with \$1 billion in bank assets. DeYoung et al (2004) argue that bank size is just one way of identifying community banks and propose defining a community bank as “... a financial institution that accepts deposits from and provides transactions services to local households and businesses, extends credit to local households and businesses, and uses the information it gleans in the course of providing these services as a comparative advantage over larger institutions.” Additional definition offered by the authors is: “A community bank holds a commercial bank or thrift charter; operates physical offices only within a limited geographic area; offers a variety of loans and checkable insured deposit accounts; and has a local focus that precludes its equity shares from trading in well-developed capital markets.” (DeYoung et al, (2004) pp. 87)

Community Development Banks are somewhat different from Community Banks. According to Wikipedia encyclopedia a CDB is “a special kind of bank designed to serve the residents of and spur economic development in low to moderate income (LMI) areas. When CDBs provide retail banking services, they usually target customers from "financially underserved" demographics. CD banks are regulated by the Office of the Comptroller of the Currency” Additionally, a CD bank “is required to lend, invest, and provide services primarily to LMI individuals or communities in which it is chartered to conduct business.”

An example of a community development bank is Shorebank, located in the South Shore neighborhood of Chicago. This banks has grown from a single bank to a diversified holding company, called the Shorebank Corporation. The number of community development banks has increased from 27 in 1992 to 39 in 2001 (Woodstock Institute, 2002). Some Community Banks are also certified by the CDFI Fund and thus eligible for funds from the CDFI Fund run by the US department of Treasury. Comparison of the impact of governance structure between CFI certified banks (CD banks) and non-bank CDFI is an important aspect of this paper.

Some credit unions also function as CDFIs. The National Credit Union Administration (NCUA) data shows that the number of credit unions specifically designated as low-income grew from 142 in 1990 to 538 in 1999, with a corresponding increase in deposits from approximately \$570 million to just over \$2 billion (NCUA, 1999). However, not all low-income credit unions are community development credit unions. Only credit unions with a mission of community development are considered CDFIs (Benjamin et al., 2002).

Business Development Loan Funds (BDLFs) are another type of CDFI. BDLFs lend capital to businesses and nonprofit organizations, who may not be able to qualify for conventional loans. BDLF pursue various social goals such as promoting economic growth and job creation in low-income areas, stabilizing population declines in distressed communities, improving the availability and quality of community facilities in under-served markets, increasing the number of businesses owned by women and ethnic minorities, and promoting the growth of businesses that do not harm the environment (Caskey & Hollister, 2001).

Benjamin et al (2004) identifies community development venture capital (CDVF) funds as organizations “that provide equity and near-equity capital to small businesses. An equity investment consists of a cash infusion into a company in exchange for partial ownership of that company. A near-equity investment consists of a loan that is convertible to equity.” A characteristic feature of the equity and near equity investment by CDVFs is that these are forms of “patient capital,” giving young firms the funds they need in their early years of operation without requiring the immediate repayment, as is the case with a traditional loan.

One of the reasons for lack of understating of the effectiveness of CDFIs is the considerable diversity of not only groups that qualify as CDFIs but also types of services offered. CDFIs offer a wide range of services from affordable housing loans, small business loans, equity capital, and equity financing to IDA accounts, and checking and savings

accounts. Some of the more sophisticated CDFIs simultaneously offer affordable housing loans, small business loans, equity capital, and financing for day care centers but many specialize in several services only. This makes it difficult (if not impossible) to make comparisons of the performance of entities that comprise the industry.

### **Framework of Analysis of Governance and Performance**

The unique features of CDFIs make the study of how governance affects performance challenging. First, as section two indicates, there is significant organizational diversity in the CDFIs industry which complicates the empirical analysis. More importantly, however, CDFIs need to fulfill an outreach mission by serving poor clients while remaining financially viable (sustainable). Thus, CDFIs share characteristics of banks and of non-profits. The challenge of evaluating the effect that these organizations' governance has on performance is addressed by estimating the impact of the governance mechanisms on both sustainability and outreach, and by formulating and testing hypotheses based on insights from the literature on corporate governance, governance in banks, and in non-profit organizations.

A focus on both outreach and sustainability is necessary because there is no evidence that organizations with the best financial results are most successful in their outreach mission.<sup>1</sup> On the contrary, lending to small businesses is more expensive because of their high level of informational opacity (Berger and Udell, 1998). Moreover, provision of financial services to low-income customers is expensive due to the higher screening, monitoring, and contract enforcement costs. Therefore, estimating the impact of governance mechanisms on both dimensions may provide insights into possible tradeoffs between outreach and sustainability.

Governance refers to the mechanisms through which investors and other providers of

---

<sup>1</sup> In the international development finance literature, many Microfinance Institutions with the best financial indicators also achieve the best outreach, but the debate on whether outreach and sustainability are substitutes or complements is still ongoing (Morduch, 2000, Navajas *et al.*, 2000).

funds ensure themselves that their funds will be used according to the intended purposes.<sup>2</sup> Such control mechanisms are necessary because managers and providers of funds may have diverging preferences and objectives. For example, CDFI managers may work towards fulfilling the outreach mission but they may also have preferences for non-pecuniary rewards. In the corporate governance literature, this problem is known as the agency problem.

The board of directors is an internal governance mechanism that helps resolve the agency problems. Board members' incentives are aligned with that of the Principals (providers of funds) because of the provision that the board can be held legally responsible for failing to perform effective monitoring. In addition, in for-profit firms, board members are compensated and poor performance can lead to loss of income, but even in non-profit organizations boards offer their reputations as collateral to the public and will try to minimize the risk of losing their reputations (Handy, 1995). Although directors may have considerable incentives to slack off or get along with managers, peer policing decreases the incidence of inappropriate behavior (Fama and Jensen, 1983a; Holmstrom, 1999). Even if board members are not paid, they volunteer their time because the mission of the organization matters to them. Board members no longer committed to the mission leave, and substitution is done by the remaining board members based on mutually agreed upon criteria (Fama and Jensen, 1983b).

The recent waves of corporate scandals indicate that there is much room for improvement of the governance practices even in the best run organizations. Given that CDFIs measure returns in both financial and social terms, and given the challenges of serving the target population, the board's ability to steer the organization toward achieving the double bottom line of outreach and profitability will likely impact the success of the CDFI because the board plays significant role in organizations with dual objectives (Holmstrom, 1999).

