SOCIAL PERFORMANCE MEASUREMENT FOR CDFI BANKS[1]

By
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Abstract

Community Development Banking Institutions (CDBIs) are United States banking institutions that have a strong orientation towards providing financial products and services which benefit underserved communities and individuals as a core aspect of their business. Within the CDBI sector, there are a number of different approaches to measuring social performance. Not only do many of these approaches consume significant resources on the part of reporting and/or collecting institutions, but they also typically do not enable comparison across the similar entities or across the banking sector more broadly. If the CDBI sector is to raise more private capital in the long run, then standardized, credible measures are required that can be used to compare the performance of institutions. This paper pursues one possible avenue of exploration in this direction, drawing on publicly available data sources, such as FDIC's Statistics of Depository Institutions & Summary of Deposits databases, and the FFIEC's HMDA and CRA data bases. The paper reports on financial and social performance indicators for the period 1996-2004 for the banks which as at July 2006 were accredited by the CDFI Fund as meeting its criteria for developmental activities and mandate, and which therefore constitute a pre-qualified group.

The paper proposes two measures, Development Lending Intensity (DLI) and Development Deposit Intensity (DDI), which systematize aspects of the lending and service tests performed on depository institutions as part of the CRA examination process. These measures of development lending and deposit taking intensity in CDFI qualified areas can provide useful lenses through which to categorize different types of institutions and identify other community banks that have a development mission, and track their performance over time. Unfortunately, annual public data is not available on all categories of development lending for smaller depository institutions, which limits the ability to calculate a full DLI for each institution each year. However, HMDA data does

[1] Note that any reference to banks in this paper refers to both banks and thrifts. Generically CDBIs also include credit unions.

[2] David Porteous, Director, Bankable Frontier (www.bankablefrontier.com) and Saurabh Narain, Chief Fund Advisor, NCIF (www.ncif.org) would like to acknowledge the hard work of Corinne Bradley, Joe Schmidt & Benecia Cousin; and the advice from numerous others including trustees of NCIF, George Surgeon, Ron Grzywinski, Mary Houghton, Ellen Seidman, Dan Immergluck, Malcolm Bush, Bob de Young, Mike Berry.

provide a relevant development lending profile at least for those banks focused on housing related lending.

The paper proposes several directions of further research in the quest for appropriate social performance measures for banks.

1. Introduction

How can one meaningfully assess the social performance of community development banking institutions (CDBIs)? This broad term has been developed by the National Community Investment Fund to mean those depository institutions that achieve positive social impact while also remaining financially strong. CDBIs include, but are not restricted to, those banks which have successfully applied for accreditation with the Community Development Financial Institutions Fund (CDFI Fund) managed by the US Treasury, which brings access to Federal support programs but requires compliance with additional reporting requirements.

To date, two main problems have stood in the way of better performance assessment. First, while there are established methods to assess and compare the financial performance of banks, CDBIs are by definition double bottom line institutions which seek to balance their profit making and their positive social impact. Shareholders and management of CDBIs consciously choose to make trade-offs between the two bottom lines; or the three, if one includes environmental impact, as is increasingly common following initiatives such as the Global Reporting Initiative[3]. As a result, measurement of the financial bottom line and comparison with 'single bottom line' banks based on financial performance alone are clearly inadequate. Second, however, even within the universe of depository entities with an expressed concern for social impact, there is no standard system of performance measurement and comparison. Instead, a multitude of different approaches is used for evaluating social performance, which often require the collection of considerable additional information in order to assess impact.

In recent years, there have been concerted efforts to collect better data about the Community Development Financial Institution (CDFI) sector; however, some of these efforts, such as the CDFI Data Project[4], have been focused on compiling aggregate data about the sector rather than comparing individual institutions. The CARS rating system[5] provides standardized means of rating CDFI loan funds only and does not cover CDBIs. Also the CARS system relies on self-selected methods of determining impact and, like most rating service, requires the collection of specialized information and the payment of a fee. Also, this system applies only to the narrowly defined universe who select to apply it, which does not allow broader comparison among depository entities.

If CDBIs are to become a standard retail investment class, able to tap into wider sources of retail investment, then there is a need to create standardized means of performance assessment so that CDBIs can be located within the broader universe of banks. This could

[3] See http://www.globalreporting.org/Home
[4] See http://www.cdfi.org/cdfiproj.asp
[5] See http://www.communitycapital.org/financing/cars.html

enable investors to make investments based on their own balance of objectives between financial and social return. Entities offering an attractive combination of both may benefit from greater access to capital and even a lower cost of funds than is possible in the absence of calibrating the investment trade-off. However, any approach to measuring social performance across banks must necessarily rely primarily on publicly available data, since the costs of collection would likely limit the universe of entities to a small self defined set. Fortunately, there are rich sources of public data relating to the activities of home lenders, such as the Home Mortgage Discloure Act (HMDA), and depository institutions, such as the Community Reinvestment Act (CRA) or the FDIC's Summary of Deposits (SOD) database.

