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Community Development

INNOVATION REVIEW

Understanding Community Development Financial Institutions and their Impact in Low- and Moderate-Income Neighborhoods

FEDERAL RESERVE BANK OF SAN FRANCISCO

Community Development INNOVATION REVIEW

The *Community Development Innovation Review* focuses on bridging the gap between theory and practice, from as many viewpoints as possible. The goal of this journal is to promote cross-sector dialogue around a range of emerging issues and related investments that advance economic resilience and mobility for low- and moderate-income communities.

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Community Development Innovation Review

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Table of Contents

Minority-Owned Enterprises and Access to Capital from Community Development Financial Institutions....5

Mels G. de Zeeuw, Federal Reserve Bank of Atlanta
Victor E. da Motta, Sao Paulo School of Business Administration, Fundação Getúlio Vargas

Just How Risky? Comparative Institutional Risks of Mission-based Depository Institutions (MBDIs)....22

Gregory B. Fairchild, Darden Graduate School of Business, University of Virginia
Megan E. Juelfs, Institute for Business in Society,
Darden Graduate School of Business, University of Virginia

Addressing the Capitalization and Financial Constraints of CDFI Microlenders....43

Brett Simmons, Revolve
Jonathan Brereton, Revolve
Joyce Klein, Business Ownership Initiative, The Aspen Institute

A Qualitative Model for the Evaluation of Community Development Financial Institutions....61

Caroline Smith Loyas, Impact Seven, Inc.

Capital-Raising Among Depository Minority-Owned CDFIs Before the Covid-19 Pandemic....88

Maude Toussaint-Comeau, Federal Reserve Bank of Chicago
Robin Newberger, Federal Reserve Bank of Chicago
Darline Augustine, City University of New York, Brooklyn College

Supporting Entrepreneurs: A Longitudinal Impact Study of Accion and Opportunity Fund Small Business Lending in the U.S. 105

Accion
Opportunity Fund
Harder+Company Community Research

Foreword

Michael C. Eggleston, Federal Reserve Bank of St. Louis
Guest Issue Editor, *Community Development Innovation Review*

As mission-driven lenders that create economic opportunity for low-income communities and individuals throughout the United States, Community Development Financial institutions (CDFIs) are integral in advancing community and economic development. The history of CDFIs dates back to the 1970s and there are currently over 1,100 operating throughout the country as banks, credit unions, nonprofit loan funds, and venture capital funds. CDFI financing leads to the creation of jobs, affordable housing, community facilities and more.

While CDFIs are integral to community development finance, there is still much we don't know about their impact. In response, the Federal Reserve Bank of St. Louis, in partnership with the Federal Reserve Banks of Atlanta, Minneapolis, Richmond, and San Francisco, the Board of Governors of the Federal Reserve System, and the CDFI Fund collaborated to organize a symposium of CDFI research.

Though initially intended to be an in-person event, the COVID-19 pandemic saw the CDFI Symposium converted to a four-part webinar series that took place between May and June, 2020. Goals of the event included highlighting relevant and empirical analysis, while also increasing the body of research on CDFIs. Researchers were invited to submit papers to present at the event, several of which were selected for publication in this Winter issue of the *Community Development Innovation Review*.

It is vitally important we support continued CDFI research and create opportunities for researchers to collaborate with community development practitioners. In service of those objectives, the Symposium's organizers have partnered with Opportunity Finance Network (OFN) to create an online learning community within the CDFI Connect[1] platform to share analyses and foster discussion. I encourage you to join the CDFI Research Community, designed as a hub for CDFI research that allows researchers, practitioners, and policymakers the opportunity to share resources and explore research collaborations.

In the meantime, please enjoy this issue of the *Review* dedicated to expanding our understanding of CDFIs and their impacts in vulnerable communities across the country.

Michael C. Eggleston
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1 See https://www.cdficonnect.org/communities/community-home?CommunityKey=02c8a544-8cdf-4986-827e-136afa6afca3

Minority-Owned Enterprises and Access to Capital from Community Development Financial Institutions

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Abstract

Small businesses are pivotal to local economic development in the United States. Among small businesses, minority-owned enterprises (MOEs) are noteworthy because they create a significant share of the jobs in majority-minority neighborhoods nationwide. MOEs are relatively more likely to encounter constraints in obtaining access to capital from financial institutions. Community Development Financial Institutions (CDFIs) provide a means to bridge limited access to capital between financial institutions and MOEs. The purpose of this study is to examine the likelihood of MOEs applying for CDFI loans. We also aim to investigate whether MOEs are more likely to have their application for a loan or line of credit accepted from CDFIs. Overall, we found no significant difference in application rates between Asian-, and White-owned businesses. However, in line with our expectations, the odds of Black- and Hispanic-owned firms applying to CDFIs were about 1.6 and 1.7 times greater, respectively, than that of similar White-owned businesses. We also found some weak evidence that the odds of Black-owned firms getting approved for financing at a CDFI are about half those of White-owned firms.

Introduction

Small businesses are pivotal to local economic development in the United States and to the U.S. economy as a whole (Porter, 2000). For instance, small businesses, defined as those with fewer than 500 employees, added approximately 1.4 million net new jobs in 2017, compared to 600,000 net new jobs added by medium- and large-sized enterprises (Robb, Barkley, & de Zeeuw, 2018). And, small firms employed almost half of the U.S. workforce (48 percent) in 2016 (U.S. Census Bureau's Business Dynamics Statistics, 2016).

Among small businesses, minority-owned enterprises (MOEs) are noteworthy because their number has seen rapid growth in recent years, increasing by 11 percent to 1.1 million employer firms between 2014 and 2016, compared to just 1 percent growth among non-MOEs during that same time period (Esposito, 2019). MOEs make up about 18 percent of businesses with fewer than 500 employees. They create a significant share of the jobs in majority-minority neighborhoods nationwide (Bates & Robb, 2014). On average, MOEs tend to be less profitable, smaller in terms of employees, and younger than non-minority owned businesses (de Zeeuw & Barkley, 2019). These firms also tend to have lower average value; white-owned firms have an average value of $656,000 compared to $224,530 among MOEs (Wiedrich et al., 2017).

MOEs are broadly defined as firms whose owners are not non-Hispanic or Latino[1] Whites, and include businesses owned by Black, Hispanic, Asian, and other ethnic and racial minority groups.[2] This subgroup of small firms is especially important due to demographic changes in the U.S. Minorities comprise a fast-growing share of the U.S. population, growing from 33.9 percent in 2007 to 39 percent in 2017 (Robb et al., 2018). Although minority groups encompass a substantial share and despite the fast-growing rate of MOEs, business ownership rates among minorities are lower than those of non-Hispanic whites. For instance, in 2016, minority business owners owned 18.4 percent of small employer businesses with less than 500 employees (U.S. Census Bureau's Annual Survey of Entrepreneurs, 2016).

Focusing on minority small business ownership presents opportunities to expand the benefits of economic growth and mobility to groups of the U.S. population who, historically, were prevented from fully participating in the economy due to explicitly racist policies. For example, Black, Indigenous, and people of color were barred from accessing programs and resources that allowed White individuals to build wealth, such as VA and FHA mortgages, or other mortgage programs (Rothstein, 2017; Gordon, 2005).

Increased minority-owned enterprises may alleviate existing economic disparities along racial lines. Research suggests there is a relationship between the race or ethnicity of a business owner or hiring authority and employees hired (Stoll, Raphael, & Holzer, 2005). Additionally, an analysis of 2008 Survey of Income and Program Participation shows a smaller discrepancy in wealth between Black- and White-business owners, compared to the overall population wealth gap (Association for Enterprise Opportunity, 2017). This may indicate that an increased share of MOEs could contribute to both narrowing the differential unemployment rates, as well as wealth gaps that exist between White and minority households.

Much previous research has established positive links between (access to) capital and business startup rates, and business performance outcomes like greater sales, profits, employment, and higher survival rates (Black & Strahan, 2002; Evans & Jovanovic, 1989; Servon, Fairlie, Rastello, & Seely, 2010). However, MOEs are relatively more likely to encounter constraints in obtaining access to capital from financial institutions.

Several studies have documented these constraints as well as unobservable differences, including structural barriers and racial discrimination. Constraints include higher interest rates (Blanchard, Yinger, & Zhao, 2008), lower levels of wealth among minorities, lower access to capital among small businesses located in inner-city minority communities (Bates & Robb, 2016; Robb et al., 2018), as well as higher loan-application rejection rates of MOEs in comparison with equally creditworthy White-owned businesses, particularly at small and large banks (Blanchflower, Levine, & Zimmerman, 2003; de Zeeuw & Barkley, 2019; Mitchell & Pearce, 2011; Robb et al., 2018). Heavy concentration of Black-owned businesses in Black residential areas has contributed to their more limited access to bank credit (Bates, 1993; Immergluck, 2004). Findings consistently indicate that MOEs (particularly Black- and Hispanic-

1 Hispanic or Latino is hereafter simplified to 'Hispanic'.
2 We hereafter use the same definition for the terms minority- or non-minority.

owned enterprises) are more likely to have their application for capital rejected than White-owned businesses with identical risk-related traits (Blanchflower, 2009; Blanchflower et al., 2003; Cavalluzzo, Cavalluzzo, & Wolken, 2002; Cavalluzzo & Wolken, 2005).

When MOEs do receive bank financing, they receive, on average, lower loan amounts, pay higher interest rates, and have lower levels of satisfaction with their lenders than do their White counterparts (Bates & Robb, 2013; Federal Reserve Banks, 2019b). Additionally, owners of Black- and Hispanic-owned firms relied more frequently on their personal credit scores compared to owners of White-owned businesses but had lower average personal credit scores (de Zeeuw, 2019); and MOEs that did not apply for capital were significantly less likely than White-owned business owners to indicate they did so because they already had sufficient capital in place (de Zeeuw and Barkley, 2019). Finally, Hispanic-owned firms in particular, were more likely to turn to higher cost and less transparent financing products like cash advances and factoring (Federal Reserve Banks, 2019b)

Ensuring that MOEs have adequate access to capital is thus of increasing importance to job creation, economic growth and opportunity, and local economic development across the U.S. Community Development Financial Institutions (CDFIs) are mission-oriented lenders that promote financial inclusion in underserved communities and provide a means to bridge limited access to capital between financial institutions and MOEs. They include community development banks, credit unions, business and microenterprise loan funds, and venture capital funds. CDFIs' main social objectives include supporting job growth in low- and moderate-income neighborhoods and providing access to financial services for groups that are often excluded from entering loan contracts, such as minority-owned businesses (Affleck & Mellor, 2006). CDFIs aim to provide access to finance for small enterprises at affordable rates and thus contribute to revitalizing economic conditions in low- and moderate-income communities (Harger, Ross, & Stephens, 2019; Marshall, 2004)

CDFIs offer financial products and services, including lines of credit and term loans that are designed to support business needs, such as working capital and investments in fixed assets. In addition, many CDFIs provide pre- and post-investment technical assistance to help potential borrowers qualify for capital and help them prioritize projects with positive net present value.

Given the need for affordable capital for MOEs and the important role of CDFIs in this space, our overarching two research questions are as follows:

1) Are MOEs more likely to apply for a loan from CDFIs than non-MOEs?
2) Are MOEs more likely to have their loan application accepted by CDFIs than non-MOEs?

We hypothesize that MOEs, predominantly comprised of Black-owned, Hispanic-owned, and Asian-owned businesses, will be more likely to both apply for loans and have their loan application approved from CDFIs due to their mission of improving access to capital for minority-owned businesses.

Little quantitative research exists examining the impact of CDFIs providing access to capital for small minority-owned firms. One study found that in 2012, CDFIs made the majority of their loans to low-income or minority borrowers (Swack, Hangen, & Northrup, 2014). This includes 58 percent of business loans and 60 percent of business loan volume, and 83 percent of microfinance loans and 79 percent of microfinance loan volume. Additionally, CDFIs are much more likely to direct their business loans to economically distressed Census tracts compared to Community Reinvestment Act (CRA)-reported business loans, though the same study finds no difference in business loan volume to areas with a high concentration of minority inhabitants. However, the study does not make it clear to what extent minority-owned businesses are the beneficiaries of these trends, as it is limited to observations about the communities in which the businesses were located.

Another study that relies on data from the Federal Reserve's Small Business Credit Survey indicates that Black-owned enterprises are significantly more likely to apply to a CDFI for loans or lines of credit than White-owned firms. No significant difference in application rates was found for Asian- or Hispanic-owned businesses. The study, however, does not capture whether Black-owned businesses are more likely to have at least part of their loan application approved by a CDFI, due to low observation counts (de Zeeuw & Barkley, 2019).

Our study contributes to a better understanding of the relationship between minority-owned firms and access to CDFI loans, by taking into account the main characteristics of firms that are both more likely to apply for loans at CDFIs and more likely to be approved. This allows for an initial assessment of CDFIs' impact in increasing the availability of affordable capital for MOEs. Our study differs from the aforementioned studies by specifically focusing on CDFI loans rather than including other sources, such as loans from banks, credit unions, nonbank online lenders as well as relying on personal savings, family and friends, and other types of alternative financial sources.

Methods

Small Business Credit Survey (SBCS) Data

To gain a better understanding of the financing experiences of small businesses that turn to CDFIs, we use 2016 through 2019 data from the Federal Reserve Banks' Small Business Credit Survey (SBCS). Each survey samples both nonemployer and employer businesses with less than 500 full- or part-time employees and poses questions on their performance and experiences in obtaining financing. One advantage of using SBCS data over, for instance, the transaction data from the CDFI Fund, is that it provides information on small business applicants that did not pursue financing at a CDFI, but rather turned elsewhere. This allows us to draw clearer distinctions between small businesses that did apply at a CDFI for a loan or line of credit and those that did not. This allows us to create a clearer picture of the population of small businesses that turn to CDFIs.

Empirical Analysis

In order to evaluate whether MOEs are more likely to both apply for and obtain a loan from CDFIs, we performed two separate logistic estimations through the following equations:

$$Apply_i = \beta_0 + \beta_1 Size_i + \beta_2 CreditRisk_i + \beta_3 Rural_i + \beta_4 WomenOwned_i + \beta_5 Profitability_i + \beta_6 FirmAge_i + \beta_7 Industry_i + \beta_8 Race_i + \beta_9 ZipCode_i + \beta_{10} VeteranStatus_i + \beta_{11} year_i \quad (1)$$

$$Approval_i = \beta_0 + \beta_1 Size_i + \beta_2 CreditRisk_i + \beta_3 Rural_i + \beta_4 WomenOwned_i + \beta_5 Profitability_i + \beta_6 FirmAge_i + \beta_7 Industry_i + \beta_8 Race_i + \beta_9 ZipCode_i + \beta_{10} Collateral + \beta_{11} Debts_i + \beta_{12} VeteranStatus_i + \beta_{13} year_i \quad (2)$$

Our estimations do not use survey weights, following the discussion outlined in Solon and colleagues (Solon, Haider, & Wooldridge, 2013). Our main empirical specifications focus on two dichotomous dependent variables. Our first outcome variable, apply, measures whether a small business that applied for a loan, line of credit, or cash advance did so at a CDFI; it is coded as 1 if an applicant firm filed an application at a CDFI, and 0 if it did so at another type of financial institution,[3] such as a bank, online lender, or a credit union. The second dependent variable, approval, indicates whether firms obtained at least part of a loan, line of credit, or cash advance application at a CDFI. It is coded as 1 if a small business received approval for at least some (more than 0 percent) of the financing amount it sought, and 0 if the application was rejected in its entirety.

Explanatory Variables

The main explanatory variable of interest is race, a categorical variable for the race/ethnicity of the owner of the firm. We include three categories, Black- or African- American-owned,[4] Asian-owned and Hispanic-owned businesses (White-owned firms are the base group, as these are most numerous, and this allows us to address the central research question). In addition, we separately performed logistic estimation for the White- and Black-owned firm categories, to examine within-group differences. We do not provide this analysis for other racial and ethnic groups due to an insufficient number of observations.

Consistent with previous literature, the estimated econometric models utilized several independent variables, derived from the SBCS, that represent firm characteristics (Robb et al., 2018).

Size is a categorical variable that measures the number of full- or part-time employees (this does not include contractors) that are employed by a firm. The categories were 1-4, 5-9, 10-19, 20-49 and 50-499 employees. The models utilize observations for both nonemployer and businesses with employees, with nonemployers as the base group. Previous work has

found significant relationships between firm size and various aspects of small business borrowers' experiences and outcomes (Robb, Barkley, & de Zeeuw, 2018).

CreditRisk is a categorical variable that groups together firms based on their self-reported credit scores. Firms in the low credit risk category (the base group in the regression models) have either owners with personal FICO credit scores of 720 or above, or a business credit score of 80 through 100, which aligns with a methodology employed in Federal Reserve System Small Business Credit Survey reports. Firms in the 'medium risk' category have business credit scores of between 50 and 80, or owners' personal scores of between 620 and 720. Firms in the 'high risk' category have business scores of between 0 and 50, or owners' personal scores of below 620. Finally, this variable includes firms that did not report either credit score, to attempt to control for non-response bias. Credit scores are a key indicator lenders use in assessing the risk applicants pose to default on a loan or other debt instrument, and as such are crucial to include in any model that examines credit applications or approval. One caveat here is that some researchers have noted that after controlling for various firm characteristics, credit scores themselves are subject to upward racial bias (Henderson et al., 2015), though others have found no such bias exists, or have even found a downward bias since expectations-based credit score models under predicted payment delinquency among minority-owned businesses (Robb & Robinson, 2018).

Rural is a binary variable where 1 measures a firm located in a rural zip code, and 0 means a firm is situated in an urban zip code. This is based on a definition issued by the U.S. Centers for Medicare and Medicaid Services. Firms located in rural areas tend to have access to fewer bank branches, and such areas have seen an outsized share of bank branch closures, complicating access to credit for some firms (Federal Reserve Board of Governors, 2019). Overall, however, rural firms have been found to be more stable financially than firms in urban locations, more likely to report not applying for financing because of enough financing already in place, and more frequently receive approval for the entirety of their requested financing; all factors that may affect their interactions with CDFIs (McKay, Terry, & Corcoran, 2017).

WomenOwned is a binary variable as well, where 0 indicates a firm is male-owned, or ownership is equally shared, and 1 means a business is majority women-owned. A variety of factors related to the gender of a firm's ownership might also relate to these firms' interactions with CDFI lenders. For instance, women-owned firms have been found to have lower startup capital, lower profitability, fewer employees, lower business survival rates, and lower sales than businesses owned by men (Fairlie & Robb, 2009; Coleman & Robb, 2009). Additionally, women-owned businesses more frequently report not receiving all of the financing they applied for, more frequently turn to large banks for financing, and more frequently receive approval for their financing application from small banks (Battisto, Gines, & Mills, 2017).

Profitability is 0 if a firm operated at break-even or at a loss at the end of the previous calendar year, and 1 if a firm operated at a profit at that point. Profitability might affect the likelihood or reasons for a firm's financing application, as well as lenders' judgement of default risk.

FirmAge is a categorical variable that measures how long firms have been in business. The models use startups, or firms less than 3 years old as the base category, with older firms grouped as firms between 3 and 6 years, 6 and 11 years, 11 and 16 years, 16 and 21 years, and 21 years and older. Industry consists of eight categories of firms, including non-manufacturing goods production and associated services (Agriculture, Forestry, Fishing, and Hunting; Mining, Quarrying, and Oil and Gas Extraction; Utilities; Construction; Wholesale Trade; Transportation and Warehousing), manufacturing, retail, leisure and hospitality (Arts, Entertainment, and Recreation; Accommodation and Food Services), finance and insurance, healthcare and education, professional services and real estate (Information; Real Estate and Rental and Leasing; Professional, Scientific, and Technical Services; Management of Companies and Enterprises), and business support and consumer services (which includes firms in Administrative and Support and Waste Management and Remediation Services and Other Services).[5]

LowIncome is a binary variable that indicates whether a zip code was considered a low- or moderate- income area by the U.S. Centers for Medicare and Medicaid Services for the purpose of Qualified Health Plan (QHP) certification. Zip code is the most granular level of geographic data accessible to analysis in the SBCS. This variable is included since, as previously discussed, previous research has found that CDFIs have been more likely to direct business loans to more economically distressed geographies (Swack, Hangen, & Northrup, 2014).

