

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

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July 2007

Working Paper 2007-01

<http://frbsf.org/cdinvestments/>



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

A study conducted for the Center for Community Development Investments
at the Federal Reserve Bank of San Francisco

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Spring 2007

The author conducted this study as part of the program of professional education at the Goldman School of Public Policy, University of California at Berkeley. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author and are not necessarily endorsed by the Goldman School of Public Policy, by the University of California, the Federal Reserve Bank of San Francisco, or by any other agency.

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Executive Summary

There is a lack of information exchange between community development lenders and capital investors that limits the growth of a secondary market for community development assets. This obstacle 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. A reputable institution could contribute to solving this problem by developing an online information-exchange platform that allows 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.

Currently, most community development lenders borrow the majority of their available capital from mainstream banks through a term loan or line of credit. In order to move toward a secondary market structure, in which lenders replenish their capital supply through the sale of receivables, the industry needs to change the way it communicates with investors. The 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 the following data points related to their individual portfolios available for sale:

- 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 portfolio (for diversification)
- Geography (to meet CRA objectives by reaching certain markets)

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. The platform host can play a significant role in the implementation of this online information-sharing tool. This analysis led to the following recommendations for implementation:

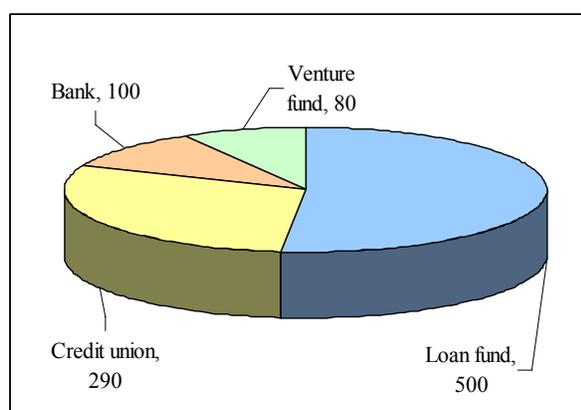
- The platform host should be a highly credible and neutral third party
- Limit access to the online tool, requiring that participants be involved in the financing of community development activities
- The online platform should have a strong educational component
- Begin with a focus on whole loan sales, as opposed to securitization
- Use a mix of strategies to attract participants and encourage continued involvement
- Introduce enforceable policies to keep the data current

The community development industry at present faces the obstacles of limited scale and origination volume, but it is vital to build the necessary information infrastructure today in order to support the growth of the industry into the future.

Introduction

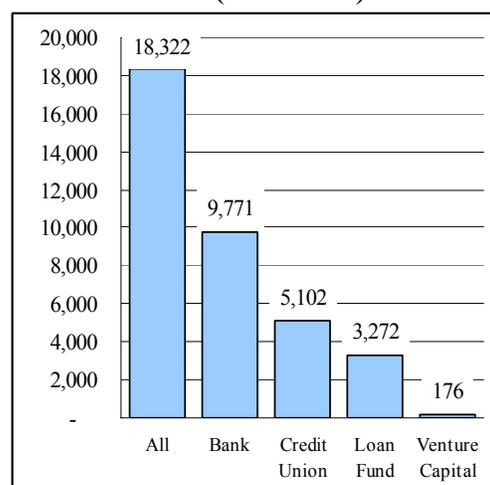
Community development lending across the country has led to demonstrated improvements in areas such as affordable housing, job creation and retention, educational opportunities for youth, and small business development. Community development financial institutions (CDFIs), which include community development banks, credit unions, loan funds, and venture funds, originate a significant share of the loans made for these efforts. The recently conducted “CDFI Data Project” study estimated that there were roughly 970 CDFIs in the United States in FY2004.¹ These CDFIs invested an estimated \$3.5 billion in fiscal year 2004 for community development services, and had held roughly \$18.3 billion in assets and \$12.2 billion in financing outstanding. In addition to the CDFIs, mainstream capital financial institutions motivated by Community Reinvestment Act (CRA) credit also provide direct loan financing to underserved communities.

Figure 1 – Estimated Number of CDFIs in US by Sector, FY 2004



Source: CDFI Data Project 2004

Figure 2 – CDFI Total Assets (\$ millions)



Source: CDFI Data Project 2004

The ability of all types of community development lenders (herein referred to as “CD lenders”) to continue to provide these services depends in part on their ability to access low-cost capital from various sources. Capital availability directly affects the volume of funds that a CD lender can channel to low-income communities. A “capital gap” can occur when CD lenders approach their liquidity limits and are unable to finance assets from their existing capital sources.² From 1999 to 2005, community investments grew 388 percent and the demand for these services is expected to increase in the future.³

¹ CDFI Data Project, 2004. Available online through the Opportunity Finance Network at <http://www.opportunityfinance.net/store/product.asp?pID=1&cID=3&c=303046>.

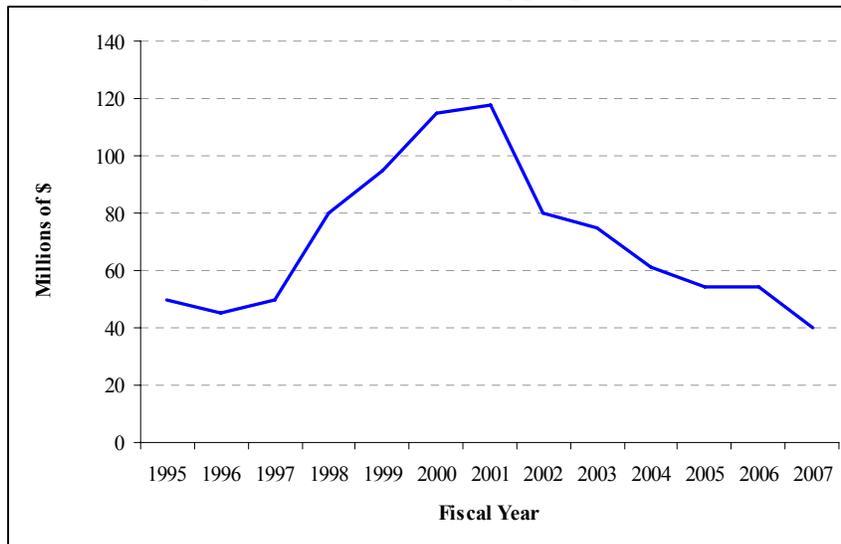
² Greg Stanton, “Unlocking Obstacles to Capital Markets for Community Development Lenders,” *Working Papers in Community Economic Development*, Applied Research Center.

³ Social Investment Forum (2005), “Overcoming Barriers to Community Investments: A Primer for Institutional Investors on Best Practices, Methodologies and Resources”. Community Investing Center, available online at <http://www.communityinvest.org/investors/inst.cfm>

Limited capital supply

Public capital resources for community development activities include federal, state, and local grant programs and a variety of tax credit incentives and funds for technical assistance. The federally supported CDFI Fund, operated as part of the U.S. Treasury, promotes access to capital and local economic growth through technical assistance and financial awards. These awards are finite and competition for them is fierce. For example, in its first five years, the CDFI Fund received 875 applications with requests totaling more than \$1.1 billion, more than five times the available funding.⁴ In the most recent round of funding application for FY 2007, the Fund received 213 applications requesting \$146.1 million in assistance, while only \$26 million was available for awards.⁵ In addition, the ever-changing political environment makes the long-term stability of federal capital resources highly unpredictable. Appropriations to the Fund steadily increased during President Clinton’s tenure (during which he signed the CDFI Act of 1994 establishing the Fund) and began their steady decline after FY 2001 (see Figure 3). The current administration’s FY 2008 proposal included \$29 million for the Fund.⁶ The limited and unpredictable supply of public funds indicates that community development lenders should look to other capital sources and seek innovative strategies to maintain the liquidity needed to meet their economic development objectives.⁷

Figure 3 – CDFI Fund Appropriations



Source: CDFI Coalition and Library of Congress

⁴ “House subcommittee marks \$40 million for CDFI Fund,” Credit Union National Association, *News Now*, May 31, 2006.

⁵ B. Luecht (2007), CDFI Fund press release, available online at www.cdfifund.gov/docs/2007/cdfi/CDFINACAAppsReceivedFY07.pdf.

⁶ CDFI Coalition (2007) E-News, February 8, 2007, <http://www.cdfi.org/Uploader/Files/enews020807.html>.

⁷ Wall Street Without Walls (2003). “Technology, Data Collection, Analysis & Dissemination.” Presentation at the “Orientation to the Capital Markets” conference held May 1, 2003, Federal Reserve Bank of Boston.

Other sources come from private capital in the form of grants or concessionary below-market rate investments from foundations, religious organizations, or socially motivated investors. Similar to the limitations of public funding for community development purposes, these no-cost and low-cost sources of private capital are restricted and highly competitive. Mainstream capital investors, including banks, insurance companies, pension funds, and mutual funds, can provide market-rate loan products and lines of credit to CD lenders, who then turn around and relend this capital to community development purposes. However, the supply of credit is limited, costly, and requires a significant amount of time to secure. The effort to increase liquidity and bridge the capital gap consumes valuable resources and staff time that would be otherwise spent providing more technical assistance, researching innovation, or expanding services for the community.⁸ CD lenders wishing to expand their lending operations will likely face capital and liquidity shortages in the future, limiting their community development impact.

The secondary market

One promising solution to the persistent problem of capital shortage is the creation of a vibrant secondary market for community development loans.⁹ Under this model, the future cash flows from repayment of community development loans can be sold in the secondary market, which consists of transactions between holders of loans (whether acquired by origination or purchase) and investors who purchase those loans.¹⁰ Secondary market transactions may involve the sale of whole loans, or these whole loans can be broken up into salable components that can be sold in a process known as securitization.¹¹

One of the most widely known examples of this process is the sale of home mortgages in the secondary market. Fannie Mae and Freddie Mac, both government-sponsored entities, purchase mortgages soon after lenders originate them and create securities backed by these loans. These mortgage-backed securities (MBS) allow the lender to collect repayment at the time of sale, thus giving the lender the ability to originate new loans to willing homebuyers. Asset securitization is a similarly structured process in which interests in receivables are packaged, underwritten, and sold in the form of asset-backed securities (ABS).¹² These can include receivables for credit card loans, auto loans, student loans, lottery winnings, and even music royalties. The underlying assets are relatively illiquid, as they represent the future repayment streams from these loans, leases, or other receivables with common features. The securitized structure allows investors to assess the risk and quality of the securities independently of the credit quality of the originator or seller. For a more detailed description of the securitization process, see Appendix I.

⁸ Interview with Deborah Leland, director of Northern California Lending, LIIF, February 16, 2007.

⁹ Robert Van Order (2006), "Securitization and Community Lending: A Framework and Some Lessons from the Experience in the U.S. Mortgage Market," *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 1.

¹⁰ Congressional Budget Office (1994), "Developing a Secondary Market for Small Business Loans." Inter-Agency Report, available online at <http://www.cbo.gov/showdoc.cfm?index=5013&sequence=0>

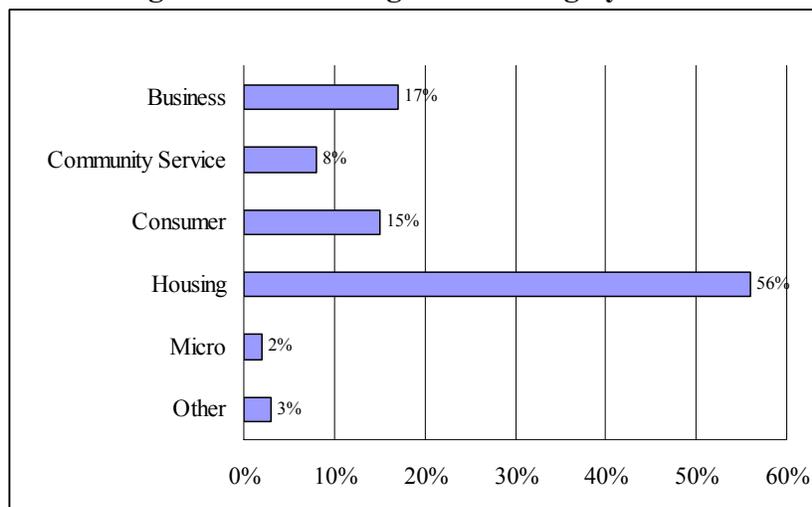
¹¹ Ibid.

¹² Comptroller of the Currency (1997), "Asset Securitization: Comptroller's Handbook." Available online at <http://www.occ.treas.gov/handbook/assetsec.pdf>

The creation and efficient operation of a secondary market for loans offers a number of benefits to originators, borrowers, and investors. This process generally gives originators access to broader funding sources at more favorable rates since they are able to transfer the risks of ownership to parties more willing or able to manage them, thus improving their overall debt ratings.¹³ The sale of loans also provides the opportunity for originators to move assets (the receivables from loan repayment) “off balance sheet” and replace them with cash equivalents from the sale proceeds. This increases lender liquidity, improves the originators’ balance sheet, and allows them to obtain immediate funds to generate new receivables, as opposed to having to wait for full repayment of the current receivables.¹⁴

This is especially significant when the receivables have longer terms, such as property mortgages, as opposed to shorter-term receivables such as credit card repayments. These benefits are compelling for community development lending, which is dominated by the financing of real property assets for affordable housing (see Figure 4).

Figure 4 – Financing Outstanding by Sector



Source: CDFI Data Project 2004

Borrowers also experience significant benefits from secondary market transactions, as they gain access to funds with favorable terms, such as longer payment terms and fixed rates that may otherwise be unavailable.¹⁵ In a securitized structure, investors hold claim to a share of the income from a diversified pool of loans, which is likely to result in greater income flow stability.¹⁶ This increased stability can improve the value of the loans, enable loan product specification to investor preferences, and reduce the end cost of funds to borrowers. Investment in these securitized assets can provide attractive yields for investors, increase secondary market liquidity, and offer greater flexibility because payment streams can be structured to meet investors’ specific needs.¹⁷

¹³ Ibid.

¹⁴ Timothy Leixner (2004), “Securitization of Financial Assets,” Holland Knight Publications, available at <http://www.hklaw.com/content/whitepapers/SecuritizationofFinancialAssets.pdf>

¹⁵ GAO (2003), “Community and Economic Development Loans: Securitization Faces Significant Barriers.”

