

Community Development INVESTMENT REVIEW

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FEDERAL RESERVE BANK OF SAN FRANCISCO

By the Numbers: Data and Measurement in Community Economic Development

Ben S. Bernanke

Can Capital Markets Replace Banks for Funding Community Development?

Richard Green

Hunting for Data Sources: How Improving Data Can Increase Capital for Emerging Domestic Markets

Glenn Yago, Betsy Zeidman, and Jill Manning

Standard & Poor's Small Business Portfolio Model Introduces a Potential New Tool for Community Development Risk Analysis

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Cows, Kiva, and Prosper.Com: How Disintermediation and the Internet are Changing Microfinance

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First Mover: The CDFI Fund's CIIS Database Holds Promise to Create a Substantial Data Repository for Community Development Investments

Heidi Kaplan

Creating a Marketplace: Information Exchange and the Secondary Market for Community Development Loans

Laura Choi

Count What Counts: Improving Charitable Investor Access to the Community Development Sector with Better Data and Better Analytical Models

Lori Bamberger and Cort Gross



Community Development INVESTMENT REVIEW

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Foreword

December 2007

This issue of the *Community Development Investment Review* explores how better data and technology can direct more capital to low-income areas. Better data on community development investments can turn uncertainty into quantifiable risk. In other words, better data transforms community development investments from being considered exotic, one-offs, public relations or philanthropy deals into regular assets with known risk parameters.

A mantra of the business world is “what matters gets measured,” but with community development transactions that is not always the case. To make this transition will require breakthroughs on a number of fronts. Articles by authors in this issue analyze the possibilities for improving data collection and analysis in the following ways: uncovering market opportunities in low-income areas (Yago, Zeidman, and Manning); tracking individual transactions (Kaplan); analyzing how nonprofits operate (Bamberger and Gross); and estimating the risk on aggregated pools of community development loans (Chen and Chang).

Technology also plays a role in how we make community development investing more efficient, and holds the promise of connecting disparate groups and lowering transaction costs. In this issue, two articles show how well-designed websites can connect borrowers with lenders in a way that could dramatically increase the flow of capital to low-income people and communities. One article delves into the lessons from international microcredit lending (Bruett) and the other focuses on domestic lending, particularly that which is motivated by the Community Reinvestment Act (Choi).

Perhaps the most important aspect of innovations in data and technology is that it generates hard evidence of the effects of community development investing. More data provides raw material for independent policy research and promotes transparency and good governance in both the public and nonprofit sectors. It also strengthens the public policy argument that community development investment creates value by promoting healthier and more vibrant communities better able to contribute to the common weal. As Federal Reserve Chairman Ben Bernanke suggests in this journal: “To know whether our policies and programs are delivering the desired results, we need to be able to measure inputs and outcomes, program by program and community by community.”



David Erickson

*Community Development
Investment Review* Editor

By the Numbers: Data and Measurement in Community Economic Development*

Ben S. Bernanke

Chairman, Board of Governors of the Federal Reserve System

I would like to thank Greenlining for the opportunity to participate in today's conference. In my time at the Federal Reserve, I have had a number of opportunities to meet with community economic development leaders to discuss issues of mutual concern and learn about the valuable role that community development organizations play in economically distressed areas across the country. I have been particularly impressed, and heartened, by the increasingly high degree of professionalism in the field. In this area, as in social policy generally, good intentions are not enough. Successful community development requires knowledge—knowledge about the particular community in question and about what has worked in similar communities in the past—and community development organizations are working assiduously and with sophisticated tools to help develop that knowledge.

Of course, knowledge bearing on community economic development has both qualitative and quantitative aspects, and it can be gained through diverse channels, from talking to people in a neighborhood to performing a regression analysis. Today, I will focus on the progress that is being made on the quantitative side—in particular, the remarkable strides that have been made in developing and analyzing social and economic data at the community level. The information that can be extracted from detailed data profiles of individual communities supports economic development in several distinct ways. First, by making companies, entrepreneurs, and investors aware of new opportunities and by promoting competition in underserved areas, such information helps put market forces in the service of community development. Second, both government policymakers and community development organizations need the reality check that only hard data can provide. To know whether our policies and programs are delivering the desired results, we need to be able to measure inputs and outcomes, program by program and community by community. Better information increases accountability and promotes good governance in both the public and the nonprofit sectors. Third, the increased availability of community-level data facilitates independent research, which is vital to informing the public policy debate and to developing further community development efforts, both public and private.

* A speech given at the Greenlining Institute's Thirteenth Annual Economic Development Summit, Los Angeles, California, April 20, 2006.

Historically, government agencies have been the source of the most comprehensive social and economic data bearing on community development. An important example is the data collected by the Federal Reserve under the Home Mortgage Disclosure Act (HMDA). The HMDA data set provides extensive information on home mortgage applications to virtually all U.S. lenders, including approval rates, the socioeconomic characteristics of applicants, and most recently, mortgage pricing information. As all good social scientists know, the data never “speak for themselves,” and the HMDA information, like any data set, must be interpreted with care and insight. Still, for nearly three decades, the HMDA data have provided valuable information about mortgage lending patterns, contributed to significant changes in mortgage credit practices, informed regulatory policies, and supported fair-lending enforcement.

Although government agencies continue to be an important source of data on community development, data collection and data analysis in this area is increasingly becoming the province of the private and nonprofit sectors, notably including community development organizations themselves. In recent years, we have seen a series of data-collection initiatives outside the public sector, with objectives that include the improvement of development strategies, the identification of new opportunities, the quantification of risk, and the exertion of influence on the direction of public policy. Many of these efforts have already had significant payoffs.

In the rest of my remarks, I will discuss some specific ways data and quantitative measurement have been used in community development. To be clear, I do not believe that all aspects of economic development can or should be quantified; and, as I have already noted, the data never speak for themselves but must be interpreted with care. Still, improving the measurement of inputs and outcomes is critical to better development policy. In this regard, it is interesting to observe that we have seen some convergence between best practices in community economic development and in economic development policy at the international level. I will conclude by noting a few of those parallels and their implications.

Discovering Market Potential

Good data support community growth and development by helping to identify previously unrecognized market opportunities. Free markets can be a powerful source of economic development, but markets work less effectively when information about potential opportunities is absent or costly for private actors to obtain. Several noteworthy initiatives have helped to provide better information about the economic potential of lower-income and underserved communities. For example, the Local Initiative Support Corporation’s (LISC) MetroEdge initiative seeks to demonstrate the market potential of diverse communities through customized data analyses of each community’s demographics and buying power. Such analysis can provide investors with a different perspective when they assess a neighborhood’s viability for investment. In one instance, a national home-improvement retailer used MetroEdge data as the basis for its decision to establish a store in inner-city Chicago, even though the retailer’s own site-selection model presented discouraging indications of profit

potential for that neighborhood. With access to new market data, the company could justify its investment in the community, and sales performance was triple what was expected within the first six months of operation.¹

Similarly, Social Compact's Neighborhood Market DrillDown methodology uses a multilayered research process to provide profiles of the market potential of high-density, lower-income communities. This approach focuses on business indicators—buying power, market size, unmet needs, and market risks—rather than on the deficiency statistics typically used to describe inner-city neighborhoods, such as rates of poverty, crime, and overcrowding. Social Compact, a coalition of business leaders, has applied its DrillDown approach to 101 neighborhoods over the past five years, beginning with Chicago neighborhoods and, most recently, in Santa Ana, California. By tapping existing public records and conducting intensive economic and demographic surveys, the DrillDown analyses of these 101 neighborhoods in eight cities have, in the aggregate, revealed additional income and buying power averaging nearly \$6,000 per household, which is not captured by traditional sources of community-level data.² Such information may attract private-sector investors to areas that had once been deemed untenable for investment. For example, following Social Compact's study of neighborhoods in Jacksonville, Florida, a developer announced plans to invest \$45 million in a multi-use entertainment complex there. A DrillDown study in inner-city Houston revealed a population that was 25 percent larger than Census estimates, resulting in the redevelopment of a 750,000-square-foot retail center that brought 2,000 jobs to a neighborhood that had not had new construction in fifty years. This shopping center is now one of the busiest retail centers in the city.³

Work to improve the measurement of market potential in inner-city communities is continuing. In one such project, Social Compact and the Brookings Institution's Urban Markets Initiative group are collaborating in reviewing methods for measuring the size and composition of economies in urban areas around the world. The objectives of the review are to develop new tools for measuring economic activity at the local level and to identify areas for future research.

Informing Investors in Community Development

The growth and maturation of community development financial institutions (CDFIs) provide another impetus for data development and analysis at the community level. CDFIs are private-sector financial intermediaries with community development as their primary mission. Like banks and other more conventional financial intermediaries, CDFIs are in the business of attracting funds and putting those funds to work in productive ways. Also like conventional intermediaries, CDFIs depend heavily on the production of accurate information both to guide investment decisions and to provide a basis for attracting new funding. It is difficult to overstate the importance of adequate and accurate information for attracting capital. Managers of pools of capital have many choices, and they tend to be extremely wary when they cannot fully assess the level of risk presented.

With an appreciation for the need for such information, managers and others with an interest in the CDFI industry have invested substantial effort in designing tools for data collection and analysis that focus on measuring the financial performance—the risks and returns—of CDFI portfolios. An important motivation for these efforts is the need to diversify funding sources for community development, which has relied heretofore largely on grants from government and foundations. To attract more return-oriented investors, including both conventional investors and those with social as well as financial goals, CDFIs must demonstrate financial viability as well as the ability to fulfill the broader development mission.

For example, the Opportunity Finance Network’s CDFI Assessment and Rating System (CARS) gathers data to evaluate a CDFI’s overall creditworthiness and its effectiveness in using its financial resources to achieve its development objectives. A CDFI is rated for its financial strength and performance in the areas of capital, assets, management, earnings, and liquidity, in a manner broadly analogous to the way a supervisory agency would rate a commercial bank. The financial analysis is supplemented by an evaluation of how well the CDFI is fulfilling its mission, including an assessment of its procedures for tracking the outcomes of its work. To date, more than forty CDFIs have chosen to be evaluated under the CARS, and thirty-one analyses have been completed. Thus far, fifteen potential investors have subscribed to the CARS database, including socially responsible investment funds, brokerage houses, large financial institutions, and national foundations.⁴ Although still in its early stages, this initiative, if successful, will have the double benefit of attracting more funds into community development and helping to ensure that those funds are effectively used.

More generally, the movement toward quantifying the performance, risk, and community impact of CDFIs is essential to the growth and sustainability of the field, in my view. By demonstrating both financial viability and social impact through hard data, CDFIs are better positioned to obtain the funding necessary to maintain their operations and to respond to emerging needs and opportunities. Indeed, progress has been made in recent years in the rating and securitization of community development portfolios, a development that should provide CDFIs with increased access to the capital markets and to new sources of liquidity. If the new data and evaluation methods of CDFI performance bear scrutiny, investors will gain confidence in using this information for matching their investment choices with their priorities and risk tolerances. In the community development field, to be sure, financial returns and social returns are not necessarily the same, which is why measurement should include both financial and social indicators. Potential investors, including public-sector and foundation sources of funds, will naturally differ on the weights they put on financial and social returns. To attract the widest range of funding, both types of information should be provided.

Evaluating Policy and Practice

Quantitative information plays yet another important role: increasing the effectiveness of policies and programs. The systematic collection and analysis of data on program inputs and outputs is an increasingly important part of learning about what works. For policymakers,

data on program results help guide policy development and improve the allocation of scarce public funds. For community development organizations, participation in broad-based data-gathering serves at least two goals. First, in the long run, their analyses of the activities and the associated outcomes in diverse communities will help them achieve the greatest impact for resources expended. Second, such analyses help community development organizations demonstrate their effectiveness to public and private funders.

A number of methods for evaluating community development projects are currently in use, with more in development. The NeighborWorks America's® Success Measures Data System documents the effect of community development programs throughout the country. Using forty-four indicators and a range of data-collection tools, the system quantifies the effects of housing, economic development, and community building programs at the individual, organization, and community levels. By sharing this knowledge, practitioners, funders, and policymakers can identify programs that achieve the best outcomes and gain insights into the reasons they work. Broad access to this information promotes replication of the most effective programs and may diminish the costs associated with trial-and-error learning.⁵

Another tool available to CDFIs is the Community Investment Impact System developed by the Department of Treasury's CDFI Fund. This system collects detailed information on institutions and transactions, allowing the CDFI Fund to measure community effects and to associate those effects with institutions working in that area. These results can help inform funding decisions, develop programs, establish performance benchmarks, and communicate societal benefits attributable to specific policy. For example, using data from the system, the CDFI Fund found that in a recent year, CDFIs leveraged financial program awards by the fund at a ratio of 20 to 1, using multiple sources of debt and equity financing from banks, local and state governments, private investors, and borrower equity to structure project financing.⁶

Each of these data-driven initiatives share the goal of increasing understanding of opaque markets to support investment, policy, and research. The need for data and tools is the driving force behind the Brookings Institution's Urban Markets Initiative. In establishing this policy center, Brookings acknowledged that limited access to data that captures the viability of urban communities constrains investment in these markets. The think tank is focusing on initiatives that can demonstrate untapped market potential.⁷ One such effort is the National Infrastructure for Community Statistics. It will include a central web-based repository that integrates data from federal, state, and local governments and from commercial sources. The ultimate goal of this project, which is under development in collaboration with more than 100 participants from government, nonprofits, and private-sector industries, is to aggregate and to make accessible the data needed to inform decisions about economic development activities.⁸

Parallels to International Economic Development

The usefulness of microeconomic data in community development raises an interesting parallel to recent analyses of international economic development. Although the U.S. context is obviously different in important respects from that of developing countries, domestic community organizations and providers of international aid both face the challenge of fostering economic development in low-income areas. In the United States, our experience in community development over the past thirty years has resulted in an evolution from a centralized, federal-government-driven approach to a heavy reliance on the involvement of community-based organizations and agencies for project development and implementation. In light of this experience, it is quite interesting that some new thinking on international development has rejected the traditional approach to aid, with its emphasis on large-scale projects and top-down planning, in favor of micro-level, bottom-up approaches that use local information and systematic analyses of inputs and outcomes.

Critics of traditional development aid programs, such as New York University economist William Easterly, argue that such programs have not succeeded because those implementing the programs do not have the information necessary to make effective use of resources.⁹ For example, a World Bank report describes an irrigation project that was being designed by technical staff for an area of Nepal that was thought to be unirrigated. A delay in the project led to the discovery that, in fact, eighty-five fully functioning farmer-managed irrigation systems existed in the “unirrigated” area. Further, another irrigation program actually reduced productivity because it undermined preexisting arrangements among farmers.¹⁰ Quite obviously, those planning these projects needed local input to make better use of the project resources.

Easterly advocates a more decentralized, grass-roots approach that involves local groups and emphasizes feedback and accountability. Illustrative of this point, a World Bank study of rural water supply projects found that, of those projects with a high level of participation by local beneficiaries, more than two-thirds were successful, whereas among those projects with little local beneficiary participation, only 12 percent were successful.¹¹ Both feedback and accountability depend, of course, on accurate measurement of results. In practice, measuring results is easier at the local level, in part because comparisons can be drawn to other localities that have not received aid. Incentives also matter; and smaller, more tailored projects for which responsibilities are well defined are likely to provide better incentives to the people who carry them out than those that large, diffuse projects will provide. Follow-up is important as well. Easterly criticizes, for instance, situations in which foreign aid has been used to build highly visible projects, such as new roads, without providing resources or incentives to do the less-glamorous work of maintaining them.

The themes emphasized by Easterly and other analysts of international aid programs are useful, I think, in the context of domestic community development. Although national initiatives have their place, often the most effective programs take place at the level of the

individual community, using local information and local participation. Accountability and feedback, facilitated by data development and quantitative analysis as well as by more qualitative information, are critical for success. Goals should be modest at first; but knowledge is cumulative, and sometimes good results can be replicated at larger scales. Research, both quantitative and qualitative, furthers learning. None of this is easy, particularly since the data have a way of challenging our views about what works and what doesn't. But a great deal is at stake both internationally and domestically and serious empirical analysis has no substitute. The development of more and better data on economically distressed communities, together with sophisticated tools for analyzing those data, is essential for continued progress in community economic development.

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Can Capital Markets Replace Banks for Funding Community Development?

Richard K. Green

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Securities markets depend on data. In the absence of data, it is not possible to underwrite risk, and judgments about risk are crucial to securities pricing. This essay discusses the sort of data that would be necessary to make underwriting decisions for community development funding.

In principle, it is possible to securitize anything. Securities based on underlying real goods go back at least as far as the development of modern futures markets for commodities with the opening of the Chicago Board of Trade in 1848. In particular, farmers at the time they planted their crops wanted to have confidence in the price that they would receive when they sold their crops. Even in the absence of price fluctuations, farming was and remains a risky business. Farm output was determined in part by farmer effort, but also by climate and insects.

In light of their production risks, farmers looked to shed at least price risk, and so the commodity futures market was born. Securities markets help complete markets: they allow investors with different risk tolerances to share risk, and they allow capital markets to fund all manner of economic activity. As such, economists have some confidence that securities markets are generally welfare improving.

This essay will discuss the extent to which securities markets may be used to fund idiosyncratic community and mixed-use development. It begins by describing the more “old-fashioned” model for financing projects: bank, or more generally, depository, based finance. It will discuss both the benefits and pitfalls of such a financing system, and how it came to be largely replaced, at least in the conventional conforming mortgage market, by a securitized system.

It then discusses the securitized model, and the strengths and weaknesses of that model. Finally, it speculates on the data requirements for developing a securitized model of community development, and whether such requirements are feasible.

The Banking Model

Let us take a very brief time to describe how a bank finances local development projects. Banks have short term liabilities (deposits) which are used to fund loans. Banks are not allowed to lend all their funds available—they must also keep capital. Banks earn profits on the spreads between their loans and their cost of funds; the cost of funds is the weighted average of returns to depositors (i.e., deposit rates) and returns to capital (which may be thought of as the difference between required return on equity and a safe rate, such as a short term treasury rate).

Banks must concern themselves with three things beyond the spread: default probability and severity, default volatility, and capital requirements.¹ The impact of default probability is obvious: for banks to profit on a loan, it must earn a greater spread if it considers default probability to be high. Moreover, if a project has a, say, 20 percent probability of default and a 20 percent loss severity, it is difficult to make it feasible under any circumstance. There is also a point at which the spread required to compensate for risky loans is so high that, by itself, it makes the loan riskier.

Modern computing has allowed banks (and other financial institutions) to correlate default probabilities in some circumstances. For example, models can predict default probabilities on conventional conforming mortgages with some accuracy. But for more complicated types of loans, the available models are still somewhat rudimentary, in part because of the data issues that we will discuss later in this essay.² In the absence of models, bankers rely on judgment in “estimating” default probabilities for various types of mortgages. This may be why banks shy away from unconventional projects. In the absence of experience with such projects, bank loan committees decide that discretion is the better part of valor and pass up the opportunities to fund what may be economically positive projects.³

Beyond default, volatility of default is an issue. For a particular loan, a five percent default probability does not translate into every loan going five percent bad—it rather means that individual loans go bad five percent of the time. Imagine for a moment that twenty banks each hold one loan. Nineteen will be fine, but the one that is stuck with the bad loan might well go out of business. If one bank owns all twenty loans, though, risk becomes manageable, as the level of losses becomes more predictable. Thus large banks serve some similar functions to securities—they diversify risk, and as such make loss prediction more certain.

The third concern facing banks is capital. In part because bank deposits are backed by the U.S. government, banks are required to hold capital, and the level of capital they are required to hold is a function of the riskiness of the portfolio of loans.⁴ When banks invest in securities such as AAA Corporate Bonds and agency backed mortgage backed securities, banks only need to hold 1.6 percent capital (assuming they are above the minimum capital requirement). But when banks make whole loans to businesses, they must hold eight percent capital. Thus by regulation, business loan and community development loan funding is more expensive than other types of investments for banks. Recent events in the subprime

1 When banks were local institutions, capital requirements were a more serious impediment, because the flow of capital came from a limited area. Now that banks are national and even international institutions, this has become less of an issue.

2 In a recent paper, Y. Liu, G. Jabbour and R. Green, “The Performance of Option-Based Default Risk Models on Commercial Mortgages: An Empirical Investigation,” *Journal of Fixed Income*, (Fall 2007), discuss the problem of developing default probability models for commercial real estate.

3 To use the parlance of capital budgeting, banks do not always fund positive Net Present Value projects.

4 There are two types of capital requirements: minimum capital and risk based capital. For a bank to be considered well capitalized by the Federal Reserve Board, it must have five percent minimum capital and eight percent risk-based capital.

and commercial paper markets suggest that these regulatory requirements are entirely appropriate, but they also tend to discourage banks from making unconventional loans.

Before we begin discussing securitization, however, it is worth discussing three advantages banks have relative to securities markets: local and personal expertise, servicing, and flexibility. All of these things actually relate to one and other.