What then are the limits to which such publicly available data can be pushed in the cause of meaningful performance management for CDBIs? Can it be used to assist in performance measurement of CDBIs? This paper seeks to answer these questions. To do this, we first survey the available performance assessment approaches and then assess the scope and usefulness of public data sources. Then, we access various publicly available databases to create a profile over time of the 61 depository institutions which were formally accredited as CDFIs in July 2006. Our sample focuses on the period since the creation of the CDFI Fund in 1996, when the CDFI designation was started. We test and demonstrate the value of two measures in particular derived from data in various data bases. In the presence of sufficient data, these measures may be used as social performance metrics in themselves; certainly, they can function as lenses which enable the better categorization and comparison of 'like with like'. This categorization is an essential step in better performance comparison across entities, which is often missed.

Sample description

The CDFI Fund website reported the names of 61 certified banks and thrifts in July 2006. While these entities were certified at various dates during the past ten years (and it has not been possible to secure a date of first certification in all cases from the CDFI Fund), we use the July 2006 cut off to define the CDFI bank dataset for which we then collect and report retrospective performance data.

Time periods

This research was undertaken as part of a review of the CDFI sector since the launch of the CDFI Fund in 1996. To make the volume of data more tractable, three years were selected to represent the start, middle and end-point of this period: 1996, 2000, 2004.

Table 1 below compares the size distribution of our CDFI bank sample with all US banks in 2004.

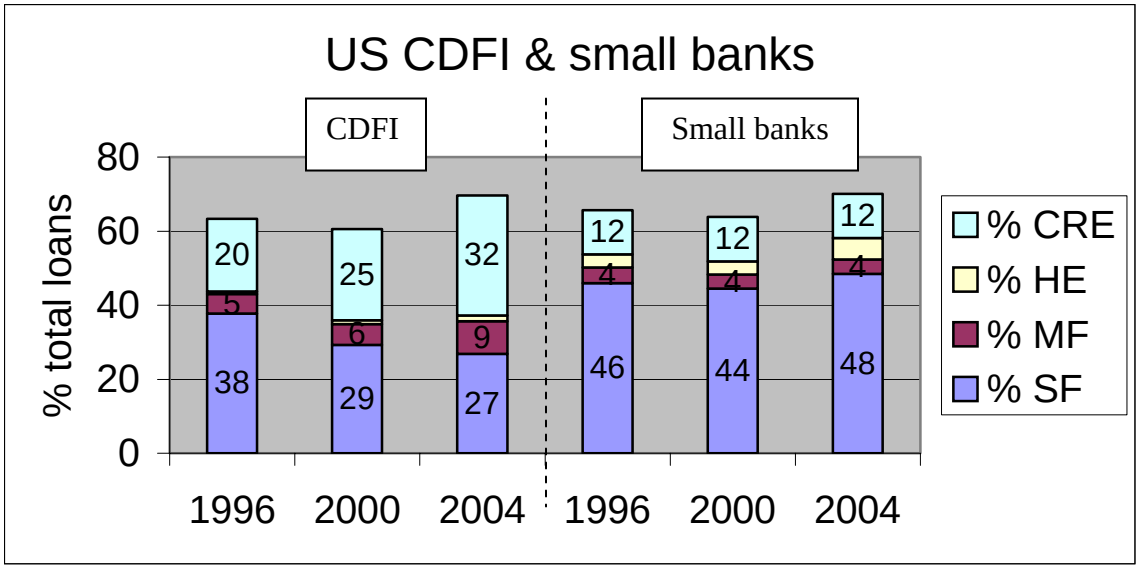
Table 1: Relative size comparison of CDFI banks (number of banks unless specified otherwise)

Gross assets- end 2004	CDFI banks	All US banks
<$250m	50	7,029
>250m;<$1bn	10	1,350

>$1bn	1	597
Average total assets	$173m	$168m

In addition, by way of setting the scene, it is relevant to compare the types of lending activity undertaken by CDFI banks. Figure 1 below reports the percentage of outstanding loans at year end in each of the sub-categories related to real estate lending for CDFI banks on the left; and small banks (less than $1 billion in assets) on the right. The total columns do not sum to 100% because the banks also undertake non-real estate lending, but unfortunately, this is not broken down further.

Figure 1: Composition of Real Estate Portfolio of CDFI banks versus small banks



Source: SDI
Note: CRE: Commercial real estate; HE: home equity lending; MF: multifamily home lending; SF: single family home lending

Figure 1 shows that real estate lending is the biggest category for both CDFI and small banks as a whole—close to 70% by 2004. The main difference between the two groups of banks is in the composition of the real estate lending: for CDFI banks, the share of single and multifamily loans has fallen from 43% of all loans to 36% (with a much higher share for multi-family); in their place, the share of commercial real estate has grown quite dramatically to almost a third in 2004, from a fifth in 1996. Small banks as a whole have somewhat increased single and multi-family lending (50% to 52%), and home equity lending (although this remains a relatively small proportion).

Qualifying areas

Because of the focus of this paper on CDFIs, we used the CDFI Fund definition of qualifying Investment Area.[6] This status is conferred by CDFI Fund based on Census

[6] Other conceivable area screens would be Low and Moderate Income (LMI), published annually by HUD, which considers tract income relative to area median; and the more recent categories of 'financially distressed' and 'financially underserved' areas declared by FFIEC in terms of recent regulation; while this

results, which show the unemployment and poverty rates against national benchmarks; and median income lower than area median. The latest list of investment areas is based on 2000 Census results, and was published in 2001. Unfortunately, we were unable to obtain the list of qualifying areas prior to this. Hence, we had to recreate the prior list using similar underlying measures of poverty, unemployment and relative income based on 1990 Census data. This gave us some 20,000 qualifying tracts for the earlier two years; and the official number of some 24,795 in 2004.[7] Area definitions also had to be adjusted to allow for changes in the 2000 census data, using a specific translation algorithm.