---

<sup>2</sup> This definition is based on the definition by Shleifer and Vishny (1997) where corporate governance is defined as the mechanism through which shareholders (providers of funds) ensure themselves that they will receive maximum return on their investments.

### Board size as a governance mechanism

A significant part of the empirical literature has focused on the impact of board size on performance. The main idea put forward is that larger boards are less effective than smaller boards because when the board gets too big, free riding by some directors may become an issue (Jensen, 1993; Lipton and Lorch, 1992). This hypothesis is confirmed by studies of both large corporate boards and boards of small firms (Yermack, 1996; Eisenber, Sungren and Wells, 1998). Compared to other organizations, financial intermediaries have larger boards. The impact of board size on performance in banking firms is less clear. For example, Adams and Mehran (2003) found that larger boards are less efficient monitors, while Belkhir (2004) found positive relationship between performance (ROA and Tobin's Q) and board size. Exploring the impact of board size and composition in financial intermediaries is especially important because of the relatively limited research in this area (Macey and O'Hara, 2003).

Oster and Reagan (2004) study the impact of board size in non-profit firms and put forward the hypothesis that, in these organizations, board size may need to be larger because of the additional duties of board members to supervise fundraising. However, these authors do not find evidence to support their hypothesis. On the contrary, they find that only personal charitable giving by board members increases with board size, but increase in board size reduces oversight and thus may not improve the productivity of the newly committed resources.

Given the similarities of CDFis with banks and with nonprofits, insight on the impact of board size and composition on firm performance can come from models that deal with organizations with multiple goals. Aggarwal and Nanda (2004) focus exclusively on the relationship between board size and firm performance in the contemporary corporation where managers are required to perform multiple tasks. They model the management team as a risk-averse agent who performs multiple tasks for a firm controlled by multiple principals (the

board of directors) who differ in the relative value they place on each task. Aggarwal and Nanda show that smaller boards offer stronger pay-performance incentives to their managers, which may explain why these firms have higher value. Holmstrom and Milgrom (1991) argue, however, that high-powered incentives may not be appropriate when the result of the agent's effort to pursue a second task (say provide more micro-loan in addition to maintaining a level of profitability and covering costs) is poorly approximated by the outcome of this task (say because the result is lower returns generated from these loans of less than \$25,000 each). In this situation, higher powered incentives may only work if the two tasks are complement. Thus, lower powered incentives conditioned on the easily observable output (financial results) may be appropriate in multitask environment. The empirical results by Aggarwal and Nanda confirm that the number of social objectives (community, diversity, environment, etc.) that a firm pursues is positively related to board size but board size is negatively related to managerial incentives. Thus, larger boards may be better in multi-purpose organizations when strong managerial incentives should not be employed.

Given that CDFIs have pursue double bottom line objectives and given that for these organization high powered incentives may not be appropriate, the hypothesis to be tested is:

*Hypothesis 1. CDFIs with larger boards perform better.*

#### Board Diversity:

Board diversity is another aspect of governance that has attracted attention. Traditionally, women and minorities have been underrepresented on the corporate board, especially in banking. As a result, numerous proposals to improve board diversity have emerged. Two different reasons for board diversity are given. The first reason is the equity consideration—it should be promoted because it is fair to do so. For example, Higgs (2003) points out that, although approximately 30% of managers in the UK corporate sector are

female, women hold only 6% of non-executive director positions. The second reason given for promoting board diversity is that it may help shareholder wealth maximization (Brancato and Patterson, 1999). In addition, more diverse boards may also have better relations with customers, suppliers and employees (Ellis and Keys, 2003).

Empirical results so far help make the case for board diversity in large corporations. Westphal and Milton (2000) find that board diversity improves firm performance and shareholder wealth. Carter, Simkins and Simpson (2003) also found significant positive relationships between the fraction of women and minorities on the board and firm value for the case of Fortune 1000 companies. In addition, they found that the proportion of women and minorities on boards increases with firm size. For the case of non-profits, evidence shows that women directors spend more time on monitoring activities but, because non-profit boards are very diverse, better performing organizations do not have proportionally more women and minorities on the boards (Oster and O'Reagan, 2004).

Organizational scholars have pointed out that diverse top management teams may disagree more, and the same may be true for boards. Thus, to improve board effectiveness, it may not be enough to simply increase the number of female and minority directors on the board but it may also require additional mechanisms to ensure cooperation between directors (Eisenhardt, Kahwajy and Bourgeois, 1997). Kanter (1977) suggests that when uncertainty is high, explicit pay-performance contracts are too costly and group homogeneity is more valuable. Adams and Ferreira (2004) focus on the impact of board diversity (measured as the percentage of women on the board) on firm performance and find that, indeed, firms with more diverse boards provide their directors with more pay-performance incentives. In addition, firms facing more variability in their stock returns have fewer women on their boards of directors.

Since CDFIs activities are not only characterized by high uncertainty but also by very

few explicit incentives, group homogeneity may be an important mechanism to ensure cooperation between board members and effective governance. Thus, while board diversity may be desirable it may come at a cost given the high level of uncertainty that exists in organizations with multiple objectives, which is incompatible with the pay-performance incentives generated by more diverse boards. The second empirical hypothesis to be tested is:

*Hypothesis 2: In CDFIs' board diversity is negatively related to performance.*

The empirical model that will help test these hypotheses is

$$Performance_{it} = \alpha_1 + \beta_1 Board\ Size_i + \beta_2 Percentage\ of\ Women\ Directors_i + \beta_3 Percentage\ of + \\ + Minority\ Directors_i + \sum_{j=1}^m \beta_j Controls_{ij} + \varepsilon_{i,t} \quad (1)$$

where performance is measured by several indicators of performance, board size is measured by the number of board members, and a vector of controls includes organizational size, age, and leverage.

Identifying appropriate measure of CDFIs performance is a challenge. In international development finance, performance of microfinance institutions which are the international counterpart of CDFIs is measured not only in terms of financial returns but also in terms of outreach, namely, how well these institutions fulfill their mission to serve the target clientele. More specifically, performance is measured in terms of depth and breadth of outreach.<sup>3</sup> Depth of outreach measures the depth of poverty of clients. Provision of loans and other financial services to more poor clients is preferred. Breadth of outreach is measured by the number of loans and other financing transactions. The larger the number of borrowers among a targeted population served, the better the outreach of the CDFI. Since serving more and poorer clients is expensive, it is likely that the financial performance of CDFIs is affected by their outreach mission. Thus, while the ultimate objective of a CDFI is to provide financial services to

---

<sup>3</sup> Navajas et al. (2000) define several dimensions of outreach.

disadvantaged populations in a sustainable manner, it is likely that the impact of the board size and composition on outreach indicators will be different than the impact of these governance mechanisms on financial performance.