We begin with local expertise. Consider a loan for the purpose of developing a retail center in an area in, say, Lodi, that is on the border between improving and deteriorating. It will be difficult for an investment analyst in London or Tokyo or San Francisco to make a judgment about likelihood of success or failure. It is probably also not worth the analyst's time to get on an airplane, and meet the series of people she would need to meet in order to make a judgment. A banker in the community may well be in a better position to make a judgment about whether a loan will fly or not. Note that part of the issue here is a lack of systematic data about the characteristics that help predict the path of a community's economy—let alone how a particular project might affect that path.

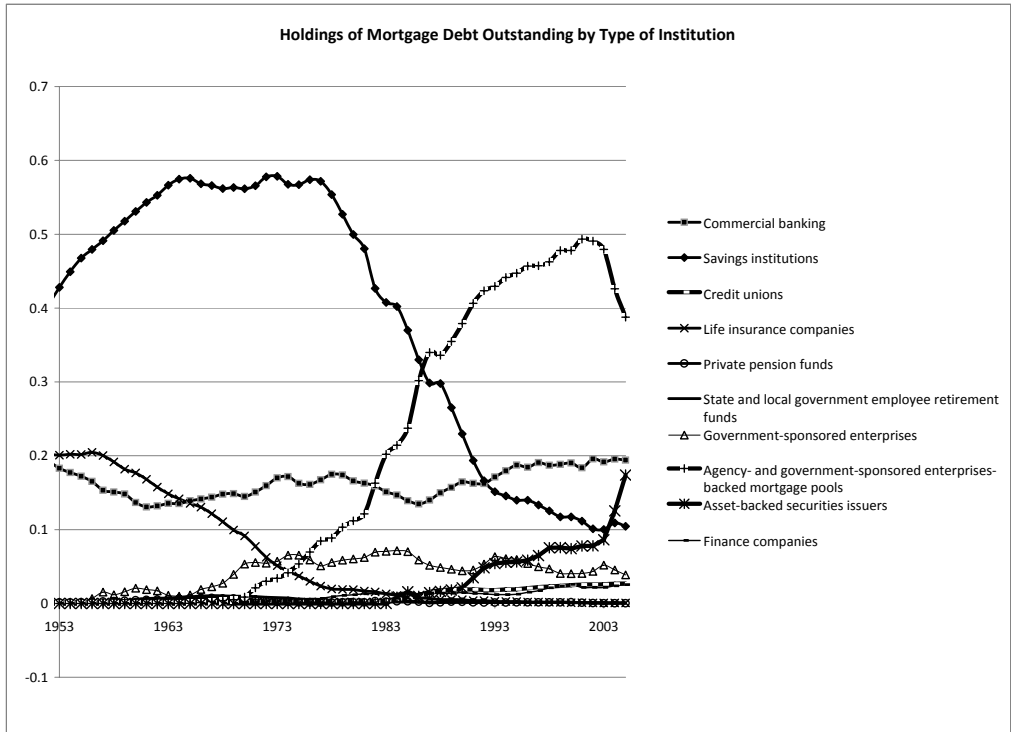
Second is the issue of servicing. This is an issue that has risen to prominence in the wake of the subprime crisis. Banks have an incentive to service their problem loans, because each dollar they lose on a loan is a dollar lost by their shareholders. As we shall discuss below, the financial issues of servicers and securities holders in the subprime mortgage market have often diverged from each other. Servicers are paid a fee conditional on default, but not a fee that is perfectly correlated with loan performance. Among other things the subprime crisis has taught us is that servicers do not have the infrastructure in place to deal with mass foreclosures, in part because they do not have an incentive to invest in such infrastructure.

Third is flexibility. Often it is the case that when a loan goes sour, it is better for both borrowers and lenders to do a workout, which can include payment extensions, re-amortization, rate changes, and haircuts. Because banks live and die with their loans, they cannot focus on the sunk cost of their loans, and negotiate terms on problem loans in a forward-looking manner.⁵ Clearly, good servicing practices and flexibility are connected.

Securities

In at least one lending market in the United States, securities have taken substantial business away from banks: the residential mortgage market. Figure 1, which is based on the Federal Reserve Board Flow of Funds data, shows how depositories' share of residential mortgages has fallen precipitously.

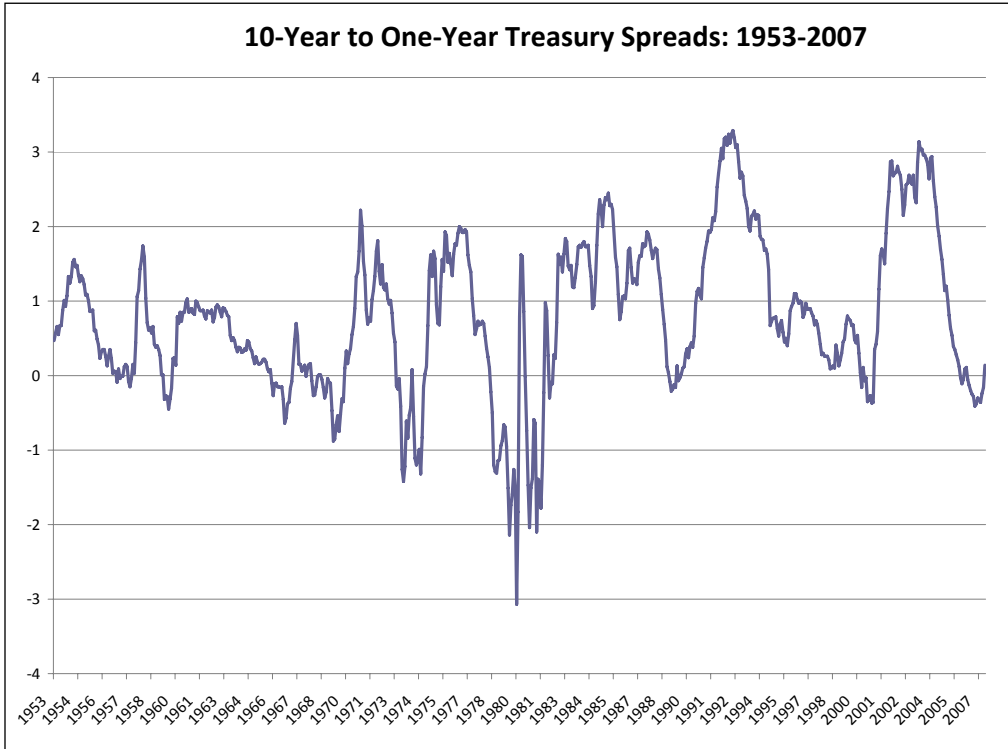
5 A paper by T. Riddiough and S. Wyatt "Wimp or Tough Guy: Sequential Default Risk and Signaling With Mortgages," *Journal of Real Estate Finance and Economics*, Special Issue on Information and Screening in Real Estate Finance, vol. 9 (November, 1994): 299-321, though, shows that sometimes banks have an incentive to be tough on their borrowers because of reputational issues: they are better off losing more money that they might on an individual loan in order to maximize returns over a total portfolio of loans.



Until the 1980s, commercial banks and savings and loans financed about three-quarters of the mortgages in the United States. They now fund about 30 percent. The difference was funded by Government Sponsored Enterprises (Fannie Mae and Freddie Mac), which issued guaranteed securities or purchased loans for their own portfolios, and by the “private-label” mortgage backed securities market.⁶

There were three precipitating events that led to the spectacular growth in securitization. First, as Figure 2 shows, the yield curve turned sharply negative. This essentially took depositories out of the mortgage game. Short term funds (such as deposits) were more expensive than long-term funds (such as mortgages), so spreads on existing books of business became negative, which led, among other things, to insolvency for many savings and loans. For investors who did not hold short term liabilities, however, the prospect of holding long term mortgages that might guarantee long term returns was attractive.

⁶ Also Ginnie Mae, which purchases FHA and VA mortgages. Ginnie Mae securities are backed by the full faith and credit of the US Government.



Second, Freddie Mac invented an ingenious instrument, the Mortgage Participation Certificate. This financial innovation allowed mortgage originators and savings and loans to package mortgages into a security and sell pieces of the security to investors. This allowed (relatively) small investors to purchase effectively small shares of large numbers of mortgages, and as such, produced diversification benefits.

Third, and most important to the ultimate discussion of this paper, was that Fannie Mae and Freddie Mac's special status enabled them to have the market power necessary to impose standardization on the mortgage process and on mortgage documents. This produced a trove of data that became the underpinning of the modern residential mortgage underwriting system.

All who apply for a conventional conforming loan—one that is eligible for purchase by Fannie Mae or Freddie Mac—fill out the same set of forms. The appraiser that they use to estimate the value of the house also fills out a specific form. This means that every loan purchased by the GSEs has a set of measurable characteristics.⁷ Among the most important of these are loan-to-value ratio, FICO scores, and payment-to-income ratio. Fannie and Freddie then develop models based upon millions of loans to determine the relationship between loan characteristics and default and delinquency rates. For a loan to qualify for a Fannie or Freddie pool, it must generally have a very low predicted probability of default.

⁷ In practice, nearly every (not every) loan is fully documented. No institution is flawless in form filing.

The homogeneity of collected GSE loan characteristics essentially makes GSE mortgage backed securities commodities, and so they trade in highly liquid markets. This homogeneity is almost certainly among the reasons that spreads on conventional conforming loans have not risen much during the subprime crisis.

It is here that the contrast with subprime loans is pronounced. Subprime loans are heterogeneous, in part because many of them were poorly documented.⁸ To get around this problem, investment banks created complicated securities structures whereby investors who wanted to reduce risk would get paid first (and take a lower coupon) while those who had a greater appetite for risk would get paid later. The problem was that because the subprime market was relatively new, and sometime sparsely underwritten, investors were really operating in an environment of uncertainty, rather than risk.

There is an important lesson here as we contemplate securitization for such things as business loans, economic development loans, community reinvestment loans, and so on: it may be the case that for a securities market to be successful, the object being securitized should likely be homogeneous.⁹

A Securities Market for Community Development Loans?

The lynchpin of securities markets is modeling.¹⁰ For example, in the residential mortgage backed securities market (at least that part of the market that is not currently in crisis), underwriting decisions are based on dichotomous choice models: models in which a set of variables is used to predict a dichotomous outcome, such as delinquency and nondelinquency, or default and nondefault. These models are usually based on normal or logistical distributions: models based on the normal distribution are called “probits,” and those on the logistical are called “logits.”

To demonstrate how they work, let us look at residential mortgages. Mortgage companies, such as Fannie Mae, Freddie Mac, Citibank and Wells Fargo, observe performance on millions of mortgages. They investigate how a set of variables predicts mortgage default: the most important variables are loan-to-value ratio, borrower credit history, and payment to income ratio. Statistical models then place weights, or coefficients, on these characteristics to produce predicted likelihood of default (LTV and borrower credit history get particularly substantial weights). Lenders then choose a cut-off point for acceptable default probability.

8 There were also clear instances where adverse selection issues contributed to loan heterogeneity.

9 By this I mean a debt market—equities are a completely different issue.

10 A classic work on credit modeling is D. Duffie and K. Singleton (2003), *Credit Risk: Pricing Measurement and Management*. Princeton University Press. In the mortgage context, works of particular note include J. Quigley and R. Van Order (1995), “Explicit Tests of the Contingent Claims Model for Mortgage Default,” *Journal of Real Estate Finance and Economics*, 11(2): 99-117. For a different view on default, see: J. Kau, D. Keenan and T. Kim (1993) “Transaction Costs, Suboptimal Termination and Default Probabilities”, *Real Estate Economics*, 21:247-263 and J. Kau, D. Keenan and T. Kim, (1994) “Default Probabilities for Mortgages”, *Journal of Urban Economics*, 35:278-296.

The cut-off point is not zero—loans with some probability of default can still be expected to be profitable. Lender determination of the cut-off point is based in good part on risk tolerance—very conservative lenders will accept a lower default probability than more risk-loving lenders.

The reason these models underpin securities is that they allow for the sort of homogeneity necessary to commoditize the mortgages inside the security. While no model can predict the performance of an individual mortgage, it can be the foundation for accurate prediction of a pool of mortgages. We can make an analogy with life insurance. No model can predict whether an individual will die in a given year, but a model can do a very good job of predicting the share of the population that will die within a given year.

In principle, one could imagine developing a similar model for community development loans. Again, lenders would be seeking a model that could predict default; then they would pick a cut-off point. Because such a model does not so far as I know exist, one would have to begin with a set of variables presumed to be important. These would include:

- (1) Some measure of the track record of the developer. This would be analogous to a borrower's credit history. A development company such as the Rouse Companies or Forrest City Development might get a very high score; a company that has no track record at all might get a low score.
- (2) A loan-to-cost ratio. Because community development projects have difficult-to-project income, about the only measure of value available for underwriting is construction cost. Alas, costs can diverge dramatically from value—an uninhabited building can cost a lot of money to build and have no value. Still, a low loan-to-cost ratio implies lots of developer equity in a project, which is a powerful signal. If nothing else, high levels of developer equity reduce moral hazard.
- (3) Some measure of community trajectory. These could include:
 - a. Changes in Income
 - b. Changes in Population
 - c. Changes in Education Levels in the Population
 - d. Changes in Local School performance
- (4) Ideally, there would also be an indicator of “payment-to-income.” In commercial real estate, this is called the debt cover ratio, which is net operating income divided by debt-service payment. This reflects the cushion that commercial projects have to meet their mortgage obligations. The problem, of course, is that it may be difficult to project income for new types of projects in communities without a track record of commercial rent levels.

One could think of other potential characteristics, but these are sufficient to make the point about the difficulty of developing a securities market for community development. Consider the first variable: developer track record. As noted, it would be possible to give

high scores to developers with strong track records and low scores to developers with little experience. It does not particularly matter what score we choose, because the purpose of econometric modeling would be to calibrate the arbitrary score to loan performance.

The difficulty is with the developers who have good but not sterling track records. How would we know who they are? How do we assign them scores? Again, to some extent econometric modeling can produce calibration, but as the first models are created, it will be necessary to assign arbitrary scores to developers, and those scores will be based on some sort of ad hoc judgment. We could make similar points with respect to the other variables.

But let us say we can solve the problem of measuring meaningful characteristics. The development of a securities market for community development loans faces two major impediments. First, to have a useful market, underwriting documents for community development loans would need to become standardized and data on the performance of loans would need to be collected. This would require cooperation among the various loan originators in the business. Note that Fannie Mae and Freddie Mac were able to impose standardization because they had market power that derived from their special status. In the absence of such institutions, it is not entirely clear what the mechanism would be that would lead to standardization.

The second impediment is the reality of the current market for securities. For investors to be comfortable with something new and unusual, they would need to have confidence in the evaluation of a rating agency. It is an understatement to say that the investment community lacks that confidence at the moment.

Moreover, the recent subprime crisis produces an interesting question: can investors a long distance away from a deal invest in heterogeneous products? Banks, who would have a better ability to evaluate an unusual deal, would have every reason to finance those that they find better than average while passing on those that they find worse than average. This means that the only deals that would be left for the securities markets would be those with difficult-to-measure unfavorable characteristics.

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Hunting for Data Sources: How Improving Data Can Increase Capital for Emerging Domestic Markets

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Milken Institute

It is well known that the U.S. population is rapidly diversifying. Ethnic groups now constitute majorities in four states (California, Hawaii, New Mexico, and Texas) and the District of Columbia. Within twenty years, this will be the case in nine states, including the electoral battleground, Florida.¹ Major shifts in the composition of U.S. business ownership flow from these demographic changes, with a dramatic increase in firms in emerging domestic markets (EDMs). EDM firms are ethnic- and women-owned businesses serving low- to moderate-income (LMI) populations and those located in urban and rural areas. Multiplying far faster than other businesses, they represent a growing share of entrepreneurs and job-creating small- and medium-sized enterprises (SMEs).² Given this trend, the degree to which investors recognize and respond to these changes will have significant consequences for the national economy in the years ahead.

Unfortunately, investors face challenges in tapping the potential opportunities. For financial markets to thrive, decision-makers (investors, lenders, and funders), business leaders, and public policy officials must be able to price risk and consider options effectively. To do so, they need comprehensive, reliable demographic and financial information and a well-developed infrastructure to obtain that information. The data on emerging domestic markets is fragmented, nonstandardized, and not widely accessible. One way to remedy this information gap would be to create a “data consortium” that leverages existing resources and uses them to build an integrated database. Increasing the amount and quality of data available on EDM firms would provide opportunities for improved analysis, policymaking, capital flow, and product development.

Recognizing the need for more and better EDM data, the Milken Institute’s (MI) Center for Emerging Domestic Markets undertook an in-depth review of the issue. The report, “Emerging Domestic Markets: Increasing Capital by Improving Data,” includes detailed information on our methodology, findings, and recommendations, a summary of which we provide in this article.³

1 U.S. Census Bureau, “Texas Becomes Nation’s Newest ‘Majority-Minority’ State, Census Bureau Announces,” August 11, 2005. William H. Frey, e-mail to authors, October 17, 2007.

2 For an in-depth examination of emerging domestic markets and their difficulty in accessing capital, see “A History of Emerging Domestic Markets” (Yago, Zeidman, and Abuyuan) in the Federal Reserve Bank of San Francisco’s *Community Development Investment Review* 3, no. 1 (2007).

3 Glenn Yago, Betsy Zeidman, Teresa Magula, and Jon Sederstrom, “Emerging Domestic Markets: Increasing Capital by Improving Data,” Santa Monica, CA, 2007.

Methodology and Summary of Findings

To better understand the EDM data gap, MI studied the full range of data collection efforts. In doing so, we:

- Conducted an extensive survey of the current literature on EDM data concerns;
- Interviewed more than one hundred experts, including lenders, both traditional finance and EDM experts, in the public, private, and nonprofit sectors, and researchers on the EDM market;
- Reviewed nearly seventy databases with information on EDM business and investment performance;
- Consulted with database managers;
- Explored potential products that could be developed from improved data in the course of two Financial Innovations Laboratories sponsored by the Institute.

Among our key findings:

- There are, as anticipated, numerous existing databases. This is particularly true when “EDM” is broadly defined to include people (minorities and women) and places (urban areas, LMI communities), and when the data of interest include demographic information and financial transactions. We chose the broad definition to capture as many sources as possible.
- Data are collected by a variety of types of organizations, with potentially divergent data needs. Compared to other types of organizations, government agencies maintain the highest number of EDM databases.
- Databases use a variety of survey units (making comparison difficult). Of those we surveyed, forty-five use “businesses” as their survey unit; nine use “lenders,” eight use “individuals,” and six use “transactions.”
- While significant data overlaps exist, so do substantial holes, in terms of quantity and quality of the data.
- There is little information covering the financing of EDM businesses at the transaction level, except in proprietary databases of financial institutions or information management companies.
- Differences in definitions and terminology hinder comparability, even among databases with the same survey unit.
- Our proposed data consortium differs from current efforts to improve data in that it attempts to capture the full range of EDM businesses and would include both demographic and financial data. It would be tailored to investors’ needs.
- There is definite interest in forming a data consortium and gaining access to an integrated EDM database, but concern exists regarding privacy of the EDM business, as well as the privacy of the data source’s information. We feel there are adequate legal and technological solutions to these privacy concerns.

The Data Matrix – Organization of Findings

We grouped the organizations collecting data into four key groups and identified them as: financial institutions/funds (12 EDM databases); government agencies (21); trade associations, nonprofit organizations, and research groups (26); and information management companies (8).⁴ In an effort to compare the different data pools, and to clarify overlaps and gaps, we created a matrix of data providers. An abbreviated version of this matrix appears at the end of this article. A discussion of organization type and the data provided by each follows.

Financial Institutions/Funds

Financial institutions, specifically banks, generally have robust EDM databases. Either within a larger data set or separated for reporting on Community Reinvestment Act (CRA) activity, banks collect and store demographic data and information on small-business owners, small businesses, loan details, and loan performance. Because of privacy concerns, financial institutions do not release information on the size of their databases, but we believe they are among the largest, second only to credit-reporting agencies (categorized as “information management companies” and detailed in a later section). They are also the least willing to share data, as they are proprietary and central to their business. In general, banks collect information at the company/business level rather than by transaction.

Nonbanks also collect data on borrowers. For example, Allied Capital’s small-business lender, Business Loan Express (BLX), collects data on each transaction performed. While its databases are smaller because of the size of the population served, they still rank among the largest databases we identified. Like banks, nonbanks in general are not willing to share proprietary information.

On a similar note, the EDM-targeted investment funds (National Association of Investment Companies members, for example) track performance and, frequently, demographics for their own purposes. Funds in which public pension funds have invested increasingly release performance data because of Freedom of Information Act requests, but not on a company level. With the increasing interest in double-bottom-line investments (sometimes known as blended-value or hybrid investments), there are efforts to track the investments’ financial returns and collateral benefits, such as job creation, environmental mitigation, workforce benefits, and urban redevelopment. One source of such data is the Research Initiative in Social Enterprise (RISE). RISE’s annual Social Investor Survey provides a national database of investments whose products, services, or business structures can be considered to have positive social or environmental impacts. The data are available in the RISE “Double Bottom Line Investor Directory,” a searchable public database of these funds.