2. Approaches to performance measurement

2.1 Social performance measurement

There is already a relatively wide, if not yet deep, literature on social performance measurement for financial institutions. A review of this has yielded several conclusions relevant to the objectives of this paper.

First, the *need for credible social performance measurement of financial institutions* is growing, as a result of increasing demands by investors for social investment opportunities; and because of pressures on mainstream financial institutions to report on a double or triple bottom line which means that 'we are all double/ triple bottom line now'. Specifically, new and existing investors need simple, credible measure/s which enable them to distinguish the social performance of financial institutions more broadly.

Second, *true impact measurement* is increasingly regarded as too expensive and difficult to achieve. This is because of the difficulty of adequately defining a control group, outside of ideal experimental conditions including randomized assignment of cases (Hollister 2004). Rather, the focus has moved towards measuring forms of outcome (for example, Immergluck 2006). An outcome is a desired change resulting from an output or series of outputs. Output and outcome need to be linked by a theory of change which explains the causality.

While output is relatively easy to measure—for lending banks, volumes of loans granted constitute output—the outcomes from such activity are much harder to measure. If the causal chain between output and outcome were sufficiently convincingly demonstrated for a particular product, one could rely on collecting output measures alone.

The evidence that increased financial intermediation at a local micro level such as a census tract leads to positive social outcomes at that level has not yet been demonstrated. This is in part because of the limitations of outcome-related data at tract level and, more so, because of the perennial questions about spillover effects across boundaries which may dilute the evidence, though not the reality, of impact within an area. Recent

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newer measure will be updated more regularly than CDFI Investment Areas, it has only become available recently and covers only non-metropolitan counties.

[7] There were 18 456 LMI tracts in 2004.

empirical work by Galster et al (2006) on parsimonious indicators of neighborhood vitality may lead to the definition of tractable, generally available indicators which accurately measure the changes in neighborhood characteristics over time.

While there is little or no strong evidence yet of positive outcome effects of intermediation activity at a tract level, there is a recent body of finance literature that has demonstrated a clear causal linkage between the volume of intermediation and economic growth at the national and international level (summarized in Levine 2005). Only in recent years has the direction of causality been definitively isolated: while the effect is clearly bi-directional, it is now accepted that financial intermediation has a 'first order positive causal impact on economic growth'. However, this relationship is not simple or linear. In fact, in one of the few empirical studies that have done similar analysis at state level, Dehejia and llevas-Muney (2003) find evidence of positive causality in distant history, but suggest that this effect exists only within bounds. For example, overlending as the result of a credit bubble will usually have a negative outcome on subsequent growth. World Bank researchers Beck et al (2004) have extended this theory of change further than impact on economic growth alone. Using a cross section of 52 developed and developing countries over a forty year period (1960-1999), they show that increased intermediation is also related causally to other socially desirable outcomes such as reduced poverty and income inequality.

These macro-level findings give more credibility to the claim that 'output' measures of intermediation volumes are likely to be linked to positive outcomes, although this claim cannot yet be definitively made. However, neither can output-related measures be dismissed as irrelevant to the search for 'parsimonious' performance measurement indicators for CDFIs which operate largely on a local or regional level.

In the literature, there are now a *variety of approaches that seek to capture direct outcome*, but as yet, none provides a widely accepted way of comparing and distinguishing the social performance of financial institutions across a broad spectrum (Kramer & Cooch 2006, Clark et al 2003).

As methods have proliferated, even financial institutions which are very committed to social impact are increasingly sensitive to the cost in time and other resources of complying with additional reporting regimes for measuring performance and impact (for example, Coastal Enterprises 2006). This underlines the need to use *existing data sources as much as possible*, accepting the likely tradeoffs between precision and the cost of data collection.

An example from a related, although very different, sector—mutual funds—shows how widely used performance measurement tools can be developed based on publicly available data alone.

2.2 Mutual Fund Rating: an example

Morningstar started its mutual fund rating services in 1986. It uses publicly available information on fund performance to create star ratings which are used widely by retail

investors to navigate the increasingly complex range of products and offerings. Morningstar's methodology of performance measurement is relatively simple, however[8]:

- *Step 1: create consistent categories* within which meaningful peer group comparison can be undertaken; Morningstar currently has some 62 categories of fund, based on characteristics affecting performance such as the size and focus of fund and has methodology to control for movement between categories.
- *Step 2: measure risk adjusted return within each category*: Morningstar uses moving averages of risk adjusted return, which for mutual funds are easily available and relate to the investment experience of retail investors.
- *Step 3*: *rank funds within each category using this criterion*; in fact, for ease of investor use, Morningstar assigns stars on a bell curve so that a few top performers get five stars, most get three stars, and so on.

For Morningstar, and no doubt others in the same business, the hardest parts of the process are not the latter steps, but the first: creating a credible and robust means of peer classification. This is a key challenge for CDBIs today, which differ greatly in size, focus and approach.