Collateral is a 0 when a firm offered no collateral to secure debt, which is used as the base group. 1 indicates a firm put up business assets as collateral, and 2 means a firm put up a different type of collateral, such as personal assets, a personal guarantee, portions of future sales, or another type. Debts is a categorical variable that measures the level of outstanding debt a firm has, which could affect how risky lenders perceive a firm as. The base group is a firm with no outstanding debt, and the other categories for comparison are: $1-$25,000; $25,000-$100,000; $100,000-$250,000; $250,000-$1 million; and more than $1 million.

Finally, *VeteranStatus* is a categorical variable that measures the extent to which a firm's ownership is comprised of veterans. Veterans have access to specialized small-business loan and grant programs, such as the Small Business Administration's Veterans Advantage loan program, which can affect how veteran-owned small businesses interact with different types of lenders. Previous research has found that the financing experiences of small veteran-owned firms differ from others in some aspects, including a lower likelihood of receiving approval for financing, and a greater likelihood of reporting dissatisfaction with their lenders (Robb, Barkley, & de Zeeuw, 2018).

Results

Based on SBCS data, in 2019, about 3 percent of small employer firms that applied for financing did so at a CDFI (see table 1). This would represent about 74,000 employer firms, and 215,000 non-employer firms across the U.S. While much less prevalent than the role played by banks, online lenders, or credit unions, this still makes CDFIs a player in the

5 For greater clarity on these industries and their two-digit NAICS codes, please see the appendix to Small Business Credit Survey Employer Firm, available at reports on www.fedsmallbusiness.org.

small-business financing landscape (Federal Reserve Banks, 2019a). This is particularly the case for Black-owned firms; in 2019, about 5 percent of Black non-employer firm applicants applied at a CDFI for financing, and about 6 percent of those with employees did so. The shares of Black-owned employer firms that apply at a CDFI are significantly greater than that among White-owned employer firms for all years that the SBCS was deployed nationally (2016 through 2019). The share of nonemployer firms that apply to CDFIs is slightly higher than that among employer firms.

Table 1: Share of Small Business Financing Applicants that Applied at a CDFI (by owner's race and survey year)

	Employer Firms			Nonemployer Firms		
Year	Overall	White-owned	Black-owned	Overall	White-owned	Black-owned
2016	4.3%	3.6%	10.3%	7.1%	7.2%	12.2%
2017	5.1%	4.2%	10.9%	6.1%	5.3%	6.4%
2018	5.2%	5.2%	17.0%	6.6%	6.0%	8.9%
2019	2.7%	2.5%	6.4%	4.0%	4.1%	5.3%

Source: Authors' calculations based on weighted SBCS data.

Application Rates at CDFIs

Using SBCS data, we uncover differences in CDFI application rates by firm type, owner's race and ethnicity, and income of neighborhood surrounding the business. Table 2 reports the four models. The first two examine differences between firm types for White-owned (N = 314 for CDFI applicants, 8,202 for non-CDFI applicants), and Black-owned (N = 127 for CDFI-applicants, and 1,227 for non-CDFI applicants) firms. The third model examines all firms, and includes the racial/ethnic breakdown of a firm's ownership as an independent variable (N = 512 for CDFI applicants, 10,500 for non-CDFI applicants). The fourth model adds a binary variable that measures whether an applicant firm was located in a low-income zip code (N = 339 for CDFI applicants, 6,521 for non-CDFI applicants).[6]

Due to the problem of small-sample bias in maximum likelihood estimation, and to adjust for this bias inherent in rare events, we employ penalized maximum likelihood estimation, and report results as odds ratios. These indicate the relative likelihood of an outcome for a particular variable. Coefficients greater than 1 mean a higher relative likelihood, and those below 1 indicate a lower relative likelihood. The results for the models are displayed in table 2. All include pooled data for 2016 through 2019, and controls were added to account for differences over time.

6 Based on data from the Centers for Medicare and Medicaid Services (CMS).

For the first key variable; firm size, the findings suggest that there is no significant pattern of differences between small-business applicants in terms of firm size among Black-owned firms. However, among White-owned firms, the odds of businesses with more than 20 employees applying at a CDFI were about half that of non-employer firms. We find no significant differences in application rates between firms with less than 20 employees and non-employers. In these results, we see some evidence that CDFIs cater more to micro businesses. In line with previous research, we find that CDFIs are at least somewhat successful in reaching small businesses in communities that are facing economic challenges. The odds of businesses in low-income zip codes[7] applying to a CDFI for financing were about 1.3 times as great as those for similar businesses located in higher-income neighborhoods.

A notable insight from the results is that among Black-owned firms, those located in rural areas have significantly lower odds of applying for financing at a CDFI. Their odds are just 0.2 percent those of Black-owned firms located in urban areas. This indicates that rural Black-owned firms could be facing particular capital access issues. Overall, rural firms are somewhat less likely to apply to CDFIs. The odds of rural firms applying at a CDFI are just 0.76 those of firms in urban areas. Indeed, this conforms with previous findings on CDFI activities in rural areas. For instance, 20 percent of CDFIs solely serve rural areas (Wavering Corcoran, 2019); and CDFIs in rural geographies face lagging bank investment compared to peers in urban locales (Opportunity Finance Network, 2019). The results point to an opportunity for CDFIs to better reach businesses in rural areas, particularly rural Black-owned firms, as well as an opportunity for the CRA to work as a policy lever to increase the level of bank investment in rural CDFIs.

7 The sample size drops considerably on the last column of table 2 due to missing information regarding low-income zip codes.

Table 2: Probability of Small Business Applicants Applying at a CDFI for a Loan, Line of Credit, or Cash Advance (Odds Ratios)

Key Covariates	White-Owned Firms	Black-Owned Firms	All Firms	All Firms (with LMI zip code)
Size of Firm (Nonemployer is base group)				
1-4 employees	0.845	1.321	1.010	1.043
5-9 employees	0.773	1.095	0.938	0.905
10-19 employees	0.876	1.233	0.943	0.798
20-49 employees	0.470***	0.492	0.523***	0.504***
50-499 employees	0.455**	0.584	0.568**	0.608*
Credit Risk (low risk is base group)				
Medium risk	1.583***	1.458	1.587***	1.608***
High risk	1.470*	1.275	1.449**	1.504**
Did not respond	1.212	1.406	1.134	1.070
Rural (urban is base group)	0.994	0.244*	0.887	0.758*
Female-owned (male-owned is base group)	1.406***	1.168	1.416***	1.494***
Profitable (unprofitable is base group)	0.881	0.893	0.932	1.062
Age of Firm (0-2 years is base group)				
3-5 years	0.958	1.337	0.968	0.882
6-10 years	0.651**	1.410	0.783*	0.823
11-15 years	0.574**	0.899	0.598***	0.595**
16-20 years	0.803	0.946	0.715*	0.760
21+ years	0.327***	1.075	0.364***	0.467***
Industry (Non-manufacturing goods production and associated services is base group)				
Manufacturing	2.189***	1.098	1.800***	1.515**
Retail	1.343	1.319	1.265	1.317
Leisure and hospitality	1.770**	1.662	1.463**	1.422
Finance and insurance	0.529	1.575	0.790	0.776
Healthcare and education	1.955***	0.383**	1.146	1.037
Professional services and real estate	0.885	0.754	0.844	0.703*
Business support and consumer services	0.866	0.763	0.818	0.746
Race/Ethnicity of Firm Ownership (White-owned is base group)				
Black			1.859***	1.677***
Asian			1.377	1.270
Hispanic			1.420**	1.562**
Low Income Zip Code				1.355**
Other Controls: Owner's Veteran Status, Survey Year (2016 through 2019)				
Observations	8,516	1,354	11,012	6,860

*** p<0.01, ** p<0.05, * p<0.1

Note: Applicants applied for a loan, line of credit, or cash advance. Coefficients are displayed as odds ratios.

Another interesting finding are the significant and positive coefficients on women-owned businesses. Among White-owned firms, women-owned businesses are significantly more likely to apply at a CDFI. Overall, the odds of women-owned businesses applying at a CDFI are about 1.5 times greater than those for similar male-owned businesses. Notably, we find no such significant differential among women- and male-Black-owned firms.

In addition, firms that are in the middle of the risk distribution, meaning firms with business credit scores of between 50 and 80, or owners' personal scores of between 620 and 720 have significantly greater odds of turning to CDFIs for financing. We also find some evidence that those businesses with the most challenging credit profiles, meaning owners' personal scores of below 620, or business scores of 0 to 50 have somewhat greater odds for applying at CDFIs. These findings provide some evidence that CDFIs are serving firms that may have a harder time obtaining credit at other types of financial institutions.

Overall, we found no significant difference in application rates between Asian- and White-owned businesses. However, in line with our expectations, the odds of Black-owned firms applying to CDFIs were about 1.7 times greater than that of similar White-owned businesses. Additionally, the odds of Hispanic-owned businesses applying to a CDFI were 1.6 times greater than White-owned firms. This indicates that businesses' access to financing through CDFIs differs by race and ethnicity, and that CDFIs with a mission to serve racial and ethnic minority borrowers could expand their reach among Asian business owners.

Approval Rates at CDFIs

Again using SBCS data, we then modeled CDFI approval rates by the race and ethnicity of a business' ownership, as well as the income-level of the neighborhood surrounding the business. The first model examines approvals for White-owned businesses (N = 208 for firms with approval, and 50 for those rejected). The second examines only Black-owned firms (N = 58 for those with approval, and 36 for those rejected). The third examines all firms (N = 311 for those with approval, and 97 for those rejected), and the final model adds a binary control for whether a firm's zip code is low-income (N = 205 for firms with approval, and 67 for those rejected). The results for these models are displayed in table 3.

Table 3: Likelihood of Applicants Receiving Approval at a CDFI for at Least Part of the Loan, Line of Credit, or Cash Advance Requested (Odds Ratios)

Key Covariates	White-Owned Firms	Black-Owned Firms	All Firms	All Firms (with LMI zip code)
Size of Firm (Nonemployer is base group)				
1-4 employees	1.075	3.680*	1.666	1.620
5-9 employees	0.664	0.884	1.133	1.321
10-19 employees	0.681	1.242	1.081	1.310
20-49 employees	0.190**	0.454	0.492	0.846
50-499 employees	0.715	0.263	2.183	1.986
Credit Risk (low risk is base group)				
Medium risk	0.440*	0.364	0.917	0.963
High risk	0.135***	0.192*	0.252***	0.233***
Did not respond	2.265	0.332	2.046	1.363
Rural	1.961	0.294	1.576	1.288
Female-owned	1.307	1.162	1.278	1.191
Profitable	1.458	3.233*	1.649*	1.477
Age of Firm (0-2 years is base group)				
3-5 years	0.450	0.238	0.362**	0.340**
6-10 years	0.667	0.481	0.453*	0.430
11-15 years	0.246**	0.267	0.255***	0.188***
16-20 years	0.359	0.107	0.305**	0.245**
21+ years	0.388	0.480	0.492	0.417
Industry (Non-manufacturing goods production and associated services is base group)				
Manufacturing	0.468	2.165	1.118	0.656
Retail	1.147	0.466	0.794	0.597
Leisure and hospitality	0.984	2.059	1.580	1.350
Finance and insurance	2.406	0.394	1.267	0.984
Healthcare and education	0.914	0.489	0.895	0.629
Professional services and real estate	0.985	1.022	0.872	0.729
Business support and consumer services	0.526	1.575	1.008	0.508
Collateral Used to Secure Debt (no collateral is base group)				
Business Collateral	4.512**	3.796	3.224**	2.862*
Other type of collateral	1.680	1.575	1.660	1.347
Race/Ethnicity of Firm Ownership (White-Owned is base group)				
Black			0.634	0.485*
Asian			1.051	0.487
Hispanic			1.370	0.961
Low Income Zip Code				1.009
Other Controls: Owner's Veteran Status, Outstanding Debt, Survey Year				
Observations	258	94	408	272

*** p<0.01, ** p<0.05, * p<0.1

Note: Applicants applied for a loan, line of credit, or cash advance. Coefficients are displayed as Odds Ratios.

Here as well, we employ penalized maximum likelihood estimation, given the relatively low sample sizes, and we report results as odds ratios. We find no significant difference in approval rates between similar firms located in- or outside of low-income zip codes.

Notably, we find some weak evidence that the odds of Black-owned firms getting approved for financing at a CDFI are about half those of White-owned firms, all else being equal. Given the mission of CDFIs, this finding is surprising and requires deeper investigation. One potential explanation might be found in the type of collateral firms offer. We find strongly significant relationships between firms that offer business assets as collateral and approval rates across almost all models, the notable exception being Black-owned businesses. We find that offering other types of collateral, such as personal guarantees, is not significantly related to loan approval outcomes. Black-owned firms are significantly less likely to offer business assets as collateral compared to White-owned firms among both employer and non-employer firms. In 2018, 50 percent of White-owned employer and 74 percent of White-owned non-employer firms with outstanding debt used business assets as collateral compared to just 29 and 16 percent of Black-owned firms, respectively (Federal Reserve Banks, 2019a). Unfortunately, the SBCS does not offer data on the size of the collateral offered, which, similar to the incidence, may differ between these types of firms as well. As described previously, differences in collateral may be a result of racial barriers to economic mobility and credit access that have contributed to a wealth gap between Whites and Blacks, on average. This could hamper minority entrepreneurs both directly and indirectly; in terms of more limited personal assets, and potentially more limited assets among the network of family and friends of minority-entrepreneurs, an important source of support for many small business startups. This requires further investigation.

Conclusion

Although MOEs create a significant share of the jobs in majority-minority neighborhoods nationwide, they are relatively more likely to encounter constraints in obtaining access to capital from financial institutions. CDFIs can provide a means to bridge limited access to capital between financial institutions and MOEs. CDFIs' mission is to serve low- and moderate-income communities and individuals, and they aim to provide access to finance for small enterprises at affordable rates, and technical assistance. CDFIs are often well positioned to utilize relationships in the local community they serve, and are frequently able to operate more nimbly than larger financial institutions, which well-suits smaller businesses that need a more hands-on approach to become borrowers, or that lack application experience or networks at larger banks (Smith et al., 2008).

The purpose of this study was to examine the likelihood of MOEs applying for CDFI loans. We also aimed to investigate whether MOEs are more likely to have their application for a loan or line of credit accepted by CDFIs. Overall, we found no significant difference in application rates between Asian- and White-owned businesses. However, in line with our expectations, Black- and Hispanic-owned firms were more likely to apply for CDFI loans than similar White-owned businesses, though this relationship is reversed for Black-owned firms in rural areas.

However, we also found some weak evidence that Black-owned enterprises were less likely to get approved for a CDFI loan than similar White-owned firms. A potential explanation for this finding is that Black-owned firms are significantly less likely to pledge collateral guarantees, which may be related to aforementioned racial wealth disparities. Unfortunately, one of the limitations in the SBCS data is that the value of such collateral offered, or a business owners' personal assets is unknown. This requires further analysis. Given this result, CDFIs could expand their financial and entrepreneurship coaching and technical assistance, and better target this at minority-entrepreneurs, and at Black-owned businesses in particular.

Better collaboration between CDFIs and larger financial institutions or Minority Depository Institutions (MDIs) could contribute to more extensive credit provision for MOEs. In low-wealth neighborhoods, business credit needs frequently exceed the capacity of CDFIs operating there, particularly given the greater resource demands that more extensive relationship-based lending combined with technical assistance to less experienced small business borrowers requires.

Large banks could develop more extensive partnerships with CDFIs, to better leverage their ability to act as agile and innovative lenders on the front line in low-wealth areas and expand their ability to develop more flexible loan products and programs. The CRA in particular could act as a policy lever to aid CDFIs to address apparent access gaps for Black-owned firms in rural areas. MDIs could be particularly well-positioned to expand the reach of MOE financing by CDFIs, or in general. To investigate this potential, future research could examine the experiences of minority-owned small business borrowers at such institutions.

Finally, policymakers that aim to increase the flow of financing for MOEs could further subsidize CDFI operations and capital pools, such as by increasing the amount of capital made available through the CDFI fund, and could earmark at least parts of such capital for programs that increase small business lending to MOEs (Smith et al., 2008).

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Just How Risky?
Comparative Institutional Risks of Mission-based Depository Institutions (MBDIs)

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Abstract

We examine the relative institutional failure risks for three sets of bank depositories: Community Development Banking Institutions (CDBIs), Minority Depositories (MDIs) and what we term Non-Mission Depository Institutions (hereafter, NMDIs). CDBIs have primary missions of community development and serving underserved populations; MDIs are typically led by minorities and serve minority populations (a single institution can be both a Community Development Banking Institution (CDBI) and an MDI, either or neither). In this analysis, NMDIs represent all other depository banks. Given their operation within lower-income and minority communities, MDIs and CDBIs appear, *prima facie*, to be face greater institutional failure risks. We examine these risks across each set of institutions, *ceteris paribus*. Utilizing data from a number of sources, including the Reports of Condition and Income (Call Reports) for a substantial set of FDIC-insured banks in the United States, we apply a modified Capital Assets Management Earnings and Liquidity (CAMEL) model to measure the predictive likelihood of failure. Recognizing that MDIs are not homogeneous, we also examine relative institutional failure across types of depositories. The results indicate that CDBIs and MDIs are systematically at lower failure risks, and that there are differences across service designations.

Introduction

Community Development Banking Institutions (hereafter, CDBIs) are depository banks that serve low-income, underserved markets. CDBIs are defined as ". . . depository institutions with a stated mission to primarily benefit the underserved communities in which they are chartered to conduct business" (Office of Comptroller of the Currency, 2019). CDBIs provide depository, credit and counseling services to low-and moderate-income (LMI) individuals or communities. They are one category of Community Development Financial Institution (hereafter, CDFI). CDFI is a U.S. Treasury designation of mission-driven financial institutions (and can be credit unions, loan funds, or equity funds).

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Similarly, Minority Depository Institutions (hereafter, MDIs) are a federally-recognized set of banks and credit unions that have missions to provide financial services to minority populations.[2] It is possible for a single depository to be an MDI, a CDBI, neither or both. Hereafter, when referring to both CDBIs and MDIs collectively, we use the term Mission Designated Depository Institution (hereafter, MDDIs). When referring to neither, we will use the term Non-Mission Depository Institutions (NMDIs).[3] As regulated financial institutions, CDBIs and MDIs must meet the same safety and soundness requirements as any other depository.

There are *prima facie* reasons to suspect that MDDIs face greater risks of institutional failure than otherwise similar depositories. Prevailing among these intuitions are concerns that center on these depositories' stated commitment to the provision of financial services to LMI and minority consumers and markets. There is a general recognition that consumers from these households tend to have lower assets, greater risks of occupational disruption (e.g., unemployment), and lower average incomes (De Jong & Madamba, 2001; Pfeffer, Danziger, & Schoeni, 2013). There is a logical progression that the provision of financial services to consumers with these characteristics expose financial institutions to heightened risks of credit default, and thus, institutional failure.

Observables provide some support for an association between MDDIs and heightened failure risks. For example, studies show that CDBIs tend to locate branches to a greater degree in LMI neighborhoods and place more of their loans in these communities as well. A recent report by the National Community Investment Forum (NCIF) found that the median CDBI in 2016 had 55.2% of their branches in LMI communities and made 75.3% of their loans in these as well (Narain & Malehorn, 2018). Comparable NMDIs have considerably lower branching and provision of services in these markets (Porteous & Narain, 2015). Likewise, other researchers report that MDIs are more likely to serve minority consumers than comparable non-MDIs (Kashian & Drago, 2017; Kashian, McGregory, & McCrank, 2014).