4 Note that the organization type “financial institutions/funds” includes both debt and equity. “Information management companies” collect and sell data related to all types of businesses. Such companies include Dun & Bradstreet, Fair Isaac, VentureOne, and the three major credit-reporting agencies: Equifax, Experian, and TransUnion.

Government Agencies

Government agencies, led by the U.S. Census Bureau, have abundant demographic data on business owners. Studies such as the “Survey of Business Owners and Self-Employed Persons,” “National Longitudinal Surveys,” and the “Panel Study of Income Dynamics” capture the gender and ethnicity of business owners, as well as the location and age of their businesses. The Small Business Administration (SBA) has a number of databases covering its lending programs. These databases are potentially important because they would enable the creation of proxies for comparisons by income level or business type.

For example, Standard & Poor’s analyzed default data from the SBA 504 loan program to generate a risk model and develop ratings for the Community Reinvestment Fund’s Series 17 and Series 18 note sales (community development small-business loans). These ratings were critical in enabling institutional investors to purchase the notes, a first in the community development field. In addition to demographic data, the SBA has amassed information on small-business cash flows, financing, and repayment performance. The data are generally publicly available, although access may be limited by regulation or process. Sole proprietorships, for instance, report revenues on the owner’s personal income tax form, which would not be accessible to researchers.

Trade Associations, Nonprofit Organizations, and Research Groups

Trade associations, nonprofit organizations, and research groups tend to have mission-specific databases that vary greatly in size and content. Detailed data are generally available by request, although access may be restricted to members. In most cases, aggregate data are available online or in the form of reports or white papers. Three general subgroups exist among these databases:

- Databases that collect information only on the business and the business owner (location, number of employees, revenues, ethnicity, gender), including the Kauffman Financial and Business Research Database and the four databases from the Initiative for a Competitive Inner City.
- Databases like the Brookings Institution’s Urban RPM Investor and the PRI Makers Network, which collect information on enterprise financing but do not survey the characteristics of the business or owner.
- Databases like the Business Consortium Fund of the National Minority Supplier Development Council, which collect data on both demographics and business financing.

Information Management Companies

Information management companies, such as Dun & Bradstreet, Fair Isaac, VentureOne, and the three major credit-reporting agencies (Equifax, Experian, and TransUnion), collect and sell data related to businesses of all types and have some of the most extensive databases. Dun & Bradstreet markets general business information—ownership, location, size, age, and cash flows—used by its clients to decrease risk exposure and increase sales. VentureOne sells venture capital data: firm location, cash flows, and financing. Although these databases are

not specific to small or EDM businesses, many EDM firms are captured. Fair Isaac captures hundreds of thousands of individual transactions and uses them to model predictive risk. Its databases are solely for the use of its clients.

Among the largest databases, holding millions of records each, are those of the three major credit-reporting agencies. These records are proprietary, strictly regulated by the Federal Trade Commission, and are not available for general pooling. Although they cannot share their data directly, credit agencies are interested in reviewing other pooled data as a means to explore alternative credit-scoring mechanisms.

Overall Data Quantity and Quality

Our review of the EDM databases made it clear that substantial holes exist in terms of the quantity and quality of the collected data. Many data sets have a narrow focus, capturing only information on demographics, specific industries, or individual cities. Although the scope of these databases meets the needs of the groups maintaining them, few effectively cover EDM businesses as a market. For example, the U.S. Census (the source of the Survey of Business Owners) is the best source for demographic information, but it does not capture data pertaining to business financing. In addition, few databases cover the financing of EDM businesses at the transaction level, except in proprietary content of financial institutions or information management companies. Yet this information is the most critical for assessing business opportunities and improving capital flows.

Furthermore, a large number of EDM databases contain relatively few survey units. The Venture Capital Fund Database, owned by the National Association of Investment Companies, has information on twenty-four venture capital funds. The Aspen Institute's MicroTest Database and the Calvert Foundation's Profiles Databases likewise consist of seventy-five and seventy-one survey units, respectively. Alone, they do not provide sufficient information on EDM businesses to allow potential investors to analyze the markets effectively.

In terms of quality, existing EDM data are self-reported and their accuracy is unverified. Dun & Bradstreet, for instance, manages an extensive database covering 366,000 minority-owned businesses and 1.4 million women-owned firms.⁵ However, identification of a firm as minority- or women-owned depends solely on voluntary disclosure by the business.

Proposed EDM Data Solutions

A review of key literature uncovers several potential solutions to the need for improved EDM data. The Information Policy Institute analyzes nontraditional information sources that could be used to bring minorities, low-income individuals, and others with insufficient credit information into the credit system. It suggests that consumer information from utility, child-care, and health-care providers, along with data from auto insurance companies and

⁵ Interview with Darren Elsner, Dun & Bradstreet, July 29, 2005.

rental agencies (housing, furniture, and consumer durables) could be used to evaluate “thin-file to no-file” (TFNF) loan applicants.⁶

An obstacle to the use of these nontraditional data sources could be the limitations inherent in voluntary reporting. To that end, Afshar recommends that the public sector offer incentives to potential data providers (such as the utility companies) to overcome economic costs and possible regulatory barriers.⁷ Increased reliance on this alternative transaction data has the potential to provide many TFNF individuals with expanded access to credit. To date, most activity with alternative data involves consumer, as opposed to small-business, credit. However, personal credit history is a significant predictor of small-business credit risk.⁸

The Minority Business Development Agency, the Small Business Administration, Weissbourd, and Weissbourd and Berry all suggest that government, nonprofit organizations and for-profit companies collaborate to improve EDM data.⁹ The federal government and for-profit companies could make existing databases more accessible and augment their value by disaggregating the data.¹⁰ Similarly, Hawke recommends combining U.S. Census, private marketing, and nontraditional sources to better understand the economic importance of EDM.¹¹

Creating a Data Consortium

Our report, “Emerging Domestic Markets: Increasing Capital by Improving Data,” recommends taking this collaborative approach of combining existing data sources. A central database, populated by multiple entities and managed by a third party, would make the data accessible to a number of people. Contributors would agree to a standard set of definitions and reformat their data to these standards to enable comparison across databases. In exchange for contributing data, members of this “data consortium” would gain access to the contents of the entire database. They would be free to run searches, download records, and analyze data. Thus, they would dramatically increase their understanding of EDM business and investment performance, and they would be better able to identify EDM investment and lending opportunities.

6 Information Policy Institute. “Giving Underserved Consumers Better Access to the Credit System: The Promise of Non-Traditional Data,” 2005.

7 Anna Afshar, “Use of Alternative Credit Data Offers Promise, Raises Issues.” Federal Reserve Bank of Boston, 2005.

8 Interview with Thomas C. Wise, Fair Isaac, May 30, 2006.

9 U.S. Minority Business Development Agency, “Accelerating Job Creation and Economic Productivity: Expanding Financing Opportunities for Minority Businesses,” 40; U.S. Department of Commerce, 2004; U.S. Small Business Administration, Office of Advocacy, “The Small Business Economy” (Washington, DC: U.S. Government Printing Office, 2004); Robert Weissbourd, “Banking on Technology: Expanding Financial Markets and Economic Opportunity” (Washington, DC: Brookings Institution, 2002); and Robert Weissbourd and Christopher Berry, “The Market Potential of Inner City Neighborhoods: Filling the Information Gap” (Washington, D.C: Brookings Institution, 1999).

10 U.S. Small Business Administration, Office of Advocacy, 2004.

11 John Hawke, “Growing Diverse Banking Markets: Going Beyond Traditional Measures,” Comptroller of the Currency Administrator of National Banks Community Development Newsletter, 2001.

The primary value of a data consortium is its ability to motivate increased interest and investment in EDM. Using its data, members could model new structures, develop and refine products tailored to EDMs, generate data, increase understanding of the market, and deploy additional capital. Product development would become an ongoing activity, fed by the information contained within the consortium database. Historically, financial innovation has significantly broadened access to capital, for example, the increase in small-business lending by large banks upon adoption of small-business credit scoring. Of particular interest to the individuals interviewed by the Milken Institute were EDM-tailored credit-scoring models (similar to those being developed for consumers, but reflective of business lending data) and structured finance vehicles leveraging multiple sources of capital, such as private funds, philanthropic contributions, and government guarantees. In addition, the data consortium, with a robust database, would significantly enhance the ability to securitize EDM loans by providing methods and data for risk assessment and the establishment of proxies and synthetic structures as needed. The richness of the data would inform investors and lenders and also help establish pricing.

Several notable efforts are under way to pool and cross-reference data within subsectors of the EDM field: the Community Development Financial Institutions (CDFI) Data Project, the National Association of Investment Companies (NAIC) project research on returns, and the Research Initiative in Social Enterprise (RISE) surveys of community impact double-bottom-line investment funds, for example. However, current pools of data remain fragmented, and many lack sufficient size, scope, or format. Our work differs in that it attempts to capture the full range of EDM businesses and includes both demographic and financial data. The database would be tailored to the needs of investors.

Data Content Considerations

Because each organization currently employs a unique data format, submissions would have to be standardized. Each consortium member—the organization supplying the data—should be responsible for reformatting its own data, for the following reasons:

- *Greater data integrity.* Each organization knows its data well and is better equipped to work with its own information. Placing the onus on each organization to ensure properly formatted data will reduce errors and increase the accuracy and integrity of the data.
- *Reduced costs for the consortium.* The consortium would be relieved of the time and labor needed to ensure that data are properly formatted, which would greatly reduce costs.
- *Simple data submission.* The consortium would determine what information to collect and would define a standard data format, a schema using XML, a common markup language for documents containing structured information. Consortium members would then either periodically send XML files to the database administrator or have a web-based interface for submitting data themselves.

- *Access to data.* In exchange for contributing data, members would gain access to the contents of the entire database. They would be free to run searches, download records, and analyze data. Thus, they would dramatically increase their understanding of EDM business and investment performance, and they would be better able to identify EDM investment and lending opportunities.

Consortium members would also have to adopt common definitions. EDM data consistency is undermined by a lack of common definitions. Concepts such as “LMI” and “ethnic-owned business” vary, as do calculations of the rates of financial and social return. Differences in definitions and terminology hinder comparability, even among databases with the same survey unit. For example, the Survey of Business Owners (SBO) defines a business as any nonfarm or nongovernmental business that filed a tax form as an individual proprietorship, partnership, or any type of corporation, and with receipts of \$1,000 or more. The Kauffman Index of Entrepreneurial Activity uses household survey data and measures individual business owners, defined as individuals from the age of twenty to sixty-four who own a business as their main job with fifteen or more hours worked per week.

Possible uses of consortium data are numerous. They would likely vary with user type and would require enhanced database functionality. Profit-driven entities might want to mine the data to evaluate investment and lending opportunities, while nonprofits might seek to track social returns. Researchers might want to explore relationships, such as those between total loans disbursed and geographic location. Thus, the database would have to have significant flexibility to meet each user’s needs.

To ensure the privacy of the borrower or equity recipient, the name, address, and contact information would be replaced with a unique identification number. Multiple loans to one borrower could then be linked to a single customer identification number, but the identity of the customer would remain anonymous.

The identity of the data provider could be hidden through two mechanisms:

- *A standardized format.* Converting all data records to a common format would, at a minimum, make it harder to attribute a data record to a specific organization.
- *Recruiting a significant number of organizations of each type.* Even with a standardized format, it might still be possible to guess what type of organization, financial institution, nonprofit, or trade association supplied a given record. Another layer of masking could be accomplished by recruiting a significant number of organizations of each type into the consortium.¹²

¹² Take the example of a consortium comprised of the CDFI Data Project and two banks, Bank A and Bank B. The data collected by the CDFI Data Project would be recognizably different from bank data because it would track social returns. Therefore, Bank A should be able to attribute any record that did not track social returns, and was not its own, to Bank B. This could give Bank A a competitive advantage. However, adding more contributors removes this risk. Take the example of a consortium comprised of ten nonprofits and ten banks. Bank A should be able to determine if a data record belonged to a competing bank, but it would not be able to identify which one.

The consortium would need to monitor data accuracy. While the cost of an independent data watchdog would likely be prohibitive, consortium members could be asked to watch for suspicious records and report abnormalities. Penalizing members with expulsion from the consortium for providing false data could encourage them to scrutinize their own data before submitting it.

Additional issues to consider include ownership and funding of the database. The initial establishment of a consortium would require philanthropic support. However, long-term ownership, financial responsibility, administration, and maintenance should be shifted to members. They would provide the data, and they should retain ownership of that data. Any transfer of ownership would present a conflict of interest related to potential resale opportunities. Furthermore, because members would directly benefit from the consortium, they should pay for it. If they chose, the membership could offset expenses by selling access subscriptions to nonmember financial institutions and research organizations. Alternatively, database users could pay a fee based on the number of queries or downloads.

Recommended Format: Relational Database

The database could take several forms: relational, dimensional, or object. For a variety of reasons, the recommended format is a relational database. A relational database uses a two-dimensional structure of rows (records) and columns (fields) to store data. All data are stored inside tables and operations are performed on the tables. Operations include the retrieval of a subset of columns, a subset of rows, or selected records and columns from multiple tables to create a new table based on their intersections. Relational databases must adhere to basic rules. Each record in each table must be unique and correspond to a primary key, a field that provides record identification. Each column must have a unique name. Entries in the same column must be of the same kind, and no column value can depend on any other column value other than the primary key. The database also must be normalized—each table should include unique fields that are not redundant with other fields within that table.

A relational database has several advantages over other models. First, it provides a description of the data using its natural structure only; no additional programming is required to structure the database.¹³ Second, it allows for easy normalization “to ensure data consistency and stability, to minimize data redundancy, and to ensure updatability and maintainability of the data.”¹⁴ Finally, and perhaps most important for the consortium, the relational model is mature and widely used. Most organizations have experience with such models and are comfortable using common query languages like SQL to manipulate data. Thus, the use of a relational database should increase the ability of members to create their own programs to search and export data from the database, thereby lessening the responsibilities of the database administrator and reducing overall costs.

13 E. F. Codd, “A Relational Model of Data for Large Shared Data Banks,” *Communications of the ACM* 13, no. 6 (June 1970): 377–87.

14 Tore Bostrup, “Introduction to Relational Databases—Part 1: Theoretical Foundation.” 15 Seconds. <http://www.15seconds.com/issue/020522.htm>.

Conclusion

In this issue of the *Review*, Federal Reserve Chairman Ben S. Bernanke stresses the importance of community economic development data. “By making companies, entrepreneurs, and investors aware of the new opportunities,” he said, “and by promoting competition in underserved areas, such information helps put market forces in the service of community development.”¹⁵ A well-constructed data consortium could help eliminate information barriers and unleash the dynamism of the financial markets through knowledge building and product development. Ultimately, both the emerging domestic markets and the national economy would benefit.

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¹⁵ Remarks by Chairman Ben S. Bernanke, Greenlining Institute’s Thirteenth Annual Economic Development Summit, Los Angeles, April 20, 2006.

Exhibit A. Matrix of Emerging Domestic Markets Databases

Data source	Database overview				Characteristics of individual			Characteristics of business ^a					Characteristics of financing				Performance of financing		Interest in data consortium ^b		
	Survey unit	Survey unit details	Number of units surveyed	Availability	Earliest year and frequency	Race / ethnicity	Gender	Geographic location	LMI location	Age of business	Number of employees	Financial information	Type of financing	Financing amount	Cost of financing	Other terms of financing	Rate of return	Rate of default	Social return	Willing to share data	Interest in consortium data
Board of Governors of the Federal Reserve System Survey of Small Business Finances (SSBF)	Business	Firms with fewer than 500 full and part-time employees (including owners working in the firm)	3,200 to 4,600 (exact number varies with year)	Free online for 1987, 1993, 1996, and 2003	1987, About every 5 years (1987, 1993, 1996, 2003)	Y	Y	Y, not on public file other than census division	N	Y	Y, including owners	Y	Y	Y, limited to most recent loan only	Y	Y, return on assets or equity can be calculated from balance sheet	N, know if file on assets in past 3 years and if firm / owner / filed for bankruptcy in past 7 years	N	Y	Y	Y
Federal Reserve Board Flow of Funds Accounts	Business	Nonfirm, noncorporate businesses	Aggregate of all corporations' IRS returns	Available online for download	1945, Quarterly	N	N	N	N	N	Y, aggregate	Y, aggregate	Y, aggregate	N	N	N	N	N	Y, available online	N	
SBA & National Community Reinvestment Coalition (NCRC) Community Express Loans	Business	Community Express - minority, women, and veteran-owned businesses in lower income areas	Approximately 17,000	Captured in 7(a) database; Can obtain separate by request to NCRC or SBA	1999, Quarterly	Y	Y	Y, city, state, or Census tract	Y	N	N	Y, For recent loans	Y	Y	Y	Y	Y	N	Y, not all	Y	
SBA 504 Loan Program	Business	Business	Approximately 200,000 (7(a) & 504 combined)	Free online (aggregated by city), more detailed available by request	1996, Annual	Y	Y	Y, city or county	N	Y, not consistent	Y, for recent loans	Y	Y	Y	Y, individual status or aggregate return	Y	Y	N	Y, not all	Y	
SBA 7(a) Loan Program	Business	7(a) loan recipients - Small, for-profit businesses (size limit varies with industry)	Approximately 200,000 (7(a) & 504 combined)	Free online (aggregated by city), more detailed available by request	1996, Annual	Y	Y	Y, city or county	N	Y, not consistent	Y, for recent loans	Y	Y	Y	Y, individual status or aggregate return	Y	Y	N	Y, not all	Y	
SBA Microloan Program	Business	Microloan recipients - For Profit businesses (generally less than 5 employees)	Approximately 24,000	Available by request	1992, Annual	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y, not all	Y	
SBA New Markets Venture Capital	Business	Small businesses invested in by a New Market Venture Capital Company	Approximately 55 (there are 6 New Market Venture Capital Companies)	Generally not available to the public	2001	Y	Y	Y	Y, beginning in 1998	Y, incomplete and unreliable	Y, incomplete and unreliable	Y	Y	Y	N	N	N	Y, but depends on the situation	Y, depending on content		
SBA Small Business Investment Company (SBIC)	Business	Small businesses invested in by an SBIC	Approximately 35,000	Generally not available to the public	1997, Annual	Y	Y	Y	Y, beginning in 1998	Y, incomplete and unreliable	Y, incomplete and unreliable	Y	Y	Y	N	N	N	Y, but depends on the situation	Y, depending on content		

Exhibit A. Matrix of Emerging Domestic Markets Databases

Data source	Database overview			Characteristics of individual?			Characteristics of business?				Characteristics of financing				Performance of financing		Interest in data consortium?		
	Survey unit	Survey unit details	Number of units surveyed	Availability	Earliest year and frequency	Race / ethnicity	Gender	Geographic location	LMI location	Age of business	Number of employees	Financial information	Type of financing	Financing amount	Cost of financing	Other terms of financing	Rate of return	Rate of default	Willing to share data
CDFI Fund Community Investment Impact System (CIS)	Lender	CDIs and CDFIs	Approximately 300	Data not currently available to the public; plans to make data available in the future	2004, Annual	Y	Y	Y	Y	Y	Y, revenues	Y	Y	Y	Y	N	Y	Y, in the future	Y
Federal Deposit Insurance Company (FDIC)/Call Reports	Lender	Banks	Approximately 8,000	Free online; Data aggregated by bank	1998, Quarterly (electronic version)	N	N	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	N
Federal Financial Institution / Funds Examination Council Community Reinvestment Act (CRA) Reports	Lender	State banks, national banks, and large saving associations (\$250M+)	Approximately 2,000	Free online; Data aggregated by census tract level	1996, Annual	N	N	Y, state, county, and MSA	Y	N	Y, census tract	Y	Y	N	N	N	N	Y	N
Information Management Companies																			
Don & Braintree (DB)	Business	Companies	7.9 million	For purchase; Price based on the number of records	1941; 1969 electronic records, Monthly	Y, if offered by owner	Y	N	Y	Y	Y	N	N	N	N	N	N	Y, available for purchase	N
VentureOne	Business	Venture-backed firms	Approximately 18,000 U.S. firms	By subscription only	1987 Quarterly	Y	Y, city	N	Y	Y	Y	Y	Y	N	N	N	N	Y, available for purchase	N
Equifax	Individual	Not disclosed	A file for every credit active adult in the country	For sale based on permissible purpose as governed by the FTC	Not disclosed	N	N	Y	Y	N	Y	Y	Y	N	Y	N	Y	N, restricted by FTC regulations on sale of data	Not disclosed
Experian	Individual	Not disclosed	A file for every credit active adult in the country	For sale based on permissible purpose as governed by the FTC	Not disclosed	N	N	Y	Y	N	Y	Y	Y	N	Y	N	Y	N, restricted by FTC regulations on sale of data	N
TransUnion	Individual	Credit tradeline history, public records	A file for every credit active adult in the country	For sale based on permissible purpose as governed by the FTC	Online file updated daily, only the current version is available	N	N	Y, street address	Y	N	Y	Y	Y	N	Y	N	Y	N, restricted by FTC regulations on sale of data	N
BankLab DataBanc	Transaction	Small business loans	Over 700,000	For purchase (with analysis)	1983, Annual	N	N	Y, varies	Y	Y	Y	Y	Y	Y	N	Y	Y	Y, data and analysis available for purchase	N