A widely accepted measure of financial performance in development finance is the self-sufficiency ratio, which is the ratio of earned operating revenue over operating cost. This ratio is used as the main indicator of financial performance here.<sup>4</sup> Two outreach measures are used—the number of loans (including loans with equity and equity investment for non-bank CDFIs), and the proportion of low-income clients to total clients.

Since even non-profit CDFIs are likely to minimize costs, predicted efficiency coefficient estimated using stochastic frontier analysis are used as another group of indirect measures of performance. In the literature so far, the focused on the impact of various governance mechanism on firm cost efficiency has been minimal. Previously, only Berger and Mester (1997) explore similar issues and while they find that organizational form organizational form (merger) affects efficiency, board independence does not because they find no relationship between the percentage of board member who are insiders and bank cost efficiency.

The literature on efficiency in banking is substantial. In addition to providing estimates of efficiency, this analysis helps understand whether the CDFI industry exhibits economies of scale and scope. Regarding the importance of the scale economies, evidence from consumer finance suggests that lending to the poor is expensive because of the need to spread high fixed cost over large number of accounts (Flannery and Samolyk, 2004). In addition, it is well established that economies of scale in banking exist mainly in very small banks. De Young et al., (2004) consider the case of community banks and find that economies of scale exhaust at

---

<sup>4</sup> Ideally we would use return on assets but the data provided does not contain information on taxes and since some CDFIs have non-profit status it is not possible to construct a good approximation of ROA.

there at about 100 million in assets, and Featherstone and Moss, (1994) show that, for agricultural banks, scale economies exhaust at about \$60 million of assets.

To obtain the predicted the efficiency coefficients a stochastic cost frontier is estimated. Functional forms most commonly used for cost frontier estimation are the Cobb-Douglas and the translog (Kumbhakar and Lovell, 2000). Although the bank efficiency literature uses the translog functional form almost exclusively, both Cobb-Douglas and translog specifications are used to estimate here in the first stage to produce two different coefficients of efficiency.<sup>5</sup>

An advantage of using predicted coefficients of technical efficiency as the dependent variable is in a second stage regression is that the underlining cost minimization process of each type of CDFI can be modeled differently. Typically, the intermediation approach of bank efficiency assumes that banks produce three outputs – loans, investment, and real estate loans. However, many non-bank CDFIs do not offer housing loans and/or do not have investments (at least not in the typical sense); thus, a lot of observations may need to be deleted or the data may need to be manipulated in another way to (such as adding a small value) to avoid zero output values. However, this would ignore the fact that the production process in different CDFIs may differ.

---

<sup>5</sup> The translog function takes the form of

$$\ln(C) = \alpha_0 + \sum_j \alpha_j \ln(p_j) + \sum_k \beta_k \ln(y_k) + \frac{1}{2} \sum_j \sum_i \gamma_{ji} \ln(p_j) \ln(p_i) + \frac{1}{2} \sum_k \sum_l \delta_{kl} \ln(y_k) \ln(y_l) + \sum_j \sum_k \rho_{jk} \ln(p_j) \ln(y_k) + \ln u + \ln \varepsilon$$

where C is total cost, y's are output levels, p's are input prices,  $\alpha, \beta, \gamma, \delta,$  and  $\rho$  are parameters to be estimated, and  $\ln u$  is the inefficiency term assumed to be one sided (half-normally distributed) and  $\ln \varepsilon$  is two sided normally distributed. The Cobb-Douglas specification is simpler:

$$\ln C_i = \beta_0 + \beta_y \ln y_i + \sum_n \beta_n \ln p_{ni} + \ln u_i + \ln \varepsilon_i.$$

Standard restrictions are imposed in the estimation by dividing all prices and quantities are by the price of physical capital (PCAP).

Efficiency analysis could accommodate the double bottom line objective of CDFIs because it permits output to be measured in terms of number of accounts and in term of value of accounts. When value of accounts is used, the output variables are calculated as the sum of all direct financing (debt, debt with equity, or equity financing) for the case of non-bank CDFI. Since CD banks have three distinct outputs when the translog functional form was used to estimate efficiency of bank CDFIs, three output variables were used: the first output is the net value of loans outstanding, the second output is the value of bank investments, and the third output is the value of all real estate financing. Efficiency for the subgroup of non-bank CDFIs was estimated using a single output variable (value of the loans and other direct financing) with the sample of nonblank CDFIs. Thus, the approach employed to estimate the efficiency coefficients is the so called “intermediation” approach.

The outreach mission of CDFIs suggests that a more appropriate way to measure CDFI output is the number of loans outstanding. Although typically output is measured by the number of accounts in the so called “production approach” to bank efficiency, whereby, deposits are considered outputs and not inputs, efficiency is estimated here with a specification where the number of loans outstanding is the output variable, while deposits are considered inputs.<sup>6</sup>

Total costs (TC) are defined as the sum of operating and financing costs. Labor costs are defined as personnel cost divided by the number of employees (or full time employee equivalent in the case of non-bank CDFIs, where part time employment is common). The price of physical capital if calculated as the ratio of operating expenses minus personnel expenses to net fixed assets. The price of financial capital is calculated as the weighted cost of

---

<sup>6</sup> Admittedly, this is perhaps a flawed measure of outreach because very important contribution to the poverty alleviation mission of CDFIs is the provision of non-loan financial services such as IDA accounts, checking accounts, as well as deposit provision by Community Banks and Credit Unions. Unfortunately, very few CDFIs provided information on these types of activities which would significantly reduce the already very small sample and probably introduce additional issues. Thus, the efficiency part of the analysis focuses only on value and total number of direct financing.

capital, where the price of borrowed capital is the interest expense over borrowed capital and the price of equity is proxied by the average annual deposit rate.<sup>7</sup> Estimated efficiency coefficients are then used as additional dependent variables.<sup>8</sup>