¹⁶ CBO (1994), “Developing a Secondary Market for Small Business Loans.”

¹⁷ Comptroller of the Currency (1997), “Asset Securitization: Comptroller’s Handbook.”

Despite the growing need for community investments and the benefits associated with secondary market activities, many investors do not invest in the community development sector because of a lack of familiarity with the industry, as well as having a number of misconceptions regarding the value of these investments.¹⁸ A common concern among CD lenders is that their assets perform well but are priced as though they are risky.¹⁹ At a recent conference, Annie Donovan of NCB Capital Impact stated, “We believe we have something tantamount to ‘AA’ risk and we’re not necessarily getting ‘AA’ pricing right now.”²⁰ This perception of risk is due in part to the lack of performance data. However, as shown in Figure 5, many CD lenders demonstrate strong performance in their lending activities.

Figure 5 – Net Charge-Off Rates

Name	Location	Impact	Net Charge Off Rate
Community First Fund	Lancaster, PA	Over \$10 million in loans made for economic development of central PA	2%
Cooperative Fund of New England	Amherst, MA	Over \$13 million in loans to support co-ops & non-profit community groups	<1.75%
Jacksonville Affordable Mortgages	Jacksonville, FL	Financed over \$95 million (loans originated and brokered)	1.20%
Funding Partners for Housing Solutions	Fort Collins, CO	\$18.9 million in loans made for affordable housing	1.03%
Greater New Haven Community Loan Fund	New Haven, CT	Over \$36 million in developer loan value for housing & community development	<1%
Homewise, Inc.	Santa Fe, NM	Over \$75.8 million financed to support affordable home ownership	<1%
Community Redevelopment Loan and Investment Fund	Atlanta, GA	Loan fund over \$11 million to support affordable housing	< 1%
New Hampshire Community Loan Fund	Concord, NH	Over \$86 million in total financing for housing & community services	0.6%
Rural Electric Economic Development, Inc.	Madison, SD	Over \$29 million in loans made for small business and infrastructure development	0.5%
Unitarian Universalist Affordable Housing Corp.	Silver Spring, MD	More than \$15.1 million in loans made for affordable housing and child care	<0.5%
Mercy Loan Fund	Denver, CO	\$128 million loans closed for affordable housing development	0.32%
Chicago Community Loan Fund	Chicago, IL	\$23.6 million in loans made for revitalization of LMI urban communities	0.23%
Low Income Investment Fund	San Francisco, CA	Over \$700 million in loans made for housing, child care and education	< 0.1%
Florida Community Loan Fund	Orlando, FL	\$25.3 million in loans made for housing, economic development	0.05%
Los Angeles Local Development Corp.	Los Angeles, CA	Directly financed \$18+ million in small business & community facilities loans	0% since 2004
Northern California Community Loan Fund	San Francisco, CA	\$52.9 million in loans for housing, small business & community facilities	0%
Village Capital Corporation	Cleveland, OH	\$18.2 million loaned from 2002 - 2006 for community real estate development	0%
CDFI Industry Average *			0.55%
All Financial Institutions (mainstream) *			0.56%

Source: Self-reported historical data from Opportunity Finance Network member profiles.

*Figures for FY 2004, as reported in CDFI Data Project 2004

¹⁸ Social Investment Forum (2005), “Overcoming Barriers to Community Investments: A Primer for Institutional Investors on Best Practices, Methodologies, and Resources.”

¹⁹ D. Erickson (2006), “The Secondary Market for Community Development Loans: Conference Proceedings.” *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 2.

²⁰ Ibid.

Net charge-off ratios are defined as the flow of a lender's net charge-offs (gross charge-offs minus recoveries) during a period divided by the average level of its loans outstanding over that same period.²¹ This ratio is one of many financial metrics for measuring lending success, but the figure above provides some evidence of the soundness of many CD lender portfolios. Despite the misconceptions about default risk and credit worthiness of community development borrowers, CD lenders demonstrate prudent and effective lending practices. The CDFI industry average net charge-off ratio for FY 2004 was 0.55 percent, which rivals the average net charge-off ratio for all financial institutions.²² There is a disconnect between common conception and reality that affects the cost and availability of capital for community development purposes.

The current research problem – Lack of information exchange

CD lenders and capital investors are inherently different in their operations and purposes. By definition, community development organizations specifically serve populations that have traditionally been unable to secure credit or capital from mainstream institutions. These lenders have greater flexibility in their loan underwriting and servicing capacities than traditional investors. As a result, community development loans are often more complex, smaller in volume, have nonstandard terms and loan documentation, and are more heterogeneous than the “plain vanilla” loans favored by investors. The growth of a secondary market for community development loans requires that these intrinsically different market participants have an efficient method for communicating with one another to signal preferences for loan sales and purchases.

This lack of information is not a new problem and previously has been identified as a significant barrier to community development securitization.²³ The Federal Reserve hosted the “Conference on the Secondary Market for Community Development Loans” in September 2006 (hereafter referred to as the Conference), during which participants collaborated to try to find a solution to the information problem.²⁴ One of the recommendations was to “establish some sort of dynamic information exchange” with possibilities including an online network modeled after the social networking website MySpace, a “deal clearinghouse,” or interactive sessions between community development lenders and investors similar to “speed-dating.”

This report stems from these recommendations. There is a lack of information exchange between CD lenders and investors that limits mutually beneficial secondary-market activities in the community development sector. This obstacle limits the ability of CD lenders to tap into the expansive capital resources of the secondary market, thereby limiting the valuable services these organizations provide to underserved communities.

²¹ Community Investing Center Glossary. <http://www.communityinvestingcenterdb.org/glossary.cgi>

²² CDFI Data Project FY 2004.

²³ Testimony of Eugene A. Ludwig, Comptroller of the Currency, before National Council for Urban Economic Development, made February 27, 1997. Available online at <http://www.occ.treas.gov/ftp/release/97-20.txt>.

²⁴ E. Seidman (2006), “Bridging the Information Gap between Capital Markets Investors and CDFIs,” *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 2.

Organization of the Report

This report is comprised of four main sections. The first section addresses the current landscape of information exchange in the community development industry. It explores existing mechanisms and attempts to identify the key problem areas that ought to be addressed.

The second section addresses the theoretical and practical requirements for effective information exchange, including a review of the relevant academic literature. This section includes case studies from the fields of international microfinance and venture capital finance and identifies important lessons relevant for the field of community development.

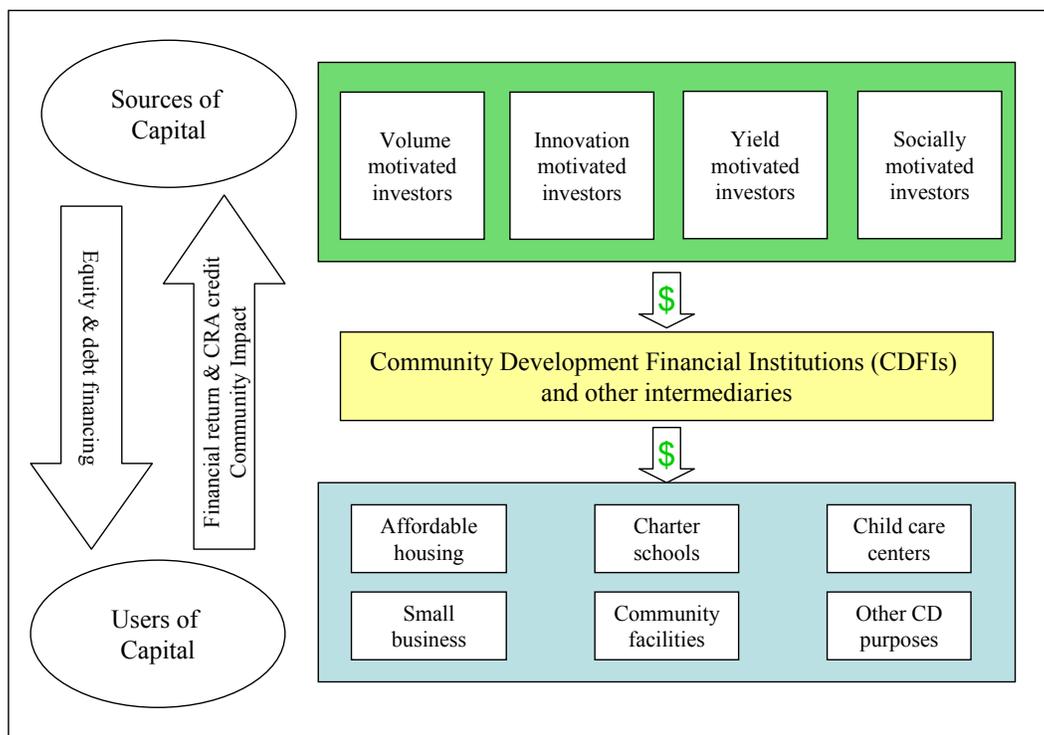
The third section identifies possible policy alternatives for improving information exchange between lenders and investors. In addition, this section includes a discussion of the evaluative criteria used to compare the projected outcomes of each alternative.

The concluding fourth section provides recommendations for implementation of the selected alternative identified in the previous section. This section goes in-depth into the specifics of developing and implementing the proposed policy alternative, providing guidance on how the prospective platform host can take a leadership role in contributing to the development of the secondary market for community development loans.

Section One: Current Conditions of Information Exchange

Figure 6 provides a simple illustration of the relationships between the sources and users of community development capital.

Figure 6 – Capital Sources and Users



Source: Adapted from Brookings Institution, 2001.²⁵

Understanding these capital relationships begins with recognition of different investor motivations. Dan Letendre of Merrill Lynch introduced an investor typology at the September 2006 conference, revealing that bank investors seeking CRA credit have different motivations (volume, innovation, and yield) and thus vary in their preferences for investment products.²⁶ A small, structurally complex loan may be undesirable for volume-motivated investors, but it could be attractive to the investor seeking CRA innovation credit. In addition to these three types of CRA-motivated investors, Figure 6 includes a fourth category of socially motivated investors who seek a “double bottom line” that includes financial and social returns. Currently no formal mechanism allows investors to communicate their motivations and preferences to CD lenders, and a number of interview responses indicated that there was a pressing need to make these “investor needs” known.

²⁵ M. Pinsky (2001), “Taking Stock: CDFIs Look Ahead After 25 Years of Community Development Finance.” *Capital Xchange*, Brookings Institution.

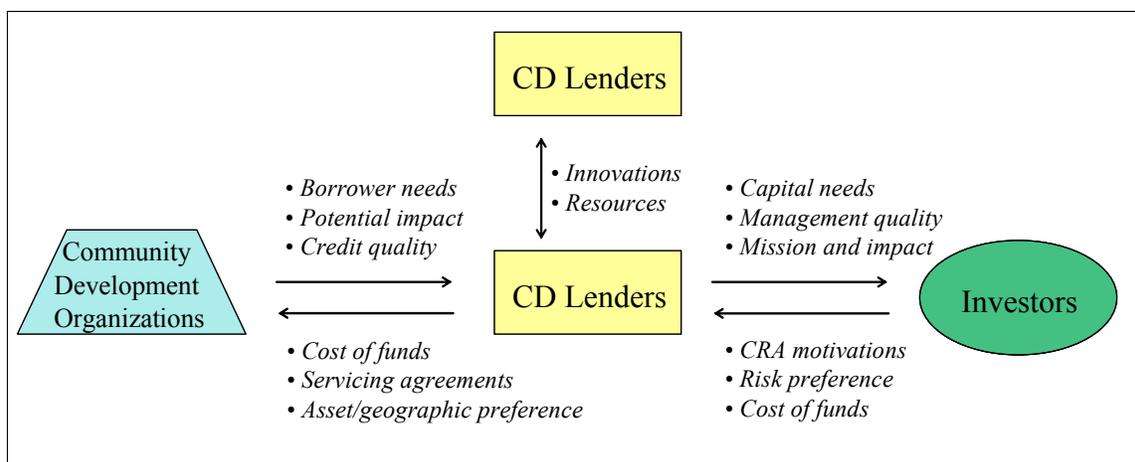
²⁶ See Seidman, “Bridging the Information Gap between Capital Markets Investors and CDFIs.”

The necessary information flows

In order for any financing activities to occur, a great deal of information must be shared across CD organizations (the end users of capital, which include affordable housing developers, child-care center operators, and small businesses), CD lenders, and investors. Figure 7 shows an example of these communication channels, which can be described as follows:

- *CD organizations (the end users of capital) convey to CD lenders* their borrowing needs, potential development impact, historical performance, and credit quality.
- *CD lenders communicate to CD organizations* their geographic and asset-class preferences, cost of funds to borrower, expectations of borrower qualifications, and servicing agreements.
- *CD lenders communicate to investors* their capital needs, management qualifications, historical financial performance, and mission and impact.
- *Investors communicate to CD lenders* their CRA motivations, risk preference, cost of funds, and credit-quality expectations.
- *CD lenders communicate with other CD lenders* to learn about innovations, resources, opportunities to pool loans, and other beneficial intra-industry information.

Figure 7 – Sample Information Flows between Parties



The opportunities for greater efficiency in the communication channel connecting community development borrowers and lenders are outside the scope of the secondary markets focus of this paper. Thus, the discussion focuses on the other two communication channels: (1) between peer CD lenders, and (2) between CD lenders and investors, with a focus on information sharing as it relates to the development of a secondary market for community development loans.

Mechanisms in place to connect CD lenders with other CD lenders

CD lenders that are able to connect with other CD lenders gain the opportunity to create valuable partnerships and share innovations, which may result in secondary market activities. One example of the intra-industry innovations that can arise through peer-to-peer communication is the forthcoming charter school conduit developed under the leadership of the Housing Partnership Network (HPN), a peer network and business alliance of high-capacity, entrepreneurial development nonprofits.²⁷ The conduit will accumulate charter school loans from a group of nonprofit financial intermediaries for sale into the secondary market. Nancy Andrews, CEO of the Low Income Investment Fund (LIIF), which will participate in the conduit, explained that the initial conversations regarding the conduit occurred “in the hallways” at a recent conference connecting a group of CD lenders, hosted by the Fannie Mae Foundation. Thomas Bledsoe, president of the Housing Partnership Network, stressed the need for CD lenders to network across organizations to use their individual strengths in order to “achieve scale” and go to the capital markets.²⁸ Mr. Bledsoe explained that HPN “facilitates peer exchange,” citing the fact that twelve of the sixteen conduit participants were already members of the HPN network.