Some observable market trends provide a measure of support for the conjecture that service to these consumer segments exposes depositories to undue risks. Contemporary high levels of residential segregation by race, income, and education create clusters of poverty and concomitant social dislocations in geographic space (and thus, in depository operational areas). For example, a recent analysis by Intrator, Tannen, and Massey concluded that "Given their higher overall levels of segregation and income's limited effect on residential attainment, African Americans experience less integration, more neighborhood poverty at all levels of income compared to other minority groups. The degree of Black spatial disadvantage is especially acute in the nation's 21 hypersegregated metropolitan areas" (Fairchild, 2009; Intrator, Tannen, & Massey, 2016). CDBIs and MDIs have made strategic decisions that place branches and staff in areas that are proximal to LMI and ethnic minority consumers.

2 MDIs and CDFIs may be banks or credit unions. In this paper, we restrict our analysis to bank depositories.
3 The acronym is created by the authors as a way of designating for analysis purposes. We recognize that institutions that are neither CDBIs nor MDIs may be mission-driven, and yet are not certified as such.

Because of this conscious choice to locate MDDI branches in LMI and minority neighborhoods, when these banks close it has a disproportionate impact on small businesses located in those neighborhoods. When community banks fail, such as MDDIs, there is a contraction in credit that can last up to 3 years in the LMI and minority neighborhoods around these branches. This impacts both the germination of new businesses and the expansion of existing businesses (Toussiant-Comeau, Wang, & Newberger, 2020). Many of the small businesses that rely on MDDIs for access to credit are constrained in other ways. Minority-owned businesses receive discriminatory treatment from private equity firms (Bates, Bradford, & Jackson, 2018) and are often undercapitalized, when compared to similarly situated white-owned businesses, which limits their ability to expand and survive (Robb & Robinson, 2018; Fairlie & Robb, 2010). While the form of restricted access to credit varies by type, minorities face more discrimination in low-competition markets (Mitchell & Pearce, 2011). Thus, this lack of equality of capital access for minority-owned business, combined with the enabling role MDDIs play in capital provision to minority small businesses, means the fate of minority-owned small businesses is tied to the fate of MDDIs.

A recent analysis suggests that the aggregate number of MDIs has dropped faster than non-MDIs, and that their smaller relative asset sizes are associated with institutional failure risks: "Accordingly, and for Black MDIs in particular, the smaller scale may translate to difficulty navigating and operating in a highly regulated, quickly transforming industry, which limits their ability to serve the communities that need their help" (Barth, Betru, Brigida & Lee, 2019, 3-4).

Noting recent marked increases in the number and regional presence of CDBIs, other observers have examined institutional indicators among CDBIs and come to alternate conclusions (Narain & Malehorn, 2018). An analysis from the National Community Investment Forum (NCIF) reports that between 2001 and 2017, the number of certified CDBIs grew from 39 to 136, with total assets increasing from $5.2B to $48.1B. They also find evidence that CDBIs grew regionally. Notably, the number of CDBIs in a select set of Southern states grew from 9 in 2001 to 79 in 2017 (i.e., Alabama, Arkansas, Georgia, Mississippi, and Tennessee) (Narain & Malehorn, 2018, 3).

While these may seem suggestive of healthy growth, increases in the number of CDBIs and assets under management may not fully satisfy. Aggregate market trends may be due to factors other than robustness: first, existing depositories may have recently certified and registered to become CDBIs; second, increased institutional counts may be due to *de novo* depositories, while obscuring failure risks at the institutional level or within certain subsegments. The NCIF report did not examine whether there are differential failure risks at the institutional level, only overall size and scope trends, so this work is silent regarding these queries.

If the profile of MDDI's customers and market areas was not sufficient reason for these questions, the recent recession of the late 2000s further contributed to this skepticism. The period brought on a record number of banking failures, including MDDIs. The prevailing perception that the crisis was due to questionable lending practices, especially among what became known as "subprime markets" led to questions in some quarters about the viability

of MDDIs due to their proximity to neighborhoods impacted by subprime lending rather than the their actual practices (Spader & Quercia, 2012).

Even without the economic uncertainty brought on by the recession and related banking failures, the question of whether CDBIs or MDIs were likely to face higher institutional failure risks has been a topic of public policy interest for some time. One reason is that once certified, MDDIs are able to receive various forms of governmental and philanthropic support–technical assistance, training and education. In addition, certified CDFIs generally and CDBIs specifically also receive financial subsidy from foundations, governments, and individuals in the form of grants or low-interest investments.

It follows that external observers–academic, policy, or philanthropic–might wonder whether these economic and non-economic supports find placement in institutions with high likelihood of failure. If MDDIs are indeed more likely to fail, some observers might question whether these institutions should receive these supports at all. Should these funds instead be distributed to institutions with better survival prospects? Another concern might be that if these institutions do indeed face lower likelihood of survival, are these supports prescriptive? That is, do depositories facing significant market challenges benefit from these supports, and would they have an even greater rate of failure without them?

Given a linkage between the mission-based strategic orientations of MDDIs to normatively-desirable societal goals, understanding their relative failure risks has many potential economic and societal benefits. Economically, these goals include aiding in creating financial security for LMI populations, increasing affordable home ownership, and providing capital to minority entrepreneurs (Barth, Betru, Brigida, & Lee, 2019; Canner & Passmore, 1994; Matasar & Pavelka, 2004; Narain & Malehorn, 2018; Toussiant-Comeau, Wang, & Newberger, 2020). In social terms, these efforts can help to diminish wealth and socioeconomic gaps between racial groups and status groups.

For some proponents of MDDIs, there is the presumption that without these mission-driven depositories, these customer segments may not be served at all, or would be underserved. If there is truth to these notions, it represents a form of market failure or a reflection of measured market response, respectively. In the case of market failure, then there is an opportunity cost being paid: the diminishment of potential economic output at the national and community level. At this point, these are largely rhetorical debates. There is very little careful, rigorous analysis to determine the relative risks of MDDIs.

Although there are propositions suggestive of facilitative functions of MDDIs in the development of LMI and minority communities, there is limited evidence and lingering questions about the relative failure risks facing these institutions. Achieving a better understanding of the comparative performance of mission-driven institutions like MDDIs may have considerable policy and societal impact. This research takes these questions seriously. In this paper, we respond to practical and scholarly interests in the failure risks of these financial institutions, employing a modification of an approach commonly used in prediction of depository failure risks: Capital Adequacy, Asset Quality, Management, Earnings, and Liquidity (known by the acronym CAMEL).

What are CDBIs and MDIs?

MDIs were created by the Financial Institutions Reform, Recovery, and Enforcement Act in 1989 (FIRREA). Of course, ethnic and racial minority-serving institutions existed prior. Informal financial collectives existed among freed slaves prior to the Civil War and, during the war, military savings banks were created by the Union army for Black troops (Fleming, 2018). After the war, the U.S. government created the Freedman's Savings Bank in 1865 as a component of a suite of policies that became known as Reconstruction.

The MDI designation was created as a component of FIRREA, with the objective of sustaining and increasing the number and capacity of depositories operating in minority markets. From a definitional standpoint, "a minority institution" is determined by either (1) a concentration of ownership among members of a certain minority group, or (2) a concentration of board membership among that minority group by an institution that primarily serves that minority group.[4] Relevant minority groups include: Blacks or African Americans, Hispanic or Latinx, Asian or Pacific Islanders, Native Americans or Alaska Native Americans, and Multi-racial Americans.[5] Specifically, section 308 of the FIRREA of 1989 defines MDIs as "any depository institution where 51 percent or more of the stock is owned by one or more 'socially and economically disadvantaged individuals'" (Federal Deposit Insurance Corporation, 2019). This is commonly called "the ownership test." The FDIC regularly updates the list of MDIs and certifies their consistency with the program's objectives using historical data (Federal Deposit Insurance Corporation, 2019).

Comparatively, The Riegle Community Development and Regulatory Improvement Act of 1994 (P.L. 103-325) established the Community Development Financial Institutions Fund as a "wholly owned government corporation to promote economic revitalization and community development." The Fund was initially proposed by President Bill Clinton and was at least partially based on his own experience with community banking prior to his election (Martin, 1994). In his public pronouncements, the mission-driven aspects of the program are clearly mentioned: "by ensuring greater access to capital and credit, we will tap the entrepreneurial energy of America's poorest communities and enable individuals and communities to become self-sufficient."[6]

The Fund was created within the U.S. Treasury and is a component of the programs of the Under Secretary's Office of Domestic Finance. Because of its focus on financial institutions, it is organized under the Assistant Secretary for Financial Institutions. In terms of type of institution, CDFIs can take a number of forms, including banks and credit unions, nonprofit loan funds, and equity funds. Estimates of the total number of CDFIs nationally vary, though most sources indicate that there are approximately 1,100. At least one reason for the variance in estimated presence in the field is the procedural requirement to self-certify, and to recertify over time. Because of that process necessity, an institution may be certified at one point in their operational history, and not at another even as operations continue unabated.

If a bank or credit union is not currently a CDBI or MDI, it can self-certify, pending CDFI Fund or FDIC confirmation. For this reason, the aggregate number of CDBIs or MDIs may change over time without there being actual creation or failure of institutions–

this presents unique problems for researchers, as we discuss above. In the next section, we provide a preliminary set of arguments for potential heightened institutional failure risks of MDDIs.

MDDIs and Institutional Failure Risks—A Few Considerations

A review of the prevailing arguments in the scholarly and practical discourse on MDDIs return a common set of hypotheses about the sources of differential operation risks for MDDIs relative to NMDIs: these include the clients served, capability endowments, informational asymmetry, and contagion. We discuss each of these briefly below.

Clients

Due to persistent racial segregation by income, socioeconomic status, and race in the U.S., the workplace, K-12 schools, and residential neighborhoods are clustered across socioeconomic factors. For example, Bischoff, and Reardon (2014) find that income segregation has grown substantially in recent decades, with the bulk of this increased spatial dissimilarity happening between 1980-2000. Likewise, researchers have found considerable levels of residential segregation by social economic status (SES), with Iceland and Wilkes (2006) finding class sorting effects in neighborhoods even after controlling for racial demography. Similarly, in an analysis of racial residential segregation in major cities and suburbs since 1970, Massey and Tannen (2018) find that even by 2010, Blacks faced falling but high levels of residential segregation, while Asians and Hispanics experienced moderate levels. It is noteworthy that the increases in segregation by race and its durability occur years after the passage of the federal housing legislation.[7]

Residential clustering and segregation segments consumers into submarkets across geographic space. One benefit of these patterns is that they facilitate effective customer targeting and service matching. Segregation is a likely influential factor on the tendency of MDDIs to locate branches and operate in LMI or predominantly minority neighborhoods. Given high levels of social-, neighborhood- and workplace-segregation, consumers tend to interact within their respective racial and status groups (Kornienko, Santos, & Updegraff, 2015; Toussaint-Comeau & Newberger, 2017). Recognizing these behavioral engagement patterns, many MDDIs also hire demographically-matched service staffs.

Although segregation may facilitate market segmentation, these residential patterns also cluster poverty and associated social ills (Cutler, Glaeser, & Vigdor, 1999; Fairchild, 2009; Massey & Denton, 1993). If the neighborhoods in which MDDIs operate have higher levels of poverty and unemployment, some financial services providers may avoid operating there (Greer & Gonzalez, 2017; Runck, 1996). There is a logic to this approach. For example, communities with substantially higher levels of unemployment and underemployment may be especially vulnerable to economic shocks and downturns. This vulnerability might sub-

7 Title VIII of the US Civil Rights of 1968 is called the Fair Housing Act, which intended to limit and decrease housing discrimination.

ject consumers and their providers to a greater likelihood of credit default. Relatedly, Wang (2018) finds that minority-owned businesses are clustered into a relatively small set of industries, and that these are often those with marginal profits.

A relative absence of financial providers in a market can be viewed as evidence of market failure, in most circumstances a negative outcome. However, market incumbents may have another way of looking at these conditions: diminished competition among providers may create "captive" market conditions for depositories operating in these neighborhoods. Institutions servicing these neighborhoods may face fewer pressures to invest in capabilities that would provide service or product advantages. These monopolistic conditions would allow these institutions to charge higher rates and rely to a greater degree on captive consumer loyalty. Taken together, consumers in segregated LMI and minority markets may pay higher rates for their products, receive fewer service innovations, and may patronize providers that lower, rather than raise, their wealth. For example, Hyra, Squires, Renner, and Kirk (2013) find that even after controlling for neighborhood demographic characteristics and real estate trends, segregation was a significant predictor of the proportion of subprime loans originated in the largest 200 U.S. metropolitan areas between 2000 and 2006. While there is no evidence that MDDIs engaged in what could be described as predatory practices, they nonetheless operate in LMI and minority markets where their clients contend with poverty and wealth-reducing practices from other financial institutions. Taken together, client characteristics could impact the financial viability of MDDIs, which is the primary interest of this analysis.

Capability Endowments

CDBIs and MDIs tend to be smaller in relative asset sizes. Some researchers have argued that relatively undercapitalized depositories may have challenges in attracting and securing state-of-the-art capabilities and resources (Barth, Betru, Brigida, & Lee, 2019). Additionally, locations in LMI and minority neighborhoods may be less attractive to some employees, and physical and technological infrastructure may be of lower quality. The people, processes, and systems in MDDIs may not be as adept at providing competitive advantage or may be more costly to provide.

Informational Asymmetry

Another barrier to effective operation within LMI and minority communities may be differential access to data or relationship networks that make the determination of creditworthiness and risk scoring daunting, even to the degree of deterring action. For example, consumer financial services credit-granting decisions rely on both quantifiable data, like credit scores, and less on qualitative, unmeasurable data, like on-the-ground, local tacit knowledge. Lee (2019) finds that character-based lending, which relies on personal characteristics, is a key factor in lending to women-owned and minority-owned businesses. The amount, scope and quality of typical credit scoring indicators tend to be negatively correlated with income, wealth, and educational attainment. Further, in communities where there has traditionally been less lending, there is less specific tacit knowledge to aid lenders in making credit decisions. Taken to-

gether, quantitative and qualitative indicators of creditworthiness may simply be less available, whether they support the notion of a lack of creditworthiness or not. A lack of information is associated with uncertainty, which is a challenge, if not a deterrent, to lending.

Contagion

MDDIs might face another vulnerability that accrues from interlinked market contagion. Put differently, an individual MDDI may have constructed loans with strong underwriting, and still be vulnerable to the collapse of loans made by other providers. As noted above, there is a correlation between subprime mortgage loans and higher levels of residential segregation (Hyra et al., 2013). It logically follows that a shared market presence with a preponderance of poorly-performing loans may lead to a contagion cascade, even when not made by the focal lender. There is some evidence for this effect. First, Fairchild and Jia (2015) find that CDFIs are not more prone to institutional failure once they control for interlocking neighborhood mortgage network effects. Similarly, other researchers find an 18% increased risk of neighborhood contagion for foreclosures among minority mortgage loans (Towe & Lawley, 2013).

The effort in this section was to catalogue a set of common themes in scholarly and policy discourse about these institutions and associated programs, and not to provide a comprehensive set of potential arguments for heightened risks. In the next section, we review the related literature scholarly work on predicting depository failure, along with CDFIs, CDBIs, MDIs and their institutional failure risks.

Literature Review

Our review of the literature reveals that precious little has been written in the scholarly literature about MDIs or CDBIs. More specifically, even less on their relative institutional risks. There is a small and growing literature that has focused on MDDI's operational efficiencies, which we also review below.

Modeling Institutional Risks

The use of statistical methods in assessing the risk of either institutional failure or payment default has roots in the work of Edward Altman in the late 1960s. Altman (1968) introduced a method of predicting corporate failure using a combination of financial ratios of the firm. The resulting model, generally referred to as Altman's Z-score, is the sum of related financial and operational ratios. Altman's model was able to predict whether a firm was at risk for failure within a given period if its particular sum falls below a certain threshold (e.g., over 8 quarters). Altman's Z-score is based on a linear discriminant analysis approach, which has several strong assumptions (e.g. covariance matrices between distressed and safe firms are equal).

Since its publication, Altman's model and its approach have been updated and expanded to cover a broader number of industries and settings, including financial intermediaries such as banks (Altman, 1977; Altman, Brady, Resti, & Sironi, 2005). The use of logistic regression approaches to monitor banks was first proposed in 1977 by Daniel Martin (1977).

The use of CAMEL models to predict institutional failure risks for US banking institutions dates back to the 1970s. They rely on a combination of financial ratios and direct observation, and are generally structured as logistic regression models. Presently, CAMEL models are the prevailing method used by regulators to determine safety and soundness of banks (used by the Federal Reserve System, Office of the Comptroller of the Currency [OCC], and the Federal Deposit Insurance Corporation [FDIC]). CAMEL models are logistic regressions that predict the probability of institutional failure as a dependent variable and apply the balance sheet and income statement ratios as predictor variables. Specific CAMEL measures are generally kept proprietary and individual institutional CAMEL ratings of banks are confidential. Thus, researchers must develop their own measures through a combination of comparisons in the literature and data mining techniques (Cole & White, 2012; Fairchild & Jia, 2015).

Although broadly used, CAMEL models have known limitations, including their reliance on past data being predictive of present and future operational conditions, reliance on internal analysis of the bank's operations rather than external, local economic conditions, and that they are only a 'snapshot' measure at a given period of time and do not systematically track risk factors over time. Nevertheless, CAMEL remains the dominant approach to estimating likelihood of institutional failure by researchers (Cole & White, 2012; Curry, O'Keefe, Coburn, & Montgomery, 1999; Hays, De Lurgio, & Gilbert, 2009; Whalen, 2005).

A few scholars have explicitly focused on the operational efficiency of MDDIs. Researchers generally report an efficiency gap between MDIs and non-MDIs, although it should be acknowledged that levels of operational efficiency are a related, though separate matter from the risks of institutional failure (Chang, 1994; Elyasiani & Mehdian, 1992; Fairchild, Kim, Juelfs, & Betru, 2020; Hasan & Hunter, 1996; Iqbal, Ramaswamy, & Akhigbe, 1999; Kashian & Casillas, 2011; Kashian, McGregory, & McCrank, 2014; Kashian & Drago 2017; Lawrence, 1997; Spellman, Osborne, & Bradford, 1977).

CAMEL Models and MDDIs

In terms of scholarly research examining the institutional failure risks of CDBIs or MDIs, there is even less in the extant literature. First, Fairchild & Jia (2015) used a modified CAMEL model to predict the comparative likelihood of failure among CDFI banks and credit unions, finding that CDFIs were not statistically different in their failure risks. Second, Kashian and Drago (2017) used CAMEL models to examine the risks of MDI failures from 2009-2014, finding that failure rates were high among Black- and Asian-MDIs. Past these, there appears to be very little research carefully examining CDFI or MDI institutional failure risks. This project adds to this limited field by considering both CDFIs and MDIs together, and expanding the span of the research beyond the years immediately following the Great Recession.

In a summation of the prevailing, there is a sizable base of research on the use of CAMEL models to predict the likelihood of depository institutional failure. There is a smaller literature on the relative operational efficiency of MMDIs and scant literature on their institutional failure risks.

Data Overview

For this analysis, we compiled Reports of Condition and Income (Call Reports) for most FDIC-insured banks in the United States between Q1 2001 and Q4 2018. Call Reports are generated quarterly by the Federal Financial Institutions Examination Council (2019). The status of ownership for each institution was obtained from the CDFI Fund's list of depository CDBIs, and from the FDIC's list of MDIs (U.S. Department of the Treasury Community Development, 2019; Federal Deposit Insurance Corporation, 2019). When an institution is a certified MDI, the reference racial group is also provided (e.g., Asian-owned MDI). As noted above, both CDBI and MDI certification is based on verifiable data and can change over time. Our final dataset captures quarterly results of 10,778 institutions across 72 quarters over a time period from Q1 2001 to Q4 2018. Of these institutions, there are approximately 125 unique CDBIs, 279 unique MDIs, and 30 institutions with both designations.

The environmental control variables come from the U.S. Census (2000, 2010) and American Community Survey (ACS) 5-year aggregate files for 2011–2017. The ACS data is used to represent the environmental variables of the last year in the 5-year aggregate files. Finally, the Rural Urban Commuting Area (RUCA) data is used to estimate the urban, suburban, and rural nature of bank locations (based on zip code). One virtue of this study period is that it encompasses the recent 2008 financial crisis in which a number of financial institutions defaulted, with appreciably high rates of failure among MDIs.[8]

8 MDIs are tracked across time using yearly data from the FDIC. CDFIs are a snapshot of the data in 2019 from the U.S. Department of the Treasury.