### **Data**

The data come from two surveys conducted in 2002 and in 2003 by the CDFI Data Project. The total population of CDFIs is estimated to be about 800 to 1000 organizations (CDFI Data Project). A total of 434 CDFIs responded to the 2002 survey and 459 responded to the 2003 survey. The first effort to collect data by the Data Project occurred for FY 2001 but data from this survey are of very poor quality and are not available for sale. In addition, more than half of the returned questionnaires contain missing data, which constrains the sample to a total of 468 observations. Among CDFIs in the sample, only 17 are Community Development Banks insured by FDIC. Thus, data from the Statistics on Depository Institutions (SDI) were collected and used to estimate the efficiency frontier for CDBs. Only banks that were certified by the CDFI Fund were included in analysis since all 17 Community Development Banks originally in the CDFI Data Project were certified by the CDFI Fund.<sup>9</sup>

Publicly available data through SDI do not contain information on board size and composition, thus SDI data were only used to predict the coefficient of technical efficiency but not in the governance analysis of this paper. Only the original 17 Community Development Banks are included in the governance analysis and they represent about 4

---

<sup>7</sup> The annual average deposit rate is used because a part of the CDFIs in the sample are non-profit thus it is necessary to accommodate the non-distribution constraint.

<sup>8</sup> This approach, however, has been criticized because the model of predicted efficiency contradicts the assumption of identically distributed  $u_i$ 's from the first stage. Instead, Battese and Coelli (1995) proposed a method that combines the estimation into a single step by assuming that  $u_i$  is distributed independently but not identically as truncation of the normal distribution. Yet, the two-stages approach is still widely used to estimate cost efficiency in banking. An extension of the analysis would be to estimate the impact of governance mechanisms on performance using this one stage model.

<sup>9</sup> In the sample provided by the Data Project, some non-bank CDFIs were not certified by the CDFI Fund possibly because they may not have needed certification or the funds that it provides but according to the Data Project and the Coalition for CDFIs their activity is consistent with that of others CDFIs, and thus these CDFIs belong to the sample.

percent of the governance sample. The sample used for estimation of cost efficiency coefficients for CDFI Fund-certified banks contains 38 banks for the years 1998-2004. All variables used to estimate a stochastic frontier cost functions are in 2004 price equivalent.

Variables used in the analysis are defined in Table 1. Summary statistics of the are presented in Table 2. The average self-sufficiency ratio is 80 percent and it varies from 0.4 percent to 425 percent. Total assets vary from \$39,900 to \$1 billion with a mean of \$24.9 million and a large standard deviation of \$89.55 million. The average age of a CDFI is 25 years with a standard deviation of 20 years. The mean of the equity-to-total-assets ratio is 24 percent and the standard deviation is quite large (24 percent). This compares to the average financial intermediary capitalization in banks in the range of 12 percent.

CDFI Data Project classifies CDFIs in two ways first as organizational form, such as CD Venture Capital Funds, CD Loan Funds, Thrift & Banks, and Credit Union, and by organizational type, such as for-profit, non-profit cooperative, other non-profits, and government & quasigovernmental organizations. According to the first classification, most CDFIs operate as loan funds (48 percent), and credit unions (47 percent), while only 0.4 percent are CD Venture Capital Funds and about 4 percent operate as thrifts and banks. According to the second classification, six percent are for profit organizations, 46 percent are non-profit cooperatives, 48 percent are other nonprofits, and 0.2 percent are classified as government & quasigovernmental organizations.

The data also reveals that most CDFIs operate locally with nine percent operating only in the neighborhood, 10 percent operating in the city or town, and 14 percent operating in the metropolitan area. In addition, 11 percent operate in a single county, 25 percent operate in multiple counties, 12 operate statewide, only 11 percent operate in multiple states, and only 4 percent operate nation-wide. Predominant local operation is consistent with the argument made in support of relationship lending. Clearly, CDFIs focus their work locally because of

the informational advantage that they have in these local markets.

In the sample, the smallest board consists of 3 members and the largest of 50. The average board size is 10.6 members with standard deviation of 4.9. Unlike in other financial intermediaries, there is significant board diversity among board members. The average board has more than 39 percent women and more than 44 percent minorities. About 17 percent of the CDFIs reported no minorities and 21 percent consisted of minorities only, while 3 percent reported no women on the board and only 1.5 percent reported women only.

Table 3 (Panels A & B) presents a breakout of board size and composition by various organizational types and forms. The data reveals that, when CDFIs are classified by organizational form, credit unions have the smallest board consisting on average of 7.9 members, while CD Loan Funds have the largest board, consisting on average of 13 board members. In the second classification by organizational type, government and quasi-government organizations have the smallest board consisting on average of 7.1 members, and other non-profits have the largest boards consisting on average of 13 board members. Thus, it seems that organizations that may have the largest number of objectives (CDLF and non-profits) indeed have the largest boards as suggested by the theory.

Turning to board diversity, CDVF have the lowest proportion of minorities (18 percent on average) and credit unions have the highest proportion of minorities on the board (59.4 percent on average); in the second classification, government & quasigovernmental CDFIs have the lowest share of minorities (11.9 percent), and non—profit cooperatives have the highest percentage of female directors (58.7 percent). In terms of gender diversity, thrifts and banks have the lowest proportion of females on the board (13.9 percent) and credit union again have the highest proportion of women (42.3 percent). Among organizational forms, government & quasigovernmental organizations have the lowest proportion of female board members (13.9 percent) and other non-profits have the highest proportion (38 percent).

## Discussion of the Results

### *Efficiency results*

Since, in addition to direct measures of performance, such as self-sufficiency, number of loans and percentage of low-income client, efficiency coefficients are used as dependent variables to estimate (1), results from efficiency analysis are discussed first. The average level of estimated efficiency of CDFIs and of CD banks is relatively low but not exceptionally low and consistent with results from previous studies.<sup>10</sup>

When output is measured by the value of loans (non-bank CDFIs only) then the average technical efficiency produced by the translog cost frontier is 0.32.<sup>11</sup> These coefficients are slightly higher when the complete sample of CDFIs is used to estimate a simple Cobb-Douglass cost frontier (0.353). The average value of the coefficients of technical efficiency for the sample of Community Development Banks is 0.39, which is very low compared to results from typical banking efficiency studies. Such low values have been reported previously in banking studies from on both the US and other countries (Berger and Humphrey, 1997). The coefficients of technical efficiency when the number of loans and other direct financing provided are used as output variables are even lower, with average value of 0.22 for the translog and 0.255 for the Cobb-Douglass functional form. These results make it clear that there is a need to define better the “production process” of CDFIs and their output in particular. It remains important to find a measure that would capture CDFIs mission to provide financial services to the very poor and not only extend loans. It remains important to

---

<sup>10</sup> At this point of the research, only translog and Cobb-Douglass stochastic frontier cost function have been estimated. Cost minimization is assumed to account for the fact that cost minimization is a more plausible assumption than profit maximization required. In addition only, translog cost frontier permits estimation of economies of scope and is appropriate for industries multi-output production process.