Exhibit A. Matrix of Emerging Domestic Markets Databases

Data source	Database overview				Characteristics of individual				Characteristics of business				Characteristics of financing				Performance of financing		Interest in data consortium?	
	Survey unit	Survey unit details	Number of units surveyed	Availability	Earliest year and frequency	Race / ethnicity	Gender	Geographic location	LMI location	Age of business	Number of employees	Financial information	Type of financing	Financing amount	Cost of financing	Other terms of financing	Rate of return	Rate of default		Social return
Fair Isaac Small Business Scoring Service	Transaction	Individual transactions	Approximately 1 million	Private	1990s, Regularly	N	N	Y	N	Y	Y, if transaction has business listing from DIBS or Experian	Y	Y	N	N	N	Y	N	N	N
VentureExpert	Transaction	Venture capital funds	Approximately 7,500	For purchase	1978, Quarterly	N	N	Y, ZIP code and MSA	N	Y	Y	Y	Y	Y, management fee	Y, average investment size, round, etc.	Y	N	N	N	Y, available for purchase
Xigi.net	Transaction	High-performing social enterprises	Various	In development; Available online	2006	In development	In development	In development	In development	In development	In development	In development	In development	In development	In development	In development	In development	In development	In development	Y
Nonprofit Organizations and Research Groups																				
Aspen Institute MicroTest Outcomes Data Set	Business	Micro-enterprises in underprivileged communities	Sample of approximately 800 each year	Private	2003, Annual	Y	Y	N	N	Y	Y, revenues	Y	Y, aggregate loans from participants	N	N	N	N	N	Y, effect on owner's household	Y, only if approval and privacy concerns are met
Brookings Institution Urban RPM	Business	Urban retailers	Undetermined	Still in development	The dataset will include 10-15 years prior to the current year	Y	Y	Y, ZIP code	Y	Y	Y	N	N	N	N	N	N	N	N	Y, only with approval of members
Brookings Institution Urban RPM Investor	Business	Urban retail investors and lenders	Undetermined	Still in development	The dataset will include 10-15 years prior to the current year	N	N	Y, ZIP code	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y, only with approval of members
Community Development Technologies Center/ Merril Lynch Southern California Minority Business Atlas	Business	Business owners	1,200	Aggregated data available online	1999-2000	Y	Y	Y, county	N	Y	Y, sales	Y, financing source	N	N	Y, types of financing needed	N	N	N	Y	Y
Initiative for a Competitive Inner City (ICIC) Inner City 100*	Business	Companies	445 companies	Limited data made public online and in Inc. Magazine. Remainder is private	1999, Annual	Y	Y	Y	N	Y	Y	Y	N	N	N	N	N	N	Y, but only data already public (growth rate, most recent FY revenue, number of employees)	Y

Exhibit A. Matrix of Emerging Domestic Markets Databases

Data source	Database overview				Characteristics of individual				Characteristics of business ²				Characteristics of financing				Interest in data consortium?				
	Survey unit	Survey unit details	Number of units surveyed	Availability	Earliest year and frequency	Race / ethnicity	Gender	Geographic location	LMI location	Age of business	Number of employees	Financial information	Type of financing	Financing amount	Cost of financing	Other terms of financing	Rate of return	Rate of default	Social return	Willing to share data	Interest in consortium data
Kauffman Financial and Business Research Database	Business	Companies	Approximately 900,000 for demographic information, approximately 300,000 for financial information	Up to 15,000 records available upon request	1983, Annual	Y, minority owned/ind. owned/CEO/Owner	Y	Y, addresses	N	Y, as of current management	Y	Y	N	N	N	N	N	N	Y	Y	
Kauffman Firm Survey	Business	New businesses - Started operations in 2004	5,000	Still in development	2004, Annual for 4 years	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	
Kauffman Index of Entrepreneurial Activity	Business	Individual business owners	7,500,000 total sample size	Available by request	1996, Annual	Y	Y	Y, regions only	N	Y, measures number of newly created businesses	N	N	N	N	N	N	N	N	Y	Y	
National Minority Supplier Development Council (NMSDC) and Business Response Panel (BGR Capital)	Business	Minority-owned business	15,000	Some data available free online with most by approved request only	1985, Annual	Y	Y	Y, city	N	Y	Y, financial statements and five-year worth projections	Y, three years worth	Y	Y	Y	Y, guarantees and collateral	Y	Y	Y, jobs created	Y, but depends on the situation	N
NMSDC	Business	Minority-owned businesses	Approximately 15,000	Available only to dues-paying national corporate members	1974, Monthly	Y	Y	Y, ZIP code	Y	Y	Y, limited	N	N	N	N	N	N	N	Y	Y	
RISE/Investors Circle/Social Venture Network/Social Venture Survey	Business	For-profit social ventures less than 30 years old	212	Not yet available	2003	N	N	Y, ZIP code	N	Y	Y, revenues and profits	Y	Y	N	N	N	N	Y	Y, depending on costs and benefits	Y	
Kauffman Foundation Panel Study of Entrepreneurial Dynamics (PSED)	Individual	Nascent Entrepreneurs	830 (there was some attrition in follow-up surveys)	Free online	1998, Four years of data collected over five years	Y	Y	Y	N	Y	Y, Y	Y, Y	Y, Y	N	N	N	N	N	Y	N	
Social Compact Neighbor Market DrillDown	Individual	Low-income neighborhoods over 6 years	101 low-income neighborhoods over 6 years	Free online (in PDF report format, some information disaggregated by geographic group level), more detailed information available by request	Snapshots of 4 years of data but can be updated annually.	Y	Y, where possible	Y, down to neighborhood level analysis	Y	Y, not consistent	Y, in terms of buying power	N	N	N	N	N	N	N	Y, not all	Y	

Exhibit A. Matrix of Emerging Domestic Markets Databases

Data source	Database overview				Characteristics of individual				Characteristics of business ²				Characteristics of financing				Performance of financing		Interest in data consortium ³		
	Survey unit	Survey unit details	Number of units surveyed	Availability	Earliest year and frequency	Race / ethnicity	Gender	Geographic location	LMI location	Age of business	Number of employees	Financial information	Type of financing	Financing amount	Cost of financing	Other terms of financing	Rate of return	Rate of default	Social return	Willing to share data	Interest in consortium data
Calvert Foundation Profiles Database	Lender	Community investment Organization	Approximately 71 (investing in small businesses and affordable housing)	Some data available free online; more robust data for sale	2000, Annual	Y, staff & board of the fund plus percent of fund's assets underlying investments	Y, staff & board of the fund plus percent of fund's assets underlying investments	Y, address and targeted region	N	Y	Y	Y, debt	Y	N	N	Y, performance of fund and investment in fund	Y, performance of fund and investment in fund	Y, not collected across all funds	Y, with some doubts	Y, if it fits their needs	
CDFI Data Project (CDFI) by the Ford Foundation and MacArthur Foundation	Lender	Community Development Finance Institutions (CDFIs)	Approximately 500	750; select aggregate data available online	2001, Annual	Y	Y	Y	N, year financing started	Y	Y	Y	Y	N, occasionally	Y	Y	Y	Y, jobs created, housing units created, etc.	Y	Y	
RISE Double Bottom Line Investor Survey	Transaction	Private equity funds	59	Not yet available	2002	Y	Y	Y, ZIP code	N	Y	Y, managed capital	Y	Y, managed capital	Y, target IRR and return hurdle	Y, average deal size	Y, IRR	Y	Y	Y, depending on costs and benefits	Y	
Trade Associations																					
Community Development Venture Capital Alliance (CDVCA) Transaction Database	Business	Transaction-level data from CDVC fund investments	696	Summary information in CDVC report on the industry	2005, Annual	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y, in aggregate	Y	
National Federation of Independent Business (NFIB) and Gallup Organization Small Business Poll	Business	Nationally representative sample of small firms	Varies	Information available on website; publications; data sets available for purchase	8 reports annually since 2001	N	Y	Y, varies with survey	Y, extend varies with survey	Y, extend varies with survey	Y, extend varies with survey	Y, extend varies with survey	Y, extend varies with survey	Y, extend varies with survey	Y, extend varies with survey	N	N	N	Y, available for purchase	Y	
National Federation of Independent Business (NFIB) Economic Trends (SEET)	Business	Members of NFIB organization	600,000	Private	1973, Quarterly and monthly	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	Y, available on request	Y	
Community Development Venture Capital Alliance (CDVCA) ROI Project	Lender	CDVC Funds	20	To be shared with CDVC industry	2004-05, One time study	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y, in aggregate	Y	
National Association of Investment Companies (NAIC) and Wayne State University Venture Capital Fund Database	Lender	Venture capital investments monthly-ortbly-ortbly investments	24	Available for purchase for research purposes	2000 & 2003	Y	Y	Y, ZIP code	N	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	

Exhibit A. Matrix of Emerging Domestic Markets Databases

Data source	Database overview			Characteristics of individual ¹			Characteristics of business ²				Characteristics of financing				Performance of financing		Interest in data consortium ³			
	Survey unit	Survey unit details	Number of units surveyed	Availability	Earliest year and frequency	Race / ethnicity	Gender	Geographic location	LMI location	Age of business	Number of employees	Financial information	Type of financing	Financing amount	Cost of financing	Other terms of financing	Rate of return	Rate of default	Social return	Willing to share data
Neighborhood Funders Group PRI Makers Network	Lender	Project-Related Investment (PRI)	Approximately 200	Available to PRI Makers members only (PRI Funders and grantmakers only)	Spring 2006	N	N	Y	N	N	N	Y	Y	Y	Y, collateral, guarantee, etc.	Y	N	Y, wide variety of reported outcomes	Y, limited	Y
Opportunity Finance Network CDFI Asset Based and Rating System (CAFRS)	Lender	Community Development Institutions (CDFIs)	Currently 12; plans for more than 30 by YE 2006	\$15,000 for full subscription, \$2,500 per CDFI	2004, Annual (for cases by CDFI)	Y, for some	Y, for some	Y, for some	Y	Y, for some	Y	Y	Y, described in analysis	Y, described in analysis	Y, described in analysis	Y	Y	Y, jobs created, housing units constructed, improved community conditions	Y, available for purchase	Y

¹ This table is organized by Type of institution, which refers to the data source, not the survey unit.

² When the survey unit is "transaction," data are available at the transaction level. When the survey unit is not transaction, data may be aggregated (e.g., percent of portfolio that is a certain race/ethnicity) or at the individual level.

³ Providing this information in no way obligates the organization to participate in later phases of the consortium or to share data.

⁴ ICIC maintains several emerging domestic markets databases.

Standard & Poor's Small Business Portfolio Model Introduces a Potential New Tool for Community Development Loan Risk Analysis*

Weili Chen and Winston Chang
Standard & Poor's

Over the past several years, the issuance of small business loan securitizations rose steeply with rated transactions completed by Business Loan Express, GE, and Lehman, to name a few. Community development lenders also gained notoriety beginning in 2004, when Standard & Poor's rated its first portfolio of loans whose underlying loan purpose was to spur community growth and development.

In rating both small business and community development portfolios, we recognized an opportunity to provide a tool—our Small Business Portfolio Evaluator™—for both our ratings process and our lenders' internal risk management. For a community development lender who is issuing debt in the capital markets, these potential benefits could have favorable credit implications.

For example, the Small Business Portfolio Evaluator (the SBP Evaluator) will flag the loans it deems as very risky from a capital markets perspective and allow the lender to adjust the underwriting accordingly. It will also generate the gross default and net loss percentages of a given pool on an aggregate level, which speaks to the pool's leverage or the equity needed to execute a securitization. Both of these credit feedback components are essential in the planning process for lenders issuing debt in the capital markets.

Why We Developed the SBP Evaluator

From a securitization standpoint, analyzing the credit quality of U.S. small businesses can be challenging. The small business marketplace is diverse, and individual businesses are vulnerable to risks that were unforeseen when the loans were underwritten. We developed the SBP Evaluator, a Monte Carlo-based algorithm that assesses loan portfolio default outcomes under various stress scenarios, to help the issuing and investing communities in their analysis.

A mainstay of U.S. economic growth, small businesses have been steadily gaining attention in the arena of structured finance. Small businesses account for more than half of the private-sector output in the United States, and they employ more than half of the country's workers. Through extended demand loans, seasonal lines of credit, and single-purpose loans

* This article, originally published March 2, 2005, is being republished to reflect the release of Standard and Poor's Small Business Portfolio Evaluator.

for machinery, equipment, and other purposes, U.S. banks extend hundreds of billions of dollars of loans to small businesses annually. These loans are sometimes securitized through capital market issuances backed by cash flows from discrete loan portfolios.

Since 1997, Standard & Poor's has rated some 50 issuances securitizing small business loans, aggregating over \$14 billion. This total is a small fraction of the estimated \$1-trillion-plus in outstanding small business loans. With the SBP Evaluator, the structured market has an effective tool to expand securitization of such loans. In developing the model, Standard & Poor's analyzed the largest available pool of loan performance data and found that, after accounting for business sector and geographic correlation, one can generate statistically stable simulations of loan portfolio default outcomes.

The SBP Evaluator can contribute to analysis and surveillance of small business loan securitizations in a number of ways. It can:

- Help banks, other small business lenders, and secondary market participants manage risk in the portfolio;
- Assess expected portfolio defaults based on obligor size, Standard Industrial Code (SIC) sector distribution, and geographic concentration;
- Assist in ratings surveillance by assessing changes in portfolio credit quality due to prepayments, defaults, or substitutions;
- Analyze revolving structures where portfolio composition changes regularly;
- Above all, provide an industry-wide assessment platform and greater levels of transparency.

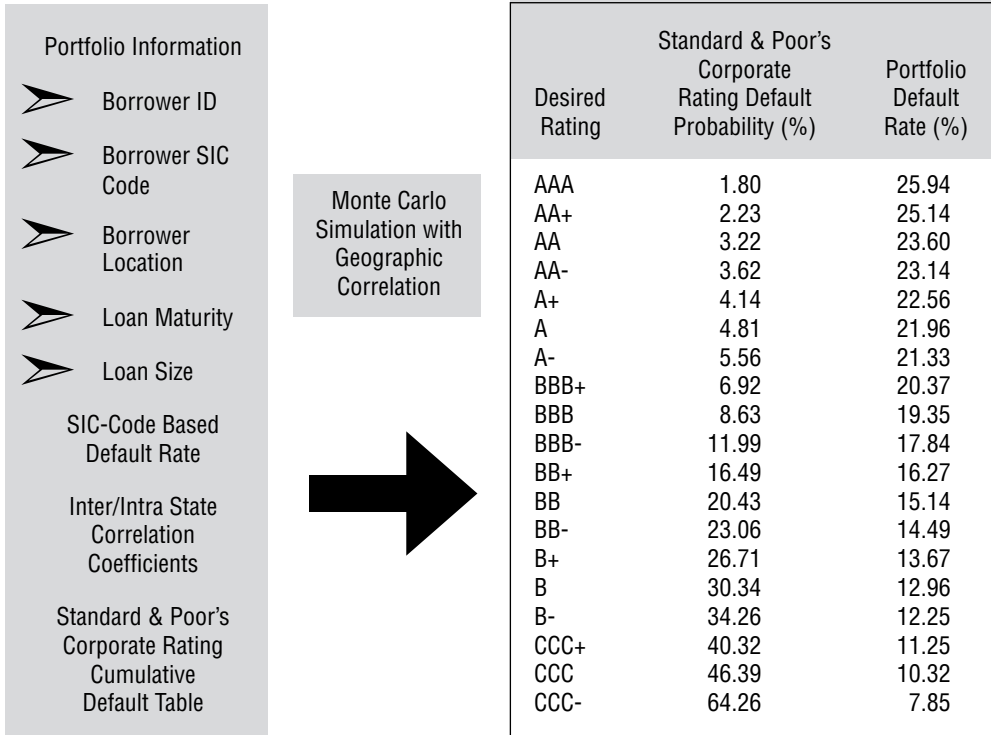
The SBP Evaluator uses the U.S. Small Business Administration (SBA) 7(a) program's historical loan default data to Monte Carlo-simulate the default distribution for a geographically correlated loan portfolio (see Appendix: The SBA 7(a) Program). Standard & Poor's uses the 7(a) program data because it's the largest publicly available pool of information and reflects considerable loan diversity. The 7(a) program guarantees riskier loans than a typical commercial lender would generally provide. The 7(a) program data include information on unseasoned businesses, borrower and business financial profiles, and nonconforming bank loans.

When properly run, the SBP Evaluator produces simulations that show the probability distributions of a given loan portfolio's default rates through the final maturity of the longest loan. These simulations model outcomes ranging from scenarios where no loan defaults through those where every loan defaults before maturity. The SBP Evaluator determines the gross default level for each rating category, consistent with Standard & Poor's corporate ratings benchmarks. While portfolios will vary in size, a minimum of several hundred obligors is needed to reach the degree of diversity necessary to achieve a portfolio effect.

The SBP Evaluator was designed for portfolio analysis. It was not designed to estimate the default probability of individual loans. This distinction is explained in more detail below.

Model Input and Output

The conceptual framework of the model is shown in the diagram.



As shown on the left, the model requires loan files grouped by obligor. Each file specifies the obligor’s ID, loan amount, maturity date, four-digit SIC code, and state or territory.

The default rate associated with each SIC code derives from the 7(a) program data. The SBP Evaluator’s calculation of SIC-specific default rates accounts for loan seasoning and default rate volatility. Standard & Poor’s current practice provides that if the originator’s default history deviates significantly from the default history of its SIC peers (as established from 7(a) data), the issuer-specific performance data may be used in the SBP simulations. The SBP Evaluator also contains Standard & Poor’s assumptions on small business loan correlation derived from the 7(a) data (see Appendix: Geographic Correlation).

On the right of the diagram is the gross default level for each Standard & Poor’s rating category and the comparable corporate rating benchmark. When assessing a loan pool with a weighted average life of 14 years, for example, a AAA corporate rating has a default probability of 1.81 percent corresponding to the AAA gross default rate of 25.94 percent for the small business loan portfolio. Over the same period, therefore, the model maintains that the default probability of the AAA-rated corporate obligation is the same as the loan portfolio experiencing a default rate greater than 25.94 percent.

The model also summarizes material portfolio metrics, thus supporting like-kind comparisons of portfolios. “Default measure” is derived from an annualized expected default rate. “Volatility measure” is derived from the standard deviation of that expected default rate. “Correlation measure” is a ratio of this standard deviation with and without the correlation coefficient factored in. These measures, together with rating-specific portfolio gross default rates, could lead to standardization and transparency in small business loan securitizations.

Another benefit of the SBP Evaluator is its flexibility: It can model changes in portfolio gross default that result from changes in portfolio size, geographic concentration, business (SIC) concentration, and borrower concentration.

Data Analysis Used to Build the SBP Evaluator

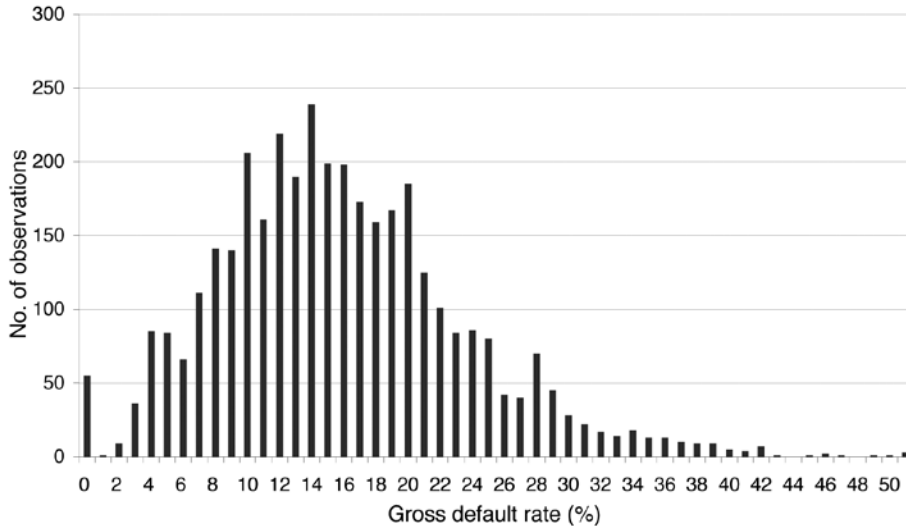
Before developing the SBP Evaluator, Standard & Poor’s identified and quantified the predominant characteristics of U.S. small business loan defaults. The data came from the Small Business Administration’s 7(a) database, which has parameters of 10,000 lenders, 600,000 disbursed loans, and 1,005 SIC codes. The database covers all 50 states, the District of Columbia, and six territories, and it contains 20 years of static pool information and material borrower and cash flow information. Standard & Poor’s is aware of no other publicly available comparable source of such data.