Table 1. Descriptive Statistics: CDFI

Statistics	N	Mean	St. Dev.	Min	Median	Max
Bank failed	7,299	0.000	0.012	0	0	1
Minority depository inst.	7,299	0.199	0.399	0	0	1
Non-performing assets over total assets	7,299	0.011	0.012	0.000	0.007	0.073
Return on assets	7,299	0.005	0.006	-0.036	0.005	0.046
Yield-cost ratio	7,299	6.146	4.610	1.579	4.386	32.243
Operating revenue/operating expense	7,299	1.039	0.264	0.032	1.029	3.475
Equity-to-asset ratio	7,299	0.107	0.026	0.035	0.103	0.341
Log of total assets	7,299	11.986	0.880	8.749	11.989	14.838
Liquidity ratio	7,299	0.170	0.113	0.006	0.145	0.924
Gearing ratio	7,299	8.827	2.179	1.932	8.725	27.370
Cost of funds	7,299	0.010	0.009	0.000	0.007	0.073
CDFI	7,299	1.000	0.000	1	1	1
RUCA	7,299	4.651	3.350	1	4	11
Poverty rate	7,299	25.125	9.039	3.600	24.600	59.100
Percent co-ethnic	7,299	0.530	0.251	0.000	0.557	0.984

Table 2. Descriptive Statistics: MDI

Statistics	N	Mean	St. Dev.	Min	Median	Max
Bank failed	8,565	0.002	0.042	0	0	1
Minority depository inst.	8,565	1.000	0.000	1	1	1
Non-performing assets over total assets	8,565	0.013	0.015	0.000	0.007	0.073
Return on assets	8,565	0.003	0.009	-0.036	0.003	0.046
Yield-cost ratio	8,565	5.536	3.921	1.289	4.256	30.900
Operating revenue/operating expense	8,565	0.995	0.340	0.100	0.967	3.082
Equity-to-asset ratio	8,565	0.114	0.040	0.032	0.106	0.346
Log of total assets	8,565	12.063	1.156	8.778	11.902	16.490
Liquidity ratio	8,565	0.175	0.129	0.005	0.143	0.964
Gearing ratio	8,565	8.717	3.121	1.893	8.394	30.723
Cost of funds	8,565	0.011	0.010	0.000	0.007	0.073
CDFI	8,565	0.169	0.375	0	0	1
RUCA	8,565	1.783	2.032	1	1	10
Poverty rate	8,565	21.620	12.329	1	18.6	72
Percent co-ethnic	8,565	0.417	0.315	0.000	0.388	0.998

In Tables 1 and 2 we share descriptive statistics tables by institution type. Table 3 provides the descriptive statistics for the depositories that are NMDIs. There are minimal differences by institutional type for a few variables and for the most part, these fit the expectations regarding the market service areas of MDDIs. In terms of financial measures, the only marked difference is in the Return on Assets (ROA) across institution types. The ROA for CDBIs is 0.005, for MDIs is 0.003 and for NMDIs is 0.009. All other financial indicators are essentially the same.

Notable differences between institutional types are found in their market characteristics. For example, MDIs are less likely to operate in rural areas than the other two types (RUCA code of 1.78 versus 4.65 and 4.54–higher codes indicate less urbanity). CDBIs and MDIs are more likely to be located in zip codes with higher poverty levels (25.13% for CDBIs, 21.63% for MDIs and 13.37% for NMDIs). Finally, the percentage of co-ethnic[9] clients is substantially higher for NMDIs at 82.3%, when compared to 53% (CDBIs), and 42% (MDIs).

Table 3. Descriptive Statistics: Neither CDFI nor MDI

Statistics	N	Mean	St. Dev.	Min	Median	Max
Bank failed	424,360	0.009	0.094	0	0	1
Minority depository inst.	424,360	0.000	0.000	0	0	0
Non-performing assets over total assets	424,360	0.009	0.011	0.000	0.005	0.073
Return on assets	424,360	0.005	0.006	-0.036	0.005	0.047
Yield-cost ratio	424,360	5.506	4.581	0.000	3.719	32.947
Operating revenue/operating expense	424,360	1.014	0.300	-1.538	0.992	3.578
Equity-to-asset ratio	424,360	0.110	0.035	0.031	0.101	0.348
Log of total assets	424,360	11.892	1.240	7.740	11.784	19.479
Liquidity ratio	424,360	0.170	0.130	0.000	0.136	1.150
Gearing ratio	424,360	8.873	2.626	1.874	8.855	30.999
Cost of funds	424,360	0.15	0.653	0.000	0.008	265.132
CDFI	424,360	0.000	0.000	0	0	0
RUCA	424,360	4.541	3.562	1.000	4.000	10.600
Poverty rate	424,360	13.369	8.376	0.000	11.704	80.300
Percent co-ethnic	424,360	0.820	0.190	0.002	0.894	1.000

9 The co-ethnic variable looks at the racial referent associated with each bank–MDIs are identified by their racial and ethnic classification of their owners–and matches that to the population proportion in the zip code of their address. Thus for a Black-owned bank, the percent co-ethnic would reflect the percent of Black individuals in their area. For banks that are not certified as an MDI, we assume that their racial reference group is white. Thus for non-MDIs, percent co-ethnic is the percent of white individuals in their area.

Table 4. Variables Used in CAMEL Logistic Regression

Name of Variable	Definition
Bank Failed	Bank ceases operation (voluntary or involuntary) – 1:00 = failure
Minority Depository Inst.	Depository is a certified MDI
Non-Performing Assets over Total Assets	Percentage of delinquent loans relative to total asset size
ROA	Return on Assets
Yield Cost Ratio	Financial sufficiency ratio – rate of return from loans relative to costs
Operating Revenue/Operating Expense	Operating Efficiency - Total Income adjusted for total expense
Equity to Assets Ratio	Percentage of assets owned
Log of Total Assets	Aggregate loans on balance sheet (logged)
Liquidity ratio	Ability to service current debts without need for external capital
Gearing ratio	Equity to debt ratio (degree of leverage)
Cost of Funds	Interest rates on debt holdings
CDFI	Depository is a Community Development Financial Institution
RUCA	Population density, urbanization, daily commuting within a service area
Poverty rate	Percentage of households below the poverty level
Percent Co-Ethnic	Percentage of households from the same ethnic group

Method and Results

Our primary research question was whether MDDIs tend to have different levels of institutional failure risks than NMDIs, *ceteris paribus*. To examine this question, we utilized a logistic regression modeling method and applied a customized CAMEL model on a robust set of bank depository predictors. As stated above, CAMEL is the generally accepted approach used by bank examiners, though the specific measures are generally kept proprietary and individual institutional CAMEL ratings are confidential.

As an analytical tool, CAMEL provides a set of logistic regression coefficients that allow researchers to determine the variables most likely to predict institutional failure, and whether certain types of institutions are at greater or lesser failure risk. In the results below, the unit of analysis is one institution per quarter. The resulting unit-quarters were then grouped by CDBI or MDI certification overall and by MDI racial referent grouping (i.e., Black, Asian, Hispanic, other minorities).

Variable Selection

For this study, covariates were developed in accords with approaches taken in past research, and trimmed through backwards selection. The final covariates are found in table 4. These covariates were also chosen because each reflects one of the standards of the CAMEL rating system. Capital adequacy, Asset quality, Earnings, and Liquidity are all reflected by one or more of the variables; there is no accepted measure for Management (so, the model is actually a CAEL specification). Our models have also added covariates for RUCA codes, Poverty rate and Percentage Co-Ethnic, which are meant as environmental control variables. After dropping observations that exhibited missing values for any of the covariates, or were extreme outlines,[10] the parameters for each were estimated. Table 5 includes the correlation matrix for the model predictors. There are no predictors that are highly correlated, and thus, multicollinearity concerns are reduced.

Table 5. Correlation Matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Bank Failed	1														
2. MDI	-0.01	1													
3. Non-performing assets over total assets	0.00	0.05	1												
4. Return on Assets	-0.03	-0.05	-0.24	1											
5. Yield-cost ratio	0.01	0.00	-0.03	0.06	1										
6. Operating revenue / operating expense	-0.01	-0.01	-0.09	0.46	0.58	1									
7. Equity-to-asset ratio	0.01	0.02	-0.05	0.02	0.10	0.14	1								
8. Log of assets	0.01	0.02	0.06	0.06	0.11	0.23	-0.15	1							
9. Liquidity ratio	-0.00	0.01	-0.07	-0.04	0.10	-0.00	0.15	-0.26	1						
10. Gearing ratio	0.00	-0.01	0.07	-0.09	-0.13	-0.20	-0.89	0.13	-0.13	1					
11. Cost of funds	-0.00	-0.00	-0.00	0.01	-0.01	-0.00	0.01	0.01	0.01	-0.00	1				
12. CDFI	-0.01	0.17	0.03	0.00	0.02	0.01	-0.01	0.01	0.00	-0.00	-0.00	1			
13. RUCA	-0.02	-0.11	-0.05	0.15	-0.04	0.03	0.04	-0.40	0.14	-0.07	-0.00	0.01	1		
14. Poverty Rate	-0.00	0.13	0.05	0.02	0.13	0.12	0.03	0.10	0.04	-0.04	0.00	0.17	0.06	1	
15. Co-ethnic	-0.01	-0.27	-0.05	0.06	-0.12	-0.07	-0.01	-0.24	0.01	0.00	-0.01	-0.18	0.30	-0.51	1

Model Construction and Sensitivity Testing

The resulting model was applied to our database of existing depositories with the goal of determining a robust set of measures that could predict the likelihood of failure. The predictive ability for the model was assessed based on the rate of false positives, rate of false negatives, specificity, and sensitivity.

10 Outliers are values more than 6 times above/below the value of the interquartile range on any of the variables.

Table 6. Predictive Accuracy of Logistic Regression Model

Banks	*Predicted Safe*	*Predicted Failed*
Safe	2993 (98.3%)	29 (1.0%)
Failed	8 (0.3%)	16 (0.5%)

The rate of false positives is calculated by (False Positives / (True Positives + False Positives)) and the rate of false negatives by (False Negatives / (False Negatives + True Negatives). Specificity is defined as (True Negatives) / (False Negatives + True Negatives) and sensitivity is defined as (True Positives) / (False Positives + True Positives). The matrix of model predictive ability is found in Table 6. Overall, the model correctly predicted failure and continuance 98.8% of the time, including false positives and false negatives.

Logistic Regression Model Results

Tables 7 and 8 contain the results of the logistic regression models. The regression models are essentially identical, with the difference that the second regression includes dummy variables for each of the MDIs by ethnic ownership type (i.e., Asian-owned, Black-owned, Hispanic-owned, Native American-owned). Each model estimation has five stages: first, the predictions regarding MDI status; second, a model including the income and balance sheet measures; third, whether the institution is a CDBI; fourth, the model includes control variables representing the markets of operation (i.e., degree of urbanity and poverty rate); and fifth, the percentage of co-ethnic consumers.

The output confirms many of the intuitions for what would predict failure in distressed depository institutions. For example, ROA has a strong negative influence on the potential of failure in both models, and this is also true for Equity to Assets ratio. Both of these suggest that failure is associated with relatively lower financial returns, *ceteris paribus*. In terms of the influence of market area covariates, higher degrees of urbanity were associated with higher likelihood of failure (i.e., the negative coefficient for RUCA codes–higher numbers represent less urban areas); and higher percentages of co-ethnic consumers were associated with survival.

There were a number of coefficients that were the primary focus of this analysis: the dummy variables for CDBI status, MDI status and, in the second regression, the MDI status by racial referent ownership grouping. These provided a set of results that are counter to what, for some, may be commonly accepted beliefs that MDIs and CDBIs are at greater risk for institutional failure.

Specifically, the coefficient for MDIs is statistically significant at the 0.001 level and is negative, suggesting that when controlling for financial indicators and operating market characteristics, MDIs are less likely to fail. In the model in which MDI types are disaggregated by racial ownership group, Asian-owned and Hispanic-owned MDIs are found to be less likely to fail at the 0.001 level of statistical significance. Native American-owned MDIs are also

found to be less likely to fail, though at a lower level of statistical significance. Black-owned MDIs are also less likely to fail, although the coefficient is both less strong and is only at the 0.10 level of significance. In terms of CDBI status, both models show a strong and statistically significant lower likelihood of failure. As noted above, one limitation of both models is that neither includes a covariate for managerial quality (the "M" in CAMEL).

Table 7. Logistic Regression Predicting Institutional Risks

	Bank failed				
	(1)	(2)	(3)	(4)	(4)
MDI	-1.845***	-1.905***	-1.739***	-1.748***	-1.919***
	(0.258)	(0.259)	(0.258)	(0.260)	(0.262)
Non-performing assets over total assets		-2.675*	-2.527*	-2.596*	-2.591*
		(1.447)	(1.444)	(1.495)	(1.484)
Return on assets		-28.459***	-28.326***	-24.354***	-23.576***
		(2.740)	(2.743)	(2.919)	(2.917)
Yield-cost ratio		0.049***	0.050***	0.047***	0.046***
		(0.004)	(0.004)	(0.004)	(0.004)
Operating Revenue/operating expense		-0.795***	-0.792***	-0.657***	-0.651***
		(0.087)	(0.087)	(0.093)	(0.093)
Equity-to-asset ratio		6.921***	6.768***	6.020***	5.863***
		(0.740)	(0.742)	(0.785)	(0.785)
Log of total assets		0.106***	0.105***	0.022	0.012
		(0.014)	(0.014)	(0.016)	(0.016)
Liquidity ratio		-0.254*	-0.256*	-0.124	-0.149
		(0.131)	(0.131)	(0.138)	(0.138)
Gearing ratio		0.078***	0.076***	0.072***	0.071***
		(0.011)	(0.011)	(0.011)	(0.011)
Cost of funds		-0.002	-0.002	-0.002	-0.002
		(0.009)	(0.009)	(0.009)	(0.009)
CDFI			-4.004***	-3.973***	-4.067***
			(1.002)	(1.003)	(1.003)
RUCA				-0.057***	-0.046***
				(0.006)	(0.006)
Poverty rate				0.005***	-0.003
				(0.002)	(0.002)
Percent co-ethnic					-0.652***
					(0.103)
Constant	-4.706***	-6.741***	-6.686***	-5.576***	-4.842***
	(0.015)	(0.253)	(0.253)	(0.281)	(0.307)
Observations	499,090	477,831	477,831	438,844	438,773
Lob likelihood	-25,108.750	-23,643.760	-23,594.800	-21,402.360	-21,381.690
Akaike Inf. Crit.	50,221.500	47,309.530	47,213.600	42,832.720	42,793.380

Notes:
*** Significant at the 1 percent level
** Significant at the 5 percent level
* Significant at the 10 percent level
Models are run with clustered standard errors

Table 8. Logistic Regression Predicting Institutional Risks by Racial MDI

	Bank failed				
	(1)	(2)	(3)	(4)	(4)
Asian-owned	-1.606***	-1.657***	-1.587***	-1.672***	-1.930***
	(0.333)	(0.332)	(0.332)	(0.334)	(0.334)
Black-owned	-1.380***	-1.593***	-0.918*	-0.971**	-0.848*
	(0.489)	(0.494)	(0.476)	(0.484)	(0.488)
Hispanic-owned	-3.080***	-3.105***	-3.070***	-2.853***	-2.852***
	(1.003)	(1.004)	(1.004)	(1.007)	(1.006)
Native American-owned	-2.461**	-2.375**	-2.183**	-2.208**	-2.628**
	(1.021)	(1.024)	(1.027)	(1.028)	(1.029)
Non-performing assets over total assets		-2.689*	-2.577*	-2.657*	-2.654*
		(1.446)	(1.445)	(1.495)	(1.484)
Return on assets		-28.400***	-28.253***	-24.317***	-23.545***
		(2.741)	(2.742)	(2.918)	(2.916)
Yield-cost ratio		0.049***	0.050***	0.047***	0.046***
		(0.004)	(0.004)	(0.004)	(0.004)
Operating Revenue/ operating expense		-0.795***	-0.792***	-0.657***	-0.650***
		(0.087)	(0.087)	(0.093)	(0.093)
Equity-to-asset ratio		6.925***	6.769***	6.020***	5.851***
		(0.740)	(0.742)	(0.785)	(0.785)
Log of total assets		0.106***	0.106***	0.023	0.012
		(0.014)	(0.014)	(0.016)	(0.016)
Liquidity ratio		-0.256*	-0.257**	-0.127	-0.150
		(0.131)	(0.131)	(0.138)	(0.138)
Gearing ratio		0.078***	0.076***	0.072***	0.071***
		(0.011)	(0.011)	(0.011)	(0.011)
Cost of funds		-0.002	-0.002	-0.002	-0.002
		(0.009)	(0.009)	(0.009)	(0.009)
CDFI			-4.041***	-4.011***	-.4.116***
			(1.003)	(1.003)	(1.005)
RUCA				-0.057***	-0.046***
				(0.006)	(0.006)
Poverty rate				0.005**	-0.004
				(0.002)	(0.002)
Percent co-ethnic					-0.664***
					(0.103)
Constant	-4.706***	-6.746***	-6.693***	-5.583***	-4.830***
	(0.015)	(0.253)	(0.253)	(0.281)	(0.307)
Observations	499,090	477,831	477,831	438,844	438,773
Lob likelihood	-25,107.240	-23,642.780	-23,592.780	-21,401.190	-21,379.120
Akaike Inf. Crit.	50,224.480	47,313.560	47,215.560	42,836.380	42,794.250
Notes:	*** Significant at the 1 percent level ** Significant at the 5 percent level * Significant at the 10 percent level Models are run with clustered standard erros				

Another limitation is in the use of this form of modeling to predict failure. No matter how robust the model in sensitivity, these failure predictions are applying economic data (financial information or market values) to predict a legal or regulatory action (a depository choosing to enter bankruptcy or being forced to close). This distinction is important to note, because however sensitive and robust the model at predicting failure, there is a regulatory black box in terms of the full set of factors in a decision.

Summary and Conclusions

The question of whether MDIs or CDFIs have systematically greater risks of failure has been a topic of some practical and limited scholarly interest. Generally speaking, there have been a set of prevailing notions based on observed characteristics at the consumer, household and neighborhood level that are suggestive of credit default (e.g., relatively lower incomes and higher poverty rates of the populations they serve, quality and availability of technological infrastructure, differences in capability endowments, market contagion). These observables have fostered a set of logics that have considerable face validity, though have seldom been tested. This research is an effort to close the gap between commonly-held wisdom and careful analysis.

To engage with these questions, we share results of an analysis of the relative institutional default risks of both CDBIs and Minority Depositories Institutions (MDIs) between the years 2001 and 2018. We examine these risks using a modified version of a logistic regression modeling technique with broad applicability, CAMEL. One virtue of this study period is that it encompasses the recent 2008 financial crisis in which a number of financial institutions defaulted, with appreciably high rates of failure among MDIs. Utilizing a set of robust data, including Call Reports and controls for areas of market operation, we tested the question of differential institutional default risk. Recognizing high rates of segregation by race and the likelihood of organizations to serve co-ethnic populations, one of our interests was in the relative institutional risks across types of MDIs by racial/ethnic grouping (i.e., Black, Asian, Hispanic, and other types of MDIs). Recognizing high rates of segregation by class, we were interested in CDBIs' relative institutional risk.

Our model's results provide insight on this study's primary research question. Specifically, we find that not only are CDBIs and MDIs not systematically more likely to fail, but that a surprising counter notion is true: these institutions are less likely to fail, *ceteris paribus*. Additionally, we find differences across MDI types, with a rank ordering of relative risks across racial referent groups. Asian- and Hispanic-owned MDIs have the least likelihood of failure, followed by Native American-owned institutions. We even found a small protective effect for Black-owned MDIs, although the significance was relatively weak (0.10 level of significance). Our results suggest that given the goals of the Treasury's CDFI Fund and the FDIC's MDI program–to support the viability and expansion of these institutions–their ability to provide financial services products to the communities they serve has merit. Put differently, CDBIs and MDIs may actually prove less likely to fail than their NMDI counterparts.