<sup>11</sup> In general, these coefficients vary from close to zero (low level of technical efficiency) to one (perfect technical efficiency). Thus higher values are preferred.

find a measure that would capture the CDFIs mission to provide financial services to the very poor and not produce a certain number of loans. In addition, the provision of payment facilities and checking accounts are extremely important services but the approach applied so far ignores these services. The expectation is that refinements in specifying the “production” (“intermediation”) process in CDFIs will produce better empirical results and increase the confidence in the resulting estimates of the impact of governance structure on efficiency.

### *Board Size*

The results of the estimation of (1) using financial performance measures are presented in Table 4 and the results of the estimation of (1) using outreach performance indicators are presented in Table 5. The results that CDFIs with larger boards perform better are contradictory when financial performance is considered. The coefficients on board size are positive but not statistically significant in Models 1&2 in Table 4 where performance is measured by the self-sufficiency ratio, while this relationship is negative and significant at the 10 percent level in the specification where the dependent variable is the efficiency coefficient produced by the simple Cobb-Douglass efficiency frontier (Model 3 in Table 4). This result needs to be interpreted with caution, and in light of the above discussion on specification of cost efficiency for CDFIs.

CDFIs with larger boards achieve better breadth of outreach (measured by the log of number of loans and direct financing) as indicated by results from Models 1& 2 in Table 5, and depth of outreach (measured by the share of low-income clients to total clients) as indicated by results from Models 5 & 6 in Table 5. These results provide evidence in support of *Hypothesis 1*. Results from the regressions where the dependent variable consist of the coefficients estimated from cost frontier where output is measured by the number of loans and other direct financing also do not produce evidence of support of *Hypothesis 1* but the same caution on interpreting these results applies. Overall, strong results from direct estimation of

the impact of board size on outreach supports the theoretical conjecture that larger boards contribute to better performance in organizations with multiple tasks, at least when that performance is measured by outreach.

### *Board Diversity*

Unlike previous studies that focus on industries with lower level of board diversity and value maximization objectives and find evidence of positive impact of board diversity on the firm's value (financial performance), the results of this analysis indicate that board diversity may not be the right mechanism to promote better financial performance. Better representation of women and minorities on the CDFIs board is associated with a negative impact on financial performance (self-sufficiency and efficiency) and breadth of outreach (measured by number of loans and other direct financing), providing support for *Hypothesis 2*. These results are also consistent with the results of Adams and Ferreira (2004) and indeed suggest that, in firms with multiple objectives and, thus, high level of uncertainty, group cohesion may be important in terms of helping the board to steer the organization towards better financial results. It is also possible that other characteristics, such as stakes in the organization or professional qualifications, may matter more than simply gender and racial diversity.

It is important to emphasize, however, that results indicate a positive impact of board diversity (both in terms of share of women and share of minority) on depth of outreach measured as the share of low-income clients to total clients. Since CDFIs are characterized with significant presence of women and minorities on the board, the positive impact of board diversity on depth of outreach may indicate self-selection and endogeneity issues. Indeed, some authors have raised the issue of possible endogeneity in the impact of board size and composition (Hermalin and Weisbach, 2003). Empirical studies have found both the presence of endogeneity and its absence (Belkhir, 2004; Beiner, Drobetz, Schmid and Zimmermann, 2003). Hausman tests for endogeneity do not reveal that this is an issue in CDFIs, however.

These results may be influenced by the fact that majority of the CDFIs in the sample are relatively new, and there has not been enough time for CDFIs to have achieved optimal equilibrium board size.

*The impact of other variables*

One of the most interesting results of this study that may shed some light on the possible relationship between community development banks and other CDFIs is that there is no statistically significant difference between the performances of those two groups in all performance measures but the depth of outreach.<sup>12</sup> Equally interesting result is produced by the model where the dependent variable is the depth of outreach (Models 5&6 in Table 5). Compared to other CDFIs, community development banks serve a lower proportion of low-income clients (have worse depth of outreach).

Results also reveal that CDLF have lower self-sufficiency ratio and reach fewer clients than credit unions which is an expected result, and CDVFs reach fewer clients and smaller proportion of low income clients than credit unions.

A Chow test helps to draw conclusions about whether CD banks and non-bank CDFIs behave in the same manner (and thus pooling them together produces the best results). The result of this test indicates that the coefficient of the organizational form dummies (bank) and those of the interactive dummies (consisting of organizational form dummy multiplied by the board size) are not statistically different across groups, and thus there is no difference between the impacts of board characteristics on self-sufficiency in bank and non-bank CDFIs.

The results also show some inconsistencies produced by the regression using direct measures of performance and indirect (predicted efficiency coefficients) measure of

---

<sup>12</sup> Although the result shown in Tables 4 & 5 are from a specification where credit unions are the baseline group and a full set of organizational types dummies are included, the results that banks and thrifts do not differ in their performance from that of other CDFIs, carry through when the base group are non-bank CDFIs and only CDB dummy is included.

performance. While the regressions results from estimating models using direct measures of performance indicate that CDFI age and size affect performance positively, and the impact of equity to total assets ratio on performance is negative, the specifications with efficiency estimates as the dependent variables show that these relationships are either statistically insignificant or significant but have the wrong sign.

The results indicate that only outreach is affected by geographic diversity. The CDFIs serving statewide, multi-state, and multi-county areas achieve better breadth of outreach than the ones with more local operation. Similarly, CDFIs operating statewide reach higher proportion of low-income clients.