As demonstrated by the HPN network, there are currently institutions and practices in place that connect CD lenders with their peers in the industry. Member organizations, for example, act as the communication channel between peer organizations, allowing collaboration and knowledge sharing across CD lenders. The Opportunity Finance Network is a prominent industry network and actively facilitates knowledge sharing through its annual conference, online training classes, consulting services, publications, and informal technical assistance.²⁹ The Coalition of Community Development Financial Institutions is another well-known industry network that operates a variety of programs to increase public knowledge about CDFIs and promote capacity building within the industry. These programs include: the “Industry Leadership Forum” for cross-sector communication and collaboration, the “CDFI Institute,” a biannual national policy conference designed to build capacity and promote networking, as well as an E-newsletter that informs industry colleagues of major news affecting the CDFI industry.³⁰

In addition to these member networks, a number of research and policy advocacy organizations also facilitate communication within the industry. The Aspen Institute is a nonprofit organization that engages in policy, leadership, and public education endeavors. Its Economic Opportunities Program focuses on strategies to connect the poor and underemployed to the mainstream economy, using “participatory learning” that is designed to help funders, policymakers, nonprofit leaders, and community representatives engage in self-assessment, collective knowledge development, and joint action.³¹ Another example is the Milken Institute, an independent economic think tank that “helps business and public policy leaders identify and implement innovative ideas for creating broad-based prosperity.”³² The Institute communicates its research and policy efforts through educational roundtables, forums, seminars and conferences, and published reports.

²⁷ Housing Partnership Network website, http://www.housingpartnership.net/about_us/

²⁸ Interview with Thomas Bledsoe, March 7, 2007.

²⁹ Opportunity Finance Network website, <http://www.opportunityfinance.net/about/about.aspx>

³⁰ Coalition of Community Development Financial Institutions website, <http://www.cdfi.org/aboutus.asp>

³¹ Aspen Institute website, <http://www.aspeninstitute.org>

³² Milken Institute website, <http://www.milkeninstitute.org/about/about.taf?cat=mission>

Government-related organizations also play a role in information sharing within the industry. The Federal Reserve Bank of San Francisco actively organizes industry conferences and publishes the *Community Development Investment Review*, which disseminates educational articles and research industry-wide. Government-sponsored entities such as Fannie Mae and Freddie Mac also hold industry conferences which allow for significant intra-industry networking opportunities, as evidenced by the creation of the HPN charter school conduit.

Lack of a mechanism to connect CD lenders directly with investors

In contrast to the established CD lender networks discussed above, there is no such network that efficiently connects lenders and investors. A 2003 GAO study on community and economic development loan securitization identified six major barriers for lenders and investors in securitizing CD loans, one of which was the finding that “mechanisms available to support securitization for CED loans are limited.”³³ The study summarizes the problem:

Lenders have no apparent and available network or facility from which to draw if and when selling loans. Likewise, investors have no apparent facility or entity from which to purchase securities backed by CED loans. In contrast to other mortgage-backed and asset-backed securitizations, there is no comprehensive mechanism for sharing information with interested lenders, investors, and capital market intermediaries.

The practitioner responses from the 2006 Conference echoed these sentiments, citing the information asymmetry between potential buyers and sellers of CD loans as a barrier to the growth of secondary market activities.³⁴ Without the proper mechanism in place to facilitate information sharing between lenders and investors, the information asymmetry problem will persist. This asymmetry represents a market failure that stems from the lack of necessary information exchange. (See Section 2 for a closer look at the academic theory concerning economic markets.)

During interviews conducted as part of the research for this paper, industry practitioners voiced a common concern that CD lenders do not know who the potential investors are, nor do they understand what potential investors want. Ellen Seidman of the ShoreBank Corporation identified two basic levels of uncertainty in the information problem. At the simplest level, “Who is in the market on both sides? In other words, who are the buyers and who are the sellers?”³⁵ At the next level, the question becomes “What are the buyers interested in buying, and what are the sellers interested in selling?” Nancy Andrews of LIIF also echoed these sentiments and indicated that it would be a “critical value added if you could get from investors what they need.” According to Donna Fabiani, program manager for the Financial Strategies and Research (FS&R) unit of the CDFI Fund, explained that “the big question CDFIs have is, ‘what do investors want to see?’ It’s not even about sharing information yet, it’s first just finding out what it (the information) is.”³⁶

³³ GAO (2003), “Community and Economic Development Loans: Securitization Faces Significant Barriers.” See Appendix II for more discussion on these barriers.

³⁴ Seidman, “Bridging the Information Gap between Capital Markets Investors and CDFIs.”

³⁵ Interview with Ellen Seidman, February 12, 2007.

³⁶ Interview with Donna Fabiani, February 26, 2007. Ms. Fabiani joined the Opportunity Finance Network as Executive Vice President of Knowledge Sharing in March 2007.

In the absence of a formalized mechanism, these questions remain unanswered, thus hindering the growth of any loan sale activity. This lack of understanding prevents lenders from being able to begin collecting the appropriate data in a standardized format acceptable to investors. In addition, lenders do not understand the specific underwriting criteria that investors expect to see when considering loans for purchase. Dan Letendre of Merrill Lynch revealed that “there is a lack of understanding of the information they (lenders) are going to have to provide in order to sell their loans.” From the investor perspective, he asks the hypothetical questions, “What information are you (the lender) currently capturing or think you need to capture to sell this portfolio to investors? What would the underwriting box need to be?” Thus, there is consistent acknowledgment of the problem—a lack of information sharing between lenders and investors, exacerbated by the absence of a facilitating mechanism.

Community development intermediaries

While there is no formal mechanism allowing CD lenders and investors to communicate directly, there is a select group of community development intermediaries that facilitate secondary market activities. The Community Reinvestment Fund (CRF) in Minneapolis is the industry leader in secondary markets transactions. CRF engages in nationwide purchases of economic development, affordable housing, and community facility loans. CRF purchases and pools loans until they reach a sufficient scale (typically at a minimum threshold of \$100 million),³⁷ at which point it can sell them to institutional investors.³⁸ In 2004, CRF issued the first-ever rated economic development debt offering, CRF-17, with the first three tranches receiving a rating of AAA by Standard & Poor’s.³⁹ This marked a significant achievement in the field as the favorable ratings attracted new investors, many of whom would likely not invest in an unrated security. CRF issued the second S&P-rated security to date, CRF-18, in 2006.

Figure 8 – S&P Ratings of CRF-17

Amount	Class	Maturity Date	Rating
\$8,871,000	A-1	July 2010	AAA
\$8,610,000	A-2	May 2013	AAA
\$8,610,000	A-3	September 2019	AAA
\$7,674,000	B	July 2024	A
\$6,523,000	C	May 2025	BB

Source: CRF, 2005

The North Carolina–based Center for Community Self-Help operates the “Secondary Market Program.” Through this program, Self-Help purchases affordable housing loans from lenders and then resells them to Fannie Mae. The National Federation of Community Development Credit Unions also operates a secondary markets program (the CDCU Secondary Market), in

³⁷ Interview with Mary Tingerthal, February 12, 2007.

³⁸ CRF website, <http://www.crfusa.com/section.asp?sectionID=62>

³⁹ Presentation by Frank Altman, CEO of CRF, to the Federal Reserve Bank of Boston, November 4, 2005. Available online at <http://www.aspenscale.org/boston/ppts/crf.ppt#2>

partnership with the Self-Help Credit Union. Under this program, Self-Help originates loans to immigrant first-time homebuyers and then sells the loans directly to the Federation. Seed capital for the CDCU Market came from the CDFI Fund, with additional investments from a separate Federation capitalization program. The CDCU Secondary Market will replenish its capital by raising debt from social investors and by selling packages of seasoned loans to outside investors. The Federation is also exploring opportunities to securitize mortgage loans, in collaboration with other community lenders.⁴⁰

Other types of intermediaries include the San Francisco-based Impact Community Capital, which manages investments for its insurance company members, making and overseeing investments in low-income communities throughout California. Impact successfully engaged in two major secondary market transactions. The first was a \$40.3 million investment in affordable housing loans in July 2000, where the portfolio purchase was funded with proceeds from a simultaneous securitization.⁴¹ The second was a November 2001 purchase of \$124 million in affordable housing mortgages.⁴² Another successful intermediary is the New York-based Community Development Trust (CDT), a private, mission-driven real estate investment trust that provides debt and equity financing for community development purposes. CDT invests “long-term debt capital by purchasing smaller, fixed-rate multifamily mortgages from community lenders.”⁴³ In 2004, CDT purchased \$44.9 million in affordable housing mortgages, swapped these mortgages for an equal value of Fannie Mae Mortgage Backed Securities (MBS), and sold these MBS to JPMorgan Chase.⁴⁴

Without question, these intermediaries have made significant contributions to the industry effort to increase secondary market activities. However, there are few of these intermediaries, and they can only do so much. The continuing growth of the community development sector requires greater access to the capital markets than these organizations can offer.

Two capital financing models and their implications for information exchange

In contrast to the function of intermediaries, there are two basic capital financing models that bring lenders and investors together directly. I will refer to these two models throughout this paper as the (1) *lending to the lender* and (2) *purchasing from the lender* models.⁴⁵ These two models differ greatly in their structure and purpose. This difference has strong implications for the types of information sharing that must occur between lenders and investors. Figure 9 depicts some of the main features of each of the two models, indicating that the development of a secondary market structure requires shifting the industry from one capital financing model to the other.

⁴⁰ National Federation of Community Development Credit Unions, http://www.natfed.org/i4a/pages/index.cfm?pageid=888#Secondary_Market

⁴¹ Impact Community Capital website, <http://www.impactcapital.net/julysummary.html>

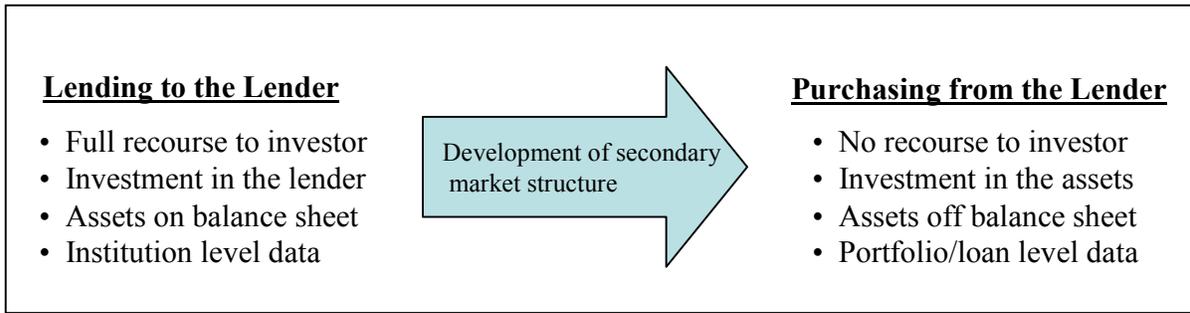
⁴² Impact Community Capital website, <http://www.impactcapital.net/novsummary.html>

⁴³ Community Development Trust website, <http://www.commdetrust.com/whatwedo.htm>

⁴⁴ J. Levy and K. Purnell (2006), “Case Study: The Community Development Trust Taps Wall Street Investors,” *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 1.

⁴⁵ An interview with Dan Letendre on January 29, 2007, informed this section on financing models.

Figure 9 – Comparison of Capital Financing Models



Lending to the lender

Lending to the lender is the most common form of capital financing in the industry, in which investors make loans or extend a line of credit directly to the CD lender itself. The CD lender then takes this capital and relends it to community members for development purposes. Under this model, the CD lender holds the stream of future repayments from the community members as assets on the balance sheet. As the CD lender awaits repayment over the full term of the loan, it may face liquidity constraints due to the limitations of the original investor loan.

The investor’s underwriting criteria for this *lending to the lender* model evaluates the general financial and managerial health of the lending institution. Under this model, the investor does not need to know about each individual community borrower. It only needs to know that the CD lender is employing prudent and safe lending practices when making loans to these borrowers. An investor’s decision to lend to a CD lender would likely focus on a narrowly bound set of data that generally would include:

- Adequacy of capital
- Track record (loan loss and delinquency)
- Asset quality
- Management team
- Earnings
- Potential liquidity
- Longevity of the institution

This model implies that investors don’t necessarily need to know the nature or details of what the CD lender is lending to (for example, the investor doesn’t need to know the details of how specific charter schools manage their operations; they just need to be able to evaluate and understand the lending organization itself). Under this model, there is full recourse to the investor. If the CD lender makes poor lending decisions, it is still contractually obligated to repay the loan to the investor. The lender has every incentive to perform well and repay the loan; to do otherwise would indicate that the organization’s operations are not sustainable. Thus, the investor takes a risk on the viability of the lending institution as a whole and does not take the risk of the underlying assets themselves.

Purchasing from the lender

Purchasing from the lender is a model used when community development lenders sell their assets directly to investors. The financing transaction is categorized as a sale, as opposed to a loan; this model allows CD lenders to move these assets off their balance sheets. Because the CD lenders receive payment for the sold assets at the time of sale, they increase their current liquidity and are able to turn around and relend the money immediately. This model is the very essence of secondary market activity and represents the type of capital financing that the industry hopes to achieve.

Under this model, the investor takes on the risk of the underlying assets themselves, separate from the risk associated with the CD lender. There is no recourse to the lender as the sales transaction transfers ownership of the assets from the CD lender to the investor. For example, a CD lender could sell a charter school loan to an investor who would now own the future repayment stream of the school loan. If the charter school fails to earn a charter renewal, is forced to shut down, and is unable to repay the loan, the investor must now take on the loss associated with the underlying asset. This risk can be successfully managed with the appropriate performance data on each type of loan, in addition to the organizational level data. This represents an inherently different financing structure than the *lending to the lender* model.