These questions have policy import. First, because of the decades-long support government agencies have given to these organizations in the forms of subsidy and technical assistance, and second, because some have argued that the viability and expansion of these types of institutions can have normatively desirable impacts (Barth, Betru, Brigida, & Lee, 2019). Expansions of these institutional types is not only consistent with desires for safety and soundness, but increased investments in these institutions could result in enhanced LMI and minority participation in financial services. These could lead to decreases in the considerable wealth gaps across racial and income groups.

There is no doubt that MDDIs and the communities they serve face considerable challenges. Also, it is clear that these institutions are less capitalized, *ceteris paribus*. Those facts being recognized, they are not necessarily at greater risk for failure.

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Addressing the Capitalization and Financial Constraints of CDFI Microlenders

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Abstract

Community Development Financial Institution (CDFI) loan funds face a common capitalization challenge as they seek to grow–they must raise net assets to enable the additional debt financing needed to support an expanding portfolio. Among CDFIs that focus on microlending–making small dollar loans of up to $50,000 to small businesses–the financial challenges are even greater, as the revenue earned on these small-dollar, relatively short-term loans typically does not cover the cost to originate and service them (Klein & Okagaki, 2018, 12-14). Thus, CDFI microlenders must also raise grant (subsidy) dollars to support the increase in their lending costs as their portfolio grows.

Introduction

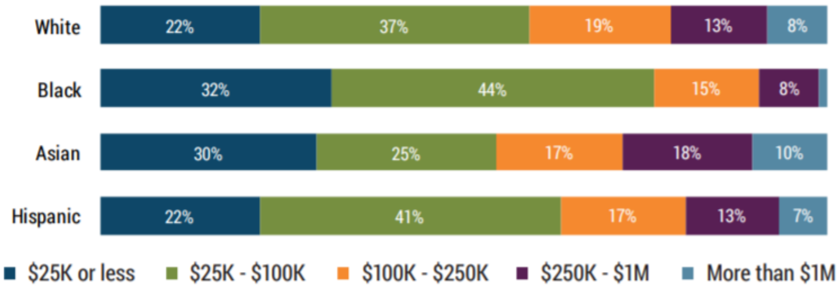
In early 2018, the Aspen Institute's Business Ownership Initiative (BOI) began working with the members of its Microfinance Impact Collaborative (MIC)[1] to explore capitalization and liquidity strategies that could address the financial challenges associated with growth. BOI partnered with Revolve, a consulting firm with experience in the CDFI microlending sector, to support its efforts. This paper presents the results of that effort, discussing why microlending is important for mission outcomes but challenging to scale from a financial perspective, and identifying the set of capitalization strategies that the MIC members have used and explored. The paper focuses in particular on the most promising strategy identified–selling loans to banks that see value in purchasing the loans to support their Community Reinvestment Act (CRA) requirements, and identifies factors that CDFIs should consider in determining whether loan sales are a potential fit for their organization.

The Importance of Scaling CDFI Microlending

One might question the wisdom of scaling a line of business that does not allow a CDFI to cover its cost through direct lending revenues. However, microlending fills a vital role in creating opportunity and equity in LMI communities, and in meeting demand for loans among entrepreneurs who have traditionally faced barriers in accessing credit: people of color and women. Data from the 2018 Small Business Credit Survey indicates that most small business owners are seeking business credit in amounts less than $100,000, and that the demand for smaller-dollar business loans is particularly strong among entrepreneurs of color. Specifically, the 2018 survey found that 76% of Black and 63% of Hispanic business owners

applied for less than $100,000 in financing–compared to 59% of White and 55% of Asian business owners. Black and Asian business owners were most likely to apply for $25,000 or less in financing (Federal Reserve Bank of Atlanta, 2019, 10).

Figure 1. Total Amount of Small Business Financing Sought (% of applicants)



Source: Small Business Credit Survey Report on Minority-Owned Firms (2019).

Importantly, the survey also found that Black business owners were more likely to turn to CDFIs (and to online lenders) than White- and Hispanic-owned firms, with 17% of Black entrepreneurs applying for financing at a CDFI (Federal Reserve Bank of Atlanta, 2019, 13). The COVID-19 pandemic has brought the need for reaching entrepreneurs of color into even greater visibility, with the failure of relief programs such as the Paycheck Protection and Economic Injury Disaster Loan Programs to reach the smallest businesses and Black-owned firms in particular.[2]

Data from the 2016 Small Business Credit Survey found that women business owners were more likely to be in the market for smaller business loans–in that year, 67% sought less than $100,000 in financing, and 28% sought less than $25,000. This compared to 49% and 15%, respectively, of male business owners who sought financing for their small business (Federal Reserve Banks of Kansas City and New York, 2017, p. 18). Women-owned firms were also more likely to apply to CDFIs than their male-owned counterparts (ibid, 21).

Capitalization and Financial Model Challenges for MIC Members

CDFIs lend across a variety of categories or asset classes, including business loans, consumer loans, commercial real estate, residential real estate, home improvement and purchase. Some CDFIs specialize in a single type of lending, while others lend in multiple assets classes. Between 2002 and 2015, about one quarter of loans originated by CDFIs were business loans

2 According to early reporting and several national surveys of small business owners. Additional media coverage available at https://www.nytimes.com/2020/05/18/business/minority-businesses-coronavirus-loans.html.

(Swack, Hangen, & Northrup, 2014, 18). Microloans are defined as loans less than $50,000, and therefore microlenders constitute a subset of CDFI small business lenders. In this paper, as well as in analysis conducted by the Opportunity Finance Network, CDFI microlenders are defined as CDFIs that hold the largest concentration of their loans in microloans (Opportunity Finance Network, 2019).

CDFI microlenders range in scale from those that originate just a few loans per year to those that originate thousands. The MIC members are distinct from the large majority of CDFI microlenders in the scale of their microlending activities and their plans to significantly scale their portfolio of loans below $50,000. As they have developed plans to scale their lending in this size range, each is cognizant of the significant financial challenges that growth entails. Despite these commonalities, the MIC members have diverse financial profiles. At the time this research effort commenced, portfolios under management ranged from $6M to more than $130M. Products remain diverse in terms of business and borrower characteristics, underwriting approach, terms, use of extensions and modifications, collateral liens secured, etc. Cumulative (vintage) losses range from 6-8% on the low end to in excess of 12%. Most cover just over 40% of their expenses through earned income while some achieve over 65% coverage. Three of the MIC members have hit their net asset limit of 20%. All have introduced larger, more profitable loan products in addition to their microloan products in order to increase self-sufficiency.

While they all require debt to lend and donations for operating subsidy and net assets, the relative priority of each need varies depending on the MIC member. The diversity among the lenders presents a challenge when crafting collective strategies. Ultimately, however, that diversity is a benefit in terms of mission outcomes as lenders look for ways to serve previously unreached clients. Previous efforts to more closely align or standardize loan parameters and underwriting have met resistance. Inasmuch as diversity leads to valuable mission outcomes the best capital strategy would seek to adapt to existing diversity.

Despite the diversity in the underlying portfolios and the scale of these lenders, they face common financial challenges. To expand their portfolios, they must:

Secure grant dollars to increase their net assets. Net assets are recommended at a level of 20% relative to liabilities by the CDFI Fund at the Department of Treasury (also responsible for CDFI ongoing certification) and some large lenders to MIC members require 25%.

Raise additional debt financing (dependent upon the above step of securing net assets to meet the underwriting and covenants requirements of their lenders). As portfolios grow, often this means an increase in the cost of debt, as CDFIs exhaust the lowest-cost sources of capital. It also often means that CDFIs must build the staff capacity to manage a significant number of lender relationships. Each of the MIC members is managing relationships with between 15-30 lenders.

Raise additional operating grants to support the costs of originating and servicing smaller loans that are not profitable. MIC members have found that even as they introduce efficiencies that improve the percentage of their costs recovered from interest and fees, rapid portfolio growth can mean that the total dollar amount of grant funds they must raise each year continues to grow.

While most CDFIs use a business and financial model that results in the first two financial challenges as they seek to grow, the third challenge is much more common among CDFIs that are seeking to scale loan products that are smaller, shorter-term, and somewhat higher-risk (e.g., unsecured). In fact, there has been a longstanding saying within the CDFI industry that CDFIs are "profit making but not profit maximizing." But the reality of this statement varies depending on the types of products that the CDFI is offering. The experience of MIC members has been that in order to grow, microlenders must build a large and strong fundraising operation as well as an effective lending operation. There is no profitmaking.

Strategies Used by MIC Members and Their Constraints

While there are various funding vehicles that microlenders use for lending capital, all involve some form of debt and so bring related constraints. These vehicles include:

CRA motivated debt. Banks provide loans at below market interest to CDFIs and receive CRA credit as Community Development (CD) loans. Typically, these have been less than $2M each, for terms less than 5 years, are unsecured and have carried interest rates around 3-3.5%. Some MIC members have taken similarly structured debt but have given a security interest. Managing a growing set of relatively small, shorter-term loans as portfolios increase contributes to the cost of expanding a CDFIs portfolio.

SBA microloan program. The SBA provides loans to CDFIs (and other lending intermediaries) but requires that a cash reserve of 15% be maintained throughout the period of the debt. This debt is secured by the loan receivables generated with the funds and the cash accounts. Operational grants are also provided to aid in the cost of delivering technical assistance to borrowers. The microloan program places a limit on the interest spread that intermediaries can charge to borrowers, which limits the CDFI's ability to cover its lending costs. The microloan program also places geographic limits on the market served by its intermediary borrowers, which can limit its utility to lenders moving into new geographies.

Equity Equivalent (EQ2) investments. These are investments in the form of debt that are deeply subordinated, requires only small interest payments, and typically have maturities that are extended in perpetuity. While equity-like, it is still debt and must be shown as such on the balance sheet.

Individual investors. Most impact investors are seeking to take minimal risk and to generate positive returns. Interest rates tend to be relative to other investment strategies for individuals and therefore are quite high relative to CRA-motivated bank debt. Rates vary from 4-7%. Individuals also desire the ability to withdraw funds after short periods of time, requiring the microlender to hold additional cash and have a predictable supply of additional debt.

LLC investments as net assets. Several large microlenders dealing with net assets constraints have utilized an innovative method to recognize EQ2-like investments as net assets. To do this, they create an LLC with investment from a bank or other party and typically a 10-year term on its formation documents. The microlender makes a small investment but has a controlling interest in the LLC and can therefore consolidate the $1M investment on its balance sheet as an asset. Nonetheless, given the LLC term, the note must still be repaid as if debt. This structure has primarily been used by microlenders with growing portfolios that are able to generate the grant funds necessary to increase their net assets (see also: Edgcomb, 2009).

New Strategies Examined by the MIC

Given the amount of debt microlenders already have and their reliance on philanthropy for net assets, solutions to their capitalization and liquidity strategies in other forms are desperately needed. In exploring new solutions, a logical place to turn is the largest asset that the microlenders hold: their microloan portfolios.

Banks commonly sell loans to diversify their assets and reduce leverage. These methods include whole loan sales, shared participations in loans, and different variants of securitization. Several large CDFIs focused on single-family housing sell mortgages to raise capital. Most fintech companies sell portions of their portfolio through loan sales and securitization. None of these methods are extensively used by microlenders.

In the case of whole loan sales there is generally a transfer of the servicing agreement and a notification to the customer that the note is no longer owned by the original lender. Microlenders are typically working with entrepreneurs with more limited banking relationships, who know and trust the microlender as a nonprofit. For most microlenders, this wholesale transfer of the relationship is problematic. In many cases it may result in reduced repayment rates and client success. As such, whole loan sales with transferred servicing was not deemed viable.

Instead, ideas were explored where the client relationship could be maintained by the microlender while still achieving capitalization without additional debt. The two initial approaches explored were securitization and loan sales (through loan participations).

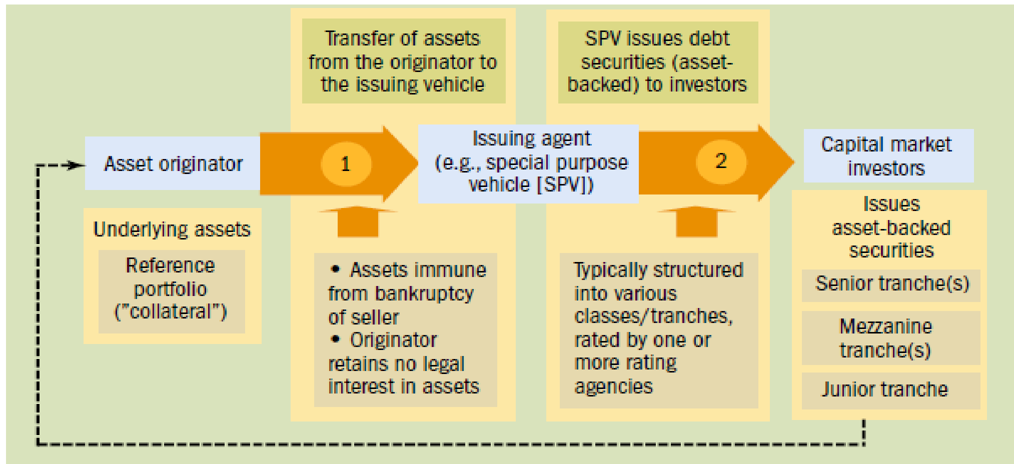
Securitization

Securitization is the creation of a security backed by the future cash flow on a pool of loans. Buyers of the security receive interest and principal payments from that cash flow. The Intersect Fund, a former MIC member, completed a small private placement securitization but is the only MIC member to have attempted something similar to a standard securitization.[3] Private placements are often not rated by a third-party agency and therefore have fewer buyers willing to consider the risk. As a result, the prices can vary widely, and the available capital is more limited.

3 The Intersect Fund was created in 2009 in New Brunswick, NJ and operated through 2018, at which time its proprietary technology platform was acquired by DreamSpring and some of its outstanding portfolio was acquired by Accion East.

Securitization is expensive. In order to create and market a publicly-traded security backed by its underlying loan pool, a lender needs significant legal, accounting, and financial (ratings agency) support. These third-party costs can be considerable.

Figure 2. How Securitization Works



Source: Jobst (2008).

For any pool there will also be some defaults. To deal with defaults a lender must typically pledge more loans than the actual total sold (so a $100M sale might have $110M of loans backing it) in order to overcollateralize the cash flow. Investors require this strengthening. Additionally, while CRA benefits encourage banks to charge CDFIs a reduced interest rate despite the risk inherent in the loans made by the CDFI, a securitization investor requires that the return mirror the risk of the underlying investment and therefore would demand at least 5-8% coupon rates. A pool consisting predominantly of CRA-eligible small business loans could potentially seek a lower rate, but overcollateralization requirements are unlikely to change. All these factors result in an expensive vehicle in terms of assets pledged along with high ancillary costs related to ratings and legal services.

Nonetheless, for many growing lenders without a long track record (such as fintech lenders) securitization at a large scale remains cheaper than issuing corporate debt or raising equity. It also has significantly less impact on the balance sheet. These firms complete securitizations at a large enough scale that the cost is small relative to the total transaction. Scale gains can start at transactions as small as $25M but are most beneficial at $100M and above.

Importantly, firms doing securitization also typically have a large pool of fairly similar loans in terms of size, risk profile, term, and structure. Without this homogeneity, securitizations further balloon in price because risk analysis is more difficult, and the legal structure becomes more complex.

Without a large pool of similar loans, securitization is unlikely to be viable. The MIC members potentially have enough total portfolio to do securitization on paper, but after accounting for commonality of loan structure and overcollateralization, it becomes clear that securitization is a tool reserved for future scale levels when more loans are available. A highly sophisticated bank investor in need of major CRA benefit could potentially negotiate a private placement with a group of MIC lenders at lower legal cost by avoiding a formal rating agency review; however, obtaining bank internal approvals for such a transaction and addressing all safety and soundness concerns may be insurmountable obstacles. As scale grows the cost of other funding vehicles currently in use will likely go up and the cost of securitization will become relatively more attractive.

Institution Level Loan Sales (via Loan Participations)

Institutional loan participation sales are a strategy that has been used by five MIC members. In these scenarios, a lender sells a 90-100% nonrecourse stake in an individual loan in exchange for the principal, some portion of the interest, and some fees. Structures vary, but the basic idea is that a participation sale more easily allows the lender to retain servicing and the customer relationship without any interruption, notification, transfer of collateral, etc. A participation structure also allows for shared risk on a portion of the sale, for instance, leaving 10% of the loan on the books of the CDFI to maintain proper incentives regarding servicing and collections. In addition, it allows the lender to turn future cash flow (repayments) into immediate cash to be lent. As a result, the lender can serve more customers without raising additional net assets and taking on additional debt.

Loans sales benefit CDFIs that are growing their portfolios from a balance sheet perspective, by providing liquidity while reducing rather than increasing their net asset ratios. Importantly for microlenders, however, loan sales also offer financial benefits from an operating perspective–by both increasing revenues and decreasing expenses. Although the extent of these benefits varies depending on the characteristics of the loan assets that are sold and the pricing paid by the purchaser, they can be quite substantial even if a premium is not achieved.

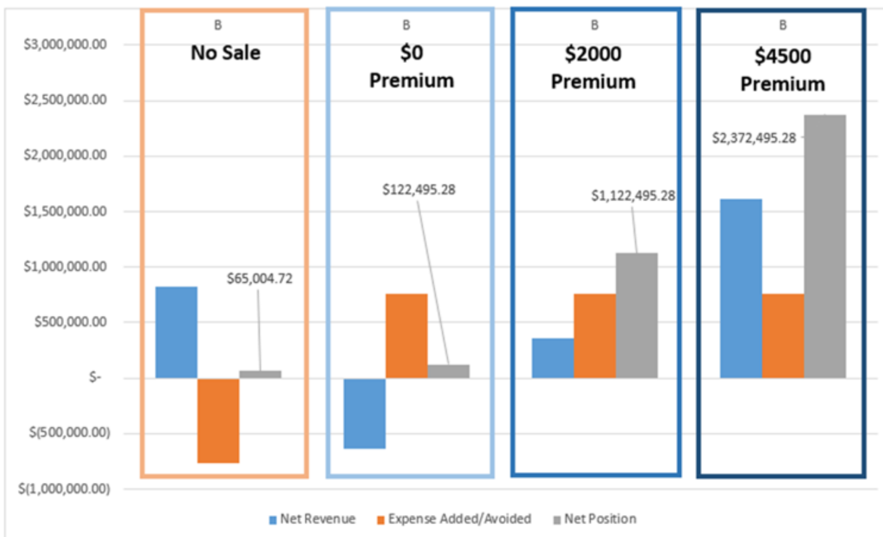
Figure 3 illustrates the financial impact of loan sales from an operating perspective for two hypothetical CDFI microlenders. The scenario modeled illustrates transactions to sell a portfolio of $5M in loans.

They are similar in a number of ways–total size of the portfolio, average interest rate, average contract term, average actual term, and cost of capital. When selling these loans, both would receive a monthly servicing fee of $15 per loan. The yield on these portfolios varies substantially based on two key variables highlighted in yellow: the average size of loans sold and the organization's historic loss rates for vintages of loans. The resulting yield is 7% for CDFI A, but only 0.11% for CDFI B. This will affect their willingness to sell at different price points.