### **Conclusions:**

CDFI serve an important social function because by providing access to financial services to underserved low-income individuals and families. Understanding what governance mechanisms promote efficient use of scarce resources that these organizations possess matters because only sustainable institutions have the potential to revitalize low-income communities and change low-income individuals' lives in the long-term. The focus of this paper is on evaluating the impact of board size and composition on the performance of CDFIs. The results show that CDFIs with larger boards have better outreach, while diverse boards may not be best able to guarantee that CDFIs will achieve their stated objectives.

## References

- Adams, R., Mehran H. (2003). Is Bank Holding Company Governance Different?, *Economic Policy Review*, 9(1): 123-142.
- Adams, Renee B., Ferreira, Daniel. (November 2004). "Gender Diversity in the Boardroom", ECGI - Finance Working Paper No. 57/2004. <http://ssrn.com/abstract=594506>
- Aggarwal, Rajesh K., Nanda, Dhananjay. (July 2004). "Access, Common Agency, and Board Size", <http://ssrn.com/abstract=571801>
- Battese, G.E., Coelli, T.J. (1995). A Model for Technical Inefficiency Effects in a Stochastic Frontier Production Function for Panel Data, *Empirical Economics*, 20:325-332.
- Beck, T., Demirguc-Kunt, A., Levine, R. (2004). "Finance, Inequality, and Poverty: Cross-Country Evidence," World Bank Policy Research Working Paper No. 3338.
- Beiner, S., Drobetz, W., Schmid, F. and H Zimmermann. (2004). "Is Board Size an Independent Corporate Governance Mechanism?", *Kyklos*, 57,(3): 327-356.
- Belkhir, M., (2004). "Board of Directors Size and Performance in Banking", Working Paper, Université d'Orléans,
- Benjamin, L. Rubin J., and Zielenbach S., (2004). "Community Development Financial Institutions: Current Issues and future Prospects," *Journal of Urban Affairs*, Vol 26 (2): 177–195.
- Berger, A.N., Humphrey, D.B. (1997). Efficiency of financial institutions: International survey and directions for future research, *European Journal of Operational Research* 98: 175-212.
- Berger Al., Mester, L. (1997). Inside the Black Box: What Explains Differences in the Efficiencies of Financial Institutions, *Journal of Banking and Finance*, 21: 895-947.
- Berger, A., Udell, G. (1998), "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle," *Journal of Banking and Finance*, August 1998, v. 22, iss. 6-8: 613-73
- Brancato, C., Patterson, D.J. (1999). "Board diversity in U. S. Corporations: Best Practices for Broadening the Profile of Corporate Boards," *Business Lawyer*, 48(1) :59-77.
- Carter, D. A., Simkins B. J, & Simpson W. G. (2003). Corporate Governance, Board Diversity, and Firm Value, *The Financial Review*, 38(1): 33-63.
- Caskey, J. P., & Hollister, R. (2001). Business development financial institutions: Theory, practice, and impact. Institute for Research on Poverty Discussion Paper no. 1240–01. Available: <http://www.ssc.wisc.edu/irp/pubs/dp124001.pdf>

- DeYoung, R., Hinter W., and Udell, G. (2004), "The Past Present, and Probably Future of Community Banks *Journal of Financial Services Research*," Vol 25 (2/3): 85-133.
- Eisenberg, T., Sundgren, S. and M. Wells. (1998). "Larger Board Size and Decreasing Firm Value in Small Firms," *Journal of Financial Economics*, 48:35-54.
- Eisenhardt, K., Kahwajy, J., and Bourgeois, L. (1997). "Conflict and Strategic Choice: How Top Management Teams Disagree" *California Management Review*, 39: 42-62.
- Ellis, K., Keys, P. (2003). Stock returns and the Promotion of Work Diversity, Working Paper University of Delaware.
- Fama, E., Jensen, M. (1993a). "Agency Problems and Residual Claimants," *Journal of Law and Economics*, 26:327-349.
- Fama, E., Jensen, M. (1983b). "Ownership and Control," *Journal of Law and Economics*, 26:349-371.
- Featherstone, Allen M., Moss, Charles B.; (1994). Measuring Economies of Scale and Scope in Agricultural Banking; *American Journal of Agricultural Economics*, August 1994, v. 76, iss. 3: 655-61
- Flannery , Mark J., Samolyk, Katherine. (June 2005). "Payday Lending: Do the Costs Justify the Price?" FDIC Center for Financial Research Working Paper No. 2005/09 <http://ssrn.com/abstract=771624>
- Handy, F., (1995). "Reputation as Collateral: An Economic Analysis of the Role of Trustees of Nonprofits," *Nonprofit and Voluntary Sector Quarterly*, 24(4):293-305.
- Hermalin, B. E., Weisbach M. S. (2003). Board of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature, *Economic Policy Review*, 9(1):7-20.
- Higgs, D. Review of the Role and effectiveness of Non-executive Directors, [http://www.dti.gov.uk/cld/non\\_execs\\_review](http://www.dti.gov.uk/cld/non_execs_review).
- Holmstrom, B. (1999). Managerial Incentive Problems: A Dynamic Perspective, *Review of Economic Studies*, 66(1): 169-182.
- Holmstrom, Bengt., Milgrom, Paul (1991), "Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership and Job Design," *Journal of Law, Economics, and Organization*, Vol. 7: 24-51.
- Jensen, M., (1993) "The Modern Industrial Revolution, Exit, and the Failure of Internal Control System," *Journal of Finance*, 48(3): 831-880.
- Kanter, R., Men and Women of the Corporation, New York, Basic Books.
- Kumbhakar, S. C., C. A. Knox Lovell. (2000). *Stochastic Frontier Analysis*. Cambridge University Press.

Lipton, M., Lorsch, L. “A Modest Proposal for Improved Corporate Governance,” *Journal of*

Macey J., O’Hara, M. (2003). “The Corporate Governance of Banks,” *Economic Policy Review* 9(1):91-107.

Morduch, J. (2000). The microfinance shism. *World Development*, 26:783–790.

Navajas S., Schreiner, M., Meyer, R., Gonzalez-Vega, C., & Rodriguez-Meza, J. (2000). Microcredit and the poorest of the poor: theory and evidence from Bolivia. *World Development*, 28(2): 333–346.

Oster S., O’Reagan, K, (2004). “Does Structure and Compensation of the Board Matter? The Case of Nonprofit Organizations,” Working Paper, Yale School of Management.