The 7(a) database also includes borrower-specific information such as employee details, loan size, guarantee percentage (loans are not fully guaranteed), female/veteran borrower status, new or existing business status, and the organizational form of the borrower. Loan information includes details on underwriting (“low-doc”), secondary market sale, and loan status history.

Analytical Challenge: The Heterogeneous Nature of Small Businesses and Small Business Lending

Compared with other asset classes, small business loans are still in the early stages of securitization. In part, this is because of the heterogeneous nature of small businesses. As observed in the Board of Governors of the Federal Reserve System’s Report to the Congress of the Availability of Credit to Small Businesses (1997): “Historically, lenders have had difficulty determining the creditworthiness of small business loan applicants. . . . Small businesses are extremely diverse—they range from small grocery stores to professional practices to small manufacturers. This heterogeneity, together with widely varying uses of borrowed funds, has impeded the development of general standards for assessing small business loan applications and has made evaluating such loans less straightforward and relatively expensive.”

Chart 1
**Default Rate by SIC Division, State, and Static Pool
 (1983-1999)**



Standard & Poor's concluded, after analyzing the 7(a) data, that while it is currently ineffective to try to predict the default of individual loans, simulations of portfolios of small business loans diversified by business type and geographic location produce statistically sound results. The cumulative history of the 7(a) data supports this conclusion. As chart 1 shows, the small business loan-default rate varies by location, business sector (as represented by the first digit of the four-digit SIC number), and year of underwriting. But overall, the average default rate is relatively normally distributed. This, along with other evidence, supports the applicability of a Monte Carlo simulation and tranching of portfolio gross default rates by the resulting portfolio default distribution, since the Monte Carlo simulation assumes that the random variable being simulated is normally distributed.

Data Analysis Methodology

Standard & Poor's analysis involved a binary logistical regression on whether any model could determine the default probability for an individual borrower and, if not, which generalized characteristics in the SBA 7(a) data could explain default variances.

Standard & Poor's concluded that the SBA 7(a) data are insufficient to accurately model the default probability of an individual loan. This is because small business failures usually occur as a result of some overwhelming exogenous factor. According to a 1995 study prepared for the Small Business Administration entitled "Financial Difficulties of Small Businesses and Reasons for Their Failure," researchers found that exogenous conditions such as new

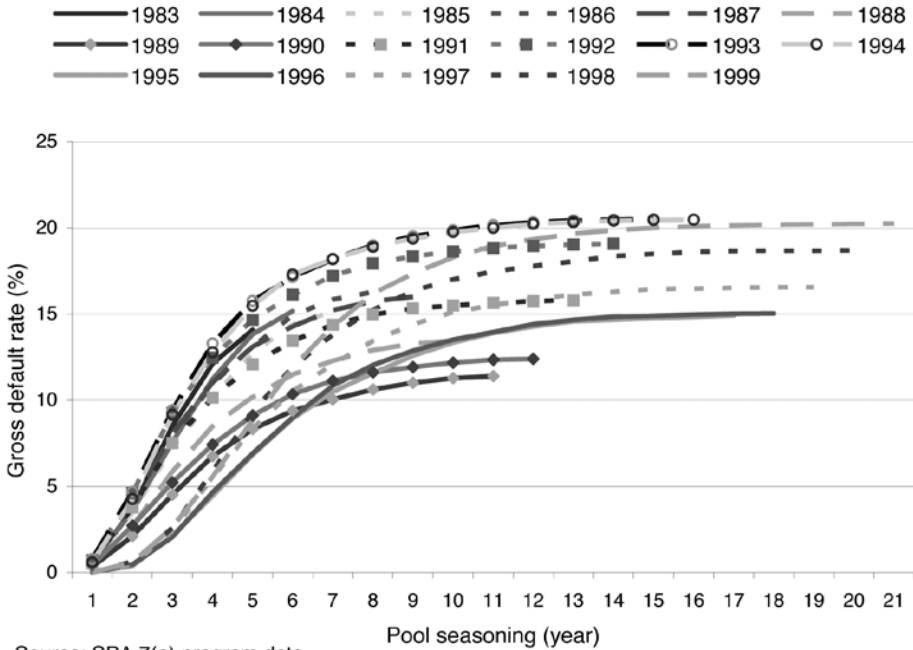
competition, increased business costs, taxes, business calamities, commercial disputes, or personnel issues caused small businesses to fail. Standard & Poor's SBP Evaluator contrasts with larger businesses, where the higher level of business diversification and greater financial flexibility tend to give borrowers greater ability to weather external challenges.

On the other hand, the second part of the logistical regression offered an explanation for the variance in small business defaults. At the portfolio level, generic issues such as business type, location, and loan-underwriting practices are material reasons for loan defaults. Standard & Poor's SBP Evaluator responds to these factors by analyzing SIC code-based default probability and geographic default correlation, among other issues.

Standard & Poor's also analyzed the correlation of historical U.S. macroeconomic conditions with the magnitude of small business failures in any particular year (see chart 2). Using linear multiple regression, Standard & Poor's found that 86 percent of small business defaults (as measured by the cumulative defaults in the first five years for each vintage) can be explained by four macroeconomic indicators at a 95 percent confidence level.

Specifically, the analysis found that bank credit expansion or contraction, as approximated by commercial and industrial loans outstanding, interest rates, producer prices, and the energy component of consumer prices, can explain the changes in business failure rates from 1987 to 1999. This is consistent with research findings noted previously that link small business failures to exogenous factors. Although of limited direct use in the rating process, this finding adds perspective to small business loan defaults and the volatility of failure rates. It also has applications in the surveillance of small business loan securitizations.

Chart 2
Static Pool Default Curve (1983-1989)



Source: SBA 7(a) program data.

How to Get the SBP Evaluator

We are releasing the SBP Evaluator on a subscription basis. For information on how to subscribe, you can visit the SBP Evaluator product page on Standard & Poor’s website at www.standardandpoors.com.

Standard & Poor’s will work closely with market participants in testing and enhancing the model so that it can be used not only to rate securitizations backed by U.S. small business loan portfolios but also to enable originators to determine the level of risk inherent in the portfolios they hold.

Additional Information on Monte Carlo Simulation and Small Business Rating Criteria

The computation algorithm and application of default correlation in the SBP Evaluator are identical to those used in the Standard & Poor’s CDO Evaluator™, a model Standard & Poor’s uses to evaluate the credit quality of a portfolio of CDO assets. Additional information on Standard & Poor’s Monte Carlo simulation and pair-wise default correlation methodologies is available on RatingsDirect at www.ratingsdirect.com. This information is also available on Standard & Poor’s website at www.standardandpoors.com. In addition, Standard &

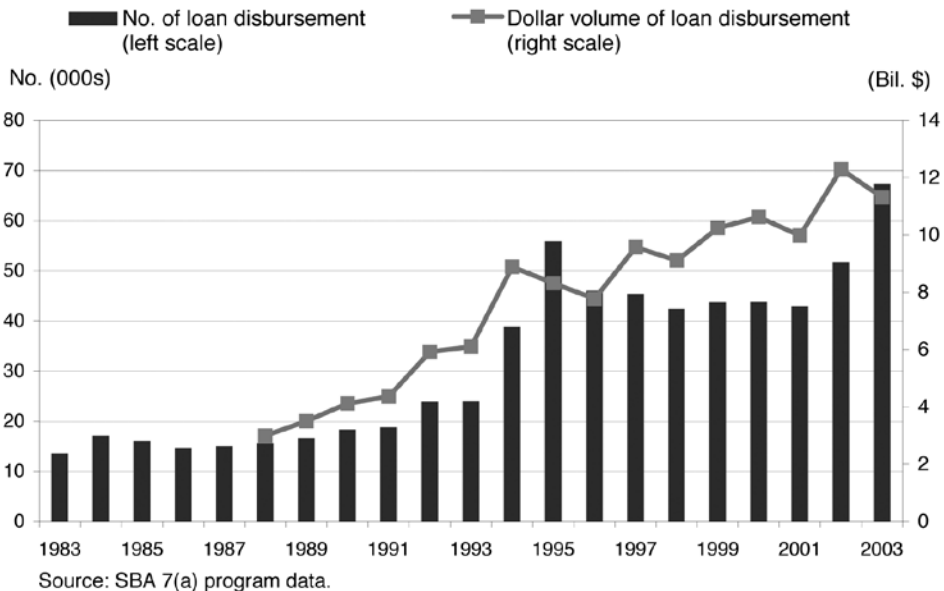
Poor’s general approach to rating small business loan securitizations is detailed in two articles, “Criteria for Securitization of U.S. Small and Middle-Market Enterprise Loans,” published January 30, 2004 and October 25, 2006. Both articles are available on both websites.

Appendix: The SBA 7(a) Program

Section 7(a) of the Small Business Act provides that the Small Business Administration “is empowered . . . to make loans for plant acquisition, construction, conversion, or expansion, including the acquisition of land, material, supplies, equipment, and working capital, and to make loans to any qualified small business concern, including those owned by qualified Indian tribes, for purposes of this Act. Such financings may be made either directly or in cooperation with banks or other financial institutions through agreements to participate on an immediate or deferred (guaranteed) basis.”

The program guarantees a portion (as much as 80 percent on loans up to \$100,000 and 75 percent on loans of more than \$100,000) of loan repayment to commercial lenders who make loans to U.S. small businesses (see chart 3). In doing so, the 7(a) program helps small businesses obtain financing when they might not be eligible for business loans through normal lending channels. Typically, an eligible business applies to a lender for financing. Based on the creditworthiness of the borrower, the lender decides if it will make the loan internally or if it will require an SBA guaranty.

Chart 3
Growth of SBA 7(a) Program (1983-2003)



According to Gwendolyn Bounds, “Enterprise: Higher Fees, Less Backing on Loans—Small Firms May Need New Funding Sources in Wake of 7(a) Changes,” Wall Street Journal, October 5, 2005: “The program’s success can be measured in its growth: In 1954, the first full year 7(a) operated, the SBA helped finance 469 loans totaling a mere \$27.3 million. This past fiscal year, \$12.7 billion was lent (guaranteed) to almost 75,000 small businesses.” During the first quarter of fiscal-year 2005, which began October 1, 2004, the SBA approved 23,197 loans for \$3.56 billion, compared with 18,822 loans worth \$3.12 billion in the same period in 2003, and 3,759 loans worth \$2.24 billion in the same period in 2004.

Appendix: Geographic Default Correlation

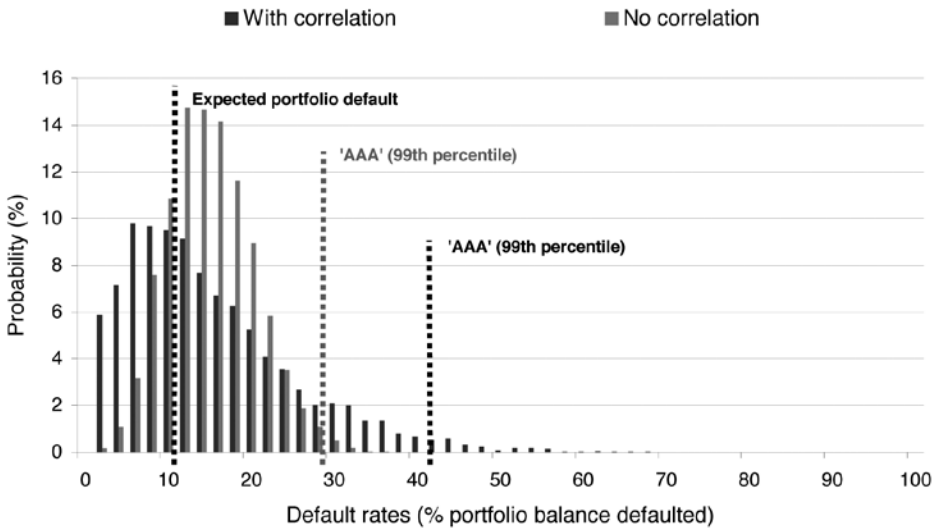
In general, “default correlation” refers to the phenomenon that borrowers sharing certain characteristics tend to default, or survive, together. Because most rated corporate entities operate nationally (that is, not exclusively locally or regionally), large rated corporate credit defaults tend to be correlated by industry. Examples include the sector weaknesses in the telecom and airline industries in 2000. In contrast, small businesses tend to operate locally or regionally, rather than nationally, so their local or regional location figures strongly in default correlations.

The map illustrates the default pattern for loans to three SIC classifications (restaurant, grocery store, and gas/convenience store borrowers) originated in 1999. Of interest are the high default clusters in the Rust Belt and Gulf State regions and the conversely low default cluster on the West Coast, suggesting a pattern of geographic correlation.



The effect of default correlation on portfolio gross default can be profound. As chart 4 illustrates, for a AAA rating, evidence of default correlation can increase the gross default rate substantially, in this particular case from 30 percent to approximately 43 percent.

Chart 4
Standard & Poor's Default Correlation Can Increase Portfolio Gross Default in Stress Scenarios



In the SBP Evaluator, Standard & Poor’s assumes that standard deviation of default is a function of borrower default probabilities and geographic correlation. A Standard & Poor’s proprietary model estimated both interstate and intrastate correlation coefficients most consistent with observed variability: high default correlation reflects a high level of default variance, and low default correlation reflects a low level of default variance.

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Board of Governors of the Federal Reserve System, 1997. “Report to the Congress on the Availability of Credit to Small Businesses,” 29. Available at: http://www.federalreserve.gov/boarddocs/rptcongress/sbc_rep.pdf.

Small Business Act, Public Law 85-536. Available at: <http://www.sba.gov/regulations/sbaact/sbaact.html>.

Cows, Kiva, and Prosper.Com: How Disintermediation and the Internet are Changing Microfinance

Tillman Bruett

Alternative Credit Technologies

The international microfinance community has received a considerable amount of attention in the past few years and has captured the imagination of millions. The understanding of microfinance that has permeated popular culture is simple: poor people run businesses, and providing very small loans to these businesses can increase profits and help them lift themselves out of poverty. In fact, microfinance is much more than small loans. Microfinance includes a range of financial products, including savings and insurance and money transfers, and can be delivered by a variety of institutions, such as nonprofits, cooperatives, nonbank financial institutions, and banks. The line between formal finance and microfinance is blurring. What continues to distinguish microfinance from formal finance is the commitment to work with small enterprises and low-income households and a reliance on “social collateral,” such as peer pressure, rather than traditional collateral when lending.

The main challenges for international microfinance remain the lack of sound intermediaries to deliver financial services as well as limited funding, although significant advances have been made in both of these areas in the past decade. The microfinance community is moving quickly to tap into local and international capital markets, particularly so-called social investors.

Recent advances in finance and technology are providing new opportunities for individual investors to support and invest in microenterprises, and in some cases bypassing intermediaries altogether. Although these efforts at disintermediation are still new, they present a new way for poor communities to attract capital that has the potential to unleash the entrepreneurial capacity of the poor. They might also hold the key for innovation in other related fields, such as community development finance.

Putting a Face (or Snout) on Poverty and Opportunity

While most people accept that short-term charity is a necessity in times of acute crisis, a solution to the chronic problem of poverty is harder to “sell.” The enormity and ceaselessness of poverty engenders hopelessness and donor fatigue. Relief organizations have had notable success in putting a face on natural disasters by asking donors to sponsor a child or build a house. One of the challenges of supporting economic development is how to put a face on poverty that conveys opportunity and closure. Heifer International is a well-known

success story in the development field in part because it has been able to personalize poverty in a way that highlights hard work, self-help, and sustainability. Heifer Projects offers donors the opportunity to provide a cow or other farm animals with the potential for reproduction to needy families to “help people feed themselves.” This disintermediation, creating a sense of a direct relationship between a donor and beneficiary, and the promise of a sustainable solution have been key ingredients in the Heifer Projects’ success worldwide, even if the faces put forward were not always human.

Microfinance uses messages similar to Heifer Projects, highlighting self-help and sustainability. However, microfinance is not well suited to build direct relationships between donors (or lenders). The essence of microfinance is intermediation—to build microfinance institutions (MFIs) capable of managing the risk and relationships between funders and entrepreneurs. The primary reason for all financial intermediation is to overcome the information gap between lenders and borrowers. This need is particularly acute in microfinance when clients have no recorded credit history or land title. A lender in New York, however well informed, is unable to measure the borrowing capacity of an entrepreneur in Nairobi. Still, microfinance has long recognized the power of creating the appearance of a direct link between funders and recipients of microloans. Fund-raising efforts for microfinance have followed the disintermediation model by allowing donors to support specific borrowers, village banking groups, or communities and have built relationships with donors by providing repayment information and stories of successes. Unfortunately, the financial costs and time burden of providing this information are fairly high and are at odds with the need to run MFIs efficiently as a business rather than as a charity.

Several recent attempts using the Internet to overcome the information gap and strike a balance between financial intermediation with relationship disintermediation are noteworthy for their successes and challenges. The lessons learned may offer some long-term solutions to attracting capital to creditworthy entrepreneurs.

Financial Disintermediation, or “Cutting out the Middleman,” Goes Small

One of the most profound changes in finance in the past fifteen years has been the spread of financial disintermediation on a global scale. Traditionally, the financial markets centered on banks that acted as a conduit between suppliers of funds (usually deposits) and users of funds (usually borrowers). Banks made their money on the spread between the interest rates paid and charged as their reward for managing the risk of intermediation. Banks now seek to take advantage of their risk-management capabilities to arrange direct deals between lenders and borrowers in the form of private placements, fixed-income securities, and more sophisticated derivative products. The growth in loan syndications (selling participations in loans) and asset securitization in particular (bundling and selling thousands of smaller financial assets to investors) is the most dramatic example of disintermediation. Both have severed the traditional link between underwriting and credit risk: institutions arranging loans or underwriting securities no longer hold them. These securities are assigned credit ratings by

rating agencies, sold in the market to the highest bidder, and traded so often that the debtor, issuer, and investor may not know who holds them. A Japanese investor may now own the credit card debt of a Canadian household issued by an American finance company and not even know it.

Prosper.com has sought to bring this financial technology to bear in small loans. Prosper.com is an online auction place for personal loans. It is not microfinance per se, but combines elements of consumer finance, social investing, and microfinance with an online market place. Prosper.com allows individual borrowers to post online their request for a loan with a proposed interest rate. Lenders in turn can shop on Prosper.com and bid to fund loans. As with a loan syndication, lenders may spread their risk by buying small parts of multiple small loans, such that a dozen or more lenders may fund a single loan. Lenders can bid down the offer rates on loans and receive updates to see if they have been outbid. Prosper.com facilitates the transaction for a 1–2 percent fee by providing basic credit information on the potential borrower (for example, credit score, home-ownership status, debt-to-income ratio). It also provides faces to the lenders by giving them space to share a photo and tell their story. Prosper.com has excelled in creating a true “people-to-people lending marketplace” in which the best borrowers get the best rates. The highest-rated borrowers pay slightly less than 10 percent on average, and it is not uncommon to see rates as low as 7 percent.

Prosper.com has been less successful in moving lenders to less qualified, riskier borrowers. The website was not intended to focus primarily on microenterprise or community development. A brief look at the inventory of available loans shows that the majority of lending is done to refinance consumer debt and most borrowers are salaried, although business and home-improvement loans are frequent. Since inception, lenders have been steadfastly risk averse. Only 17 percent of the \$91 million in brokered loans have gone to borrowers with a credit score of less than 600 or no credit score. This percentage dropped to 8 percent in the wake of the subprime lending crisis. To its credit, Prosper.com has tried to incorporate some traditional microfinance methods to help lower-rated clients. Borrowers can voluntarily associate themselves with certain groups (professional, ethnic, service, etc.) that act as a character reference and a screening mechanism. Theoretically, borrowers can upgrade their creditworthiness by being associated with a group’s collective credit grade. However, group-payment rewards led to group organizers trying indiscriminately to attract as many members as possible, leading Prosper.com to discontinue these rewards and de-emphasize group affiliation on their website.

Kiva is a nonprofit organization that seeks to disintermediate the lending relationship between socially motivated lenders and developing world microentrepreneurs using the Internet. Kiva works with MFIs in developing countries to build Internet profiles of borrowers with a brief biography, loan requested, loan term, and purpose. Rather than wait for individual loans to be funded, Kiva’s MFI partners first approve and disburse the loan, which is then refinanced by several Internet lenders. Like Prosper.com, Kiva encourages lenders to diversify risk (and currently limits lenders to \$25 participation on any single loan). Kiva’s

website also includes a detailed summary and rating of the MFI field partner. It is the collection rate and rating of the MFI partner that Internet lenders rely on to make decisions rather than a borrower's credit score. Unlike Prosper.com, Kiva's lending is not market-based; at present, lenders receive 0 percent interest, although Kiva plans to allow lenders to earn a return in the coming year.