3. Publicly available performance data

3.1 Financial performance

The main measures of bank financial performance are commonly accepted: return on equity and /or return on assets are widely used as comparable indicators of profitability. Of the two, return on assets may be preferable for CDFI banks since they often have lower gearing ratios due to the nature of their business, hence not able to earn higher ROEs. These measures may vary considerably year to year and hence if one has an interest in long run performance, there is a need to calculate averages over time. For depository institutions at least, the data necessary to construct such measures is widely available through publicly accessible databases such as the FDIC's Statistics of Depository Institutions (SDI).

Dobbs & Koller (2005) go further to suggest that, in addition to ROE, compound revenue growth over time is also an important measure of the long run financial performance of a business. Using the 62 accredited CDFI Fund accredited institutions in 2006, we experimented with possible composite measures of financial performance which would blend a number of underlying dimensions of financial performance, including:

- Return on equity (ROE)
- Return on assets (ROA)
- Efficiency ratio
- Tier 1 leverage ratio
- Charge offs to loan book
- Loan loss to reserves.

[8] Available via http://corporate.morningstar.com/US/asp/detail.aspx?xmlfile=279.xml

For example, we ranked the CDFIs in each category based on their published figure in each category in a year, and calculated the average of the six rank scores. However, perhaps not surprisingly, there is a strong correlation (0.76) between ROE and the composite financial performance measure, since most of the measures ultimately feed into an ROE or ROA result. Furthermore, it requires a certain a priori judgment to assign scores in certain categories: for example, should higher charge offs necessarily lead to lower rankings if this is the result of a decision to enter riskier markets, and if the risk adjusted return is still adequate.

Consequently, we have reverted to the simple, consistent option of using ROA averaged over a preceding five year period as a long run financial performance measure for CDFI banks.

3.2 Social performance

There are three main publicly available databases that provide information relevant to social performance, summarized in Table 2 below. The FDIC's Statistics of Depository Institutions database, which provides only financial information is also used in our analysis.

Table 2: Summary of Public Data Bases

Database	Maintained by	Who reports	What the data tell us
1. Community Reinvestment Act (CRA)	FFIEC	All supervised banks with assets above $250m pre-2005 required to report loan data; annually; threshold now $1bn in assets	Originations of loans in developmental categories (to small business; agriculture) by country/ census tract CRA exam ratings, undertaken periodically by supervisors, provide an indication of official rating of development performance
2. Home Mortgage Disclosure Act (HMDA)	FFIEC	All depository lenders and other qualifying mortgage lenders, in general with home purchase loan originations exceeding $25m annually[9]	Applications for and *originations and purchases* of home loans by type and by characteristics of borrower by census tract as opposed to loans outstanding.
3. Summary of Deposits (SOD)	FDIC	All FDIC insured institutions; annually	Location of branches and deposits booked per branch

[9] For detailed HMDA reporting eligibility: see http://www.ffiec.gov/hmda/reporter.htm

4. Statistics on Depository Institutions (SDI)	FDIC	All FDIC institutions; quarterly	Only financial information

There are some relevant limitations specific to each database:

- HMDA: while most (but not all) of the CDFI Banks report HMDA data, this captures only home lending, which is a declining proportion of most CDFI banks real estate portfolios: single and multifamily lending has declined from 43% to 36% of total loans outstanding between 1996 to 2004 ; correspondingly, commercial real estate, which may only be picked up in CRA reports, has become increasingly important (32% in 2004, up from 20% over the same period). This means that HMDA is picking up less and less over time of the real-estate related development lending of CDFIs.
- CRA: up until 2004, only entities larger than $250m in assets were required to complete the detailed CRA reports which enable new lending to small businesses to be identified separately by area. The rise in the reporting threshold to $1 billion from 2005 and the change in the methodologies mean that most CDFI banks, and indeed most small banks in general, will no longer be required to report origination at a tract level,[10] so whatever the historic value of this information, its value as a source of detailed data on small banks has already diminished.
- SOD: differential practices on booking deposits distort the information value of data on the value of deposits by branch. Therefore, a measure of percentage of branch offices in qualifying areas was used as a proxy for the focus of banking presence.

To construct a database for the 62 CDFI banks, considerable effort was necessary to extract data from the different data bases and combine them. The SOD and SDI data for each year and for all institutions in the CDFI Bank data set is available via the FDIC website. The underlying HMDA and CRA data sets used in this analysis were available via FFIEC website for years after 1999 and could be ordered on CD-ROM for the earlier year in our sample. The transactional databases for CRA and HMDA Raw Data are extremely large and require considerable manipulation to obtain usable data which combines the information by institution. While there are some commercial services which provide links across the databases by institution to facilitate such comparison, we found these to be very expensive; hence, we decided instead to test how one could proceed accessing the data directly from source.

Not all CDFI banks today were in existence in 1996; and even many of those that were, were not necessarily required to report in each year due to their size, as Table 3 below shows. In particular, so few of the CDFI banks qualified to undertake detailed CRA reporting during this period, that we could not use this data as a substantive source.

[10] In 2005, there were only 1103 CRA reporting banks in total, with only 59 having assets less than $249m.

Table 3: No of observations found in each database in each year

Database	1996	2000	2004
1. CRA	1	6	5
2. HMDA	34	36	43
3. SOD	47	57	58
4. SDI	52	59	61

So, given these limitations, what use can one make of the data related to social performance in particular?