Quercia R., Stegman, M.A, and W. Davis. (2002) “Performance of Community Reinvestment Loans: Implications for Secondary Market Purchases, in *Low-Income Homeownership: Examining the Unexamined Goal*, (Retsinas N. and E. Belsky Eds), Washington D.C.: Brookings Institution Press.

Quercia, Roberto G; Rohe, William M; Levy, Diane K. (2000) A New Look at Creative Finance. *Housing Policy Debate*, 11 (4): 943-72.

Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *Journal of Finance*, 52(2): 737–783.

Westphal J. and Milton, L. (2000). “How Experience and Network Ties Affect the Demographic Minorities on Corporate Boards,” *Administrative Science Quarterly*, 45:366-398.

Yermack, D. (1996). “Higher Valuation of Companies with a Small Board of Directors,” *Journal of Financial Economics*, 40:185-212.

Table 1 Definition of the Variables used in the analysis

Variable Name	Variable Description
<b>Dependent Variables</b>	
<b><i>Financial Sustainability Indicators</i></b>	
Self-sufficiency	The ratio of earned operating income to operating expense
E_vlns_translog	Efficiency estimates where output is the value of the loans and other direct financing and translog functional form is used
E_vlns_CD	Efficiency estimates where output is the value of the loans and other direct financing and Cobb-Douglass functional form is used
E_vlns_translogCDBs	Efficiency estimates where output is the value of the loans and translog functional form; CDBs sample
<b><i>Outreach Indicators</i></b>	
Log(Nlns)	Number of direct financing (loans, equity and near equity transactions)
Linc_cl	Low-income clients as a share of total clients
E_nolns_translog	Efficiency estimates where output is the number of loans and other direct financing and translog functional form is used
E_nolns_CD	Efficiency estimates where output is the number of loans and other direct financing and translog functional form is used
<b>Independent Variables</b>	
Bsize	Number of Board Members
Pminor	Share of minority on the board
Pfemale	Share of female board members
Eq_ta	Equity-to-Total Assets ratio
TA	Total assets in \$'000
Age	CDFI age, years since inception
CDB	Dummy that takes the value of one if the CDFI is a community development bank or thrift; zero otherwise
CDLF	Dummy that takes the value of one if the CDFI is a CD Loan Fund; zero otherwise
CDVC	Dummy that takes the value of one if the CDFI is a CD venture capital fund; zero otherwise
CU	Dummy that takes the value of one if the CDFI is a CD venture capital fund; zero otherwise
Gov	Dummy that takes the value of one if the CDFI is governmental or quasi-governmental organization; zero otherwise
NPCU	Dummy that takes the value of one if the CDFI is non-profit credit union; zero otherwise
Nonprofit	Dummy that takes the value of one if the CDFI is non-profit other than credit union; zero otherwise
Profit	Dummy that takes the value of one if the CDFI is for profit; zero otherwise
Year dummy	Dummy that takes the value of one if the year is 2002; zero otherwise

Table 1 Definition of the Variables use in the analysis (continued)

Variable Name	Variable Description
<b>Independent Variables</b>	
Metro	Dummy that takes the value of one if the CDFI operates in one metropolitan area; zero otherwise
Mstate	Dummy that takes the value of one if the CDFI operates in multiple states; zero otherwise
Mcounty	Dummy that takes the value of one if the CDFI operates in multiple counties; zero otherwise
Statewise	Dummy that takes the value of one if the CDFI operates in in one state; zero otherwise

Table 2. Summary Statistics of the Variables

Variable	Mean	Std. Dev.	Min	Max
<b>Dependent Variables</b>				
Self-sufficiency	0.799	0.431	0	4.3
Log(Nlns)	914	5,502	2	105,910
Linc_cl	0.717	0.239	0	1
E_vlns_translog (for non-bank CDFIs)		0.323		
E_vlns_CD	0.353	0.195	0.029	0.91
E_vlns_translogCDBs	0.389	0.091	0.24	0.84
E_nolns_translog	0.218	0.167	0.008	0.885
E_nolns_CD	0.255	0.192	0.008	0.878
<b>Independent Variables</b>				
Bsizen	10.551	4.915	3	30
Pminor	0.438	0.364	0	1
Pfemale	0.390	0.204	0	1
Eq_ta	0.259	0.258	-0.838	0.996
TA (\$'000)	24,901	89,549	39	1,068,592
Age	23.496	19.727	1	120
CDBs	0.047	0.212	0	1
CDLF	0.482	0.500	0	1
CDVC	0.004	0.065	0	1
CU	0.465	0.499	0	1
Profit	0.059	0.235	0	1
Non-profit cooperatives	0.457	0.49	0	1
Other non-profits	0.479	0.500	0	1
Gov & quasiov	0.002	0.047	0	1
Metro	0.141	0.348	0	1
Mstate	0.098	0.297	0	1
Mcounty	0.247	0.432	0	1
Statewise	0.122	0.327	0	1
Year Dummy	0.526	0.500	0	1

Table 3. Board Size and Composition by Organizational Type

Panel A

Organization form	No of Board Members	Minorities Share	Female Share
<b>CD Loan Funds</b>			
Obs	296	267	290
Mean	13.1	0.282	0.384
Std. Dev.	6.3	0.232	0.184
Min	3	0	0
Max	50	1	1
<b>CD Venture Funds</b>			
Obs	33	19	20
Mean	9.7	0.185	0.260
Std. Dev.	4.3	0.267	0.191
Min	4	0	0
Max	22	1	0.56
<b>Trifts and Banks</b>			
Obs	25	25	25
Mean	10.6	0.474	0.164
Std. Dev.	3.8	0.349	0.116
Min	6	0	0
Max	20	1	0.4545455
<b>Credit Unions</b>			
Obs	217	217	217
Mean	7.9	0.594	0.423
Std. Dev.	2.1	0.410	0.223
Min	4	0	0
Max	15	1	1

Table 3. Board Size and Composition by Organizational Type

Panel B

Organization type	Number of Board Members	Minorities Share	Female Share
<b>Profit</b>			
Obs	47	40	41
Mean	9.7	0.378	0.233
Std. Dev.	3.4	0.331	0.178
Min	5	0	0
Max	20	1	0.56
<b>Nonprofit Coop</b>			
Obs	221	221	221
Mean	8.0	0.587	0.421
Std. Dev.	2.2	0.409	0.222
Min	4	0	0
Max	18	1	1
<b>Other nonprofit</b>			
Obs	300	265	288
Mean	13.1	0.285	0.381
Std. Dev.	6.3	0.239	0.186
Min	3	0	0
Max	50	1	1
<b>Gov&amp; quasigov</b>			
Obs	3	2	2
Mean	16	0.119	0.139
Std. Dev.	7.1	0.168	0.061
Min	11	0	0
Max	21	0.2381	0.1818

Table 4: Pooled OLS of the impact of board size and composition on financial performance of CDFIs.