I conducted an informal survey of mainstream investors who provided insight into their investment practices on the condition of anonymity due to the sensitive nature of the data. Their responses provided a detailed look at the types of information that would be relevant to investors when considering loans for purchase. In response to the question, “What information would you need to know about the *lending organization* when considering purchasing loans for securitization?” one investor responded:

*Information about the **people** involved in the organization—experience, amount of time management has worked together, background on management, staff capacity.*

*Information about **credit** policies—loan loss rates, delinquency rates, loan loss reserves, risk rating systems, collateral types, and advance rates.*

Another investor expanded on this response by providing the following detail in response to the same question about information on the lending organization:

Investor Needs: Data on the Lending Organization

- Mission statement
- Investment philosophy
- Code of ethics
- Equal opportunity employer
- Organization and people
 - Articles of incorporation
 - References and staff biographies
 - Employment record
 - Investment performance record
 - Financial strength
 - Contingent liabilities
- Operations
 - Underwriting standards
 - Servicing standards
 - Monitoring standards
 - Reporting capabilities
 - Internal controls
 - Investment approval policies
 - Staff training and development
 - Technology and business systems
 - Business continuity plan
 - Insurance: Errors and omissions
 - Insurance: Directors & officers liability
 - Legal actions

Given the risk transference discussed previously, this model requires loan level data, in addition to the organizational data listed above, in order to price risk and predict future cash flows. The investor must also know something about the nature of the assets (for example, understanding the local and state laws associated with charter school renewals). In addition, the investor would require information specific to the characteristics of the loan portfolio. An investor from a mainstream bank provided the following response to the question, “When analyzing a loan portfolio for purchase, what are the key pieces of information you must obtain before making a decision to buy?”

Investor Needs: Data on the Portfolio

- Loan documentation
- Performance data collected
- Underwriting criteria and procedures
- Maturity
- Risk-return level
- Rate
- Information on any specialized loans offered
- Time distribution of the loans (to assess if the delinquencies reported are representative of the actual loans or if the delinquencies reported have been diluted by recent increases in loans)
- Loan portfolio data
 - loan types
 - security interests
 - covenants
 - advance rates
 - borrowers risk rating levels
 - market

The lists provided above are just a sample of investor responses, and each investor will have different standards for each of these criteria. The data requirements in the *purchasing from the lender* model are much greater and require significantly more communication between lenders and investors. Thus, while the industry may be familiar with the *lending the lender* model, CD lenders wishing to move toward the *purchasing from the lender* model should be prepared to collect and share this information. Transitioning from the current *lending to the lender* model to the secondary markets approach of the *purchasing from the lender* model requires an information infrastructure and a method for educating participants on the types of data that need to be collected.

The role of third-party ratings

For mainstream securitizations, third-party rating agencies such as Standard & Poor's, Moody's, and Fitch play an integral role in the investment decision-making process. These ratings standardize and communicate vast amounts of information in a format that investors are comfortable with, thus reducing the transaction costs of information gathering for the investor.

However, the community development industry has generally been excluded from the major raters because of their smaller scale and lack of standardization. The Opportunity Finance Network (OFN), an industry member organization, created the CDFI Assessment and Rating System (CARS) in 2004 to serve as the industry's third-party-rating mechanism. A completed CARS analysis provides information on impact performance and financial strength and performance.⁴⁶

⁴⁶ CARS brochure, available online at http://www.opportunityfinance.net/store/Downloads/cars_set.pdf

CARS plays an important role in improving the flow of information between CD lenders and investors. However, the rating process is better suited for the *lending to the lender* capital financing model. According to Kathy Stearns, executive vice president of CARS for OFN, the CARS rating process assists investors interested in directly investing in a CDFI.⁴⁷ The rating analysis provides an in-depth look at the financial and managerial health of a CDFI lender, as well as its lending processes and procedures—factors that best inform a decision to invest in the lender itself. Mr. Letendre voiced a similar sentiment, stating that “CARS is a good example of a tool that improves information flow between lenders and investors when the transaction is structured as a loan to the lender, with recourse to the lender.”

Thus, while CARS plays an integral role in the capital financing of CD lenders, it does not fully bridge the information gap between lenders and investors for the purposes of increasing secondary market activity. In order to move toward the *purchasing from the lender* model, independent ratings on portfolio assets would be needed, similar to the rated securities of the mainstream financial markets. Ms. Stearns indicated that it is currently “too soon” for CARS to move toward portfolio ratings, citing the time-sensitive nature of portfolio sales and the high staff cost required to monitor and produce these ratings. In addition to these logistical concerns, the fact remains that the industry does not generate a sufficient volume of loans to support the cost associated with individual transaction level ratings.

The need for greater infrastructure

These findings from the current landscape are consistent with the view that the community development industry lacks the necessary infrastructure to keep up with mainstream financial institutions. A study for the Brookings Institution on the changing environment of capital markets reported:

Today's retail financial institutions are supported by a highly developed infrastructure. . . . Part of this infrastructure is the technology platform that facilitates rapid exchange of information and makes quick transactions possible. Part of the infrastructure lies in standardized documents, procedures, protocols, methodologies, investment vehicles and products. Together, this infrastructure enables financial institutions to match users of capital with suppliers of capital accurately, quickly and efficiently. By comparison, financial infrastructure in the CDFI industry is grossly underdeveloped. . . . Without the development of supporting infrastructure, lasting change does not occur. The existence of infrastructure is a benchmark of wide-spread implementation of an idea. Without enabling infrastructure, promising demonstrations remain as nothing more than a series of "one-offs."⁴⁸

The current lack of information sharing infrastructure thus warrants development of a formal mechanism that enables community development lenders and investors to connect and communicate efficiently. Section Two explores the details of creating such a mechanism.

⁴⁷ Interview with Kathy Stearns, April 2, 2007.

⁴⁸ K. Moy and A. Okagaki (2001), “Changing Capital Markets and Their Implications for Community Development Finance,” *Capital Xchange*, Brookings Institution.

Section Two: Crafting an Effective Information Exchange

Given the current lack of information sharing infrastructure in the community development industry, this section provides theoretical and practical considerations for the creation of an effective information exchange.

The academic theory of communication and information exchange

Central to the academic discussion on information exchange is the theory of asymmetric information, introduced by George Akerlof in his seminal study on the market for used cars.⁴⁹ The study focused on the market imperfection of asymmetric information between buyer and seller, namely that the seller of a used car had more information about the good than the prospective buyer (whether the car was a “lemon”). Stiglitz and Weiss expand on the theory of market inefficiency created by imperfect information in their classic article on credit rationing. They find that the problem of imperfect information between borrower and lender creates disequilibria in the supply and demand for credit, resulting in an underserved market.⁵⁰ Weber and Devaney observe that information asymmetries are more significant in rural and less-developed economies, resulting in greater inefficiencies and an underallocation of resources to these areas.⁵¹ Imperfect information is a recognized market failure with serious repercussions for those communities that are unable to access the credit markets.

Another important article in the academic literature of information theory is George Stigler’s “The Economics of Information.”⁵² His article analyzes one of the most important economic considerations of information – ascertainment of market price. For buyers and sellers seeking to uncover the appropriate market price for a good, the cost of search is the time associated with finding a willing counterparty. This is especially pertinent for “unique” goods, or those that exhibit a degree of heterogeneity, as is present in the market for community development loan portfolios. In these situations, the identity of willing buyers and willing sellers is not immediately known, and “the costs of search are so great under these conditions that there is powerful inducement to localize transactions as a device for identifying potential buyers and sellers.” This is consistent with the findings of a CBO study on the securitization of small business loans that finds that “where secondary markets have been slow to develop, the high cost of transactions seems to be a major inhibitor.”⁵³ By reducing the search time associated with identifying buyers and sellers, and improving the flow of information between parties, it becomes less costly and more efficient to find the optimal market price for a good. Stigler identifies methods for reducing these search costs, such as classified ads and intermediary specialized traders (such as used-car dealers).

⁴⁹ G. Akerlof (1970), “The Market for ‘Lemons’: Quality Uncertainty and the Market Mechanism,” *Quarterly Journal of Economics* 84, no. 3.

⁵⁰ J. Stiglitz and A. Weiss (1981), “Credit Rationing in Markets with Imperfect Information,” *American Economic Review* 71:393–410.

⁵¹ W. Weber and M. Devaney (1998), “Community Lending, Bank Efficiency, and Economic Dualism,” *Growth and Change* 29, no. 2.

⁵² G. Stigler (1961), “The Economics of Information,” *Journal of Political Economy* 69, no. 3.

⁵³ CBO (1994), “Developing a Secondary Market for Small Business Loans.”

However, given that Stigler published his work in 1961, it is useful to look for more modern applications of information technology to address the information problem. Information systems linking different organizations, also known as interorganizational information systems (IOS), can use the rise of information technology and increase economic efficiency.⁵⁴ J. Bakos of the Stern School of Business at New York University describes the “electronic marketplace” as 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. As shown below in Figure 10, markets serve a number of functions in an economy, and the increasing role of information technology in these markets facilitates their operation.⁵⁵ Bakos argues that the introduction of an electronic market system reduces search costs, increases efficiency and societal welfare by reducing the cost of unproductive searches, and allows buyers to locate products that better match their needs. In the absence of an efficient IOS, high search costs lead to efficiency losses and eventually cause the market to break down, or in the current case, prevent an efficient market from being formed at all.

Figure 10 – Functions of a Market

Matching Buyers and Sellers	<ul style="list-style-type: none"> • Determination of product offerings <ul style="list-style-type: none"> – Product features offered by sellers – Aggregation of different products • Search (of buyers for sellers and of sellers for buyers) <ul style="list-style-type: none"> – Price and product information – Matching seller offerings with buyer preferences • Price discovery <ul style="list-style-type: none"> – Process and outcome in determination of prices
Facilitation of Transactions	<ul style="list-style-type: none"> • Logistics <ul style="list-style-type: none"> – Delivery of information, good, or service to buyer • Settlement <ul style="list-style-type: none"> – Transfer of payment to seller • Trust <ul style="list-style-type: none"> – Credit system, reputations, rating agencies
Institutional Infrastructure	<ul style="list-style-type: none"> • Legal <ul style="list-style-type: none"> – Commercial code, contract law, dispute resolution, intellectual property protection • Regulatory <ul style="list-style-type: none"> – Rules and regulations, monitoring, enforcement

Source: Bakos, J. (1998)

The implication for the current research is that while data remain central to the growth of investor activity in community development, there must be a mechanism that allows lenders and investors to easily share and access this data. Mary Tingerthal, senior vice president of the Community Reinvestment Fund 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

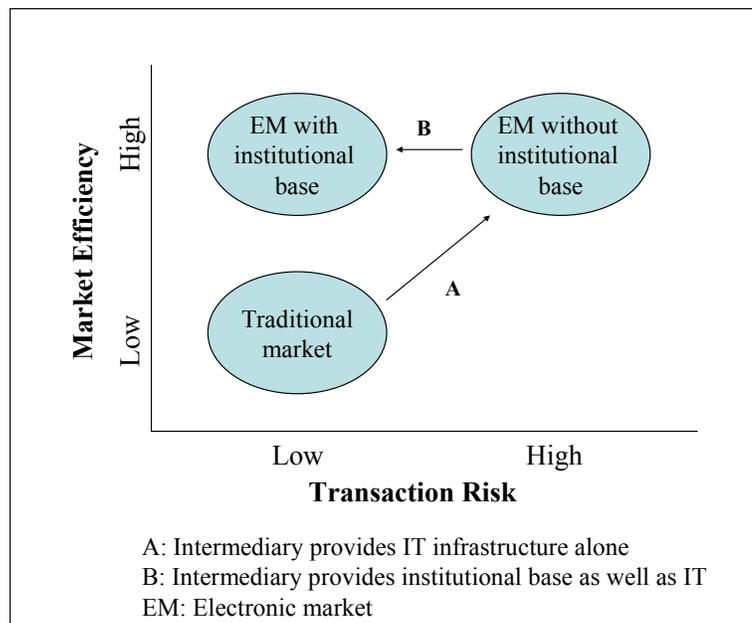
⁵⁴ J. Bakos (1991), “Information Links and Electronic Marketplaces: The Role of Interorganizational Information Systems in Vertical Markets,” *Journal of Management Information Systems* 8, no. 2.

⁵⁵ J. Bakos (1998), “The Emerging Role of Electronic Marketplaces on the Internet,” *Communications of the ACM*, vol. 41, no. 8.

asset.”⁵⁶ 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 to share this data with.

One consideration for the development of an electronic marketplace is the importance of establishing trust among market participants. Information systems management expert Ho Geun Lee stresses that “the provision of IT alone is not likely to create trustworthy electronic marketplaces. . . . Institutional policies and processes must be an important part of electronic intermediary services.”⁵⁷ Electronic intermediaries are online information providers – they allow market participants to easily access information on product availability, prospective trading opportunities, and recent transactions. However, central to the provision of this information is the reputability of the platform host as well as the trustworthiness of the platform participants. Lee recommends that electronic intermediaries establish an “institutional base,” designed to regulate the duties and responsibilities of market participants. The institutional base can implement policies to ensure the trustworthiness of the market interactions while sustaining the efficiency of the electronic market, as shown in Figure 11. The implication is that standards must be in place to ensure the accuracy and quality of information in order to minimize transaction risk. Given the sensitive nature of an institution’s financial data, it is valuable to establish the credibility of this institutional base early in the development of an information exchange.

Figure 11 – Institutional Base Improves Market Efficiency and Transaction Risk



Source: Lee, H. (1997)

⁵⁶ M. Tingerthal (2006), “Turning Uncertainty into Risk: Why Data Are the Key to Greater Investment,” *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 2.

⁵⁷ H. Lee (1997). “Electronic Market Intermediary: Transforming Technical Feasibility into Institutional Reality,” *Proceedings of the Thirtieth Hawaii International Conference on System Sciences*, IEEE Computer Society.

Information exchange in two phases

Another consideration for the development of a communication platform is the chronological order of information exchange. Kirsten Moy, director of the Aspen Institute’s Economic Opportunities Program, specified the importance of separating the exchange of information into two distinct phases.⁵⁸ This separation implies that the nature and content of the shared information will differ across the two phases. The implication for the current research is that the creation of an information exchange must be targeted to a specific phase.