Kiva's efforts at true financial disintermediation are complicated by cross-border transactions. Legally, Internet investors are lending to Kiva, not to the microenterprises. Kiva then lends to MFIs or has an agency agreement through which the MFIs manage Kiva's funds. Despite this, Internet lenders agree to assume the full risk of Kiva's loans, including foreign currency risk, mimicking a direct lending relationship with the borrower. Kiva relies on its MFI partners to identify and screen borrowers and approve, disburse, monitor, and collect loans. MFIs are also required to post borrower profiles with occasional updates, which can be time-consuming and outside their daily business routine. In return, MFIs are allowed to keep all the interest earned on the microenterprise loans, usually in excess of 25 percent. Most important, Kiva was created to move lenders to poor households. It deliberately selects some "young and unproven" MFIs that have the potential to reach poorer entrepreneurs overlooked by more established MFIs. Its lending has been constrained by the limited number of qualified and appropriate MFI partners as well as the time and cost required to screen, monitor, and enroll them.

In October 2007, eBay launched Microplace to help link individual investors to purchase a part of institutional investors' microfinance securities. Rather than disintermediation, Microplace is pursuing democratization of investing as an online registered broker-dealer that sells participations in wholesale loans and securities issued by social investors to MFIs. Investment choices are fairly limited at present and will be constrained by the number of credible social investors in microfinance. Returns are fairly low, ranging from 0 percent to 3 percent, reflecting the rates charged by the selected social investors. The potential in Microplace is to offer another option for individual investors to participate in microfinance with the confidence that selected social investors are able to analyze, monitor, and collect from MFIs.

The Bigger Gap: Information

The Internet is also helping to bridge the information gap between investors and borrowers without resorting to disintermediation. Founded in 1997, the MicroBanking Bulletin (MBB) has become the benchmarking source for the microfinance industry. The industry commentary, analysis, and benchmarks have created more standardization and a better understanding of developments in the microfinance sector. More than 200 MFIs are now included in the MBB. All financial data is provided voluntarily by MFIs (with substantial supporting statements) and then reviewed and adjusted by the MBB staff to provide comparable results for profitability, efficiency, and loan portfolio quality. This led to the founding of the MIX Market, a global, web-based, microfinance information-exchange platform. It provides information on and to a broad variety of microfinance players, such as MFIs, investment

funds, MFI networks, raters/external evaluators, and others. With more than 1,000 MFIs self-reporting, the MIX Market seeks to develop a transparent information market to link MFIs worldwide with investors and donors and promote greater investment and information flows. The self-reported data on the MIX Market is not analyzed or adjusted, but participants are ranked according to their level and quality of information disclosure. Neither the MBB nor the MIX Market intermediate or directly manage lender and borrower relationships. Arguably, the MBB and MIX Market services have done more to foster funding flows to MFIs, and ultimately to their microenterprise clients, than any other mechanism to date by providing a platform for exchanging information and promoting transparency. [For a look on how the MIX Market example may help promote a secondary market for domestic community development loans, see Laura Choi's article in this issue of the *Review* and her working paper: "Creating a Marketplace: Information Exchange and the Secondary Market for Community Development Loans" (July 2007) at: <http://frbsf.org/publications/community/wpapers/2007/wp07-01.pdf>].

Early Lessons Learned

The early experience of Prosper.com, Kiva, Microplace, and the MIX Market is instructive, if not definitive. First, Internet lending is attracting a new class of Internet investors comfortable with person-to-person lending, even across borders. This requires building some semblance of a relationship between the borrower and lender, providing accurate credit information, a mechanism for diversifying and sharing risk, and facilitating contracts and the physical (or electronic) exchange of cash. And yes, it has to be fun and either personally or financially rewarding. The ease with which lenders can browse Prosper.com's website is irresistible, allowing lenders to sort by credit rating or keyword, screen borrowers, and even place standing orders to automatically buy loan participations that meet certain criteria. With Kiva, lenders can sort by country, gender, business, and other categories. While Kiva and Microplace have targeted social investors, Prosper.com's online auction is also appealing to an investor who enjoys the investing process and financial returns.

Second, lenders rely heavily on the personal and financial information provided by the Internet underwriters to make decisions. Similar to rating agencies, the borrower information they gather and share directly supports disclosure and transparency, provides peer comparisons, enhances access to new funds, and, in the case of Prosper.com, enhances the terms of borrowing. The information is also directly linked to a person and their story providing some means to assess the borrowers character and the purpose of the loan. While the basis of Prosper.com's borrower ratings are independent credit scores, borrowers are able to improve their ratings by paying on time. Prosper.com also offers a growing statistical database on loan performance that segments lenders by different categories (credit score, home ownership, etc.) that serious investors rely on to analyze risk. Kiva lacks independent ratings of many of their MFI partners and most do not report to the MBB. As a result, Kiva has resorted to rating partners itself based on a set of standard criteria as well as past performance with Kiva's

loans. Although these in-house ratings are certainly efficient, it is too early to tell if this will compromise or enhance the soundness of Kiva's underwriting; ratings and credit scores are supposed to be independent and objective because there is an inherent conflict of interest with rating your own securities.

Third, each of these models shows the importance of the role of the Internet underwriter in managing risk on behalf of the lender. The marketplace of Prosper.com works in part because lenders trust that Prosper.com has the ability to monitor and pursue delinquent loans on their behalf. Kiva and Microplace work because lenders are committed to a cause and trust that they have diligently vetted their partners and monitor them closely.

Finally, reaching lower-income borrowers requires a strategy, structures, and incentives to do so. Prosper.com's marketplace offers a financial incentive to take riskier loans—the rates are often three to four times higher than low-risk loans. Still, investors have not lent much to lower or unrated borrowers. If Prosper.com's business model were to be used to reach low-income communities, it might address this by partnering with organizations such as qualified underwriters, and community and social organizations to identify, screen, and analyze prospective borrowers.

For now, all three have more funds than qualified investments. All three face a similar dilemma—how to increase the quantity and quality of borrowers. This is a reminder that capital is only part of the solution to economic development. With capital must come technology, know-how, and access to markets. To use a popular metaphor, development is no longer about handing out fish, teaching to fish, or even lending fishermen money to build a boat. Rather, development is now focused on providing fishermen with GPS, leasing them refrigeration units and packing warehouses, teaching them ISO standards, sending them market prices on their mobile phones, and linking them to export markets. Still, the advent of Internet person-to-person lending holds great promise for the future of microfinance.

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Additional Information Resources

For information on the organizations discussed:

www.heifer.org

www.mixmarket.org

www.kiva.org

www.mixmbb.org

www.microplace.org

www.prosper.com

For More Information on Microfinance:

ACCION International	www.accion.org
Consultative Group to Assist the Poorest (CGAP)	www.cgap.org
Grameen Foundation	www.gfusa.org
Imp-Act	www.imp-act.org
Microfinance Gateway	www.microfinancegateway.org
MicroSave	www.microsave.org
PlanetFinance	www.planetfinance.org
SEEP Network	www.seepnetwork.org
USAID microfinance	www.microlinks.org
World Council of Credit Unions	www.woccu.org

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“A Tale of Two Lenders.” *BusinessWeek*. Winter 2006. http://www.businessweek.com/magazine/content/06_52/b4015451.htm?chan=search.

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First Mover: The CDFI Fund's CIIS Database Holds Promise to Create Substantial Data Repository for Community Development Investments

Heidi Kaplan

Federal Reserve Board of Governors

As private investors seek to enter or increase their stake in the community development market, the cry for additional data to support investment decisions is growing louder. The lack of consistent and detailed information on the performance of community development financial institutions (CDFIs) has hindered the industry's entrance into the capital markets. Although an assortment of industry data sets are available for simple evaluations of CDFIs and their portfolios, the existing data are inconsistent and relatively sparse across reports. As a result, the call for a comprehensive data set to inform and attract investors interested in CDFI portfolios has become a mantra in the community development environment.

In 2002, the CDFI Fund (the CDFI Fund) recognized the demand for more detailed industry data and committed to filling the gap. The CDFI Fund contracted E. F. Kearney to develop and house a new data collection system, now widely known as the Community Investment Impact System (CIIS). Since fiscal year 2003, the CDFI Fund has used CIIS to collect organization, financial, and impact data annually from award recipients. In addition to the customary survey data, the CDFI Fund also collects transaction-level data on the organization's entire portfolio through CIIS. To date, the CIIS data has been made available to the CDFI Fund, two additional federal agencies, and two private parties conducting contracted services for the CDFI Fund.

CIIS is the first system to collect standardized transaction-level data on the community development finance industry. CIIS is a comprehensive program designed to be the primary data source for the CDFI industry. The transaction-level data makes CIIS a unique and highly desirable data set. This article discusses all aspects of CIIS with a particular focus on the transaction-level data as a unique and long-awaited data set for the investors and researchers interested in the community development industry.

Introduction to CIIS

In 1994, Congress established the CDFI Fund within the Department of the Treasury to expand the availability of credit, investment capital, and financial services in distressed communities nationwide. Over the past decade, the CDFI Fund has developed into an important government entity that promotes access to capital and economic growth in low-

income communities through monetary awards to CDFIs and the allocation of tax credits to community development entities (CDEs).¹

Through the CDFI Program, the CDFI Fund offers monetary awards for both financial assistance and technical assistance. Certified CDFIs are eligible to apply for financial assistance awards, which are typically used for capitalization. The CDFI Fund awards financial assistance as equity investments, loans, deposits, or grants that must be matched with nonfederal funds. Certified CDFIs and entities seeking certification may apply for Technical assistance grants to build capacity through the acquisition of prescribed products or services such as technology upgrades, staff training, or consulting services.

The New Markets Tax Credit (NMTC) program allows taxpayers to receive a credit against federal income taxes for equity investments in CDEs awarded an NMTC allocation. To date, the CDFI Fund is authorized to allocate a total of \$16 billion in equity, including \$1 billion specifically earmarked for the recovery and redevelopment of the Gulf Opportunity Zone.

In 2004, the CDFI Fund introduced CIIS as the annual data collection tool for awardee and allocatee financial performance and community development outputs. According to the CDFI Fund's "Rationale for Collecting Data" document, CIIS data are used to measure CDFI and CDE performance, conduct peer analysis, support community development research, and enhance community organizations with access to the capital markets.²

CIIS is comprised of the Institution Level Report (ILR) and the Transaction Level Report (TLR). The ILR captures organizational data, including the CDFI or CDE background information, financial position, lending and investing activities, community development outputs, and development services. The CDFI Program awardees are required to submit an ILR annually for two or three years and NMTC allocatees are required to submit an ILR annually for the life of their NMTC investments. Any certified CDFI may voluntarily submit an ILR.

The TLR captures data on each individual loan and investment in a CDFI's portfolio and a CDE's NMTC-funded portion of the portfolio. The TLR includes nearly 200 data points covering the loan or investment's rates and terms, underwriting criteria ratios, project costs and characteristics, geography, borrower characteristics, community development outputs, and program-specific information. Many of the TLR data points are optional.³

Financial assistance awardees are required to submit a TLR annually for three years and NMTC allocatees are required to submit the TLR annually for the life of the NMTC investments. Any certified CDFI may voluntarily submit the TLR. For each annual report submission, organizations are required to update loan and investment data reported in the

1 For a more complete definition of CDE and other terms used in the NMTC program, use the following link: <http://frbsf.org/publications/community/review/122005/article10.pdf>. Additional information about the CDFI Fund can be found at www.cdfifund.gov.

2 <http://www.cdfifund.gov/ciis/Rationale.pdf>.

3 Additional information about CIIS can be found at http://www.cdfifund.gov/what_we_do/ciis.asp.

previous year and add new loans and investments for the current year. Each TLR transaction has a unique CIIS identifier allowing data users to perform longitudinal analyses.

The CDFI Fund began collecting data through CIIS for fiscal year 2003 and has recently completed the data collection for fiscal year 2006. The four parts of the CIIS Data Collection table show the number of CIIS reports received for each fiscal year.

CIIS Data Collection⁴

Number of CDFIs (by type) providing an ILR

	Fiscal Year			
	2003	2004	2005	2006
Banks	8	7	8	17
Credit Unions	28	29	22	21
Loan Funds	178	194	139	168
Venture Capital Funds	9	6	4	4
Total CDFI ILRs	223	236	173	210

Number of CDEs (by type) providing an ILR

	Fiscal Year			
	2003	2004	2005	2006
Banks	2	6	11	11
Credit Unions	1	1	2	1
Loan Funds	6	36	76	97
Venture Capital Funds	7	10	13	20
Total CDE ILRs	16	53	102	129

Number of CDFIs (by type) providing a TLR

	Fiscal Year			
	2003	2004	2005	2006
Banks	0	0	0	1
Credit Unions	0	1	7	13
Loan Funds	0	19	61	93
Venture Capital Funds	0	2	3	3
Total CDFI TLRs	0	22	71	110

⁴ Data provided by the CDFI Fund. Number of ILRs and TLRs represent cleansed reports for fiscal years 2003, 2004, and 2005. Number of reports for fiscal year 2006 represents total reports submitted, because the cleansing process is not complete.

Number of CDEs (by type) providing a TLR

	Fiscal Year			
	2003	2004	2005	2006
Banks	0	4	6	0
Credit Unions	0	1	1	0
Loan Funds	1	31	36	31
Venture Capital Funds	3	7	4	3
Total CDE TLRs	4	43	47	34

CIIS Data Quality

The CDFI Fund has made high-quality CIIS data a priority. The commitment to quality is demonstrated through the CDFI Fund's production of detailed instructions, ongoing development of system technology, and user accessibility to knowledgeable staff. In addition, the CDFI Fund has been responsive to the industry's feedback on CIIS by regularly updating the system and supporting documentation.

The CIIS instruction documents serve as the users' guide to data definitions and the CIIS technology. The TLR instructions are essential for introducing users to the transaction-level data-collection requirements, including date-point definitions, the identification of data as "Mandatory," "Optional," or "Conditionally Required," and the description of permissible data-point responses. Organizations review the instructions to prepare for the data-collection effort, data storage, and uploading data options.

CIIS offers three options for uploading TLR data. The simplest TLR submission option is online manual entry. Online entry is intensely time-consuming for a portfolio of more than four or five transactions. However, a manual submission does not require the source data to be stored electronically. Organizations with some technological savvy may select the second upload option, submitting the Excel Template provided by CIIS. Filling in and formatting the Template may be time-consuming depending on the state of the source data. However, the Template allows users to collect, upload, and save the submission in a single file. Finally, a third submission option allows users to upload data through an XML interface using a file generated directly from their information systems. XML is the most reliable upload option for ensuring accurate data transmission because it eliminates human error that may occur during manual entry or copying and pasting. The CDFI Fund has encouraged software vendors that support CDFI and CDE loan management systems to develop and market CIIS XML modules for their software. According to the Fund's website, four vendors (three for CDFIs and one for CDEs) had CIIS-compatible software available for the fiscal year 2006 reporting period.⁵

The CDFI Fund supports consistency and quality across the CIIS data by maintaining personnel dedicated to CIIS. Specifically, the CDFI Fund contracted E. F. Kearney to

⁵ http://www.cdfifund.gov/what_we_do/CIIScompatibleSoftware.asp

provide a full-time CIIS Help Desk to respond to CIIS users year-round. The Help Desk is available to the public for questions regarding data definitions, technology issues, and other CIIS-related issues. In addition, the CDFI Fund offers user training for all aspects of CIIS. A sample of the training is available on the CDFI Fund's website.

The CDFI Fund further boosts accuracy in the CIIS data by following the annual submission process with rigorous data "cleansing." "Cleansing" is the process of comparing the data to the organization's year-end financial statements and other data points within CIIS. During the cleansing process, the CIIS Help Desk contacts organizations about any questionable submissions. The CDFI Fund does not accept an organization's data for analysis until the data-cleansing process is complete.

CIIS Contributions to the Community Investment Industry

The CIIS is a database that is unique and potentially a great resource to the community development investing community. The CDFI Fund released an initial analysis of the CIIS data set. The CDFI Fund has also shown that it is open to changes in how the data are collected.

Unique Data Set

The availability of the CIIS TLR data will provide key information about the community development finance industry, with a particular contribution to capital market players interested in community investments. Currently, CIIS is the lone system collecting detailed loan and investment data from CDFIs and CDEs. The system offers new insights into the terms and performance of these investments. The CIIS TLR data are also valuable because they include detailed geographic data on each transaction.

The community investment industry clearly hungers for more comprehensive data on the characteristics of community development financial products and their performance. The CIIS data may help enhance the liquidity of CDFIs and CDEs by providing capital market investors with the data they need to analyze portfolio performance. Such analysis may not only increase these investors' interest in CDFI and CDE portfolios, but it may also lead to better terms for CDFIs and CDEs because investors will have the appropriate information to price these portfolios accurately.

In a *Community Development Investment Review* article, "Turning Uncertainty into Risk," Mary Tingerthal discussed the need for data to respond to standard investor measures of due diligence, including the debt-coverage ratio, issuer background, delinquency and defaults, prepayment performance, and liquidity of securities.⁶ Although CIIS does not collect all of the requested data, the data set does offer a significant contribution toward resolving these questions. The following is a brief discussion of how the CIIS data meet, or fall short of, Tingerthal's list of the investor data requirements.

6 Mary Tingerthal, "Turning Uncertainty into Risk: Why Data Are the Key to Greater Investment," *Community Development Investment Review* 2, no. 2 (2006).

Debt Coverage

Initially, the CDFI Fund did not collect data on debt coverage ratio in CIIS. Beginning with the fiscal year 2006 TLR, the CDFI Fund required CDEs to provide the debt service coverage ratio for all loans as calculated at the time of investment. The debt coverage ratio is not collected for CDFI transactions.

Track the Record of the Issuer

For CDFIs, the TLR comprises the organization's entire portfolio for the report year, including any loans or investments that were active during that fiscal year. Each financial assistance awardee is required to provide three years of annual TLR. Transactions in these successive reports can be analyzed for longitudinal performance trends.

For CDEs, the TLR includes the portion of the organization's portfolio funded by NMTC investments. The CDFI Fund does not require CDEs to submit TLR data on non-NMTC-funded transactions. As a result, CIIS contains a complete history of the performance of the NMTC portfolio, but it lacks key information on an allocatee's lending and investing outside the NMTC program.

The CIIS reports described above answer many questions about the issuer's track record. Although the CDFI Fund does not require CDFIs and CDEs to submit data for all the available TLR data points, organizations are required to provide the loan or investment amount and purpose, rates and terms, and fiscal-year-end loan status. Some organizations may also provide data on the delinquency history, debt restructuring, and debt refinancing.⁷ Furthermore, the CIIS ILR provides a broad-brush view of organizational performance for each fiscal year reported.

Financial Status of Issuer

Through the ILR, the CDFI Fund collects information on the financial status of the lender. For CDFIs, CIIS stores key data from their balance sheets and profit-and-loss statements. However, for CDEs, the financial data collected are extremely limited.

Delinquency and Default/Recovery Performance of the Underlying Assets

Tingerthal describes a detailed analysis that may benefit from the availability of CIIS data. As noted above, CIIS provides some information on the assets⁸ and the borrowers.⁹

CIIS does not collect sufficient data to respond to the following: stability of the loan servicing agreements, prepayment performance, priority payment for the class of securities, and liquidity of securities.

7 Date Originated (Mandatory - M); Original Loan/Investment Amount (M); Purpose (M); Interest - Rate, Fixed/Variable, Amortization Type; Equity-like Features; Term; Guarantee; Lien Position; Collateral - Type, Value at Origination; Forgivable Loan?; Principal Balance Outstanding; Loan Status (Active, Closed, etc.); Days Delinquent; Number of Times 60 Days or more Delinquent; Number of Times the Loan was Restructured; Number of Times the Loan was Refinanced; Amount Charged Off; and Amount Recovered.

8 Term and amortization of the loans, interest rate (at fiscal year-end), presence and type of collateral, loan purpose, and loan amounts.

9 Debt coverage ratios (CDE), loan-to-value ratios (CDE) and credit score.

Initial Data Analysis and Accessibility

As the community development finance industry players eagerly await access to the TLR data, the CDFI Fund has made great strides to publicly release key data findings. Initial data analysis is available to the public and the raw data have been provided to a small number of private and public agencies. Recently, the CDFI Fund published the first two major online reports, “Growth, Diversity, Impact: A Snapshot of CDFIs in FY 2003,” and “Trend Analysis of CIIS Institutional Level Report Data, FY 2003-2005” using the ILR data. Data used for these reports, are also available to the public. Since the inception of CIIS, the Fund has also released findings on the leverage of CDFI Program award dollars, NMTC project descriptions and characteristics, and maps of the geography of NMTC projects.¹⁰

The CDFI Fund also provides the CIIS data set and analysis to fellow Treasury agencies to support the CDFI and NMTC programs. For example, the CDFI Fund uses the CIIS data to report on the impact and performance of the awardees and allocatees in Treasury’s annual Performance and Accountability Report.¹¹ In addition, the CDFI Fund provides the NMTC data available to the Internal Revenue Service for compliance purposes.