	(1) Self- sufficiency	(2) Self- sufficiency	(3) E_vlns_CD	(4) E_vlns_translog
Constant	0.987*** (13.98)	1.015*** (13.76)	0.565*** (6.44)	0.536*** (6.91)
Bsize	0.004 (1.11)	0.004 (1.02)	-0.005* (1.73)	-0.003 (1.28)
Pminor	-0.044 (0.89)	-0.062 (1.21)	-0.095 (1.39)	-0.101* (1.68)
Pfemale	-0.208** (2.54)	-0.225*** (2.71)	-0.216** (2.45)	-0.238*** (3.06)
Age	0.004*** (4.26)	0.004*** (4.29)	-0.002 (1.33)	-0.003** (2.29)
TA	0.000** (2.35)	0.000** (2.29)	-0.000*** (2.86)	0.000 (1.07)
Eq_ta	-0.131* (1.68)	-0.130 (1.63)	-0.025 (0.42)	-0.000 (0.00)
CDBs	-0.010 (0.12)	0.011 (0.13)	0.027 (0.21)	-0.027 (0.24)
CDLFs	-0.406*** (7.87)	-0.384*** (6.81)		
CDVFs	-0.382 (1.56)	-0.350 (1.41)		
Metro		-0.005 (0.09)		
Mstate		-0.062 (0.89)		
Mcounty		-0.064 (1.40)		
Statewide		-0.030 (0.51)		
Year Dummy	-0.012 (0.38)	-0.009 (0.28)		
Observations	466	466	209	209
Adjusted R-squared	0.38	0.38	0.06	0.06

Absolute value of t statistics in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 5 OLS of Outreach on board size and composition

	(1)	(2)	(3)	(4)	(5)	(6)
	Log(Nls)	Log(Nls)	E_vlns _translog	E_vlns_CD	Linc_cl	Linc_cl
Constant	5.965*** (22.95)	5.688*** (21.27)	0.411*** (5.91)	0.455*** (5.93)	0.638*** (13.31)	0.657*** (14.73)
Bsize	0.025* (1.80)	0.028** (2.00)	-0.002 (1.11)	-0.003 (1.33)	0.005* (1.88)	0.005* (1.73)
Pminor	-1.125*** (6.21)	-0.967*** (5.23)	-0.126** (2.34)	-0.143** (2.38)	0.090*** (2.65)	0.081** (2.54)
Pfemale	-0.579* (1.94)	-0.420 (1.41)	-0.092 (1.34)	-0.096 (1.25)	0.105* (1.87)	0.091* (1.68)
Age	0.012*** (3.19)	0.011*** (3.17)	-0.004*** (2.93)	-0.004*** (2.78)	-0.000 (0.60)	-0.000 (0.50)
TA	0.000*** (9.87)	0.000*** (10.12)	-0.000** (2.47)	-0.000** (2.56)	-0.000 (1.04)	-0.000 (1.38)
Eq_ta	-0.493* (1.70)	-0.457 (1.57)	0.119** (2.56)	0.163*** (3.20)	-0.127** (2.12)	-0.089 (1.12)
CDBs	-0.086 (0.24)	-0.242 (0.68)	0.072 (0.60)	0.048 (0.36)	-0.313*** (5.03)	-0.270*** (5.26)
CDLFs	-1.581*** (8.22)	-1.819*** (8.85)			0.011 (0.30)	-0.006 (0.15)
CDVFs	-1.155 (1.30)	-1.625* (1.84)			-0.419*** (2.59)	-0.459*** (8.49)
Metro		0.024 (0.14)				-0.029 (0.99)
Mstate		0.433* (1.74)	-0.054 (1.32)			0.009 (0.19)
Mcounty		0.543*** (3.29)	-0.023 (0.78)			-0.087*** (2.66)
Statewide		0.660*** (3.12)	-0.013 (0.42)			0.100*** (2.96)
Year Dummy		-1.267*** (5.68)	-0.073 (1.37)	-0.088 (1.48)	-0.008 (0.34)	-0.007 (0.32)
Observations	453	453	205	205	409	409
Adjusted R-squared	0.45	0.47	0.13	0.15	0.13	0.17

Absolute value of t statistics in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

## **Appendix:List of CDFI Fund certified Community Development Banks**

Albina Community Bank  
Bremer Bank, National Association  
Bank of Cherokee County  
Bank of Ruleville  
Blackfeet National Bank  
Capitol City Bank & Trust Company  
Carver Federal Savings Bank  
Central Bank of Kansas City  
Citizens Trust Bank  
First Bank of D.C., National Assoc  
City National Bank of New Jersey  
Community Bank of Lawndale  
Community Bank of the Bay  
Community Commerce Bank  
Community Thrift and Loan Association  
Drydes Savings Bank, F.S.B.  
Delta Southern Bank  
Douglass National Bank  
Dryades Savings Bank, F.S.B.  
Elk Horn Bank and Trust Company  
First American Bank  
First American Bank, National Association  
First American International Bank  
First Bank of the Americas, S.S.B.  
First Independence National Bank of Detroit  
First National Bank of Phillips County  
Fort Gibson State Bank  
Inter National Bank  
International Bank of Chicago  
Liberty Bank and Trust Company  
Mechanics & Farmers Bank  
MemphisFirst Community Bank  
Mission Community Bank  
Mission Community Bank, National Association  
Mutual Bank  
Mutual Community Savings Bank, SSB  
NAB Bank  
Native American Bank, National Association  
New York National Bank  
OneUnited Bank  
Pacific Global Bank  
Seaway National Bank of Chicago  
Security State Bank of Wewoka, Oklahoma  
ShoreBank  
South Shore Bank of Chicago  
The Boston Bank of Commerce  
The Carver State Bank  
The Community's Bank  
The Harbor Bank of Maryland  
United Bank of Philadelphia  
Unity National Bank of Houston