Phase One – Connection

The first phase is connection, where lenders and investors come together by sharing basic organizational and high-level portfolio data. This introductory-level data sharing facilitates the efficient matching of buyer and seller as the two parties communicate a relatively short list of data points. Parties can quickly rule out unsuitable transactions, such as those that are outside specific geographic limitations or those with a high concentration of a certain type of asset. If the potential transaction appears to be mutually beneficial, the lender and investor can become acquainted, begin to communicate, and develop a relationship. Donna Fabiani of the CDFI Fund stated, “It’s up to the CDFIs to initiate contact and then you would start a more private conversation.”⁵⁹ Initiating contact and establishing connection thus requires proactive effort on the part of CDFIs to attract investor attention and provide the appropriate data.

In an effort to understand what these initial data requirements would be for establishing a lender-investor connection, the anonymous investors who informed the previous section on the two capital financing models were asked the question: *In contrast to the final purchasing decision, what key data points about a loan portfolio and the lender would be enough to spark your interest and motivate you to enter more detailed discussions with a lender?* The investor response was as follows:

Investor Needs – Data to Establish Connection

- Loan to value ratio
- Debt service coverage ratio
- Interest rates and investor pass-through
- Portfolio size (amounts and number of loans)
- Types of loans in portfolio (for diversification)
- Experience and track record
- Superior loan loss and delinquency rates
- Geography (to meet CRA objectives by targeting certain geographies)

In addition to the above data points, one investor indicated that another attractive feature would be “the option to set requirements early in the development of a loan portfolio, which would assure that future loans would be made according to our requirements.”⁶⁰ Information sharing during this initial connection phase can thus inform future investment behavior. Once the

⁵⁸ Interview with Kirsten Moy, February 12, 2007.

⁵⁹ Interview with Donna Fabiani, February 26, 2007.

⁶⁰ Anonymous investor response, submitted April 2, 2007.

connection has been made, the two parties can move toward more detailed information sharing in the second phase.

Phase Two – Full Disclosure

The second phase of information exchange is *full disclosure*, during which lenders and investors reveal the full details of the financial data required to underwrite a secondary market transaction. This conversation can only occur if there is a certain amount of preexisting trust between the two parties, so it generally must follow the initial connection phase. In addition, most lenders would be unwilling to disclose publicly the full details of their loan portfolios. A number of interview responses indicated that this more detailed information exchange is better suited for one-on-one conversations and negotiations. Thus, while data shared during the connection phase is best suited for a wide audience, the disclosure phase will realistically occur only through exclusive interactions.

The types of data that investors wish to see during this phase include the data points discussed earlier under the *purchasing from the lender* model (see “Investor Needs: Data on the Organization” and “Investor Needs: Data on the Portfolio”). In addition, Frank Wilary and Doug Winn of the financial intermediary consulting firm Wilary Winn indicated that a static pool analysis would also be of interest to investors.⁶¹ Static-pool analysis allows for the evaluation of almost any type of loan-pool performance, regardless of the underlying characteristics of the loans in the pool.⁶² According to Wilary and Winn, investors considering a portfolio of loans for purchase would need to know the following static pool data:

Constant Prepayment Rate (CPR)

The CPR is the percentage of the current outstanding loan balance voluntarily paid in advance of the straight amortization schedule. CPR is a measure of the prepayment rate at which a loan is expected to prepay, expressed as an annual percentage of the remaining loan balance.⁶³

Constant Default Rate (CDR)

The CDR is the annualized percentage of the loans in a pool that do not fulfill their debt obligations (they “go bad” or default). CDR measures default in a manner similar to the way CPR measures prepayments.⁶⁴

Loss Severity

Loss severity can be calculated as the simple ratio of the dollar loss for a time period divided by the dollar amount of defaults for that time period. In other words, loss severity is that portion of the default amount not recovered.⁶⁵

⁶¹ Interview with Frank Wilary and Doug Winn, February 15, 2007.

⁶² National Credit Union Administration (2006), “Static Pool Analysis: Evaluation of Loan Data and Projections of Performance,” Whitepaper available online at <http://www.ncua.gov/RiskAlert/2005/StaticPoolAnalysis.pdf>

⁶³ Ibid.

⁶⁴ S. Gangwani (1998), “MBS Structuring: Concepts and Techniques,” *The Securitization Conduit* 1, no. 3.

⁶⁵ National Credit Union Administration (2006), “Static Pool Analysis: Evaluation of Loan Data and Projections of Performance.”

A relevant model of data disclosure from the mainstream asset-backed securities market is Regulation AB, a final ruling by the Securities and Exchange Commission that codifies requirements for the registration, disclosure, and reporting for all publicly registered asset-backed securities.⁶⁶ The SEC now requires ABS issuers to make static pool analysis information (including the data points discussed above) publicly available to potential investors. While the community development industry is not subject to Regulation AB, it provides a useful indication of the types of portfolio data that potential investors consider important when analyzing loans for purchase. For more detailed information on Regulation AB, see Appendix III.

Whole loan sales as predecessor to securitization

Another consideration for the development of an information-sharing mechanism is the nature of the secondary market activities that will occur. Whole loan sales and securitization are two distinctly different types of secondary market transactions. Securitization occurs when several investors each buy a share of a pool of loans. This spreads the risk that any one loan will default across several security holders and usually results in a higher resale value for the overall pool of loans.⁶⁷ Securitization is better suited for large-volume loan pools (typically in the range of \$100 million) due to the significant transaction costs associated with the complicated legal and financial structure.⁶⁸ 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.⁶⁹

Figure 12 – Comparison of Funding Sources

Whole Loan Sale	Securitization
Profit up-front	Profit over time
Additional diversifier of funding	Widely-used and understood funding source
Economic option for smaller-sized pools	Offers economies-of-scale/ability to issue large quantity of debt
Ability to buy exact volume of specific loans	Flexible environment/ability to structure risk through tranching

Source: Standard & Poor's, 2005

There is a general consensus that the community development industry has not yet achieved the necessary scale to allow the widespread use of securitizations. Luther Ragin of the FB Heron Foundation and Thomas Bledsoe of the Housing Partnership Network each pointed out that the limited origination capability of many CDFIs implies that an information-sharing platform for asset securitization may be premature. As such, it may be appropriate to focus on whole loan sales in the early stages of an online information exchange. A Congressional Budget Office study states that secondary markets tend to develop first for loans that have low transaction costs and

⁶⁶ Mortgage Bankers Association, “Regulation Asset Backed Securities Resource Page” available online at <http://www.mortgagebankers.org/IndustryResources/ResourceCenters/RegAB>

⁶⁷ HUD (1995), Notice: CPD 95-05 available at <http://www.hud.gov/offices/cpd/lawsregs/notices/1995/95-5.doc>

⁶⁸ Interview with Frank Wilary and Doug Winn, February 5, 2007.

⁶⁹ HUD (1995), Notice: CPD 95-05.

that whole loan markets usually precede and then give way to secondary markets with securitization.⁷⁰

This approach also takes advantage of the existing CRA incentives for bank investors. Regulated financial institutions seeking CRA credit are already motivated to purchase loans from CD lenders. The proven success of these incentive-driven transactions can act as a signal to capital investors unregulated by CRA of the viability and security of community development investments.

Case studies of information exchange

It is valuable to consider existing models of information exchange from other industries. Understanding what works (and what doesn't) in other fields can provide important lessons for the creation of a new information infrastructure to support the secondary market for CD loans.

Case #1: Information exchange in the market for international microfinance

The MIX Market is an online information-sharing platform for the international microfinance industry that provides data and connects international microfinance institutions (MFIs), public and private funds that invest in microfinance, MFI networks, raters/external evaluators, advisory firms, and governmental and regulatory agencies.⁷¹ The international microfinance industry exhibits a number of characteristics that make the MIX Market platform a useful model for the community development industry:

- MFIs are varied in size and scale of operations
- MFI activities are heterogeneous and geographically diverse
- Microfinance is typically outside the realm of mainstream investment activity
- MFIs lack of international standardization and technical capacity

Each MFI participant has a “user profile” with a significant amount of data related to the organization and its financial health and mission-related impact. These data were originally collected by MIX Market analysts who traveled around the world to interview MFI employees, and entered the data into the MIX Market platform.⁷² This approach was costly and time- and labor-intensive. An interview with Isabelle Barres, strategic director for the MIX Market, revealed some important lessons from her experience in the development of the online information sharing tool:

- Each member organization is responsible for its own online profile, including updating financial information. Placing this responsibility on each MFI reduces the administrative workload of the MIX Market staff and increases each MFI's “sense of ownership” in their profile.
- Participants need to be screened and verified before gaining access to online tools. This strengthens the trustworthiness of the platform and increases participants' willingness to post data on an online forum.

⁷⁰ CBO (1994), “Developing a Secondary Market for Small Business Loans.”

⁷¹ Retrieved from http://www.mixmarket.org/en/about_mix_market.asp

⁷² Interview with Isabelle Barres, February 15, 2007.

- Allowing different levels of disclosure encourages greater participation as some organizations may desire to participate but would be discouraged if they were forced to disclose large amounts of data.
- A series of built-in data verification checks serves the dual purpose of improving data quality and limiting the administrative burden of verifying every single data point. For example, analysts have observed a reasonable range of fund growth and if an MFI reports a growth rate that surpasses this range, a staff member will take a closer look at the data to verify that the reported growth is accurate.
- Participants had a strong incentive to participate given the industry wide pressure for greater transparency. MFIs that did not disclose information were perceived as having something to hide.

While the data reported on the MIX Market are better suited for the *lending to the lender* model of capitalization, the implementation of the online platform and the process of data collection and verification inform the current research effort to develop such a tool for the community development industry.

Case #2: Information sharing in the venture capital market

The venture capital market is an efficient system for meeting the needs of institutional investors seeking desirable returns and entrepreneurs seeking funding.⁷³ Investors provide start-up capital to young companies with the potential for rapid growth, or established companies seeking to introduce a new product, with the potential to earn higher-than-average financial returns. These types of investments require a significant amount of information sharing, as investors must have enough data to assess the viability and profitability of their investment. In addition, the venture capital industry faces the problems of information asymmetry, uncertainty, and product heterogeneity, all of which are concerns that the community development finance industry faces as well.⁷⁴

There are a number of online venture capital information exchange mechanisms that allow investors and entrepreneurs to quickly locate potential partners. These include www.vFinance.com, www.businesspartners.com, www.kickstand.org, www.venturedeal.com, as well as a number of other industry network websites. The online mechanisms utilize a variety of features to facilitate the communication between the sources and users of venture capital. Some of the applicable features include:

- An active exchange forum, where network participants can post messages in an open forum to discuss recent transactions and industry developments.
- Document templates and education resources to assist new entrepreneurs in the development of their business-plan documents. The standard template informs entrepreneurs of the types of data investors require and encourages data uniformity.
- Calendar of event listings to highlight upcoming conferences and other industry events.
- Links to industry research and industry associations (such as the National Venture Capital Association).

⁷³ B. Zider (1998), "How Venture Capital Works," *Harvard Business Review* 76, no. 6.

⁷⁴ Interview with John Quigley, March 1, 2007.

There has also been a recent increase in the use of “speed dating” sessions in the venture capital industry. Stanford University recently hosted the VC3: Venture Capital Speed Dating session, providing capital-seeking entrepreneurs with the opportunity to present their business plans one-on-one to potential investors during three-minute “pitch sessions.” Investors respond to the presentations during three-minute “feedback sessions” and then the entrepreneurs move on to present to the next investor.⁷⁵ A number of similar speed-dating sessions have been held across the country, including sessions by the Council for Entrepreneurial Development, a private nonprofit that supports entrepreneurs in the Research Triangle area of North Carolina. Sessions have also been held internationally, with an upcoming session in Canada to be hosted by PriceWaterhouseCoopers.

These academic and real-world models provide a framework for the following section, which analyzes possible policy alternatives and their implications.

⁷⁵ C. Loizos (2007), “Heard of speed-dating? VCs try speed-investing,” *San Jose Mercury News*, March 6, 2007.

Section Three: Policy Alternatives and Implications

This analysis aims to identify strategies that the prospective platform host can undertake in order to address the lack of information exchange between buyers and sellers of community development loans. Based on interviews with relevant industry practitioners and prior recommendations made during the 2006 Conference, the following alternatives are possible policy options for the host:

Let present trends continue

This alternative assumes that no further action will be taken. Present trends will continue undisturbed without a policy intervention and secondary market activities in the community development industry will evolve according to the status quo.

Create an online trading platform

The host can create an online trading platform similar to a commodities-style trading platform. This alternative will effectively “create” a virtual secondary marketplace where buyers and sellers exchange assets in a legally binding transaction (in a manner similar to eBay or other online sales platforms).

Establish a “My Space” network

As one of the specific recommendations made during the Conference, this alternative will establish an online network modeled after the popular social networking website. Each participant will create a “user profile” with background institutional information and then will be able to communicate directly through the website.

Establish a “speed dating” network

This alternative also comes from a recommendation made during the Conference. The host will establish a “speed dating” network, which will connect a group of lenders with a group of investors through brief face-to-face encounters. The host will facilitate these speed-dating sessions and will be responsible for the ongoing organization and management of the network.

Create a “hybrid” online platform

Under this alternative, the host will create an online platform that borrows different elements from a variety of existing networks. Rather than replicating an existing model, this “hybrid” alternative will use the most relevant aspects of previously identified networks, such as the commodities exchange, eBay, MySpace, and speed-dating models.

Evaluative criteria

The following evaluative criteria provide objective standards for comparing the possible outcomes of the policy alternatives discussed above.

Ability to improve information exchange

This criterion represents the immediate goal of this research effort, which is to improve information sharing between lenders and investors. The selected policy alternative should lead to an outcome with better information exchange than currently exists. This criterion, while important, should not be considered in isolation of other issues—it must be balanced by other considerations.

Ability to encourage secondary market activities in the community development industry

As opposed to the immediate goal of improving information exchange, this criterion addresses the broader long-term goal of increasing secondary market activities in the community development industry. To what extent does each alternative lend to the evolution of a vibrant secondary market for community development loans?