Figure 3. Impact of Loan Sales on CDFI Financials

CDFI A	
Portfolio Participated ($)	$5,000,000
Average Loan Amount ($)	$25,000
Average Interest Rate	13.0%
Avg Contract Loan Term (Months)	36
Avg Actual Loan Tenure (Months)	25
Monthly Servicing Fee (Per Loan)	$15
Average Long-Term Default Rate	7.0%
Average Cost of Capital	3.0%

CDFI B	
Portfolio Participated ($)	$5,000,000
Average Loan Amount ($)	$10,000
Average Interest Rate	13.0%
Avg Contract Loan Term (Months)	36
Avg Actual Loan Tenure (Months)	25
Monthly Servicing Fee (Per Loan)	$15
Average Long-Term Default Rate	13.0%
Average Cost of Capital	3.0%



When a bank is considering a loan purchase, it will examine the yield to determine its potential upside from the transaction, but it will also consider value from supplementing its CRA lending test performance. Scenarios A and B are intentionally quite different in terms of these two outcomes, but both reflect realistic CDFI microlender portfolios. The $5M portfolio from CDFI B offers a much lower yield, but because of the smaller average loan size, offers a much higher value in terms of CRA credits, as the purchase involves 500 loans rather than 200. CDFI A has created a portfolio generating a high return but has originated larger loans to achieve that return. Because banks are typically seeking to acquire a higher number of transaction units, as opposed to a greater outstanding dollar balance, from a CRA perspective a portfolio with fewer units will have lower value.

Among the MIC members that have sold loans, the volume and experience vary. Accion Chicago has completed more than $10M of loan sales to banks that are primarily CRA motivated. In these cases, the banks have been willing to lose money on the immediate transaction because they can purchase a small loan (average size of $10,000), receive the same CRA benefit as a larger loan, and purchase the exact number of loans they need to improve their CRA profile.[4] The value is driven by the alternative cost to supplement CRA as opposed to the immediate return from the transaction. In these cases, bank purchasers were willing to pay a per-loan premium substantially above par. The overall outcome is an improved net margin for Accion and improved CRA performance for the bank.

Opportunity Fund has sold more than $70M in loans, although the majority of these have been trucking loans that are larger small business (not micro) loans. These loan sales have been motivated by Opportunity Fund's need to generate liquidity to meet the rapidly growing demand for its loans. For the larger transactions completed by Opportunity Fund, the per-loan premium paid by purchasers has been much lower than that received by Accion Chicago. However, for a rapidly-growing lender, the alternative was either to raise new net assets needed to leverage new lending capital–which can be slow and an expensive process if one accounts for the staff resources dedicated to securing grants–or to slow its lending growth, which could have led borrowers to seek alternative and higher-priced capital.

Loan sales are the best fit for CDFI microlenders that face financial needs associated with large-scale portfolio growth. A CDFI that has a small portfolio, is far from its net asset ratio cap, and has a set of local banks willing to lend it money and donate should likely avoid loan sales because the cost in terms of staff time and capacity is not worth the balance sheet benefit.

That said, a CDFI with significant growth goals for its microloan portfolio may model out a period when a base level of loans and grants will no longer suffice. If that threshold is within a five-year horizon, beginning the preparations to sell loans can be an important strategic move, as it will significantly reduce the burden associated with taking those steps in a condensed time window. Avoiding a condensed time window is critical as it will allow the CDFI the time

4 The CRA small business lending test is based on the number of small business loans originated, not the volume. Therefore, banks seeking to strengthen their CRA rating often prefer to buy larger numbers of small loans (which offer relatively low risk from a dollar perspective) to a smaller number of large loans.

to find banks that see the CRA benefit and realize that higher prices also aid the community (by subsidizing the provision of small dollar loans). For example, Revolve has in some cases quickly found banks (often those that sit on the board of a CDFI and therefore know it well) that are willing to purchase loans at lower prices. In other cases, it has taken a year or more of outreach and many meetings to find a bank willing to pay a high price.

A sufficient time buffer will allow a CDFI to strategically weigh the tradeoff between the investment of its time and the price it receives, relative to the opportunity cost in terms of staff time. Typically, a new lender with fewer bank relationships will take longer to find a first buyer who can pave the way for future transactions. Because the characteristics of the individual CDFI and its relationships/reputation are so important to sales, it is very difficult to predict how large the administrative and staff costs may ultimately be. Thus, it is important for CDFI to be strategic in how they allocate time to grow loan sales. At the same time, it is worth noting that many of the steps needed to prepare for loan sales will strengthen a CDFI's lending operations.

Loan sales can be difficult to complete and time consuming. The experiences of the microlenders above, and the work to date on this issue completed by Revolve and BOI, identifies key factors–in essence, risks to the bank purchasers–that CDFIs should assess and be able to overcome as they contemplate approaching banks to sell loans. These factors, listed below, are the primary driver of whether this strategy has the potential to be a good fit for a CDFI:

Institution-level risk

Banks will want to know whether the CDFI has the financial and management strength to support loan purchases. More specifically, they will want to be convinced that the CDFI has the systems and strength to effectively underwrite and service the loans that the bank will purchase, and the financial strength to survive until the purchased loans are paid off. It can be difficult to reach the necessary level of comfort. Experience suggests that the following factors can play a role in helping banks to assess and overcome concerns about institutional risk:

- A bank's internal knowledge of and experience with CDFIs.
- External validation of a CDFI's balance sheets and accounting systems, such as via Aeris, annual audits, or other systems.
- The length and scale of a CDFI's lending experience. A CDFI with experience on thousands of loans with good data and a long track record help.
- The CDFI's relationship and engagement with local banks. CDFIs with boards of directors that have significant bank representation, or that have longstanding relationships and reputations among the banking community will be better positioned to sell loans.

CRA risk and knowledge

The second pre-transaction risk is with CRA itself. Bank expertise regarding the various options for meeting CRA obligations varies widely. In local community banks, the CRA officer role often rotates among bank staff, meaning that institutional knowledge is continually lost. For larger banks, CRA officers are often chosen for their community connections related to grant disbursement and the CRA investment test. As a result, they may lack familiarity with data for their CRA lending test, which is often reviewed within the lending function of the bank. This fragmentation of responsibility for the various aspects of overall CRA performance makes it difficult for banks to see how certain units in certain assessment areas may have an outsized impact on overall CRA performance relative to other strategies. This is likely due to the common CRA strategy of "loan, grant, repeat" to CDFIs and nonprofits. Strategies (outside of community development loans) that contribute to the CRA lending test are often left to the bank's commercial or mortgage bankers, not the CRA officer. Loan purchases often require decisions and buy-in across bank silos and business lines; so, the CDFI must be able to explain the community benefit clearly to the CRA officer and make the financial case to the bank CFOs and CLOs. It is the combination of these variables that shows the value in these transactions. Without agreement across the bank, it is difficult for one part of the bank to see how these transactions are advantageous. As one might imagine, implementing loan sales will typically fall to a CDFI's CFO, who must then gain the CRA knowledge necessary to get past the initial pitch to the bank. Finally, the CFO must have considerable bandwidth. When first establishing a track record with loan sales, conversion rates of bank's pitched will likely be under 10%. After establishing a group of buyers, the required bandwidth substantially decreases.

Transaction risk

Finally, there is the risk involved in the loans themselves. Banks will conduct due diligence on a portfolio to reach its own judgement on the loan default risk. Among the MIC members, the experience with due diligence experience ranges from having a local bank president sit down to review loan files in the CDFI's offices, to having bank underwriters getting comfortable with detailed spreadsheets of data and the CDFI's internal risk measures. Importantly, banks are looking for commonality and potential red flags. A bank will look at the organization and completeness of the CDFI's loan files as key indicators of whether it can be trusted to manage the servicing and to have underwritten the loans in a manner the bank can understand. The files also indicate whether the CDFI is dealing with some regulatory issues a bank must confront. Getting past this review is typically challenging, as a bank will not have a credit box that would include the vast majority of CDFI microloans as underwritten. Banks that approach CDFI loans through the lens of their own credit policies will struggle to become comfortable; a CDFI must be proactive in describing its own credit box, approach, and track record in ways that differentiates itself from the bank but provides comfort with the risk and performance of the loans to be purchased. It may take time for a bank purchaser to become comfortable with the heterogeneity and varying risk levels in a

CDFI's portfolio. In Revolve's experience, banks initially gravitate towards loans originated in a CDFI's lower risk tiers, and to lower-balance loans, if they can have both. Starting with a more homogenous pool helps the bank get comfortable. Over time, the pool of lower-risk, lower-balance loans will shrink while the bank simultaneously gets used to the credit risk. Although buying a $500,000 pool of 50 loans with even a 10-12% loss rate is a small absolute risk relative to a bank's overall small business portfolio, especially given the number of units it will obtain for CRA purposes, it still often takes time for the bank to get comfortable. Starting with selling more homogenous, lower-risk pools helps begin that process.

Loan volume

Experience to date with loan sales indicates that banks want loans in their assessment area that check as many CRA boxes as possible. The first priority is whether the loan is in an LMI census tract and whether it is made to a borrower with less than $1M in gross annual revenue. Furthermore, experience shows that banks want loans with an average size below $20,000 in order to maximize the CRA benefit for the dollar invested in loan sales. Units matter disproportionately to dollars from a CRA lending test credit perspective. Thus, once the bank's focus area is clear, a CDFI needs to assess whether it has sufficient loans to make an impact on a potential bank buyer's CRA rating. If the bank makes 500 loans a year and needs 50 loans every year that meet all the above characteristics to improve its numbers with regard to loan distribution, some CDFIs will be hard-pressed to provide the needed volume. There is very little positive impact to the bank from buying fewer loans than it needs to move the needle on its CRA rating. Generally speaking, lenders with less than 200 loans in their portfolios may struggle to provide buyers the predictability they require.

With regard to the issue of financial need and loan volume, one special note pertains to lenders with significant concentration in the SBA microloan intermediary program. Loans funded with these dollars become collateral for the SBA debt. As a result, any effort to sell those loans requires approval from the SBA. Attempts to get such approval have led to challenges: the SBA has indicated a willingness to consider approving loan sales that are large in scale, are done by intermediary lenders that have drawn most of their funds from the SBA, and are imminent. In the latter case, it appears approval will only occur if a bank buyer has already been found. Most bank buyers presented with this scenario are unwilling to expend the time to review files and audit the organization if the eventual sale is dependent on the SBA's approval. This is especially true as the SBA has not been willing to approve pilot efforts that may reassure banks that approval will be granted. As such, CDFIs wanting to sell SBA microloans likely need to sell loans disbursed using other funds first and then create a transaction specifically aimed at gaining longer-term SBA approval.

Practices, Processes, and Capacities Required to Sell Loan Participation

Participation sales require an initial setup and outreach effort and then ongoing operational and account management with the bank buyers. The loan sales process should start with a review to ensure the lender has policies that mimic the core aspects of the Bank

Secrecy Act. For most CDFIs this is a small burden. More importantly, the lender needs to review its documentation process, underwriting, and document retention to ensure it consistently adheres to its own policies. In some cases, lenders need to tighten internal controls before pursuing loan sales.

Lenders then need to start outreach. For lenders looking for a price above what they would receive from holding the loan, it is essential to orient outreach efforts to banks around a CRA justification and a targeting of banks based on that CRA logic. Only banks struggling with consistently originating loans eligible for the CRA lending test will be willing to pay extra for smaller, relatively higher risk loans. This hurdle of CRA knowledge can be substantial and time consuming to acquire. Most microlenders currently lack the depth of CRA knowledge to sell loans along these lines.

For lenders willing to sacrifice some income for the immediate liquidity, the sales pitch is more straightforward and is largely driven by market conditions, price and risk. To add additional CRA benefit, outreach should be targeted to banks struggling with customer acquisition. This can be determined by loan to deposit ratios and often through board member knowledge.

After a buyer is found, the loan sales strategy shifts to an account management process. Bank buyers will need a point of contact to deal with servicing questions and to convey monthly reports. It is best if one person handles this effort for all banks. This is especially true as volume grows. Banks willing to pay the highest price for loans will do so because of the speed with which they can meet their CRA targets. They will buy more over time if the same amount of volume is consistently available. For the CDFI, a balance must be struck between short-term and long-term sales. Banks are willing to become more dependent on buying from the CDFI, and therefore buying more loans overall, if the lender has volume available when they need it. Conversely, if the CDFI does not have loans available when the bank needs them, the relationship will be damaged, and the bank will need to make other plans to address the shortfall. The lender must become adept at managing this tradeoff if they intend to make this strategy work as a tool for long-term growth.

All of the above requirements relate primarily to personnel. The system requirements are not beyond what a traditional servicing process can handle. The primary investment is therefore a personnel opportunity cost: selling loans will take time and focus away from other activities and a concerted sales and operations effort from senior leadership at the organization. Once established, it may take an additional 0.5 FTE to maintain the bank relationships.

Steps in the Loan Sale Process

1. Model potential financial impact from loan sales and decide to proceed.
2. Review portfolio from a CRA perspective: reviewing existing loans at microlender and determine value based on CRA consideration for each loan.
3. Conduct operational evaluation and revised practices as needed: the microlender must be able to meet a bank's needs to understand and be comfortable with the CDFIs underwriting, cumulative losses, ability to meet bank compliance needs, its operational preparedness for banks replicating loan files and managing payments to banks.

4. Target banks and conduct outreach: identify potential purchasers based on their CRA lending challenges and existing knowledge of and relationships with CDFIs; make sales pitch based on CRA benefits.
5. Complete a non-disclosure agreement with the bank: necessary to protect CDFI borrower data.
6. Submit loan information to bank for review, which typically includes:
    a. Credit box summary. (Can review full policy if desired. More of a steering document.)
    b. Light review of individual loans in spreadsheet form.
    c. Share electronic sample files with all loan documentation.
7. Bank determination/decision to proceed with pricing as stated per loan: begin to review legal agreement.
8. Bank selects loans:
    a. Bank receives more in-depth view of loans in their stated assessment area with key underwriting data also now included.
    b. Bank chooses which loans it wants to see full files on.
    c. Bank reviews files, chooses files, and replicates chosen files on its systems.
9. Perfect transaction and close: using targeted close date, determine amounts outstanding, anticipated interest, and premium.
10. Servicing: lender collects payments and remits interest and principal to the bank while withholding the servicing fee.

Scaling Loan Sales among CDFI Microlenders

Revolve and BOI's experience with loan sales has helped to identify three key issues that could facilitate greater use of loan sales by CDFI microlenders (via either securitization or loan participations). These relate to third-party ratings, servicing, and centralizing expertise and management of loan sales.

Third-party Ratings

In the process of exploring the feasibility of securitization and institutional participation sales, it becomes clear that the presence of a third-party rating may be essential to reach scale. In the world of securitization, third-party ratings are common and required. In the world of participations, even bank to bank, third-party rating is unusual and likely contribute to the market remaining small and focused on one-off transactions. It is more common to sell 5-10 loans than 500 because the buyer is in many cases repeating the underwriting process to get comfortable with the transaction. This is in contrast to sales of consumer loans and mortgages that can rely on FICO and other data to allow thousands of loans into a single tranche of a securitization without assessing each loans risk directly. Alternatively, a bank may come to rely on a trusted broker who knows its risk preference. For sales to meet the

needs of large-scale microlenders seeking to grow, streamlining the review of hundreds of small loans is essential.

The most promising way to accomplish the streamlining is an accepted rating process that is quick and clear. A rating tool could be created or adjusted from an existing lender. However, such a tool would likely be heavily influenced by the lenders, which will create a perception of bias. A better solution may be to find an approach already used and accepted by banks. Various systems exist or are in development that may eventually serve this role.

Servicing

The second commonly occurring issue is loan servicing. In securitizations it is common to have a third-party, backup servicer included in the terms of the agreement. This backup ensures that any risk to the first servicer does not jeopardize cash flow of the entire pool. Some participation agreements also require a backup servicer or, in the case of multiple lenders contributing to a single pool, a master servicer to compile all the incoming information and be prepared as a backup servicer as required. It is likely that for large-scale sales or securitizations purchasers would value at least a master/backup servicer and in some models, may value direct servicing support. In this case, CDFIs could still retain the relationship with the client but pass off the tasks more directly tied to risk (or perception of risk) for the bank buyer. Third party servicers operate across the country and Revolve and individual CDFIs are engaging with them to identify their ability to execute the servicing requirements of microlenders.

Creating a market maker

Given the capacity and time requirements necessary to implement institutional loan sales–developing related expertise, balancing the trade-offs between volume and pricing, providing the required volume of loans, and the potential value added by third-party service providers–we believe there is value in centralizing knowledge and management of loan sales in an entity that could in effect be a "market maker" for loan sales.

A market maker would serve as a warehouse of loans from multiple lenders. It would work with the CDFIs to complete initial due diligence and ensure they are prepared to sell. After that initial process, the market maker would buy all of the loans that a lender would like to sell within a set credit quality standard. This would address the liquidity needs of the CDFIs, enabling them to originate new loans without raising net assets or additional debt. The market maker would then manage the process of finding buyers for the loans and achieving the best price possible while balancing volume needs long-term for the bank buyers. When the market maker achieves a premium, it would pass that premium back to the original lender, providing resources to support the CDFI's ongoing costs of originating and servicing microloans.

A market maker would also be valuable from the banks' perspective. In the course of its work to support loan sales, Revolve met with several banks that had approached CDFIs to try to purchase small business loans. The banks expressed a common frustration that their

overtures to the CDFI were declined or ignored, despite the CDFI's likely need to sell loans. It seems likely that the CDFI's response stemmed primarily from a lack of capacity and knowledge. Many nonprofits struggle to allocate time to strategic initiatives that are outside of the norm of the day-to-day. For that reason, many banks have expressed a desire to work with a motivated third party that would facilitate transactions for the CDFIs.

Although a market maker would have a similar capital structure to the CDFI lenders–leveraging its net assets with debt–if the secondary market is functioning well and most of the loans it purchases can be sold relatively quickly, it would not need a significant asset base. For example, while the fund might have $50 million in assets under management, most of those assets would be held by the bank purchasers, and the fund itself could function with $5-10M in assets. Therefore, its capital raising needs would be limited. In fact, a large warehouse line might be sufficient to manage transactions.

Of course, if sales become slow, the market maker could quickly balloon in size, but counterintuitively, that ability to grow is an asset. Sales are most likely to become slow during a recession, when small business lending is contracting at banks. The experience of the MIC members is that recessions create growth as businesses turn to them to fill the void in lending created by bank retractions. Yet, in a recession many high-volume CDFIs will not have the balance sheet to take on debt to grow. In that instance, a market maker that has maintained a small debt load and low net asset ratio can become a vehicle to take on debt a CDFI is not otherwise positioned to borrow, passing liquidity to the CDFI through loan purchases.

In May 2020, Revolve and BOI partnered to take this learning to the next phase, creating a new nonprofit, the Entrepreneur-Backed Asset (EBA) Fund, that is working to create an efficient and scalable secondary market for CDFI microloans. Its initial focus is on purchasing loans from the members of the Microfinance Impact Collaborative. As of October of 2020, EBA Fund had purchased $1.9 million in loans from four of the MIC members. Of the loans purchased, 79% were loans originated to entrepreneurs of color.

The Role of Loan Sales in the COVID-19 Context

The COVID-19 pandemic will have a deep and likely long-term impact on small businesses and the institutions that finance them. Many small businesses have been deeply affected by the mandatory closure of many types of firms; others that were not required to close and those that have reopened are affected by the need to adapt operations to new health and safety requirements and the general drop in demand. The duration and therefore the full impact on small businesses from measures needed to respond to the pandemic, and the recession it has created, is unknown.

What is clear is that the emergence of the COVID-19 pandemic has had a significant impact on the portfolios and liquidity needs of CDFI business lenders. As the pandemic hit, CDFIs offered deferments or other forms of debt relief to their borrowers that reduced their operating liquidity. CDFIs also must increase their reserves to reflect the higher risk among loans originated prior to COVID. These combine to create serious financial challenges for those lenders that were already at or near the net asset levels mandated in loan covenants with their creditors.

Many CDFIs have stepped up to lend as part of relief and recovery programs such as the Paycheck Protection Program and local and state government supported programs. In most cases they were able to access dedicated sources of liquidity for these programs, but often the fees and other funding available for the programs will not cover the full costs (operating and capital) of making those loans. For example, a lender making a $15,000 PPP loan will generate only $750 in revenue, which is not sufficient to cover the full cost of originating and servicing that loan.