One of the key differences between CDFI banks and others is, in theory at least, that they do a sizeable proportion of their business, whether lending or deposit taking, in qualifying areas. Business undertaken in such qualified areas is generally considered development-related business which qualifies for consideration under the CRA lending test. Through using data from these databases above, the differences should be measurable over time, and can be calibrated to enable better comparison among entities which do relatively more, or relatively less, business in these areas. Specifically, we propose two social performance measures (SPMs) which make use of the data, and which, as the next section will show, allows us to distinguish and compare among CDFIs and even with broader groups as well. These are:

- Development Lending Intensity (DLI), which should apply to all categories of lending which are deemed to have positive social impact (such as housing, SME, rural, commercial real estate) measured at a qualifying area level; and
- Development Deposit Intensity (DDI), which considers deposits taken or branches located in qualifying areas, similar to the service test considered as part of a CRA examination.

These measures are defined in Table 4 below.

Table 4: Social performance distinguishing features

Measure	Definition/s	Meaning
1. Development Lending Intensity (DLI)	The total value of development-related loans originated and purchased by a bank in qualifying areas in a year, as a percentage of total loans originated by bank i at time t. DLI may also be calculated relative to some measure of size, such as tier one equity or total assets	A higher DLI value means relatively more of a bank's lending takes place in qualifying areas. A DLI value increasing over time indicates an intensifying focus on lending in qualifying areas.
2. Development Deposit Intensity (DDI) (i) DDI(t)	(i) The value of deposits booked in qualifying areas as a percentage of total deposits; or (ii) Percentage of total offices	(i) The extent to which the bank draws its resources from qualifying areas.

(ii) DDI(b)	located in qualifying areas	(ii) The extent to which the bank provides deposit and retail financial services in qualifying areas

In many ways, the calculation of measures of this type is at the heart of the CRA examination. The CRA examination report records the originations of home loans and small business loans by number and value, differentiated by geography of the borrower and even income of the borrower for home loans. This profile is compared against averages for a regional comparator grouping of banks, in order to form an opinion on the reasonableness of the distribution of the banks lending patterns. Similarly, for the location of retail service points, where the current spread of branches and the trend in branch openings and closings in different income areas is considered in coming to an assessment of the performance of the institution.

The outcome of a CRA examination, typically conducted every three years or so, a rating on a four point scale. Examination methodology has been standardized across the bank supervisory agencies to attempt to make CRA ratings more comparable. Nonetheless, ratings are highly clustered in the upper two categories (outstanding, satisfactory), and are largely used only for regulatory purposes. Certainly, they have not to our knowledge been used for investment purposes, because the CRA rating does not, nor does it seek to, systematize the underlying information in a way that can be used by investors to understand social performance in a quantifiable manner

Instead, we believe that the derivation of these two measures, DLI and DDI, on a consistent basis can be highly relevant to categorizing and comparing the social performance of banks with one another and over time.

The DDI measure is easily accessible annually via the FDIC's SOD database. However, the calculation of DLI from regular publicly available data presents an immediate challenge: very few of the CDFI banks (5, from Table 3 above), or small banks under $1 billion in general, are required to produce annual lending reports for CRA. Because of lower exemption thresholds, many more are required to report HMDA data: 43 in 2004 from Table 3 above. However, to calculate DLI on one asset class alone may create a misleading picture of the development lending of a bank: they may undertake little housing lending in investment areas, because the bulk of their business is SME or commercial real estate investment in these areas. Since at present we can calculate only the DLI measure for home lending, this only has descriptive power for those entities which focus on home lending. We therefore distinguish DLI based on HMDA alone as DLI (HMDA) and apply it primarily for lenders for which home lending is more than 50% of their loan portfolios in 2004. For those lenders which are not housing-focused, DLI (HMDA) provides a guide only to their housing activity, which is relatively small, and can says nothing about their social performance in general.

4. Application of SPMs to CDFI Banks

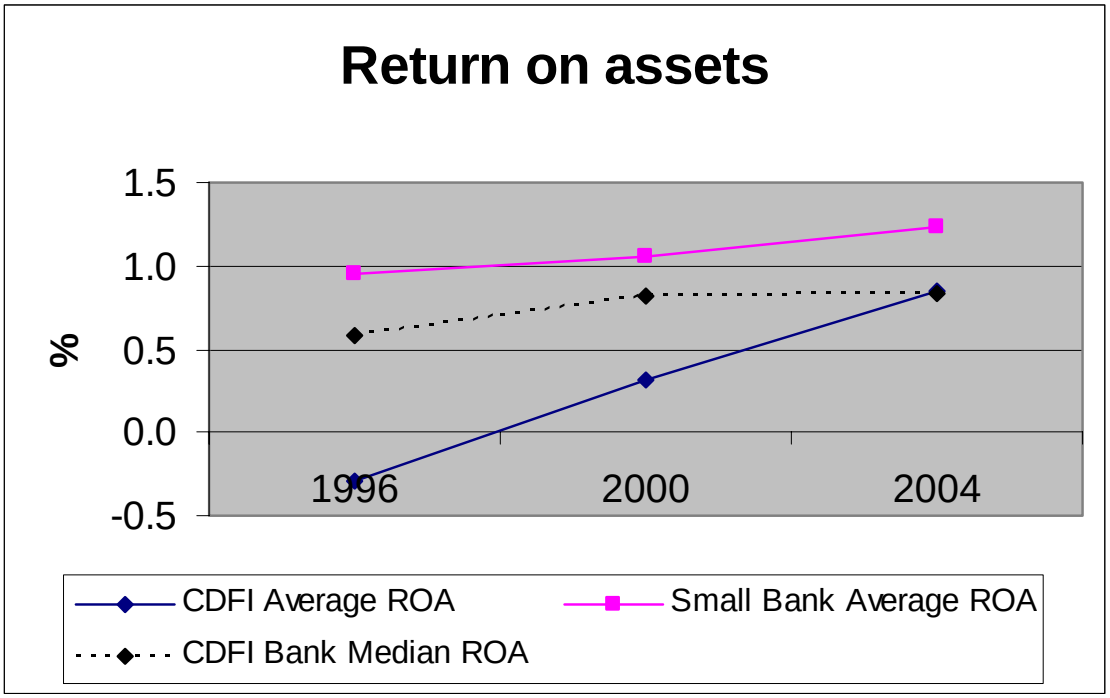
So what do these measures and the available data tell us about the performance of CDFI banks over the period 1996-2004?