Administrative feasibility

This criterion considers the time and effort necessary to establish and continue operation of a selected alternative. Another important aspect of this criterion is the feasibility of implementing the alternative: Will the host be able to adopt this policy and implement it in conjunction with its current operations?

Low cost burden to platform host

Each possible outcome must be weighed against the potential costs of implementation and maintenance. Relative to their costs, to what extent does each alternative produce the desired results of improved information exchange and increased secondary market activity? A low-cost option may not be advisable if the desired effects are not achieved. However, an alternative that provides the desired results at a high cost must also be weighed against other factors.

Potential for widespread adoption

A policy alternative may be selected and implemented, but that does not necessarily mean that the intended parties will adopt it. This criterion represents the degree to which lenders and investors (the “target” participants) will adopt and use the recommended policy option. Considerations under this criterion include ease of access, user cost, and suitability of the alternative to user needs.

Sustainability in the long run

Recognizing that the evolution of an efficient secondary market will be a long-term process, this criterion considers the sustainability of each outcome in the long run. An important aspect of this criterion is the adaptability of each alternative—as the market evolves and changes over time, how well does each policy adapt to these changes to maintain its value in the long run?

Evaluation of policy alternatives

The chart below provides a basic indication of the extent to which each policy alternative meets the evaluative criteria previously discussed. A checkmark indicates if an option is thought to meet the specified criterion, at a minimum threshold of not violating it. A discussion of the potential trade-offs between these alternatives is shown below.

Figure 13 – Evaluation Matrix

Criteria	Let Present Trends Continue	Create Online Trading Platform	Establish a MySpace Type Network	Create a speed dating network	Create a hybrid online network
Improve Information Exchange		✓	✓	✓	✓
Encourage Secondary Market Activities		✓		✓	✓
Administrative Feasibility	✓		✓	✓	✓
Low Cost Burden to Platform Host	✓				
Potential for Widespread Adoption	✓		✓		✓
Sustainability in the Long Run			✓		✓

Let present trends continue

The long history and persistent nature of the information-sharing problem indicate that a solution is unlikely to materialize in the near future if present trends continue undisturbed. While this alternative requires no monetary or staff time investment, it is also unlikely to achieve the desired outcome of improving information exchange between CD lenders and investors. “One-off” transactions could continue to occur, but without a targeted effort to streamline the information-sharing process, these ad-hoc developments are likely to remain as one-offs. This alternative recognizes that ongoing developments in the industry will continue to occur (such as the activities of CRF, the introduction of “Community Development Assurance,” which acts as an insurer of CD loans, or the HPN conduit discussed earlier). It is possible that the industry will eventually formalize an information-sharing mechanism, but this could take a significant amount of time (the information gap has already been a recognized problem for over a decade). Because it takes no effort to let present trends continue, it is easy for other industry players to adopt this alternative—communication and information sharing will continue to be fragmented and inefficient.

Online trading platform

The creation of an online trading platform would potentially result in a high level of information sharing as buyers and sellers communicate loan portfolio details and negotiate sales transactions. However, this option is likely premature given the current state of the community development industry. Luther Ragin, senior vice president of investments at the F. B. Heron Foundation, indicated that the market for community development assets is not fully developed and there is a limit to the originating capability of many CDFIs.⁷⁶ While secondary market activities can still occur in the face of limited-scale originations, a commodities-style trading platform is an unsuitable mechanism for facilitating these transactions. An eBay or commodities-style online marketplace requires a significant volume of goods to be traded to justify the significant costs associated with operation. In addition, it places administrative burden on the host, who would have to manage the legal and regulatory aspects of running a true sales platform.

MySpace Network

The MySpace-type network, while viable from an administrative standpoint, is not recommended as a policy solution for the current research effort. The MySpace framework is built upon user-created profiles, where each member has the discretion to post any sort of information desired. This free-form information sharing could improve information exchange between lenders and investors. It is questionable, however, whether the *appropriate* information would be shared. Without guidance on what data to share, user profiles would likely follow the MySpace model of background organizational information, which is suitable for informing *lending to the lender* decisions but not sufficient to encourage *purchasing from the lender*. In addition, this type of information is already widely available through networks such as the Opportunity Finance Network member profiles or the Community Investing Center database available online at www.communityinvestingcenterdb.org. Creation of a MySpace network would duplicate these existing networks without significantly contributing to the growth of secondary market activities.

Speed Dating

Speed dating has a greater potential than the MySpace option to encourage secondary market activities, since investors and lenders are able to engage in face-to-face conversations about the specific data points relevant to the sale of a portfolio of loans (similar to the data points discussed in the earlier sections of this paper). However, the speed dating network requires a significant amount of administrative effort to coordinate and it is likely difficult to sustain in the long run. Many investors and lenders are geographically constrained, and the effort to bring them together for face-to-face sessions could be too burdensome for all parties involved. There is a limited potential for widespread adoption, as lenders and investors need to be physically present in order to participate in the information sharing, and it is unclear whether other organizations would be willing to accept the responsibility and cost associated with administering such speed-dating sessions.

⁷⁶ Interview with Luther Ragin, March 5, 2007.

Hybrid Platform—Recommended Alternative

The hybrid platform would be an online tool that allows each participant to have a “profile,” but the input fields would be uniform across all participants, thus displaying the relevant portfolio and institutional data that investors have expressed interest in. This would facilitate secondary market activities by establishing connection in the first phase of information sharing, which would lead to one-on-one conversations outside the platform. This option requires a significant amount of resources and staff time to implement and operate. However, there is a greater potential for widespread adoption because of the ease of online access and the little effort required to participate in such a network. Additionally, an online tool would be highly adaptable to changes in the future. Once established, the website structure and content would be highly flexible and responsive to changing participant needs, making the tool sustainable in the long run.

The hybrid platform would provide separate areas for the sellers and buyers of community development loans. Each side of the transaction would be able to efficiently search and identify appropriate parties from the other side (i.e., the sell side and the buy side). Users would have the opportunity to provide organizational-level data and contact information, similar to the list of data points discussed in the section on capital financing models. It would also be useful to include an organization’s CARS rating, if available, since the rating is designed to communicate significant data on the financial health and operations of an individual organization. One of the most important aspects of this platform is an advanced-level search capability, which is essential for increasing the efficiency of locating a potentially suitable counterparty.

The user profiles would offer predetermined fields for loan portfolio data, thus informing participants of the optimal amount and types of data pertinent to the other side’s needs. Investors would provide data on the types of loans they are interested in purchasing, which could include items such as geographic concentration for CRA purposes and desired portfolio size or asset classes. Lenders seeking to sell loans could identify potential buyers based on the investors’ revealed preferences for loan products. This would allow lenders the opportunity to approach investors directly, empowering them to improve their capital resources.

Lender-provided data would have to be more specific, focusing on the pertinent details of portfolios available for sale. While including a greater number of data fields would allow for greater information sharing, it would also increase the data-entry burden and may reduce incentives for participation if lenders feel they are required to disclose more data than they wish. When asked if twenty data fields would be appropriate, Nancy Andrews of LIIF indicated that it might be too burdensome, but she pointed out that too few data points could also pose a problem. Posting as little as four data points may be easier for participants, but it may also produce a number of cumbersome false leads, which could also reduce future incentives for participation. The data list provided by the anonymous investor responses indicate that the following portfolio data would be appropriate for establishing a connection:

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

For comparison, the nonprofit organization Wall Street Without Walls, a volunteer-based financial technical assistance program, presented the following list of key data points during a 2003 conference at the Federal Reserve Bank of Boston.⁷⁷

Key Data Points to Capture for Loan Sale Purposes

- Sector (business, microenterprise, consumer, community facilities real estate, commercial real estate, housing development, first mortgages, home equity loans)
- Closing date
- Original amount
- Outstanding balance
- Annual gross business sales (business loan)
- SIC code or type of business
- Borrower FICO score
- Type of transaction (senior debt, subordinated debt, equity investment)
- Type (line of credit versus term loan)
- Type of interest rate (fixed, adjustable, etc) and adjustment frequency
- Interest rate cap/floor
- Current interest rate
- Term (months)
- Payment frequency—principal and interest
- Days delinquent and number of times delinquent
- Type of collateral and lien position
- Appraised value of collateral at origination

The final selection of these data fields should involve collaborative input from potential participants. The successful development of this platform will be an iterative process and should incorporate effective feedback loops into the development process. The next section discusses these issues and addresses other specific recommendations for implementation.

⁷⁷ Wall Street Without Walls (2003), “Technology, Data Collection, Analysis, and Dissemination,” presentation at the “Orientation to the Capital Markets” conference held May 1, 2003, Federal Reserve Bank of Boston.

Section Four: Recommendations for Implementation

Implementation of the recommended hybrid platform involves consideration of a number of factors. This section addresses the most pertinent aspects of implementation and recognizes that the developmental process will be iterative.

The platform host should be a neutral, highly credible third-party organization

One of the most important implementation questions is *Who should host the platform?* John Quigley, a professor of economics and public policy at UC Berkeley and a member of the advisory committee to FRBSF's Center for Community Development Investments, stressed that the platform host needs to be highly credible in order to assure potential participants of the integrity of the online tool.⁷⁸ In addition to institutional credibility, the platform host needs to be neutral. It should not be a member of the lender or investor community, but rather a third-party organization that can facilitate communication in a fair and unbiased manner.

However, the implementation and continued operation of the platform may require a significant amount of staff resources. One alternative for overcoming this challenge is to create a partnership among a few organizations. Hosting the platform in collaboration with one or two other organizations alleviates the administrative and cost burden to any one organization and provides other benefits as well.

The involvement of another recognized neutral party could give the platform greater exposure and establish a stronger industry presence. Possible platform hosts could include the Federal Reserve Bank of San Francisco, the CDFI Fund, and the Opportunity Finance Network. The FRBSF is recognized for its research focus and has an extensive network of industry contacts. The CDFI Fund is similarly neutral, highly credible, and well connected in the industry. Representatives from the Fund expressed interest in becoming involved with the project in the future and offered to lend data collection technology and resources to the project development.⁷⁹ In addition, the CDFI Fund has a specific mandate to support secondary market activities and their direct and visible involvement in the platform would help to fulfill this mandate. The Opportunity Finance Network is another recognized industry leader that could be beneficial in partnering the platform with CARS, which plays an important role in connecting lenders and investors.

The platform host should limit access to the online tool

The online tool should allow easy access for CD lenders and investors, but the general public should not have full access to the platform. The host should have authority over the membership-approval process, requiring interested parties to register in order to gain access to the online tools. To avoid possible criticisms of organizational exclusivity (such as if access was granted only to registered CDFIs), the host can grant access based on operational restrictions (for example, requiring that participating lender organizations engage in financial development of low-income communities, similar to CRF's restrictions for loan purchases).⁸⁰

⁷⁸ Interview with John Quigley, January 18, 2007.

⁷⁹ Interview with Donna Fabiani and Linda Davenport of the CDFI Fund, February 26, 2007.

⁸⁰ CRF website FAQ section, available online at <http://www.crfusa.com/info.asp?sectionID=58&subSectionID=58&articleID=49>

Restricting access serves a variety of purposes. Earning the approval of the platform host indicates a certain level of participant credibility, in conjunction with the theory of the institutional base and marketplace trust. In addition, restricted access protects one of the primary incentives for sharing information: the ability to access other participants' information. Ellen Seidman of the ShoreBank Corporation also suggested restricting access, indicating that only those who give data should be able to get data. Given the sensitive nature of an organization's financial data, it is important to ensure a certain level of privacy to encourage participant information sharing. The general public could still access the home page and any general information, but participants would have to log into a password-protected area to access specific organizational data.

The online platform should have a strong educational component

One of the most common interview responses was that CD lenders don't know what investors want. In order to address this, as well as other information gaps, the platform should incorporate an education component. Similar to the venture capital platforms, it can have general document templates for loan documentation as well as information about technical financial structures and vocabulary. In addition, this section should inform CD lenders of the types of data they should be collecting to facilitate the full disclosure phase of communication. This includes information on how to report the constant default rate (CDR) and the constant prepayment rate (CPR) and loss severity.

There should also be information to educate investors about the community development industry, including published third-party reports (such as the low-income-housing tax-credit performance reports from Ernst & Young). Effective communication between CD lenders and investors requires that both parties each have a basic understanding of the operations and vocabulary pertinent to the other participant's industry. The education page can also provide links to the intra-industry networks described earlier, as well as research resources.

The platform should begin with a focus on whole loan sales

Given the current origination volume and limited scale of the community development industry, it is fair to predict that widespread securitization of CD assets will not happen right away. Thomas Bledsoe of the Housing Partnership Network indicated that only a small number of CD lenders are originating at a sufficient volume to "go to the capital markets."⁸¹ As discussed earlier, the sale of whole loans may be an appropriate predecessor to securitization because it is better suited for smaller volumes. A likely buyer under the whole loan scenario would be a financial institution regulated by the Community Reinvestment Act. These types of buyers are already motivated by CRA credit to seek out community development investments. As these types of loan purchases become more common, they provide concrete evidence of the viability and security of CD investments. The flexible nature of an online tool will allow the platform to adapt to securitizations as the industry grows its origination volume and scale.

⁸¹ Interview with Thomas Bledsoe, March 7, 2007.

The host can use a variety of strategies to attract participants to the platform

The platform host can capitalize on its reputation as a credible, neutral leader in the industry to solicit stakeholder input and attract attention to the platform. Successful operation of the networking tool requires a critical mass of participants from both the investor and CD lender community. John Quigley of UC Berkeley recommends promoting the platform in conjunction with some upcoming industry conference.⁸² This strategy could provide a variety of opportunities to connect potential users and seek participant feedback on the mechanism.

Another strategy for encouraging continued traffic to the website would be to invite practitioners to post online commentary and write web articles with content pertinent to their respective organization.⁸³ The incentive for increased exposure could encourage active participation while providing a forum for opinions and reactions.