Finally, the CDFI Fund has provided CIIS data to public and private organizations for the purposes of program evaluation and research. The Government Accounting Office used the NMTC data to complete an evaluation of the NMTC program that was published in January 2007.¹² Two private contractors have accessed the CIIS data as a component of their detailed evaluations of the CDFI and NMTC programs. In addition, this year the CDFI Fund announced funding for a Policy Research Initiative. The proposal selections were announced in October 2007, and each affiliated researcher will have access to the CIIS data upon completion of their contract.¹³ The CDFI Fund has stated its intent to make the TLR data available to the public, although the agency has yet to work through the privacy and technological hurdles of this commitment.

CDFI Fund Responsiveness

The CDFI Fund has adapted to the constant demand for CIIS updates and improvements to capture the diverse CDFI and CDE market. CIIS is a comparatively new data-collection system representing a wide spectrum of financial products that evolve from year to year. The CDFI Fund’s responsiveness to requested changes, often substantial in nature, is laudable. Not only does the CDFI Fund capture the array of CDFI awardees, but the agency effectively met the challenge of designing CIIS alongside a developing and untried NMTC program.

Over the past four years, the CDFI Fund has added and adjusted data points to the TLR. For example, when the Fund became aware of the demand for additional data on underwriting ratios, data points for loan-to-value and other relevant ratios were introduced in the

10 http://www.cdfifund.gov/impact_we_make/data_reports.asp.

11 <http://www.treas.gov/offices/management/dcfo/accountability-reports/>

12 <http://www.gao.gov/new.items/d07296.pdf>

13 http://www.cdfifund.gov/news_events/PolicyResearchInitiativeResearchProject.asp

subsequent CIIS release. The CDFI Fund uses a help desk, training sessions, and conferences to interact with users and to inform the staff about the need for changes in reporting requirements. The most significant updates have been made to the TLR portion of CIIS.

The CDFI Fund also makes regular updates and clarifications in the instructions. For example, if the CDFI Fund receives questions about instructions or is alerted to a financial product that does not fit the given instructions, the CIIS documentation is updated with the necessary explanations. The CDFI Fund's website includes instructions from previous versions of CIIS, which allows users to view the updates made between annual CIIS releases.

Additional Opportunities for CIIS to Meet Industry Needs

CIIS provides the promise of data demanded by the community investment market. Two distinct actions by the CDFI Fund would make the coveted information that CIIS potentially offers more responsive to the needs of community investment players. First, the CDFI Fund can further develop CIIS as the standard for transaction-level data for the community development finance industry. Second, the CDFI Fund could provide more data and analysis to the public.

Standardize Transaction-level Data for Community Development Finance Industry

The community development finance industry would substantially benefit from a standardized data-collection effort. Currently, multiple government agencies, trade associations, and nonprofit organizations collect information on the industry's financial performance and outputs. The varying data definitions and output measures make it difficult for organizations reporting to more than one entity to collect accurate information and problematic for data analysts to compile data across reports.

The need for uniformity is particularly evident when examining the details and complexities of transaction-level data. With the release of CIIS, the CDFI Fund initiated a transaction-level data standard for the community development finance industry. Maintaining a single point of reference for data definitions and criterion will reduce the information-gathering and -storing efforts for the financing entities. As the "first mover" in designing a transaction-level data report, the CDFI fund earned the advantage of being the defining entity in this endeavor.

If CIIS is to develop as the "gold standard" for community investment analysis, it is imperative that the CDFI Fund continue to evolve the system to respond to the industry's needs. Continuing to solicit industry feedback is essential to providing standardized information that works for the diverse range of CDFIs and CDEs.

In addition, the CDFI Fund should make CIIS available to noncertified CDFIs. Opening CIIS provides an opportunity to reduce the number of existing data-collection efforts and, thereby, the reporting burden of many CDFIs. Increasing the number of CIIS reports also improves the significance of the CIIS data set. Finally, if CIIS remains limited only to the constituents of the CDFI Fund, other entities may develop competing transaction-level data-collection systems, which would lead to more problems with consistency.

Additional Data Analysis

As the sole entity with access to the complete CIIS data set, the CDFI Fund should greatly increase the data analysis provided to the public. The current analysis available on the website focuses on simple summaries of the information provided with few implications for the industry. Given the depth of data provided, the CDFI Fund should focus on providing more detailed statistical analysis and pointed findings. For example, the data could be used to support public policy recommendations, characterize CDFI performance to the public, or assist entities attempting to attract community investments.

The CIIS has the distinct opportunity to become the industry standard for community development loan and investment data. Making the TLR data widely available will allow investors and research analysts to work with the data and discuss issues and findings with the CDFI Fund. The outcome of this process will be important feedback on the data collected, the cleansing process, and the overall quality of the data. Data sharing will allow the CDFI Fund to properly manage the collection effort and the CIIS data to have the broadest impact on community development investments.

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Creating a Marketplace: Information Exchange and the Secondary Market for Community Development Loans¹

Laura Choi

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The lack of information exchange between community development lenders and capital investors limits the growth of a secondary market for community development assets. This obstacle also limits the ability of community development lenders to tap into the virtually endless capital resources of the secondary market, thereby limiting the valuable services these organizations provide to underserved communities. Participants from the Federal Reserve's Conference on the Secondary Market for Community Development Loans in 2006 suggested solutions modeled after popular social networks, such as MySpace, speed dating, and Match.com. The area of social networking may initially appear to be an unexpected source of inspiration for a community development finance model, but the underlying benefits of economic efficiency, widespread visibility, and reduced search cost make these models viable solutions.

Central to the academic discussion on information exchange is the theory of asymmetric information, which George Akerlof introduced in his seminal study on the market for used cars.² Another important article in the academic literature of information theory is George Stigler's "The Economics of Information."³ The article analyzes one of the most important economic considerations of information—ascertaining market price. For buyers and sellers seeking to uncover the appropriate market price for a good, the cost of searching is the time associated with finding a willing counterparty. This is especially pertinent for "unique" goods, or those that exhibit a high degree of heterogeneity, such as community development loan portfolios. A Congressional Budget Office study on the securitization of small business loans finds that "where secondary markets have been slow to develop, the high cost of transactions seems to be a major inhibitor."⁴ By reducing the search time associated with identifying buyers and sellers, and by improving the flow of information between parties, finding the optimal market price for a product becomes less costly and more efficient.

1 This article is a summary of findings from a longer working paper prepared for the Federal Reserve Bank of San Francisco's Center for Community Development Investments. For more in-depth discussion on this topic, see <http://www.frbsf.org/publications/community/wpapers/2007/wp07-01.pdf>.

2 G. Akerlof, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* 84, no. 3 (1970).

3 G. Stigler, "The Economics of Information," *Journal of Political Economy* 69, no. 3 (1961).

4 Congressional Budget Office, "Developing a Secondary Market for Small Business Loans." Inter-Agency Report, 1994, available online at <http://www.cbo.gov/showdoc.cfm?index=5013&sequence=0>

Modern applications of information technology make the social-networking models relevant solutions for addressing the information problem. Information systems linking different organizations, also known as interorganizational information systems (IOS), can make use of information technology to increase economic efficiency. The “electronic marketplace” is an IOS that allows participating buyers and sellers to exchange information about market prices and product offerings with a goal to establish buyer-seller relationships.⁵ Markets serve a number of functions in an economy, and the increasing role of information technology in these markets facilitates their operation. The introduction of an electronic market system reduces search costs and increases efficiency by reducing the cost of unproductive searches, and it allows buyers to locate products that better match their needs.⁶ In the absence of an efficient IOS, high search costs lead to efficiency losses and eventually cause the market to break down or prevent an efficient market from being established at all.

The implication for current research is that while data remain central to the growth of investor activity in community development, a mechanism must be developed that allows lenders and investors to easily share and access these data. Mary Tingerthal, president of the Capital Market Companies, Housing Partnership Network, stated that “any investment is possible only if the investor has the necessary information—the data—to decide whether to make an investment or purchase an asset.”⁷ It is vital that CD lenders improve their data-collection processes, and it is equally important that they have an efficient mechanism for finding a willing investor with whom to share this data.

A reputable institution could significantly advance the development of such a mechanism by establishing an online information-exchange platform that would allow buyers and sellers of community development loans to: (1) efficiently identify suitable counterparties, and (2) effectively share the appropriate type and amount of data to facilitate a sale.

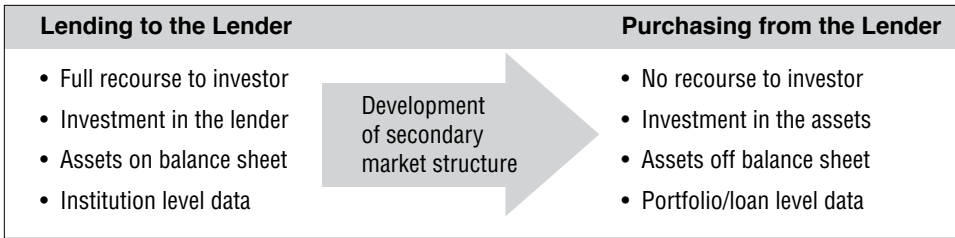
Most community development lenders borrow the majority of their available capital from mainstream banks through a term loan or line of credit, shown as “lending to the lender” in the diagram below.⁸ In contrast, the secondary markets financing model, shown as “purchasing from the lender,” allows lenders to replenish their capital supply through the sale of receivables. The characteristics of these two models differ greatly, and the industry needs to change the way it communicates with investors in order to transition from the present model to the secondary market structure.

5 J. Bakos, “Information Links and Electronic Marketplaces: The Role of Interorganizational Information Systems in Vertical Markets,” *Journal of Management Information Systems* 8, no. 2 (1991).

6 Ibid.

7 Mary Tingerthal, “Turning Uncertainty into Risk: Why Data Are the Key to Greater Investment,” *Community Development Investment Review* (Federal Reserve Bank of San Francisco) 2, no. 2 (2006).

8 An interview with Dan Letendre of Merrill Lynch on January 29, 2007, informed this section on capital financing models.



The creation of an online platform would facilitate this transition by allowing parties to share the specific types of data most relevant to the sale of community development loans. Lenders would share organizational data and provide data points related to their individual portfolios available for sale. For example:

- Loan-to-value ratio
- Debt service coverage ratio
- Interest rates
- Expected investor pass-through yield
- Portfolio size (amounts and number of loans)
- Types of loans in the portfolio (for diversification)
- Geography (to meet CRA objectives by reaching certain markets)

This list is only a preliminary estimation of the specific data investors are seeking. The development of an online platform requires a collaborative process that actively engages the investor community, in order to discern what these specific data needs are. The online platform would facilitate only the introductory phase of information sharing, where buyers and sellers identify the potential for transactions. Any actual legal sale of assets would occur through subsequent one-on-one conversations outside the sphere of the platform.

Another consideration for the development of an information-sharing mechanism is the type of secondary market activities that will occur. Whole loan sales and securitization are two distinct types of secondary market transactions. Securitization is better suited for large-volume loan pools (typically in the range of \$100 million) because of the significant transaction costs associated with the complicated legal and financial structure.⁹ In contrast, the sale of whole loans allows each loan to be sold as a separate investment with buyers often purchasing more than one loan at a time. Whole loan sales are often used when the volume of loans to be sold is relatively small or the sales of loans are infrequent.¹⁰ The community development field at present does not originate loans at a sufficient volume to support widespread securitization, but the development of an online platform can facilitate whole loan sales as a precursor to larger-volume transactions.

The platform host can play a significant role in implementing this online information-sharing tool. Some important considerations for implementation include:

⁹ Interview with Frank Wilary and Doug Winn, February 5, 2007.

¹⁰ HUD (1995), Notice: CPD 95-05.

- The platform host should be a highly credible and neutral third party.
- Access to the online tool should be limited, requiring that participants be involved in the financing of community development activities.
- The online platform should have a strong educational component.
- The beginning focus should be on whole loan sales as opposed to securitization.
- A mix of strategies should be used to attract participants and encourage continued involvement.
- Enforceable policies must be introduced to keep the data current.

The community development industry can benefit from increased secondary-market activities, but the present landscape of information sharing between lenders and investors remains a significant barrier. The lack of understanding of what investors want in relation to loan purchases is compounded by the lack of an information infrastructure.

Although the limited scale of the industry is a concern, it is valuable to develop the infrastructure to support the ongoing growth of the industry into the future. If the industry waits for lenders to increase their originations to a scale large enough to address the lack of information-sharing infrastructure, a lag will occur between the need for a mechanism and the implementation of that mechanism. The community development industry should seek early-stage solutions that can be modified and adapted as it grows in its lending capacity and becomes comfortable with the capital markets. The other benefit of taking proactive steps to improve market infrastructure is the likelihood that the information-sharing mechanism will act as a catalyst for secondary market growth. Just as eBay created a secondary market for heterogeneous goods (where people were suddenly able to find buyers for their old lamps and used books), the introduction of an efficient electronic marketplace may similarly spur the growth of purchases of community development assets.

The prospective platform host has the opportunity to take a leadership role in supporting community development lenders in their capital financing strategies. The creation and operation of an online information-sharing platform will allow lenders and investors to connect efficiently with one another in order to build trust and professional relationships. The formal implementation of a new platform also signals to the industry that the growth of the secondary markets requires a transition from the status quo—moving from the lending to the lender model to the purchasing from the lender model.

Both community development lenders and capital investors have opportunities for mutual gain in the growth of secondary markets. The ultimate beneficiaries are those communities that depend on this market for scarce financial resources. Strong, healthy communities are the surest sign of this industry's success. Improving information exchange will ensure that a solid infrastructure will be in place to support the community development industry in the future.

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Count What Counts: Improving Charitable Investor Access to the Community Development Sector with Better Data and Better Analytical Models

Lori Bamberger and Cort Gross

Imagine choosing a mutual fund or securities investment based on a telemarketer or one-paged postal solicitation. Imagine learning the fund's strategy and peer-rating exclusively from its own homepage and marketing material. And, finally, imagine determining a prospective investment's future financial potential exclusively from the ratio of one year of revenue to one year of administrative costs. Yet, this is what investors are asked to do every time they make a charitable contribution. The existing evaluative system for charity currently fails large and small donors, the high-net-worth as well as UNICEF's Halloween contributors. Unfortunately, the consequences for nonprofit organizations are even worse.

Without an easy-to-use evaluation system, the steady flow of smart investment capital to nonprofit organizations may begin to dwindle. With \$260 billion in the U.S. economy flowing annually to nonprofit organizations, and with more than \$199 billion of that coming from individual households, the nonprofit sector must make its operations and achievements easier to understand and supported by accurate data.¹

There was an explosion in thought and effort regarding social venture development and investment in the 1990s. The work is far from consistent, however, and mostly fails to find a critical analytical balance between measurement and industry insight. Although we acknowledge that people working in community development and finance, foundation program officers, and even private donors to nonprofit organizations large and small have all learned the language of "metrics," "outputs," and "return on investment," concepts foreign to nonprofit and community work twenty years ago, we suggest that our field needs to do both more and better.

A number of new ventures, ranging from online search engines to donor circles and venture philanthropy funds, are emerging to provide donors immediate access to information on which to base their decision to make a contribution. The community development field, however, remains fragmented and does not yet have a viable system for providing standardized, timely, and easy-to-understand information on their organizations and their work.

1 Sources for the size of this sector are numerous, with its size stated variously. One of the more compelling arguments for volume in the nonprofit sector, however—one that in part started the debate that we discuss in this essay—is Bill Bradley, Paul Jansen, and Les Silverman, "The Nonprofit Sector's \$100 Billion Opportunity," *Harvard Business Review* (May 2003).

Although tools that meet the needs of most investors, especially those who work online, are so far limited, some excellent comprehensive tools have been developed. Venture Philanthropy Partners, working with management consultants McKinsey & Company, has developed a deep matrix for the purpose of assessing nonprofit performance.² The Opportunity Finance Network (OFN) has also developed its CARS™ rating system for nonprofits, “a comprehensive, third-party analysis of community development financial institutions that aids investors and donors in their investment decision-making,” the purpose of which is to provide efficiency and uniformity as Community Development Financial Institutions (CDFI) are working to claim a place in secondary-market financing for their investments.³ The Blended Value Map, which Jed Emerson developed in his work with the Hewlett Foundation and Stanford University (and after a decade of proselytizing for social entrepreneurship), offers a comprehensive assessment of socially responsible investment (on issues of measurement, silos of interest, cross-cutting impact, and analysis on an international scale).⁴

Responding to What Donors Want

We have discovered some common themes among donor interest and donors’ needs for pre-investment research. For example:

- Most charity stays in the community in which the donor resides or works. Donors seek local examples of best practices, but they want to mimic the big foundations such as Gates, Rockefeller, and Ford.
- Although the Internet offers a wealth of information, we have not found a complete solution to sorting across or within sectors based on strategy and performance.
- Among younger high-net-worth individuals, donors seek innovation and technologically-savvy outlets for giving.
- Although peer circles are helpful, most donors invest individually.
- It is hard to find good information on or off the Internet about long-standing U.S.-based antipoverty and community development organizations. The successes and innovations in this policy area are known only to a relatively small number of policy insiders, academics, and professionals in the nonprofit arena.

In this environment, nonprofits need their own “Morningstar”—a tool that can cross silos of interest and illustrate capacity, performance, leadership, and the potential for return on social investment.

2 See an early version at “Effective Capacity Building in Nonprofit Organizations” (August 2001). (www.venturephilanthropypartners.org).

3 (www.opportunityfinance.net)

4 See www.blendedvalue.org, which includes a 360-page annotated bibliography on the issues.

Who Makes It Happen?

The responsibility for creating a useful evaluatory tool is still up for grabs, but we would argue that the nonprofit sector must produce it. Happily, though, production is under way. The reach of the Internet, for instance, has empowered new ventures to create charitably-oriented search engines and directories designed to help a donor find, contribute to, or volunteer with a charitable organization. Online examples include Global Giving, Donors Choose, and Heifer International.

On the Internet, it is far easier to find a “charity” providing microcredit to social-venture enterprises in Third World countries than to find community-based housing and community development corporations in the United States.⁵ Citigroup is launching a fund for its ultra-high-net-worth private banking clients for microcredit organizations operating in Third World countries. Although a community banking division exists within the bank, no such fund exists for domestic investment.

Finally, then, the responsibility for creating a pre-investment analytic tool of this kind also rests with those financial institutions that manage donors’ trusts, donor-advised funds, and other charitable investment instruments. Until recently, these multi-billion-dollar institutions have not been called upon to help implement the “content,” as opposed to the financial or legal structuring, of a donor’s strategy. However, this is beginning to change. “Financial advisors are realizing that they need to provide philanthropic advice that goes beyond creating financial and legal structures for giving,” according to the analyst Renata J. Rafferty in an article in the *Wall Street Journal*. “In addition to managing financial investments . . . advisors can help clients evaluate altruistic options, forge alliances with like-minded clients, and connect with experts.”⁶

These changes arise because charitable giving has become an enormous growth opportunity for financial institutions, as well as for proprietary donor-advised funds. Recently, Fidelity’s \$5 billion mutual fund lowered its minimum contribution to \$5,000 and reduced its fund management fees as well.⁷ With the inevitable shift of donor-advised funds from community foundations to banks, allowing investors to manage their profitable and charitable funds in one location, as well as the phenomenal growth in individual wealth in recent years, the community and economic development sector must ensure that donors have access to quality sectoral information that is now available primarily to foundation program officers and policy insiders.

5 Other resources also exist. Two of the more notable are Kiva (<http://www.kiva.org>), a well-regarded and well-supported microfinance program that advertises changing the world “for \$25,” and EBay, which has recently partnered with the Calvert Foundation to create MicroPlace, a new microfinance aggregator (www.microplace.com). According to its press release, MicroPlace will offer investment opportunities from around the world, including Africa, Eurasia, Latin America, and Southeast Asia. Individuals can visit www.microplace.com to research investment opportunities, make investments, and learn more about microfinance and global poverty.

6 *Wall Street Journal*, October 8, 2006, 1.