In this context, selling loans to remove them from a CDFIs balance sheet is an important tool for addressing the liquidity and leverage crises that many CDFI micro and small business lenders will face. Given the risk levels of the loans, the entities that purchase them must be structured to absorb losses and/or allow for loan restructures that that provide relief to small business borrowers. Revolve and BOI have been working on two efforts to advance loan sales as a response to COVID-19. The first involves a short-term shift in the goals of EBA Fund to ensure its financial model and capital structure allow it to absorb some of the losses that will occur in loans purchased at the current time. Over time, as the economy recovers, EBA Fund can pivot to a capital structure and pricing that reflects the risk levels of loans made in a non-pandemic context. The second effort is a proposal developed with partners in the CDFI industry that encourages the Federal Reserve to use the tools it has to provide liquidity to financial markets in order to establish entities that can purchase and restructure loans to businesses in industries most deeply affected by COVID-19 (Bynum, Klein, & Ogden, 2020).

Conclusion

Asset sales have been a critical driver in scaling growth in a number of financial products and asset classes. It has been a more difficult process in the small business lending market, given that it is more difficult–and also less desirable–to use credit scores alone to assess the risk of these transactions (Bhide, 2018). And CDFI micro and small business lenders have yet to achieve the level of scale necessary to make securitization a cost-effective tool.

However, the work of Revolve, BOI and MIC members has demonstrated that loan sales can be a tool for addressing all three of the key financial challenges that have limited the growth of CDFI small business lenders. This is because microloans in particular have a value from a CRA perspective that means that for some purchasers the value of purchasing loans goes beyond the direct financial return on the portfolio itself. In addition, it is possible to bring tools to bear that can increase knowledge of the risk and return associated with the underlying loans, as well as to increase the efficiency and pricing of the transactions themselves. With the necessary tools, information, and infrastructure, loan sales represent an important change in the underlying financial and business model for CDFI microlenders that could be a missing driver to greater scale and impact.

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A Qualitative Model for the Evaluation of Community Development Financial Institutions

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Abstract

This paper addresses a gap in evaluation research of Community Development Financial Institutions (CDFIs) in the United States and models a qualitative interview process that CDFIs can employ to develop a better understanding of how their lending affects borrowers and communities. The CDFI industry was established to deliver capital and technical assistance to borrowers, projects, and communities that lack access to credit due to historic structural inequities and uneven development patterns. CDFIs represent a broad array of institution types, providing financial products and services across a diverse set of asset classes in communities throughout the United States. The complexity of the CDFI industry thus precludes a standardized approach to evaluation of its social outcomes and impacts. The model presented focuses on the small business lending activities of Impact Seven, a statewide CDFI serving Wisconsin. By conducting one-on-one interviews of borrowers and analyzing responses for recurring themes, CDFIs like Impact Seven can develop a nuanced understanding of the ways in which their lending activities affect small business borrowers and the communities in which they work. Qualitative analysis can additionally serve to identify quantitative outcome and impact metrics for further study.

Introduction

Community Development Financial Institution (CDFI) is a U.S. Treasury designation covering a range of financial institutions engaged in the promotion of "economic revitalization and community development" that may include FDIC-insured banks, credit unions, loan funds and venture capital funds (U.S. GPO, 2015). CDFIs are engaged in the provision of financial products and services, as well as technical assistance to enhance the ability of borrowers to utilize their financial products, while claiming a double bottom line emphasizing both financial and social returns on investment. The financial performance of CDFIs is measured and evaluated in ways similar to banks, such as financial ratios and CAMELS analyses examining Capital Adequacy, Asset Quality, Management, Earnings, Liquidity, and Sensitivity to risk. However, the measurement of social returns produced by CDFI activities is typically limited to counting outputs, such as the number and dollar amount of loans closed, the number of jobs created or retained at loan closing, or the number of housing units constructed utilizing financial products obtained from CDFIs. In-depth evaluations often focus on economic outcomes. As a result, social objectives and appropriate evaluation tools may be missing or misaligned for many CDFIs.

I posit that CDFIs would more efficiently and effectively allocate their resources within the communities they serve by aligning social objectives with outcome or impact identifiers, facilitating a deeper and more nuanced understanding of how CDFI lending activities affect the borrowers and the social fabric of the communities they serve. In addition, CDFIs would be better positioned to build the case for funders and investors concerned with social return on investment. However, a review of the existing literature reveals that there has been little academic attention paid to the matter.

The question is complicated by the fact that CDFIs represent a diverse array of institution types and offer many different products and services. CDFIs may be regulated banking institutions including depository banks or credit unions, or unregulated non-profit loan or venture capital funds. Within these institution types, CDFIs provide different financial products for a range of asset classes, from microenterprise and small business to affordable multi-family rental housing, single-family homeowner mortgages, commercial real estate, consumer credit, and more (Benjamin, Sass Rubin, & Zielenbach, 2004, 177-178). Further, CDFIs define their target markets differently and may include a specific population and/or a geographic area ranging from a single neighborhood to the nation as a whole. Even within individual CDFIs, there is often a mix of discrete product types such as consumer credit, lines of credit, term loans or mortgages, matched with specific asset classes and target markets. A review of literature on evaluation methodologies makes clear that the diversity of institution types and activities precludes the development of a monolithic standard for the evaluation of CDFIs. Further, determining attribution is challenging, if not impossible. For example, a CDFI loan might be a small piece of a larger capital stack; attributing a discrete piece or a percentage of a project to each lender or investor involved is both difficult and illogical because the project functions as a whole, not in parts. There are likely many external factors influencing outcome and impact identifiers, further complicating the matter of attribution (Swack, Hangren, & Northrup, 2014, 7). Finally, community-level social outcomes and impacts are likely too diffuse to measure when activities are spread scatter-shot across a wide geographic area.

A full accounting of CDFI outcomes and impacts thus lies beyond the scope of this paper. Instead, I explore a qualitative model for self-evaluation that will allow CDFIs to develop and implement methods to track and better understand their own performance. I summarize the history of the CDFI industry, the criteria for CDFI designation, published academic, public, and industry evaluation reports, as well as a theoretical framework for an approach to CDFI evaluation to establish realistic expectations of outcomes and impacts. I present a qualitative model that CDFIs can employ to enhance their understanding of how their products and services affect borrowers, businesses, and communities, in addition to identifying possible quantitative social outcomes or impact indicators using the individual borrower as the unit of study. After conducting interviews of CDFI borrowers, I identify recurring themes to recommend additional variables for further study as well as the risks and limitations of such an approach. Finally, I share the results of my implementation of this methodology at a CDFI, including potential quantitative metrics that I identified and recommendations for implementation and further action .

History of CDFIs

Community-based solutions for increasing access to financial capital have existed for as long as the conventional finance industry has excluded disadvantaged populations and communities. The CDFI Coalition (n.d.) cites the establishment of African American-owned credit unions in the early twentieth-century Jim Crow South as a successful community-based response to systemic discrimination by mainstream financial institutions. However, post-World War II economic restructuring ushered in an era of chronic disinvestment in America's cities as "white flight" contributed to the growth of ring suburbs and the rapid decline of inner cities (Benjamin, Sass Rubin, & Zielenbach, 2004, 178). Mainstream lenders, including government-sponsored housing mortgage programs, actively practiced "redlining" whereby red lines were drawn around low-income or minority areas labeling them as higher risk, further exacerbating urban decline and uneven development patterns (Ardalan, 2006, 115).

In response, Lyndon Johnson's War on Poverty was carried out through a series of legislation known collectively as the Great Society programs that established a network of thousands of Community Action Agencies, funding local efforts to organize low-income people to change the conditions contributing to poverty (Orleck & Hazirjian, 2011, 11-12). A 1966 amendment to the Economic Opportunity Act also created Community Development Corporations (CDCs), a network of community-based organizations that implemented local responses to housing needs (ibid, 441). Many CDCs started their own loan funds for small business or affordable housing development in the 1970s with funding from federal agencies (CDFI Coalition, n.d.). In 1977, the Community Reinvestment Act (CRA) was passed to curtail the redlining practices of banks that withheld credit from poor and minority areas and invested bank assets in non-minority areas, exacerbating inner-city decline by essentially transferring wealth to suburbs (Orleck & Hazirjian, 2011, 444). However, CRA compliance was largely measured by banks' outreach efforts to underserved populations rather than actual lending activities, leading to criticism of its effectiveness to incentivize lending in low-income areas (Teitelbaum, 1994).

Bill Clinton's first presidential campaign in the early 1990s, inspired by his experience with the Arkansas-based Southern Development Bank Corp., advocated for strengthening enforcement of the CRA and "the creation of a national network of community oriented financial institutions dedicated to the revitalization of distressed urban neighborhoods, and as well, depressed rural communities" (U.S. GPO, 1993, 1). This network of community-based lenders would provide small business loans to catalyze entrepreneurship, invest in homeownership and affordable rental housing in distressed neighborhoods and leverage private capital for community development purposes (ibid, 3).

Toward that end, the Clinton Administration introduced two pieces of legislation that formalized and shaped today's CDFI industry (Metzger, 1993, 1). The Reigle Community Development and Financial Institutions Act of 1994 defined a set of characteristics for financial institutions qualifying as CDFIs and established the CDFI Fund within the U.S. Department of the Treasury with a mission "to promote economic revitalization and community

development through investment in and assistance to Community Development Financial Institutions" (Benjamin, Sass Rubin, & Zielenbach, 2004, 178; 12 CFR, Part 1805, 2015). Secondly, a piece of 1995 legislation increased enforcement of the CRA through changes in compliance measures to include actual investment volume in CRA-designated geographic areas. Importantly, this legislation also facilitates the capitalization of CDFIs by allowing banks to fulfill their CRA lending obligations by providing capital to CDFIs for re-lending in banks' CRA target areas (Benjamin, Sass Rubin, & Zielenbach, 2004, 178).

The Reigle Act and subsequent rulemaking defines the following characteristics of CDFIs:

1) CDFIs must focus on community development as their primary mission.
2) A CDFI is a private, legal entity with a primary function of providing financial products and/or services. Broadly, this includes community development banks, credit unions and loan funds.
3) CDFIs serve a defined "Target Market," wherein a minimum of 60% of their loan portfolios are comprised of loans to "Investment Areas," or geographies meeting specific distress criteria; and/or to underserved populations such as low-income people and/or minority groups known as Low-Income or Other Targeted Populations.
4) CDFIs provide "development services," or assistance that helps borrowers or beneficiaries more effectively utilize the financial products or services of the CDFI; e.g., credit counseling, business plan development, etc.
5) CDFIs must be accountable to their Target Markets through representation from their self-defined Investment Areas or Targeted Populations on their governing boards (12 CFR, Part 1805, 2015; CDFI Fund, 2014, 2-3).

The above legislated eligibility criteria are incorporated into a formal certification process by the CDFI Fund with annual monitoring for compliance. CDFIs function as financial intermediaries, attracting public and private capital to community and economic development projects through managed loan funds and leverage at the project level. The assumption underlying the establishing legislation, then, is that directing capital to borrowers in underserved markets results in community development.

Evaluation of CDFIs

There has been little academic evaluation of the extent to which CDFIs achieve outcomes and impacts in community development, likely due in part to the relatively young age of the industry as well as the inherent complexities emerging from the diversity of institution types, products, and geographies of focus. It is also likely that some CDFIs are in fact conducting evaluation activities ranging broadly in methodology and scope but they are private endeavors conducted for funders or for their own internal uses. A risk of the failure to appropriately identify impact is a misalignment of activities and desired outcomes and impacts on the part of CDFIs themselves.

Most literature on the evaluation of CDFIs assumes a level of impact beyond the economic effects brought about by the provision of financial products and services. However, CDFIs themselves almost entirely use economic output indicators as proxies for assumed community development benefits; i.e., quantitative outputs serve as proxy measures for qualitative social impacts (Kolodinsky, Stewart, & Bullard, 2006, 31-42). The challenge for the evaluation of social outcomes and impacts is how to determine the appropriate indicators beyond the typical metrics tracked by CDFIs, such as the number and dollar amount of loans closed, number of jobs created or retained, number of housing units developed, or number of childcare or healthcare slots created, etc. A review of published impact evaluations of CDFIs underscores the rarity of high-quality studies and the lack of standardization in the identification and measurement of outcome and impact indicators.

One study of the social impacts of the provision of financial services by a CDFI credit union utilized a combination of focus groups and surveys to examine the extent to which the utilization of credit union services could be associated with indicators such as behavioral changes and improved quality of life. The study found that the more services used, the higher the probability of realizing impact indicators, potentially validating the use of proxy measures for social impacts (Kolodinsky, Stewart, & Bullard, 2006, 42). Swack, Hangren, and Northrup (2014, 51) also suggest that quantitative output metrics shown to correlate with longer-term outcome or impact measures could potentially be used as proxy measures for evaluation purposes.

Smith (2005, 2) examined the extent to which a CDFI bank providing financial products and services for business and single-family home mortgages could claim to achieve several broad community development goals including improving access to capital, reducing residential segregation by economic class and increasing democratic freedoms. The author applied a standard she calls "capitalism as justice" that assigns equal weight to class, race, and political and social forces that combine to perpetuate conditions of poverty in urban areas. The author did not find a link between the CDFI's activities and "capital as justice" goals such as the "protection of individual liberties . . . and democratic freedoms," among others (ibid, 27-28). The conclusion of the thesis points to a misalignment of output indicators tracked by the subject CDFI and its desired impact as a stand-alone anti-poverty solution. The author posits that CDFI interventions at the borrower level do not attempt to address the multitudinous, complex structural and social causes of poverty, and thus cannot make the claim that broad poverty reduction and community-level impacts are a result (ibid, 53-54). Smith argues that the CDFI industry needs to establish realistic expectations for the impacts it can hope to achieve; i.e., identifying outcome and impact indicators that can be more directly associated with CDFIs' activities such as those resulting from the outputs of financial products and services provided by CDFIs. The study points to the ecological fallacy of aligning borrower-level interventions with community-level impacts.

While few academic resources are available on the topic, CDFI industry stakeholders have produced a number of documents on evaluation and impact metrics. The CDFI Fund is the largest aggregator of impact data on CDFIs and collects a tremendous amount of pri-

mary source data from CDFIs each year through the CDFI certification process, applications for financial assistance, and through the annual reporting of grantees. It has published several research briefs and evaluation reports commissioned from third-party researchers. The most comprehensive is *CDFIs Stepping Into the Breach: An Impact Evaluation Summary Report*, by researchers at the Carsey School of Public Policy's Center for Impact Finance at the University of New Hampshire which specializes in examining the role of mission-oriented financial institutions, including CDFIs, and on the implications and impacts of improving access to capital. The study utilized multiple methods including multivariate analysis comparing transaction-level data collected from CDFIs with conventional lenders, and an "exploratory" comparative analysis of selected census tracts receiving a sustained high level of CDFI investments from 2003 to 2012 against those without CDFI intervention. The primary purpose of the evaluation was to determine the extent to which CDFIs were achieving the stated purpose of the policy to promote "economic revitalization and community development through the provision credit, capital and financial services to underserved populations and communities in the United States" (Swack, Hangren, & Northrup, 2014, 4).

The study determined that CDFIs are engaged in their intended purpose across all types of lending, providing financial products and services to people and places underserved by traditional financial institutions. It also showed that growth in CDFIs' assets has led to growth in lending activity and growth in impact outputs (e.g., job creation, housing unit development, etc.), and that CDFI loans are concentrated in distressed census tracts at a higher rate than conventional lenders. The study also observed that CDFI loans tend to be "plain vanilla" loan products with features that minimize borrower risk, at near-market rates (ibid, 21-30).

However, the authors did not find a statistically significant relationship between sustained investments by CDFIs in census tracts and later lending by mainstream lenders, or that CDFIs lend more in census tracts with disproportionately low rates of mainstream lending activity. In addition, there was no relationship observed between "concentrated and sustained" lending by CDFIs in a specific census tract and later increases in HMDA lending (single-family home mortgage loans) which was used as a proxy measure for improving quality of life (ibid, 33-36).

Another study conducted and published by Carsey School researchers for the CDFI Fund included an examination of the social and economic effects of CDFI loans to resident-owned manufactured housing communities. The mixed-methods study examined a number of quantitative variables related to the performance of a specific loan product, financing for resident-owned manufactured housing communities, and its adoption by mainstream financial institutions. In addition to secondary data sources, the study utilized focus groups and key informant interviews consisting of residents of assisted resident-owned manufactured housing communities (Swack & Rivera, 2009, 6-7). A second Carsey School study of resident-owned manufactured housing communities compared survey responses of resident-owned communities with investor-owned communities related to perceptions of economic factors such as the financial market for manufactured housing, affordability, and fee structures. The

qualitative feedback obtained via survey provided support for the hypothesis that CDFI financing of cooperative-owned manufactured housing communities reduced rents and fees for residents and revealed that many respondents had a sophisticated and detailed understanding of the financial market and economic forces involved (Ward, French, & Giraud, 2006, 3).

An example of research commissioned by two private CDFIs involves a study by Harder + Company Community Research; Accion, a network of CDFIs; and Opportunity Fund. The study was initiated in 2015, with preliminary findings presented at the 2017 Opportunity Finance Network Conference, the largest annual gathering of CDFIs. The longitudinal study is tracking economic and social outcomes of five hundred microenterprise borrowers in twenty-one states through questionnaires and a subset of individual borrower interviews. Questions are intended to capture data about the financial health of borrowers and their businesses as well as quality of life, with borrowers reporting increased financial stability, improved cash flow, better "work-life balance" related to improved time management, and increased self-efficacy related to goal achievement (Harder + Co., 2017).

Aeris, formerly known as CARS, provides information and consulting to connect mission-oriented investors with CDFIs in need of capital and is a major industry data aggregator. Prior to its establishment in 2004, investors often perceived CDFIs as high-risk investments; there was no standard for assessing the safety and soundness of CDFIs' capital structures or activities as provided for in the conventional market by ratings institutions such as Moody's Analytics and Standard & Poor's. Critically, socially-minded investors had no way of assessing the extent to which a CDFI achieved social impacts beyond the typical output measures tracked by CDFIs. These barriers prevented CDFIs from accessing the financial resources of conventional investors and capital markets to fuel growth. Aeris provides comprehensive ratings and ongoing monitoring for CDFIs to simplify investors' due diligence and underwriting. Aeris' proprietary rating system is intended to mirror those of conventional ratings systems, with a letter grade ranging from BB+ to AAA indicating a CDFI's financial performance and assigning one to four stars based on the achievement of measurable social impact. An additional plus sign indicates "policy plus" designation, signifying that the CDFI is involved in affecting policy change related to economic justice.

Due to investor interest in double- or triple-bottom line returns, Aeris works with individual CDFIs to identify an appropriate group of "impact" measures for the CDFI to track and report. Note here that Aeris uses the word *impact* to refer to any social or environmental returns rather than the long-term definition of impact used in the lexicon of evaluation (Aeris and the GIIN, 2016, 2). Aeris recognizes that reporting on accurate and measurable impact data increases the legitimacy and credibility of the CDFI industry and has the real effect of increasing the flow of capital to community development projects (ibid, 5). As a result of a meeting between Aeris, the Opportunity Finance Network (OFN), and the U.S. Treasury's CDFI Fund, Aeris and Global Impact Investing Network (GIIN) published a guidance paper for CDFIs on standardized metrics for impacts. Based on the input of a working group inclusive of CDFIs and stakeholders, the paper identifies and defines impact metrics split

into five broad categories including Economic Security, Education, Environmental Sustainability, Health and Food Access, and Housing, utilizing standardized definitions for their measurement (ibid., 8). Nearly all recommended metrics are quantitative outputs (e.g., the number and dollar amount of loans closed, the number of housing units created, etc.) while a few are quantitative short-term outcomes, such as the dollar amount difference in proprietor income over time (ibid., 9-20). However, in order to achieve a four-star rating for social impact, a CDFI must demonstrate that it tracks impact indicators in addition to outputs (Aeris, 2018). The onus is thus on individual CDFIs to develop their own methodologies and procedures for doing so.