Implement policies to keep the data current

Mary Tingerthal stressed the importance of preserving the “freshness of the data,” suggesting that reminder emails be sent to participants to affirm the accuracy of their information.⁸⁴ In addition, parties that do not update their institutional data at least once a year could be warned that their participant profiles may be deleted. This could be similar to eBay practice of having a limited time frame for auctions—portfolio data could have an “expiration date” to ensure freshness. Keeping the data current is important for preserving the value of the platform. Outdated data remove the incentive to participate and if this becomes a perceived problem among participants, it may render the platform obsolete.

⁸² Interview with John Quigley, January 18, 2007.

⁸³ Ibid.

⁸⁴ Interview with Mary Tingerthal, February 12, 2007.

Conclusion

The community development industry could greatly benefit from increased secondary market activities, but the current 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 a lack of information infrastructure.

While there is concern over the limited scale of the industry today, 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 large enough scale to address the lack of information-sharing infrastructure, there will be a lag between the need for a mechanism and the implementation of one. It would be beneficial to seek early-stage solutions that can be modified and adapted as the industry grows in its lending capacity and comfort with the capital markets. The other benefit of taking proactive steps to improve market infrastructure is the likelihood that the development of a 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 an active 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 each other 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.

Through the course of this research effort, a few interesting questions arose that remain unanswered. While they were outside the scope of the current research, they provide implications for further research. One such item is the potential trade-off between competitive advantage and the desire to sell and purchase loans. Whether lenders will perceive portfolio data sharing as giving up competitive advantage remains to be seen. Additionally, the platform host will need to identify appropriate success measures to critically examine whether the platform is achieving the desired results. At some point, the host must assess whether the time and effort required to oversee the platform are worth the results. Without metrics in place, this becomes a difficult task.

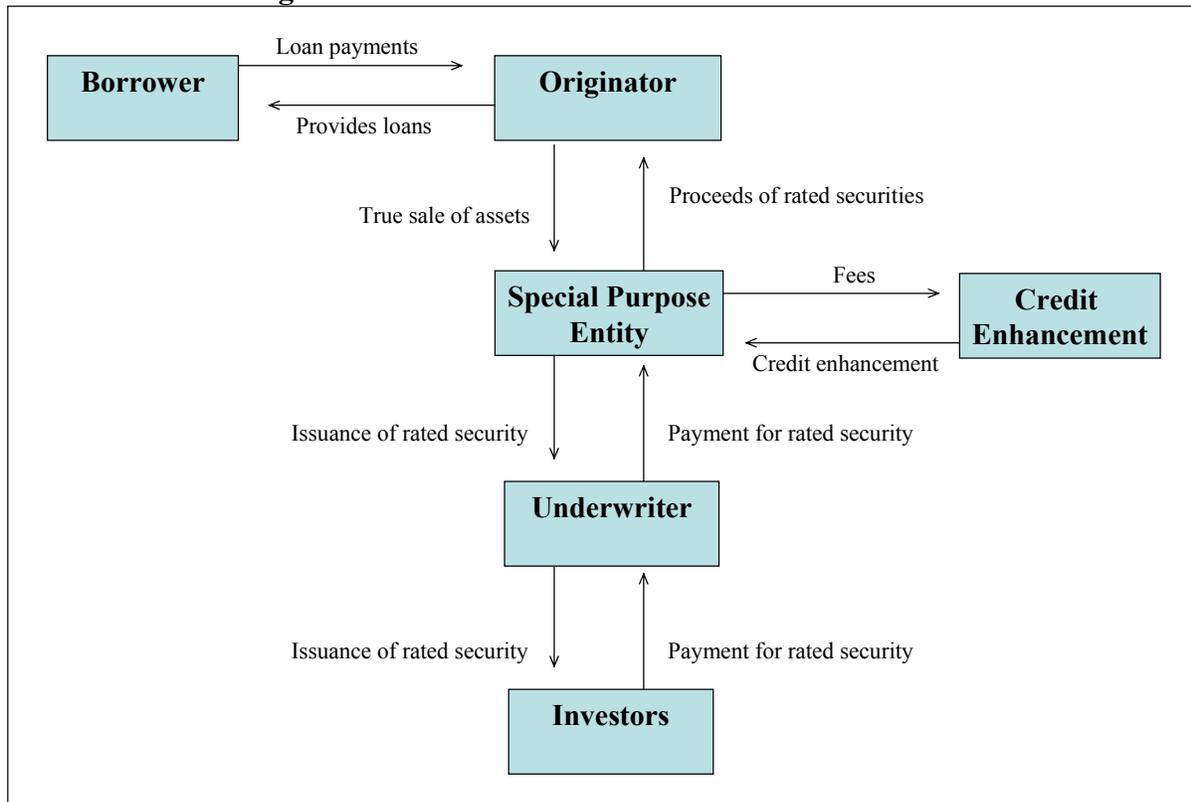
Both community development lenders and capital investors have opportunities for mutual gain in the growth of the secondary markets. The ultimate beneficiaries are those communities that depend on this market for scarce financial resources. Strong and healthy communities are the surest sign of this industry's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

Appendix I – The Basics of Asset Securitization

This section is adapted from the article “Securitization of Financial Assets” by Timothy C. Leixner of the law firm Holland & Knight LLP.

A basic securitization begins with the transaction between borrower and originator, in which the originator provides a loan to the borrower in exchange for a stream of loan repayments. The originator then sells this stream of receivables to a "bankruptcy-remote" special purpose entity (SPE) in a manner that qualifies as a "true sale" (vs. a secured loan).⁸⁵ This sale is done for accounting purposes, and it protects the receivables from the claims of creditors of the originator. The SPE then issues and sells, in a private placement or public offering, the debt securities, which are subsequently satisfied from the proceeds of and secured by the receivables. The underwriters are the brokers of the transaction, typically investment banks or banks that sell or place the securities in a public offering or private placement. When the securitization is "closed," funds flow from the investors (as the purchasers of the securities) to the issuer (the SPE) and from the issuer to the originator. All of these transactions occur virtually simultaneously.

Figure I.A – Basic Securitization Transaction Model



Source: Greenberg Traurig (2003).

⁸⁵ Also referred to as a “bankruptcy-remote entity” whose operations are limited to the acquisition and financing of specific assets. The SPE is usually a subsidiary company with an asset/liability structure and legal status that makes its obligations secure even if the parent company goes bankrupt. (www.investopedia.com)

Key Participants

Originator - The entity that generates receivables in the ordinary course of its business (i.e., a lender). Can also include organizations that purchase and assemble portfolios of receivables (in that sense, not a true "originator").

Issuer - The special-purpose entity, usually an owner trust (but can be another form of trust or a corporation, partnership, or fund), created pursuant to a trust agreement between the originator and the trustee, that issues the securities and avoids taxation at the entity level.

Trustees - Usually a bank or other entity authorized to act in such capacity. The trustee holds the receivables, receives payments on them, and makes payments to the security holders.

Investors - The ultimate purchasers of the securities. Usually banks, insurance companies, retirement funds, and other "qualified investors."

Underwriters - The brokers, investment banks, or banks that sell or place the securities in a public offering or private placement. The underwriters usually play the principal role in structuring the transaction, frequently seeking out originators for securitizations.

Custodian - An entity, usually a bank, that actually holds the receivables as agent for the trustee or trustees.

Rating Agencies – Third-party rating agencies include Moody's, S&P, Fitch IBCA, and Duff & Phelps.

Servicer - The entity that actually deals with the receivables on a day-to-day basis, collecting the receivables and transferring funds to accounts controlled by the trustees. In most transactions the originator acts as servicer.

Credit Enhancement

Credit enhancements are required in the securitization process, but the type of enhancement and the amount often depends on the risks as determined by a third-party rating agency. The enhancements reduce the risks to the investors, thus increasing the rating of the securities and lowering the costs to the originator. Typical credit enhancements include:

Over-collateralization – Transferring a greater amount of receivables to the issuer than required (i.e., more than would be required if the repayment stream is paid as anticipated).

Senior/subordinated structure - Issuance of subordinated or secondary classes of securities, which are sold to other investors or held by the originator. If the repayment does not occur as anticipated, the holders of the senior securities receive payments before the holders of the lower-rated (subordinated) securities.

Early amortization - If certain negative events occur, all payments from the receivables are applied to the more senior securities until paid.

Cash collateral account - The originator deposits funds in account with a trustee for use in case the proceeds from the receivables are not sufficient.

Reserve fund - Subordinated securities retained by the originator or trustee and pledged for the benefit of the trust (and, therefore, the investors).

Security bond - Guarantee of all payments due on the securities.

Liquidity provider - A guarantee by the originator (or its parent) or another entity of all or a portion of payments due on the securities.

Advantages of securitization

1. The receivables are moved "off balance sheet" and replaced by a cash equivalent, which improves the originator's balance sheet.
2. The originator does not have to wait until it receives payment of the receivables to obtain funds to continue its business and generate new receivables. This is important when more traditional methods of financing are limited or difficult to obtain.
3. The securities issued in the securitization are more highly rated by participating rating agencies (because of the use of the bankruptcy-remote vehicle), thus reducing the cost of funds to the originator when compared to traditional forms of financing.
4. In nonrevolving structures, and those with fixed interest rate receivables, assets and related liabilities can be matched, eliminating the need for hedges.
5. Because the originator usually acts as servicer and there is normally no need to give notice to the obligors under the receivables, the transaction is transparent to the originator's customers and other persons with whom it does business.

Appendix II – GAO Report Findings

The following findings from the Government Accountability Office (GAO) provide a rich context for understanding how information sharing fits into the broader set of obstacles currently facing the growth of a secondary market for community development assets. The list below comes from the 2003 report “Community and Economic Development Loans: Securitization Faces Significant Barriers.”

The six key barriers to securitization

1. Borrower demand is not known across targeted markets, and community and economic development (CED) lenders generally lack incentives—both market-based and federally driven—to participate in securitization. As a result, the volume of loans that could be securitized is not well understood.
2. Many CED lenders lack the capacity to securitize their loans. For instance, their reliance on small, less-diversified portfolios that require intensive servicing results in higher per loan costs. Also, many lenders do not have financial information—such as their cost to originate and service these loans and the expected income from these loans—that is needed to assess whether securitization is a viable option. Nor can they readily obtain the staffing resources or skills needed to expand lending activity that might be required when securitizing their loans.
3. External requirements—statutory or programmatic—attached to funding sources may directly or indirectly inhibit the securitization of loans.
4. CED lenders believe that selling their below-market-rate loans would require them to absorb too high a discount to benefit from a securitization.
5. Lack of lender standardization and performance information impedes securitization by increasing the cost of securitizing these loans.
6. Mechanisms available to support securitization for CED loans, such as information links between capital markets and lenders and loan-pool assemblers, are limited in number and capacity.

Appendix III — Regulation AB

The following information on Regulation AB comes from the Mortgage Bankers Association (MBA), “Regulation Asset Backed Securities Resource Page.”

Regulation AB is a sweeping codification by the SEC of twenty years of guidance and practice in the regulation of asset-backed securities. Residential mortgage-backed securities (RMBS) issued or guaranteed by SEC exempt entities such as Fannie Mae, Freddie Mac, and Ginnie Mae are not subject to Regulation AB. Private placement transactions also are not covered by Regulation AB.

Most publicly issued, nonagency RMBS are subject to Regulation AB. The growth in this sector has been rapid, and during 2005, nonagency, or private-label RMBS issuance outpaced the volume of RMBS issued by Fannie Mae, Freddie Mac, and Ginnie Mae combined. The regulation is significant to MBA members who originate or service mortgages that are used in nonagency RMBS transactions, and members who act as issuers, sponsors, servicers, trustees, paying agents, or vendors of certain other types for RMBS deals.

The full text of Regulation AB is available online at <http://www.sec.gov/rules/final/33-8518fr.pdf>.

Deloitte conducted an investor survey of static pool data in January 2006, which provides information on original pool characteristics and static pool or performance data, disclaimers used on static pool websites, and diagrams for transaction structures and flow of funds.⁸⁶ A sample of the results of that survey is included below, as presented in the online report. The full report is available online at:

http://www.deloitte.com/dtt/cda/doc/content/us_fsi_securitization_sos012006.pdf

⁸⁶ Deloitte (2006), “Reg AB: Static Pool Survey and Structural Diagrams of Flow of Funds.”