4.1 Financial performance

Using SDI data, it is possible to compare the financial performance of the CDFI Banks with the rough peer group of banks with less than $1 billion in assets. This cut off was made simply because of tractability; ideally, other criteria would define the small bank category more narrowly as community banks as de Young et al (2004) and de Young (2006) have done.

A few results are immediately apparent from this data alone. First, at the bottom line level of return on assets, CDFI Banks have been less profitable on average than small banks in general throughout the period, although the differential is less pronounced when the median is calculated, suggesting some outliers. The gap has also closed somewhat over the period as shown in Figure 2 below. Certainly, CDFI banks have increased median and average ROA substantially over the period.

Figure 2: Return on Assets: CDFIs and small banks compared



Source of data: SDI, various years
Note: Small banks: banks under $1bn gross assets in each year;

The difference in performance between CDFIs and the larger peer group of small banks appears to be due to several factors, which are explored more fully in de Young (2006). For example, although CDFI banks show a consistently lower median charge-off rate than small banks and earn a consistently higher gross interest margin (4.6% versus 3.6%),

these positive factors are not sufficient to outweigh the effects which draw down profitability. These include:

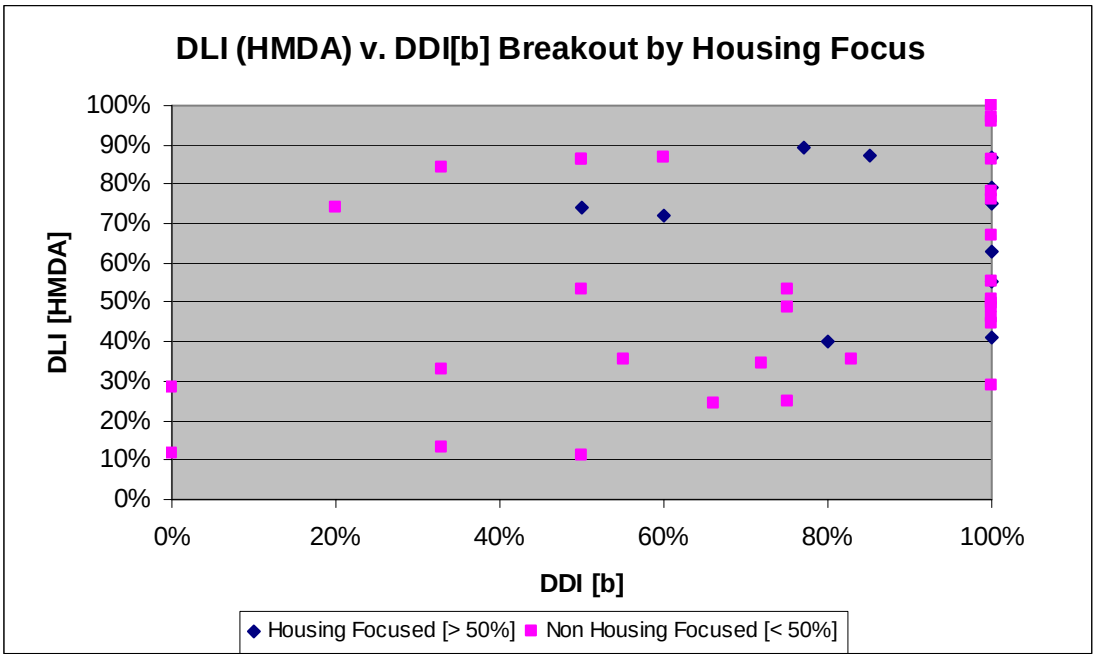
- The efficiency ratio of CDFIs is more than a third higher than that of small banks in general (76% vs 56% in 2004), reflecting in part lower average size of the CDFIs compared to the banks in the under $1billion asset category; and
- CDFIs are consistently less geared (Tier 1 leverage ratio of 9.2% vs 8.7%) and less lent out (loans to deposit ratios of 77% vs 104%), reflecting in part the less commoditized, more specialized nature of CDFI lending.