7 The fund is now advertised in magazines such as *The New Yorker* next to ads for upscale consumer goods.

The Current Landscape for Evaluating Charitable Investments

Table 1 offers an overview of the existing evaluative tools for market evaluations by nonprofits.⁸

Area of focus	Sectoral example	Access	Reach
Financial accountability and Form 990 data	Guidestar, Charity Navigator, Foundation Center	online	U.S.-based organizations with global reach
Strategy and analytic engines tied to individual sectors	Community Giving Resource, Pangea, PROI	online	U.S.-based organizations with global reach
Funds: social venture or “best in class”	Omidyar Network, Growth Philanthropy Network, Tipping Point, New Profit, PangeaGiving	online, in print, and personal staffing	Local, national, and international
Online donation portals	Global Giving, Greater Good	online	Local, national, and international
Publications and publication hubs	Philanthropy online, Journal of philanthropy	online and in print	Local, national, and international
Individualized quantification of donor’s gift performance	Newdea	online	Local, national, and international
Charitable consultants	Rockefeller, TPI, IFF, Arabella	in person	Local, national, and international

Financial Accountability

At least three organizations offer an encyclopedic approach to basic information about nonprofit organizations with a focus on the nonprofit’s own financial accountability. The preeminent engine is Guidestar, which publishes the single largest database of more than 1.5 million nonprofit organizations. Guidestar obtains its data from Form 990, the return submitted annually to the IRS by nonprofits. Most of Guidestar’s rich data and analytic tools, except for the most basic organizational identifying data, are available for a monthly subscription fee. Guidestar allows organizations to enter their own program goals and accomplishments in narrative form. Less well known and well populated, with more than

⁸ This at best is a representative sample. Resources of this kind continue to grow at a pace that quickly dates an article such as this one. The purpose here is not so much to cover the entire field as list representative samples by type, then critique the strengths of weaknesses of each.

5,000 closely analyzed organizations, is Charity Navigator. It provides users with more robust tools and rankings free of charge and offers additional services for subscribers. The Foundation Center offers a third catalog of nonprofit organizations and foundations, but it does not provide rankings or analytic tools.

Guidestar and Charity Navigator have made a single metric nearly universal to serve as the barometer of an organization's financial accountability: the ratio between an organization's expenditures on "program" and its expenditures on administration. In addition, both organizations publish information on executive director (or CEO) compensation, and both review historic budget and fund-raising data to determine growth and future potential for financial solvency. Finally, both offer the donor the ability to search for an organization by sector, using the taxonomy created by the Urban Institute. Most nonprofit organizations across sectors find these ratios oppressive at best and not a good indicator of financial management. Regardless, the analysis fails to assist a donor in answering the following questions: (1) Is the organization effective at what it does? (2) Does the organization meet its projected goals? and (3) Beyond its goals, does the organization use the most effective and up-to-date strategies in its sector?

Sectoral Analysis

Two organizations exemplify early sectoral approaches to evaluative tools for donors: Community Giving Resource (CGR) and the New Progressive Coalition's Political Return on Investment tool (PROI). CGR is a Web-based information portal designed to enable donors to understand the effective tactics used by national and community-based nonprofit organizations operating in low-income communities. CGR equips the donor with best-practice knowledge against which to evaluate specific organizations nationwide. CGR's expertise spans the range of low-income urban and rural America in education, health care, environment, jobs/microenterprise, housing/home ownership, financial stability, and family security. Within each of these "modules," CGR offers at least five tactical approaches, including solving immediate needs, offering entrepreneurial approaches, organizing and advocating for change, and organizational capacity-building. CGR also has begun to build a unique donor community by allowing large donors to share their experiences in building private foundations.

Although CGR does provide examples of best practices nationwide, it focuses on those issues within the mission of its parent organizations, the Aspen Institute and the Neighborhood Funders Group. It also lacks a more instantaneous and direct tool that can connect users from leading strategies to local organizations. CGR's management team, interviewed for this article, notes that this feature will be added.

PROI was launched in early 2007.⁹ It was created by the New Progressive Coalition (NPC) as an online marketplace that links donors with progressive start-up nonprofits. The PROI tool, which intends to use the rigorous measures that venture capitalists use in evaluating private start-up companies, features a single set of “core metrics” and at least six “sector metrics.” NPC will also rank organizations based on a combined score. Although data integrity is a concern, the PROI tool allows organizations to self-enter most of the data. PROI focuses on advocacy organizations working for change that typically use, at least in part, political means to achieve their goals. Core metrics and some examples of their subdeterminants include:

- Organizational goals and innovation
- Organizational leadership (including average years of experience, relevance of board experience, and rates of staff turnover)
- Program growth, replicability, and scalability (including increases in funding from year to year)

Sector metrics and some examples of their subdeterminants include:

- Advocacy/Organizing (including winning issue position, mobilization, membership and volunteers, change in awareness/opinion, and network and coalition building)
- Electoral (including voter turnout, contacts, demographics, fund-raising, volunteer engagement, and cost)
- Idea generation (media coverage, adoption/impact on legislation, and change in perception/awareness and influence)
- Leadership development (including successful placement of aspiring leaders)
- Media metrics (including audience reach and characteristics, new content produced and disseminated, and influence on opinion leaders)

The value of NPC’s system will depend entirely on the integrity of the data self-entered by each organization, but the rigor and depth of the tool is encouraging.

⁹ NPC has just launched three mutual funds, centered on energy independence and the environment, health care, and nonpartisan civic engagement and election-related issues, which use the PROI methodology to screen portfolio investments. Investors follow a five-step process to define their investing preferences and then can chart the progress of their investment using the PROI tool. According to NPC, its “Political Mutual Funds” will be continuously managed. Depending on the performance of the first round of holdings, or to take advantage of opportunities that arise, organizations may be added or removed to improve the “political return” of the fund. Contributors will have access to “Impact Reports” in order to constantly monitor how their contributions are making an impact. As Andy Rappaport, a Silicon Valley venture capitalist and political donor and, with his wife, Deborah, the major investor in NPC, has said, “By providing a mechanism for every citizen to make informed decisions about where to make donations, to measure and track the effectiveness of these donations, and to be able to join with other contributors to have a real impact no matter what they can afford, NPC is contributing in a very real way to welcoming citizen participation back into the political and policy making process.” See <http://blog.newprogressivecoalition.com>, as well as articles in *The New York Times* and the *San Francisco Chronicle*, November 19, 2007.

Charitable Funds and Aggregators

Some funds are taking targeted giving to a new level and pooling charitable contributions in organizations that demonstrate effectiveness. The New Philanthropy Network and New Profit Fund, for example, are both dedicated to increasing philanthropic investment in local organizations they deem effective and capable of being scaled and replicated at the national or regional levels.

Others, including the Tipping Point and the Robin Hood Fund, aggregate charitable contributions to those organizations deemed to be entrepreneurial and effective, whether new or long-standing. Interestingly, Tipping Point funds only operating expenses because its management team believes that too often organizations can only attract philanthropic capital to new initiatives that are flashy, which sometimes drain resources away from core operations. Social Venture Partners and Full Circle Fund, two donor circles, make investments in organizations that members select based on the ability of members to improve organizational capacity through volunteerism.

An Optimal Evaluative Tool

In our survey, we asked both what investors needed and what they hope the industry will produce. We sketch out its parameters here.

Simplicity and availability of data

The best evaluative approaches are simple and those that work turn on a few basic questions: What does the organization do? Is it successful at what it does? They also assess its capital need and the return that it can offer on an investment.

The ability to evaluate depends on accessing information across organizations and sectors, whether privately held or public. On the one hand, IRS Form 990s (the tax-exempt organization's equivalent of a tax return), annual reports, and press accounts available on the Internet are most of what a complete outsider to an organization can find. But as our discussion of Guidestar shows, using only these resources leaves significant gaps in the analysis.

On the other hand, accessing privately held information is often difficult without at least a soft promise of a favorable outcome—such as new capital—for a nonprofit organization. The \$5 billion Gordon and Betty Moore Foundation, for instance, conducted multiple interviews of dozens of organizations in its start-up phase. It asked tough management and strategic questions and tested on a range of analytical metrics. At the end of the process, all the participating nonprofits received was a sincere thanks from the foundation. The foundation's staff has stated that, while communication as to their intent could have been better, many organizations retained some bitterness about the experience.¹⁰

¹⁰ *San Francisco Business Times*, November 13, 2006 (www.sfbizjournals.com).

Narrowing the field by organizational size and longevity

Our preferred approach is to narrow the field to organizations that have a \$10 to 30 million balance sheet, a \$3 million minimum operating budget, and 3–5 years of operating history. These organizations are large enough that they can contemplate an investment, yet they are not so big that a small investment will not make a difference. In other words, they are still hungry enough that they will be willing to put up with a deeper third-party analysis, even as they might be grateful for a more personal analytical approach.

Measuring leadership

Beyond the numbers, the energy and experience of the management team are important. These characteristics are not precursors to analysis, but in our view they are necessary components of success. And while the lack of either does not exclude the team from making the grade, we believe they are fundamental.

Business planning and strategic direction is uneven in the nonprofit world. In the community development sphere, this direction is in its infancy, while in other aspects of nonprofit work it is well developed. Yet it can be safely asserted that financial size and history, coupled with the energy and experience of the senior management team, take on meaning for most nonprofits when they result in a clearly articulated strategic direction for the organization at the staff and board level. As a result, we believe that analysis of nonprofits is now far beyond receiving a well-written mission statement. Rather, an organization needs to demonstrate that it is engaged with its history and capacities and adequately equipped to assess and act upon them, that it can say not just who it is, but what it can and will do, and how that is effective, innovative, and sustainable.

Measuring accountability

Measuring accountability comes mostly from the audit practice. Are controls in place, understood, and maintained? Are audits and management reviews clean? Are reports and filings complete and timely? If there are findings or other management criticisms, are they addressed quickly and thoroughly? These questions are familiar to an organization that has undergone a few audits. They also underscore another criterion of inclusion in our evaluative universe: no audit, no investment.

Measuring outcomes

With regard to performance, the first test is one of self-discipline. Assuming the group has a plan, do they meet their own stated goals? And if they don't, why not?

A common tool used to measure organizational effectiveness (though not necessarily goal-attainment) is the amount of operating revenue spent on overhead versus program. While this can be a helpful test, it quickly becomes useless across markets and organizations, let alone sectors. Overhead to run a soup kitchen in San Francisco is hardly the same as running one in Fargo, and both are absolutely negligible compared with the overhead it takes to run a museum anywhere.

This is where best practices and sectoral analysis come in to play. A useful tool in the context of a soup kitchen, for instance, might be a comparison of senior management compensation across the sector, or the number of volunteer hours an organization is able to generate relative to total hours worked by staff, or the percentage of fund-raising that comes from individuals versus corporate support versus local community foundations.

With that knowledge, the essential overhead metric begins to take on some sector-specific meaning. Likewise, outputs and throughputs are helpful, but necessarily only with the combined view of industry standards and organizational goals. As an example, measuring participants in a job-training program or cost-per-participants is an interesting metric, but it is irrelevant if none of those participants are acquiring or retaining real jobs. The analysis needs to be smart enough to measure the right outputs, based on best practices, industry standards, and thinking around innovation.

Count what counts

The stated purpose of the analysis, the attempt to evaluate potential for return on investment, becomes especially interesting when it is asked to be smart about our work. Subject to financial accountability, we in the nonprofit sector have become very good at counting. In community development in particular, where the authors have the most expertise and where we are interested in finding ways to stimulate investment, we have learned how to tie every dollar we get to something: number of clients served; number of units built; number of meals prepared; number of jobs created. With regard to sectoral analysis, some of us have also shown a talent for situating those numbers in larger trends: improvement in test scores in our charter school versus improvement districtwide; job retention for our service population in income deciles across a census tract; savings accounts as a percentage of income for our program participants as compared to marketwide savings rates as tracked by the Commerce Department.

But the point of the analysis, what is termed double- or triple-bottom-line analysis in some contexts, is that there is something more to this investment. This poses some interesting questions. Do you get your money back? Maybe. Do you see a return on your investment? You certainly can. Can you quantify your return? Well, yes and no.

The binocular view

The last element of our analysis thus looks at two things. The first we call the “binocular view,” an analogy one of us learned from birdwatchers. Birders typically spot distant birds with the naked eye, then focus in with binoculars. After glimpsing the “little black dot,” the observers can get a sense of depth and scale with binoculars, which allow them to identify a bird at a distance. After they think they know they have identified the bird, however, the pros will often turn to a spotting scope, which provides a more powerful monocular view, to confirm their judgment. Similarly, we think that a binocular view of a prospective investment is needed before the more intense monocular, and typically more metrically oriented, view is warranted.

Investing in nonprofits requires making a judgment based on strategic plan, staff commitment, past financial commitments, and success in meeting its mission (i.e., that an organization can provide not just a return on investment but also a social return). The judgment of what that is will vary depending on the investor and the analyst. And while we have our favorite analysts, we are nonetheless suggesting that the same fundamental criteria can be used to make an assessment of any nonprofit business and program that is being considered for an investment. After the desire to invest in a nonprofit is identified, two views of any prospective investment are required, one for each of the two sides of value: the fundamentals as described above and the judgment that the work makes a difference.

The binocular view best describes our definition of social equity analysis. Although discussions of the double bottom line, a view to both financial and social return, or even the triple bottom line, an impact assessment including “people, profits, and planet” promulgated through the United Nations, which also takes into account environmental and other factors, are helpful in understanding the issues involved, their analysis can remain too binary for the analysis we call for. The blended-value approach, led by Jed Emerson and supported by others in academic and foundation settings such as Gregory Dees and Michael Porter, has also been productive. In this context, the binocular view attempts to be both simple and comprehensive. The analysis seeks an enterprise that shows capacity and mission. The organization considered for investment must demonstrate positive financial and organizational return and productive social change.

One extra test that we like to make—a kind of tiebreaker—is to look for what one investor has called the breakthrough initiative. We like to see what, when all the assumptions above are in place, is that extra activity the organization in question has proposed or accomplished. What have they done that really sets them apart from their peers? This can take numerous forms and it can be large or small. A breakthrough initiative is something that combines the two sides of value in a creative way. Capacity meets mission and does so with style. We feel it is imperative for organizations to define and for investors to seek out those opportunities that, with all the essentials in place, set one organization ahead of another. This can provide the basis for real return on social investment.

An example from the field

Madison Street Apartments is an 82-unit mid-rise mixed-use low-income housing project being developed in downtown Oakland by Affordable Housing Associates (AHA) in Berkeley, California. AHA has been working in Berkeley for more than ten years, with about 500 units of housing it manages itself, almost 300 of which it developed, as either acquisition and rehabilitation or new construction projects. The membership of its board of directors is stable and diverse. It is financially solvent and, after a few tough years, is currently in a stable, asset-favorable position on its \$30 million consolidated balance sheet, and is showing an operating surplus on its \$3 million income statement. Its relatively new executive, Susan Friedland, is well educated and experienced, and it has a thin but experienced development team with demonstrated capacity.

When the project was presented to prospective investors, seeking equity in return for the provision of low-income-housing tax credits, its costs and development timelines appeared reasonable. It was to be built in a strong market with a quantifiable need. Other project financing, including local government soft debt and conventional permanent debt financing, appeared reasonable and stood up to diligence.

Several equity investors bid on the project and one secured the deal for two reasons. Enterprise Community Investments, the for-profit tax-credit investment arm of the nonprofit Enterprise Community Corporation, saw all the fundamentals of a good deal. This was reason enough to bid aggressively on the investment. But the project also presented a breakthrough—one that Enterprise was willing to pay the “extra dollar” to support. On the Madison Apartments, AHA partnered with First Place Fund for Youth (FPFY), an organization serving emancipated foster youth, to provide one of the first permanent housing solutions in the market with social services on site for this underserved population. Further diligence on FPFY demonstrated further social return than an investment in their efforts would make. According to Rich Gross, Enterprise’s Acquisitions Director for California, once the fundamentals had been established, the investment was irresistible. They took a binocular view of the investment and won the opportunity to make a social return.

Although this example comes from a highly developed and robust market for a certain kind of equity investing in what has become a very complicated business, it is directly analogous to the case we are making here for a typical individual donor’s charitable gift. Fundamentals plus breakthrough, analyzed with a binocular vision, yields measurable social return.

Conclusion

We believe that the community and development economic sector in which we work is called upon to create a tool capable of allowing individual investors to examine collective data regarding performance outcomes, strategy, financial accountability, peer ratings, innovation, and leadership. This tool should enable charitable investors to evaluate a prospective investment for its potential social return on investment. Moreover, we would suggest that donors would find charitable giving more meaningful, more powerful, and more effective if they were offered a comprehensive tool that allowed a comparison among prospective investments. And we wholeheartedly believe that smarter investments can lead to more sustainable improvements in how community development organizations do their work.

This sector’s capital needs, the retail financial world’s market opportunity in charitable giving, and the customization demands of individual donors and investors have all conspired to create a unique opportunity; the time is ripe to create and launch an evaluative tool for community and economic development.

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Further Reading

Many CDFI leaders have worked to define the issues. In working with some of them as consultants or staff, the authors have benefited significantly from their insights. In addition to the sources mentioned in the notes, the following have been important to us.

On capital issues, see Nancy Andrews, “Equity with a Twist: The Changing Capital Needs of the Community Development Field,” *Capital Xchange*, The Brookings Institution (April 2001). Involvement in the early development of LIIF’s underwriting practice informs much of our fundamental analytical approach. The extensive work of Clara Miller in recent years is also informative, e.g., “Capital Structure Counts,” a publication of the Nonprofit Finance Fund (NFF) in 2001 (www.nff.org), or “Linking Mission and Money” (2002). Our definitional focus on the relationship between capacity, mission, and capital owes much to Miller’s perspective. NFF has also recently extended a deeper program capacity of its own on the issue of performance measurement and investment. See its recent report on the symposia held at Harvard’s School of Business in early 2007, detailing the work of staff member George Overholser, whose leadership of NFF Capital Partners is putting into practice many of the ideas we discuss here. The Aspen Institute also continues to lead in this field as facilitator and advocate. See Kirsten Moy and Alan Okagaki, “Financial Innovation and Infrastructure: New Pathways to the Capital Markets for Communities,” *Capital Xchange*. The Brookings Institution (July 2001), as well as many symposia and projects that have followed. The work of Pacific Community Ventures is extremely promising (www.pacificcommunityventures.org). Other articles of note on the capital markets include: Allen Grossman, “Philanthropic Social Capital Markets: Performance-Driven Philanthropy,” Harvard Business School, Social Enterprise Series, no. 12 (1999); Christine Letts, Allen Grossman, and William Ryan, “Virtuous Capital: What Foundations Can Learn from Venture Capitalists,” *Harvard Business Review* (March–April 1997); and Gregory Stanton, “Unblocking the Obstacles to the Capital Markets for Community Development Financial Institutions,” Capital Markets Access Program (January 2003).

The other factor essential to the analysis is organizational leadership and development. The literature on these topics is far-reaching and comprehensive. Some pieces that caught our eye in the context of the work for this piece, however, include: Jeffrey L. Bradach, “Going to Scale,” Harvard Business School Working Papers, Social Enterprise Series, no. 9 (1999). Bradach is the founding partner of Bridgespan Group, a nonprofit management-consulting arm of Bain and Company, which has worked productively with community development educational groups we know. Carol De Vita and Cory Fleming, “Building Capacity in Nonprofit Organizations,” The Urban Institute (April 2001) makes an interesting argument about stages of growth (www.urban.org). Social Venture Partners has an excellent Website listing of capacity-building resources (www.svpseattle.org/resources.) And a new book by Leslie R. Crutchfield and Heather McLeod Grant, *Forces for Good: The Six Practices of High-Impact Nonprofits* (San Francisco: Jossey Bass, 2008), complements and more deeply elucidates work along the lines of Jim Collins. Collins’s 2007 monograph, *Good to Great and the Social Sectors*, applies his work in the for-profit sphere to the nonprofit sphere. The two efforts have been, respectively, supported and endorsed by the Stanford Center for Social Innovation (www.gsb.stanford.edu/csi), which has also served as a locus of discussion and dialogue on these issues.

Community Development INVESTMENT REVIEW

The Community Affairs Department of the Federal Reserve Bank of San Francisco created the Center for Community Development Investments to research and disseminate best practices in providing capital to low- and moderate-income communities. Part of this mission is accomplished by publishing the *Community Development Investment Review*. The *Review* brings together experts to write about various community development investment topics including:

Finance—new tools, techniques, or approaches that increase the volume, lower the cost, lower the risk, or in any way make investments in low-income communities more attractive;

Collaborations—ways in which different groups can pool resources and expertise to address the capital needs of low-income communities;

Public Policy—analysis of how government and public policy influence community development finance options;

Best Practices—showcase innovative projects, people, or institutions that are improving the investment opportunities in low-income areas.

The goal of the *Review* is to bridge the gap between theory and practice and to enlist as many viewpoints as possible—government, nonprofits, financial institutions, and beneficiaries. As a leading economist in the community development field describes it, the *Review* provides “ideas for people who get things done.” For submission guidelines and themes of upcoming issues, visit our website: www.frbsf.org/cdinvestments. You may also contact David Erickson, Federal Reserve Bank of San Francisco, 101 Market Street, Mailstop 620, San Francisco, California, 94105-1530. (415) 974-3467, David.Erickson@sf.frb.org.

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