Residential Mortgage (including home equity)

Sponsor	Original Pool Characteristics	Performance Data
<p>Bear Stearns Website: www.bearstearns.com/transactions/bsabs_i/2006-he1/ Performance Data: Monthly Number of Transactions: 20</p>	<p>Number of Loans Original Pool Balance Average Initial Loan Balance Original Mortgage Rate (WA) Original Term (WA) Remaining Term (WA) FICO (WA, Min, Max) LTV (WA) Distribution by Product Characteristics (%) Distribution by Documentation (%) Distribution by Property Types (%) Distribution by Occupancy Type (%) Distribution by Loan Purpose (%) Distribution by Original Mortgage Rate (%) Geographic Concentration (States > 5%) (%) Originator Concentrations (Originators > 10%) (%)</p>	<p>Delinquencies (Current, 30-59, 60-89, 90+) (#, \$, and %) Total Delinquencies (#, \$, and %) Assets in Bankruptcy (#, \$, and %) Assets in Foreclosure (#, \$, and %) Assets in REO (#, \$, and %) Annualized Default Rate Net Loss as % of OPB Loss Severity (%) Cumulative Annualized Default Rate (%CDR) Cumulative Net Loss as % of OPB Cumulative Loss Severity (%) Current Prepayment Data: Loan Age in Months (WA) Pool Balance and Factor Annualized Prepayment Rate (%CPR)</p>
<p>C-BASS Website: www.regab.c-bass.com Performance Data: Quarterly Number of Transactions: 30 Also includes OWNIT Transactions presented by vintage origination quarter</p>	<p>Number of Loans Original Pool Balance Average Initial Loan Balance Mortgage Interest Rate (WA) Original Term (WA) Remaining Term (WA) FICO (WA, Min, Max) Distribution by Product Characteristics (%) Distribution by Documentation (%) Distribution by Property Types (%) Combined LTV (WA) Lien Position (First, Second) (%) Distribution by Mortgage Interest Rates (%) Geographic Concentration (States > 5%) (%)</p>	<p>Delinquencies (Current, 30-59, 60-89, 90+) (# and \$) Total Delinquencies (# and \$) Total Delinquencies as a % of Current Pool Balance Assets in Bankruptcy (# and \$) Assets in Foreclosure (# and \$) Assets in REO (#and \$) Net Losses (\$) Net Losses as a % of OPB Cumulative Loss Frequency (%) Cumulative Loss Severity (%) Cumulative Net Loss (\$) Cumulative Net Loss as a % of Original Pool Balance Current Pool Factor Prepayment Rate Prepayment Rate is equal to $1 - (1 - \text{the aggregate principal balance of all liquidated or prepaid in full mortgage loans at the time of their liquidation or prepayment over the aggregate original principal balance of all mortgage loans in the pool})^{\frac{1}{12}}$ raised to the power of 12 over the number of months from the cutoff date to the calendar quarter. The Prepayment Rate calculation does not include partial prepayments or curtailments. If partial prepayments or curtailments were included the Prepayment Rate would be higher.</p>

Sponsor	Original Pool Characteristics	Performance Data
<p>CitiMortgage Website: www.citimortgagembs.com Performance Data: Monthly Number of Transactions: 57 for CMSI shelf Presented in Excel Format. Includes a page of Definitions All of the pool characteristics have been updated on a monthly basis since inception.</p>	<p>Number of Pool Assets Original Pool Balance Current Pool Balance Interest Rate (WA) Original Term (WA) Remaining Term (WA) FICO (WA, Min, Max) Distribution by Product Type (Fixed, ARM) (%) Distribution by Loan Purpose (Refi, C/O) (%) LTV (WA) Distribution by Loan or Note Rate (%) Geographic Concentration (All States) (%)</p>	<p>Delinquencies (Current, 30-59, 60-89, 90+) (# and \$) REO (# and \$) Foreclosure (# and \$) Bankruptcy (#and \$) Original Loan Balance of Loans with Loss Cumulative Original Loan Balance of Loans with Loss Book Value Recoveries Net Losses Cum Loss Ave Net Loss on All Assets with a Net Loss (%) Cum Loss as a % of Orig Pool Balance (%) Current Prepayment Rate LTD CPR</p>
<p>Number of Transactions: 4 for CMLTI Shelf (primarily WMC collateral)</p>	<p>Number of Loans Principal Balance Average Principal Balance Average Original Balance % of Loans with Prepayment Charges % of Fully Amortizing Loans % of First Lien Loans % of Second Lien Loans Remaining Term (WA and range) Original Term (WA and range) Interest Rate (WA and range) Distribution by Product Type (Fixed, ARM) (%) Maximum Interest Rate for ARMs (WA and range) Minimum Interest Rate for ARMs (WA and range) Margin (WA and range) Next Adjustment Date (WA and range) LTV (WA and range) FICO (WA and range) Geographic Distribution – Top 5 Distribution by Property Type (%) Distribution by Occupancy Status (%) Distribution by Loan Purpose (%) Distribution by Documentation Level (%) Distribution by Risk Category (AA, A, A-, B+, B, C) (%)</p>	<p>Delinquencies (Current, 30, 60, 90+) (#, \$, and %) Bankruptcy (#, \$, and %) Foreclosure (#, \$, and %) REO (#, \$, and %) CPR (1-mth, 3-mth, 6-mth, Life) Loss Severity (WA) (%) Cumulative Losses (# and \$)</p>

Auto Loans

Sponsor	Original Pool Characteristics	Performance Data
<p>Capital One Website: www.capitalone.com/staticpool Capital One Auto Finance Trust and Capital One Prime Auto Receivables Performance Data: Monthly Period Number of Deals: 18 Available in Excel or PDF</p>	<p>Original Pool Balance Original Number of Receivables Average Receivable Balance Contract Rate (WA) Original Term (WA) Remaining Term (WA) FICO Score (WA, Min, Max) 90% FICO Range New % Used % Distribution by Contract Rate (% of Aggregate Principal Balance and % of Aggregate Units) Geographic Distribution (Top 5 States) (% of Aggregate Principal Balance and % of Aggregate Units)</p>	<p>Delinquencies (31-60, 61-90, 91-120) (%) Cumulative Net Loss Rate (%) Pool Factor</p>
<p>Triad Financial Website: www.triadfinancial.com/absdata Performance Data: Monthly Period Number of Deals: 7</p>	<p>Number of Receivables in Pool Original Pool Balance Average Receivable Balance Interest Rate (WA) Original Term (WA) Remaining Term (WA) FICO (WA) New Vehicle % Used Vehicle % Distribution by Interest Rate (%) Geographic Distribution (Top 5 States) (%)</p>	<p>Net Cumulative Loss Rates Delinquencies (30+, 31-60, 61-90, 90+) (%) ABS Speed</p>

Credit Cards

Issuer	Original Pool Characteristics	Performance Data
<p>Capital One Website: www.capitalone.com/staticpool Capital One Master Trust Performance Data: Nine Months Ended 9/30/05 and Year-Ends 2004 and 2003 Years of Originations: 6 Available in Excel and PDF Shown in numerical data and GRAPHICAL form. Definition of each of the data points is included</p>		<p>Delinquencies (30+) (%) by yr. of origination Net Loss Rate by yr. of origination Yield by yr. of origination Principal Payment Rate by yr. of origination</p>

Student Loans

Sponsor	Original Pool Characteristics	Performance Data
<p>Sallie Mae Website: www2.salliemae.com/NR/rdonlyres/42992279-908F-48EF-A0ED-AB649E9589EB/0/regab_noncons20061011706.pdf</p> <p>Performance Data: Quarterly Number of Transactions: 22</p>	<p>Aggregate Outstanding Principal Balance by Treasury Bill and Commercial Paper Number of Borrowers Number of Loans Maturity (WA) Average Outstanding Principal Balance per Borrower, per Loan – T-Bill, per Loan – Commercial Paper Coupon (WA) Spread (WA) – 91-day T-Bill Spread (WA) – Three Month Commercial Paper Distribution of Loans by Loan Type Distribution of Loans as Percent of Pool by Outstanding Principal Balance (%) Distribution of Loans by Borrower Interest Rate Distribution of Loans by School Type Distribution of Loans by Borrower Payment</p> <p>Scheduled Weighted Average Remaining Months in Status by Current Borrower Payment Status Geographical Distribution of Loans as of the Cut-Off Date by State</p>	<p>Loan Status Information Delinquency (0-30, 31-60, 61-90, 91-120, 121-150, 151-180, 181-210, 211-240, 241-270, 271-300, 301-330, 331-360, >360, Total Delinquent >30, Total Repayment) Claims Paid, Claims Rejected and Risk Sharing Losses (Periodic, Cumulative) Since Issuance CPR and Quarterly CPR</p>

Interview Acknowledgments

My sincerest thanks to the following people who generously offered their time and expertise to this research effort:

Nancy Andrews, Low Income Investment Fund
Isabelle Barres, MIX Market
Thomas Bledsoe, Housing Partnership Network
Linda Davenport, CDFI Fund
Leonard English, General Board of Pension and Health Benefits
David Erickson, Federal Reserve Bank of San Francisco
Tracy Ericson, Wells Fargo
Donna Fabiani, Opportunity Finance Network
Ruth Jaure, CDFI Fund
John Krainer, Federal Reserve Bank of San Francisco
Liz Laderman, Federal Reserve Bank of San Francisco
Deborah Leland, Low Income Investment Fund
Dan Letendre, Merrill Lynch Community Development Company
Wayne Marsden, Wall Street Without Walls
Kirsten Moy, Aspen Institute
John Nelson, Wall Street Without Walls
John Olson, Federal Reserve Bank of San Francisco
John Quigley, University of California Berkeley
Luther Ragin, FB Heron Foundation
Ellen Seidman, ShoreBank Corporation
Kathy Stearns, Opportunity Finance Network
Mary Tingerthal, Community Reinvestment Fund
Frank Wilary, Wilary Winn
Doug Winn, Wilary Winn

References

- Akerlof, G. (1970). "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* 84, no. 3.
- Bhattacharya, A., and Fabozzi, F., ed. (1996). *Asset-Backed Securities*. New Hope, Pennsylvania. Frank J. Fabozzi Associates.
- Bakos, J. (1991). "Information Links and Electronic Marketplaces: The Role of Interorganizational Information Systems in Vertical Markets," *Journal of Management Information Systems* 8, no. 2.
- CDFI Coalition (2007). "President Bush Proposes \$29 Million for the CDFI Fund." *E-News* 2/8/2007. Retrieved 2/28/2007 from <http://www.cdfi.org/Uploader/Files/enews020807.html>
- CDFI Data Project (2004). Available online through the Opportunity Finance Network at <http://www.opportunityfinance.net/store/product.asp?pID=1&cID=3&c=303046>
- Comptroller of the Currency (1997). "Asset Securitization – Comptroller's Handbook." Available online at <http://www.occ.treas.gov/handbook/assetsec.pdf>
- Congressional Budget Office (1994). "Developing a Secondary Market for Small Business Loans." Inter Agency Report, available online at <http://www.cbo.gov/showdoc.cfm?index=5013&sequence=0>
- Deloitte (2006). "Reg AB: Static Pool Survey and Structural Diagrams of Flow of Funds," available online at http://www.mortgagebankers.org/files/ResourceCenter/RegAB/JanuarySOS-207591SOS_v4.pdf
- Erickson, D. (2006). "The Secondary Market for Community Development Loans: Conference Proceedings," *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 2.
- Gangwani, S. (1998). "MBS Structuring: Concepts and Techniques," *The Securitization Conduit* 1, no. 3.
- Gilson, R. (2002). "Engineering a Venture Capital Market: Lessons from the American Experience," *Social Science Research Network Electronic Paper Collection*, Working Paper 248.
- Government Accountability Office (2003). "Community and Economic Development Loans: Securitization Faces Significant Barriers." GAO-04-21.
- Jappelli, T., and M. Pagano (2000). "Information Sharing in Credit Markets: A Survey," *Univeristy of Salerno Working Paper No. 36*.

- Lee, H. (1997). "Electronic Market Intermediary: Transforming Technical Feasibility into Institutional Reality." *Proceedings of the Thirtieth Hawaii International Conference on System Sciences*, IEEE Computer Society.
- Leibsohn, D. (2001). "Expanding Capital Resources," *Financial Innovations Roundtable*. Retrieved on March 12, 2007, from http://finir.org/expand_cap/background1.htm
- Leixner, T. (2004). "Securitization of Financial Assets," Holland Knight Publications, available at <http://www.hklaw.com/Publications/OtherPublication.asp?ArticleID=41>
- Levy, J., and K. Purnell (2006). "Case Study: The Community Development Trust Taps Wall Street Investors," *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 1.
- Loizos, C. (2007). "Heard of speed-dating? VCs try speed-investing," *San Jose Mercury News*, printed March 6, 2007. Available online at http://www.mercurynews.com/vc/ci_5365240?nlick_check=1
- Mortgage Bankers Association (2007). "Regulation Asset Backed Securities Resource Page," available online at <http://www.mortgagebankers.org/IndustryResources/ResourceCenters/RegAB>
- Moy, K., and A. Okagaki (2001). "Changing Capital Markets and Their Implications for Community Development Finance," *Capital Xchange*, The Brookings Institution Center on Urban and Metropolitan Policy.
- National Credit Union Administration (2006). "Static Pool Analysis: Evaluation of Loan Data and Projections of Performance," Whitepaper available online at <http://www.ncua.gov/RiskAlert/2005/StaticPoolAnalysis.pdf>
- Pinsky, M. (1995). "Coalition of Lenders and Investors Help Create the Community Development Financial Institution Act of 1994," *Shelterforce Online*, Issue 79, January/February 1995.
- Pinsky, M. (2001). "Taking Stock: CDFIs Look Ahead After 25 Years of Community Development Finance," *Capital Xchange*, The Brookings Institution Center on Urban and Metropolitan Policy.
- Sabarwal, T. (2006). "Common Structures of Asset-Backed Securities and Their Risks," *Corporate Ownership and Control* 2, no. 4.
- Securities and Exchange Commission. "Asset Backed Securities" Release 33-8518; 34-50905; File No. S7-21-04. Retrieved February 12, 2007, from <http://www.sec.gov/rules/final/33-8518.pdf>

Seidman, E. (2006). "Bridging the Information Gap between Capital Markets Investors and CDFIs," *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 2.

Standard & Poor's (2005). "Europe's Whole Loan Sales Market Burgeoning as Mortgage Credit Market Comes of Age," Structured Finance Commentary, available online at http://www2.standardandpoors.com/spf/pdf/products/060605_whole_loan_salesSNAP.pdf

Stanton, G. (2003). "Unlocking Obstacles to Capital Markets for Community Development Lenders." *Working Papers in Community Economic Development*, Applied Research Center.

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

Stiglitz, J., and A. Weiss (1981). "Credit Rationing in Markets with Imperfect Information," *American Economic Review* 71:393-410.

Telpner, J. (2003). "A securitisation primer for first time issuers," Greenberg Traurig Publications, available online at <http://www.gtlaw.com/pub/articles/2003/telpner03a.pdf>

Tingerthal, M. (2006). "Turning Uncertainty into Risk: Why Data Are the Key to Greater Investment," *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 2.

U.S. Code. 42 U.S.C. Section 5301. Full text retrieved February 12, 2007, from <http://www.hud.gov/offices/cpd/communitydevelopment/rulesandregs/laws/sec5301.cfm>

U.S. Department of Housing and Urban Development (1995). Notice: CPD 95-05 available online at <http://www.hud.gov/offices/cpd/lawsregs/notices/1995/95-5.doc>

Van Order, R. (2006). "Securitization and Community Lending: A Framework and Some Lessons from the Experience in the U.S. Mortgage Market," *Community Development Investment Review*, Federal Reserve Bank of San Francisco, vol. 2, issue 1.

Wall Street Without Walls (2003). "Technology, Data Collection, Analysis, and Dissemination." Presentation at the "Orientation to the Capital Markets" conference held May 1, 2003, Federal Reserve Bank of Boston.

Weber, W., and M. Devaney (1998). "Community Lending, Bank Efficiency, and Economic Dualism," *Growth and Change* 29, no. 2.

Zider, B. (1998). "How Venture Capital Works," *Harvard Business Review* 76, no. 6, 131-39.