4.2 Social performance

Figure 3 below shows a scatter plot of DDI and DLI measures we have calculated for the sample of CDFI banks in 2004.

As explained earlier, DLI could only be calculated using HMDA data i.e. for home lending. This is a significant factor, since only 13 of the sample can be described as housing focused, with single and multiple family lending constituting more than 50% of assets in 2004. Figure 3 shows a scatter across the DDI-DLI space, indicating housing focused lenders, for which DLI HMDA is a more useful measure, with diamond shapes, There is a with a notable grouping along 100% DDI line. Indeed, the median DDI for CDFI banks is 100%; that is, the median CDFI bank has all its branches in qualifying areas. There is some visual evidence from the graph that the bulk of CDFIs sit in the northwest quadrant i.e. have DDI and DLI above 50%.

Figure 3: DDI(b) and DLI (HMDA) 2004



However, the significance of an arbitrary segmentation—above and below 50% alone—may be questionable. We require benchmarks for these measures from other categories of entities to make meaningful distinctions as to what level is 'low' or 'high'. Table 5 below gives initial equivalent calculations for other categories of banks.

Table 5: DDI & DLI Comparators

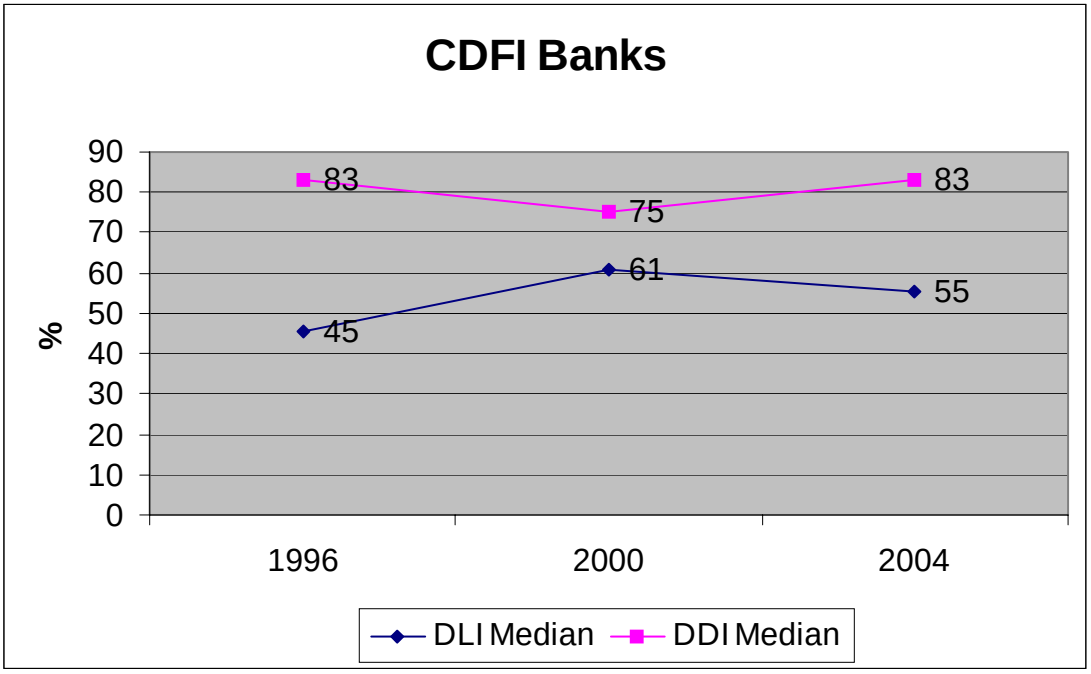
Category	Number in category	DLI (HMDA) average	DDI average
Top 10 US banks by assets	10	16.6%	31.44
Small banks (<$2bn)	1142	NA	44.8%
All minority owned banks	189	49.6%	61.67
CDFI banks	42	55.2%	75.34

It is clear from Table 5 that CDFI banks are quite different from large US banks, and indeed even from smaller banks in general.[11] Using norms for small or community banks, we could define four quadrants, with the expectation that CDFIs would then more clearly be clustered in the top right hand quadrant; although, given than the DLI numbers are HMDA only, not all CDFIs will be located there: some may not do much housing lending, and the lending they do may be deliberately done in middle income areas as a strategy to diversify risk or raise income to pursue development impact by other means. However, we would be surprised to find CDFI-type banks, what we have dubbed CDBIs, in the bottom left hand quadrant—below median or average on both counts.

Seen through these DDI and DLI lenses, have CDFI banks changed over time? Figure 4 below summarizes the average of these two measures for the CDFI bank category over the sample period. It is interesting that the DDI measure shows little variation over the period, returning to its 1996 average by 2004. However, there is evidence of an upward trend in DLI, which has risen from 45% to 55.2%, although it has fallen from the peak shown in 2000.

[11] We still need to calculate a consistent DLI measure for 'community banks' but to do this for 1200 banks requires substantial computing power for which we may presently need help from FDIC.

Figure 4: DDI and DLI over time



Source: DLI (HMDA) in each year; DDI (b) in each year

Underlying these averages are of course the stories of 42 individual CDFI banks, which have adjusted their business models over time. This was presumably in response to many factors, including competition and desire for impact. If we define a material change in terms of the 2004 number being more than 10% different from the 1996 number, then 23 banks have seen no material change over this time; while 12 have had a material rise in DLI and 7 a material decline. It is striking that the vast majority have maintained or increased their development lending focus in housing; and for those which have not, it is not possible to say whether this is the result of, for example, increasing emphasis on other development lending activities such as commercial real estate.

So, finally, how do we bring all this together in an indicative performance rating? Earlier we argued that a long run average ROA may be the best single financial performance measure. In Table 6 below, we report on the CDFI-accredited institutions that have performed best according to this measure in the period 2000-2004, but using the DLI and DDI lenses to create more robust comparator groups.

First, Table 6a reports a segmentation using above and below CDFI median DLI, which as discussed above, is only relevant for housing focused lenders, a relatively small group. Then, Table 6b uses DDI which can be calculated for all, but uses the median DDI for community banks as a whole. It further categorizes according to their lending focus—whether a majority of loans in 2004 is for single and multi-family housing or not. Of course, 'not' covers several major categories which we cannot distinguish completely from the available data alone. The Tables report only the top three institutions in each category ranked by the average ROA for the last 5 years.

Table 6: Performance measurements using social performance lenses
Using 5 year average ROA 2000-2004

6a. Category: Housing focused CDFI banks only

	Housing focused	No of Banks
Above CDFI median DLI HMDA	ShoreBank: 1.04% Pacific Global Bank: 1.02% Seaway National Bank of Chicago: 0.97%	9
Below CDFI median DLI HMDA	Carver Federal Savings Bank: 0.70% Mutual Community Savings Bank, FSB: -0.10%	2

6b. Category: All CDFI banks

	Housing focused	Non-housing focused
Above CB median DDI	11 Banks; top 3: ShoreBank: 1.04% Pacific Global: 1.02% Seaway National: 0.97%	26 banks; top 3: Central Bank of Kansas City: 2.63% International Bank of Chicago: 2.12% University National Bank: 1.75%
Below CB median DDI HMDA	None	6 banks; top 3: Community Commerce Bank : 1.88% Park Midway Bank: 1.77% Inter National Bank: 1.54%

This type of categorization could inform and assist a double bottom line investor who seeks the best financial return possible from investing in banks which, for example, focus on housing and which are more 'present' in poorer communities. With these criteria, the list in the top left hand boxes would be a good starting point for further analysis by the investor. Providing an easy starting point for investment decisions is all mutual fund rating services seek to do.

5. Conclusions

Our work to date reported in this paper has been exploratory, seeking to understand how the CDBI sector has performed over the past decade and the extent to which publicly available data can assist in measuring its performance.

Based on the same logic underlying the lending test and service test undertaken as part of a CRA exam, but with a different purpose, we propose that DLI and DDI can be useful social performance measures since they standardize the comparison of the underlying business model of a bank.
We further believe that we have plumbed the limits of readily available public data. In summary, the Summary of Deposits provides a useful a profile of the location of deposit

taking operations of all banks, which can be summarized in the DDI measure proposed here. On the lending side, for banks focused on home lending, HMDA remains a very useful source of data, which may be used to calculate the DLI (HMDA) measure reported here. However, for those banks which are not focused on housing (and even for those which are but which undertake substantial other development lending activities), the regularly available public data is simply not adequate to enable benchmarks to be developed.

We have also demonstrated the possible use of these measures: first creating consistent, relevant categories using these new measures in order to more fairly compare financial return measured by ROA across a broader category of institutions. While publicly available data do not allow for the calculation of social performance measures per se, they can enable more meaningful comparison of financial measures across different types of banking institutions as we have demonstrated. These measures also help to track the focus of a bank's service model over time—highlighting whether it is becoming more or less development focused on these terms, in a way which would then invite further investigation.

Our initial findings suggest that the DLI/ DDI measures are sufficiently useful social performance measures to warrant some further exploration.

Three directions are proposed for further work.

First, it is essential to fill out the DLI measure to include other categories of lending than those available from HMDA alone. CRA Examination reports provide at least some of the necessary data for each institution, although these reports are published typically on a three year cyclical basis and are available to the public in a pdf format and have to be accessed for each lender. Nonetheless, there is therefore more relevant public data to be accessed, although the method of access will be slow and time consuming. However, the potential value of the DLI measure suggests that this may be worth doing for CDFI banks at least. If this data cannot be accessed, then the alternative is to consider the incentives and inducements for lenders to self-report it

Second, even if limited to using the more restricted DLI (HMDA) measure, it would be worth applying the DLI/ DDI criteria as screens to identify a possible wider universe of CDBIs beyond the small number of banks that have presently chosen to apply for CDFI status. DDI and DLI thresholds can be applied as the first cut towards identifying those banks with the potential for higher social performance. Of course, further exploration would be necessary to establish this definitely in each case. However, even to make the first cut requires investment in the hardware and software capacity to manage substantial volumes of data.

Third, the changes in DDI and DLI observed over time deserve some closer investigation. This is because we lack an empirically verified theory of how double bottom line banks change over time. For example, do some banks move 'upmarket' as the result of necessity, opportunity or even success in their development mission as depressed areas

turn around and no longer qualify? Do others intentionally pursue high development intensity over time? In our opinion, it would be worth following up with the banks in our sample which have shown material increases or declines in DLI to determine the underlying factors for this; and how they have changed in other ways over this time.

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