In summary, outcome and impact evaluation varies substantially between CDFIs and measurement of long-term outcome and impact indicators and the utilization of sophisticated evaluation techniques are rare, even among top-tier CDFIs (Ward & French, 2006, 47). Additionally, the outputs and outcomes that are tracked are broad, varied, and lack standardization in their definition and measurement (ibid, 48). To overcome these challenges, industry umbrella groups, data aggregators, and membership organizations including Opportunity Finance Network, Aeris, NeighborWorks America and the CDFI Fund have attempted to standardize indicator definitions to achieve a greater degree of uniformity in data collection and reporting. However, CDFIs and stakeholders wishing to develop a deeper and more nuanced understanding of the outcomes and impacts of CDFI lending are largely on their own.

Evaluation Framework

In reviewing the literature on evaluation of CDFIs, I had hoped to find examples of social outcome and impact indicators that could be applied to a CDFI loan fund to evaluate the extent to which the organization's activities result in community-level change. While there are a handful of CDFIs with in-house research arms, the benchmarking of the evaluation capacity of CDFIs done by Swack, Hangren, and Northrup (2014) found that this is quite rare and that the evaluation done by the majority of CDFIs is largely limited to the quantitative data collection and reporting required by the CDFI Fund, Aeris, and other industry stakeholders. Given the lack of established evaluation methodologies and indicators, I elected to develop a model that CDFIs could implement on their own, with the aim of producing qualitative data that would: 1) enhance CDFIs' understanding of their own outcomes and impacts; and 2) identify potential outcomes and impact indicators for further study if desired.

In seeking a framework for evaluation, I focused on examples of research that would be low-cost and feasible for a small- to mid-sized CDFI to conduct with existing staff. Program and project evaluation commonly utilizes a logic model framework, which provides an organizational template for displaying how an activity is connected to its anticipated results. Its flow connects inputs to activities, activities to outputs, outputs to outcomes, and finally, outcomes to impacts. *Inputs* include the resources available to do the work of the program, and might include financial and human capital, knowledge resources and more. *Activities* consist of the planned intervention intended to effect change. *Outputs* are the immediate results of the activity and are typically quantifiable. *Outcomes* are individual-level changes.

Some models differentiate between short-term (1 year), mid-term (2-4 years) and long-term (5-7 years) outcomes, while *impacts* are considered to be those conditions, often difficult to measure, that emerge 8-10 years following an intervention (Stoecker, 2013, 149; Kellogg Foundation, 2006, 2).

Stoecker (2013, 8) asserts that intensive research–or studying a few cases with a high level of detail–will better enable researchers to understand cause rather than extensive research involving the study of a large sample of just a few quantitative variables in great detail. While qualitative research may serve to identify potential variables for study by quantitative methods, it may be sufficient to provide a rich and nuanced understanding of the topic of study (ibid, 9). Indeed, the author argues that project-based qualitative, applied research is the most effective method for organizations and community groups seeking to achieve social change and continuous improvement in the processes used rather than quantitative evaluation of predictive or cause-and-effect relationships (ibid, 13). Stoecker frames evaluation within a classic strategic planning cycle (diagnose-prescribe-implement-evaluate) and includes the following steps: choosing the question, which must be focused enough to produce the sort of data necessary to be informative; designing the research methods; collecting the data; analyzing the data; and reporting results (ibid, 17-21).

In scientific research, the emphasis on objectivity is intended to deliver unbiased results, but Stoecker argues that researchers with a deep familiarity with the subject and community of study will produce more nuanced, informed, and ultimately more helpful data (ibid, 6). Stoecker's methods are specific to project-based community or participatory action research but the underlying theory has broad applicability to interventions intended to effect community development outcomes.

Conducting interviews with individual CDFI borrowers is an effective way to operationalize this theory. An interviewer employed by a CDFI has an advantage over an unaffiliated third party in that the interviewer has some first-hand knowledge of local community, economic and social conditions, as well as the practices and products of the CDFI. Best practices in qualitative interviewing recommend developing open-ended questions designed to elicit narrative responses, and first conducting a few practice interviews to test the questions and refine as necessary. To draw out more detailed or nuanced responses, interviewers should be prepared to ask for examples or say, "tell me more about that" (Alvesson, 2011, 55).

An "interactive rationalist" approach to conducting interviews means building trust through establishing rapport, employing a structured but somewhat flexible format, repeating back insights to ensure accuracy and carries the assumption that responses are reflective of interviewee's thoughts and experiences (ibid, 12-13). Responses may certainly be biased, for interviewees may be "politically aware and politically motivated actors," or they may provide responses that they perceive are those desired (or undesirable) by the interviewer (ibid, 29). As such, in interpreting responses it should not be assumed that interviewees are always providing the pure, unvarnished truth. Additionally, interviewers must be cognizant that outside factors of which the interviewer or the interviewee are not aware may be acting on the variables of study.

In summary, the development of community involves building the overall community field comprised of networks of associations between groups and individuals that forge social connections for collective action with a positive purpose. Interactional field theory views community development as the process of building the overall community field, comprised of social interactions between groups and individuals pursuing general, cross-cutting interests (Brennan, 2008, 88). CDFIs are primarily engaged in the provision of financial products and services for projects benefitting disinvested communities and/or underserved populations. CDFI outputs capture the economic effects of lending and as such, community development outcome and impact indicators are difficult to identify and vary between different types of CDFIs. Qualitative intensive research offers a useful framework in which CDFIs may evaluate the effects of their lending activities by studying a few cases in greater detail.

Methodology

In order to evaluate the outcomes and impacts of CDFI lending, I modeled a methodology based on interviews of small business borrowers at Impact Seven, a nonprofit CDFI loan fund serving the state of Wisconsin since 1970. Impact Seven provides financial products and development services in small business, commercial real estate, and multifamily affordable housing. It has a lending staff of three full-time employees and in the past four years has closed approximately $35 million in loans, of which $11.3 million was to small business borrowers for start-up and expansion activities. Impact Seven tracks twenty-seven output and outcome indicators associated with their lending activities. Most are prescriptive data points required to fulfill reporting requirements of third-party investors and funders while a few were developed internally to add value to impact reporting for the organization's Aeris rating. Of the total, eighteen are quantitative outputs, eight are short-term outcomes, such as the number of affordable units placed in service, while one, loans made bankable, is a medium-term outcome.

Due to a lack of identified best practices around evaluating CDFIs, some scholars have utilized interviewing methodologies to collect qualitative data on the outcomes and impacts of CDFI lending. These models align with Stoecker's focus on intensive research, studying a few cases in great detail to gain a nuanced understanding of the changes in borrowers following the CDFI intervention by conducting interviews of borrowers to "extract themes" for use in conducting a qualitative evaluation of the outcomes or impacts of CDFI loans at the borrower level in addition to quantitative output and outcome indicators typically tracked.

This understanding may be sufficient for many CDFIs for their own use in evaluating their effectiveness, the extent to which they meet their mission and the needs of their borrowers, for strengthening cases for funding and obtaining third-party capital, for attracting mission-oriented "impact investors" and in individual fundraising. For CDFIs, their investors or other stakeholders wishing to conduct high-quality empirical research to establish causation or correlation between CDFI intervention and borrower outcomes, a qualitative evaluation process could point to potential quantitative indicators for further extensive study.

Rather than examining community-level outcomes, this model will assist CDFIs to assess the extent to which their products and services contribute to individual well-being and explore how their borrowers relate with community. When the borrower is the level of the intervention, the borrower must be the unit of observation for evaluation as well.

I elected to conduct individual structured interviewers with Impact Seven's small business borrowers. I selected this asset class over others in Impact Seven's portfolio because: 1) I could find no other studies examining the outcomes and impacts of CDFI loans to small businesses and thus the impacts of financial products in this asset class are less understood than those of affordable housing loans or financial services, for example; and 2) it is the largest asset class in Impact Seven's portfolio in terms of both the number and dollar amount of loans and therefore provided the largest sample frame. Impact Seven offers two products to its small business borrowers with terms and rates tailored to meet the needs of the individual borrower or project. Most are term loans for significant capital purchases for start-ups and expansions such as equipment and real estate. Lines of credit are offered less frequently and tend to be used by businesses to purchase inventory and to weather fluctuations in cash flow. Comparing similar types of borrowers is important to the evaluation process so I selected small business borrowers with original principal amounts under $1 million with owners who are substantially involved in day-to-day operations (as opposed to larger corporate borrowers with start-up and expansion projects implemented by management staff). This yielded a sample frame of twenty-nine non-duplicated borrowers. I excluded two loans pending foreclosure due to exclusive communication with these borrowers through attorneys, for a final selected sample of twenty-seven small business borrowers.

After reviewing the literature and summarizing the theoretical framework for analysis, I developed a set of eleven open-ended questions and one multi-part ranked question on borrower satisfaction with feedback from academic and industry advisors. Several questions were intended to capture the extent to which Impact Seven's financial products and services fill a gap in the market and met the needs of assisted businesses. Additional questions sought to obtain information about the services and amenities assisted businesses brought to underserved areas, to get a sense of borrowers' interactions in the community and use of community resources, and additional economic benefits such as hiring workers or increasing employee wages. Several questions were informational for internal process improvement purposes, such as which development services borrowers felt were most helpful and levels of borrower satisfaction across several categories.

One borrower contacted had a loan of approximately $100,000 modified in 2017 that was considered a "troubled debt restructure," wherein Impact Seven granted a concession to the loan terms that otherwise would not have been considered but for the borrower's financial difficulties. Six additional borrowers contacted had loans totaling just over $700,000 in unpaid principal balances that had been modified from original terms. Loan modification may be indicative of sub-par loan performance but also may be completed for other reasons such as a term or interest rate adjustment, change in purpose, or revising a payment schedule to accommodate seasonal cash flow patterns, for example. In addition, six of the loans had been reviewed and renewed by Impact Seven's loan committee since closing with unpaid principal balances totaling $1.1 million.

I sent personalized emails to each borrower, introducing myself and explaining that I would be contacting them by phone to ask questions to help Impact Seven understand how our lending activities affect borrowers, businesses, and communities, and that I would use information collected for an academic paper. I attempted to contact each borrower three times over the course of two weeks via telephone and obtained complete responses from fifteen of those contacted for a 55% response rate. When all interviews had been completed, I looked for repeated themes in my notes. Results are presented in the next section, including the number of borrowers who responded positively to each theme and illustrative anecdotes shared by respondents when useful.

Results

In comparing borrower responses to eleven open-ended questions, I extracted twenty indicators structured as polar statements that could be assigned either an affirmative (1) or negative (0) response.

Figure 1. Borrower Response Summary

Theme	Indicator	Percentage affirmative response
CDFI is filling a gap left by traditional lenders; has a largely word-of-mouth referral network	Loan would not have been obtained but for Impact Seven	87%
	Previous turndowns by banks	87%
	Borrowed from Impact Seven due to relationship with loan officer/staff	20%
	Referred by bank	53%
	Referred by third-party TA provider	20%
Businesses continue to borrow to meet capital needs	Have taken out additional loans from Impact Seven	40%
	Has taken out additional business loans from other lenders	27%
	Needs additional capital	47%
CDFI provides technical assistance and development services to borrowers	Impact Seven provided services in addition to financial capital	60%
Provides amenities, products, or services not otherwise available in the area	Business provides products or services otherwise not available in the area	53%
CDFI loan capital catalyzes change in businesses	Change in business such as new product, increased sales, etc.	87%
Businesses access an array of community resources and partnerships	Member of trade group	20%
	Involved in local economic development efforts	33%
	Chamber of Commerce member	40%
	Participates in local fundraising (e.g., sponsors sports team, etc.)	73%
	Community partnerships	40%
Business provides additional benefits to workers	Employee fringe benefits provided	20%
	Other worker benefits such as additional hiring, training, etc.	67%
Increased borrower confidence and self-efficacy	Borrower confidence increased	93%
	Borrower/business better off since obtaining Impact Seven loan	100%

For the affirmative responses in each indicator category described above, I reviewed the notes I took on each response to search for common themes. A discussion of borrower responses and frequencies follows, organized by theme.

The CDFI is filling a gap left by traditional lenders

All but two borrowers agreed with the statement, "your project would not have been possible but for the loan from Impact Seven." Thirteen of these borrowers, or 87% of those contacted, also reported previous turndowns by banks. Several businesses explained that they were seeking capital during the Great Recession and the early years of the recovery when credit was tight, from 2007 to 2012. The largest business contacted, a manufacturer, was hit hard in the recession and obtained an operating line of credit from Impact Seven that was critical to the business' survival in that year after turndowns from several banks commented, "Banks are only willing to help you when you don't need it."

Several businesses described their experiences in approaching banks for credit and were turned down due to inadequate collateral to secure the requested loans. Two businesses explained that they turn profits due in large part to their reliance on purchasing used equipment for operations. However, the banks they approached either would not accept equipment as collateral or balked at the uncertainty of the collateral valuation due to its used condition. Five borrowers had existing lending relationships with banks but were turned down for the project in question for various structural reasons; e.g., inadequate collateral or a high loan-to-value ratio. In one case the borrower had reached their lending limit concentration with the bank.

Two borrowers described existing, ongoing relationships with banks wherein the banks made the referral to Impact Seven because the borrowers' requests fell outside of their underwriting guidelines but have continued to provide ongoing technical assistance to the borrowers. Importantly, this evidences the complementary role that Impact Seven plays to the banking industry; rather than taking business away from traditional banks, it fills a gap for financial products and services. Finally, Impact Seven participated out a portion of two of the loans to a bank or other lender in order to structure the deal in a manner acceptable to all parties involved, effectively finding opportunity in the deal through spreading risk between multiple lenders.

Impact Seven's referral relationships tell a compelling story about the gap its products are filling. Borrowers are referred to Impact Seven entirely through word of mouth. Fifty-three percent of borrowers were referred by a bank while 20% were referred by a third-party technical assistance provider such as SCORE or a county Economic Development Commission (EDC). The remaining three borrowers obtained loan capital from Impact Seven due to existing relationships with an Impact Seven loan officer or other staff person. The owner of a grocery store explained that Impact Seven's portfolio manager shops in her store, so it was important to her to give Impact Seven her business. The manufacturer mentioned above said that because Impact Seven was the only lender willing to help during the recession, he would continue to keep his business there. The fact that banks are overwhelmingly the top referral

source of small business loans is further indicative that Impact Seven is meeting demand for financial products unfilled by banks.

Businesses continue to borrow to meet capital needs for growth or to level out cash flow

Of the borrowers interviewed, 40% have borrowed additional funds from Impact Seven while 27% have borrowed from other lenders to fuel business growth or level out uneven cash flow patterns. Of these, two respondents borrowed from a conventional lender such as a bank which they attribute to improvements in credit and/or business performance since closing their Impact Seven loan(s), while two borrowers took out additional loans from third-party lenders with predatory terms such as usurious interest rates or monthly payments exceeding available cash flow. One of these borrowers, a manufacturer, declared bankruptcy as a result but brought on a new, more experienced partner who successfully managed the business through the process has since increased sales to achieve stability.

Nearly half, or 47%, of borrowers interviewed said they needed additional capital. Four of these borrowers stated that initial capital needs were met with their Impact Seven loan(s) but they will be seeking additional capital for expansion or capital improvement projects. One borrower who had taken out a predatory loan from an online lender would like to refinance existing debt to reduce monthly payments.

The CDFI provides technical assistance and development services to businesses

In the CDFI industry, services that enhance the ability of borrowers to utilize CDFIs' financial products are referred to as technical assistance and may include training on a broad array of topics related to operating a successful business, from advice on real estate transactions, to accounting, to marketing and more. Services may be provided by CDFI staff or by partners such as Small Business Development Centers (SBDCs) or local accountants. Development services typically refers to direct assistance with structuring deals. For example, coordinating between all lenders in the capital stack of a complex project to arrive at a structure that meets the needs of the borrower, project, and financiers involved. Sixty percent of respondents reported receiving technical assistance and other services from Impact Seven related to their business loan. Two borrowers were assisted with grant dollars for signage funded via Impact Seven's participation in the federal SBA Microloan Technical Assistance program. The largest business interviewed stated that their "management is strong in finance and operations" and thus had no need of technical assistance.

Several respondents initially reported that Impact Seven did not provide any services outside of the provision of loan capital, but nonetheless went on to describe specific technical assistance provided by their respective loan officers. One borrower described how her Impact Seven loan officer reviewed her existing lease and pointed out a number of disadvantageous terms that were a primary driver of expenses that exceeded revenues. As a result, the borrower exited the lease and obtained a new lease with more favorable terms, which had the effect of reducing expenses and achieving positive cash flow. Three borrowers described technical assistance delivered after closing, from extensive assistance working through a bankruptcy (the

aforementioned manufacturer), to assisting a borrower with improving cash flow management, including restructuring payments to accommodate seasonal cash flow patterns.

In some cases, borrowers were clear that they did not want or need advice from their loan officer, particularly those with clear visions and/or experience in their line of business. Even in these instances, however, the assistance of Impact Seven in structuring the loan, such as reviewing assets to identify acceptable alternative collateral in cases where lack of traditional collateral precluded the involvement of a bank lender, finding additional third-party sources to close the project financing gaps, or reviewing project budgets or operating pro formas for accuracy, was an essential precondition to loan approval by Impact Seven.

The question could likely be rephrased for clarity in order to obtain more accurate responses, such as “How did the CDFI provide assistance with structuring the loan?” However, it could be that in many cases borrowers are unaware of the provision of development services related to loan structuring.

Assisted businesses provide products, services or amenities not otherwise available in their markets

Quality of life and access to amenities are often cited as preconditions for economic growth and reasons that major employers site their operations in a particular locale. All borrowers described ways in which their businesses were unique or differed from their competition, but eight, or 53%, reported that their businesses provided products, services, or amenities that would not otherwise be available in their markets. This could be due in part to a disproportionate number of borrowers (60%) interviewed located in rural areas that likely do not have the population base to support multiples of one type of retail or service business. One rural town would be a food desert but for the presence of a small grocery store carrying a full array of fresh produce, dairy and meats, financed by Impact Seven. A small healthcare facility serving elderly patients reports being the sole provider in the county able to serve seniors with complex medical needs. A local chain of fitness facilities has locations in a number of small, rural towns where larger providers would not locate due to small population concentrations. Five borrowers operate retail businesses providing unique amenities such as leisure activities or arts-related programming. Three borrowers report competition within their market but add value to their products or services that may substantially set them apart from other providers. Three borrowers contacted serve a national market. Local businesses providing a diverse array of goods and services represent assets from the perspective of place-based economic development, by differentiating the area from others. The competitive advantage realized by these locales may be attributed in part to the placemaking efforts of these borrowers.

CDFI loans catalyze revenue-positive changes in businesses

All respondents reported uses of loan proceeds consistent with the stated purpose of the loan request at the time of underwriting. When asked how their CDFI loan(s) changed their businesses, 87% of borrowers described changes primarily related to activities of either

a start-up or expansion; e.g., the acquisition of real estate, capital equipment, inventory, etc. purchased with loan proceeds. Twelve reported increased revenues resulting from higher sales (though note this does not necessarily equate to higher net profits). Four were start-ups and the remaining are existing businesses that obtained loan capital for expansions or capital improvements to increase efficiency. One borrower who obtained a loan to refinance existing debt reported no change except reduced expenses related to a lower interest rate. These responses indicate that businesses are using CDFI loans for the intended purpose, and that the CDFI loans catalyze revenue-positive changes in the assisted businesses. Revenue change and net profits could be quantified at annual loan reviews to track changes over time.

Local partnerships build businesses and communities

All borrowers reported participation in community, with two-thirds in more than one category. The most commonly reported type of community involvement (73%) is the support of local causes primarily for marketing purposes, such as sponsorship of sports teams or fundraisers for schools, public improvements, or community initiatives. One borrower serving a national market commented that although support of local needs does not serve a direct marketing purpose, the business frequently provides material and financial support to local causes because they view supporting the institutions that their forty-plus employees rely on as part of boosting employee morale and a strategy to attract and retain workers.

In addition, 20% of borrowers are members of national or regional trade groups and 40% were members of local Chambers of Commerce, but notably only one borrower specifically stated that membership was beneficial. One borrower commented, "I'm a member of the Chamber but of course they just . . . [*pause*] meet. There is no usable advice or real results." One third of respondents participate in local economic development efforts, such as membership in a county Economic Development Commission (EDC) board or group, or participation in a downtown revitalization effort. Two borrowers discussed their involvement in a local Main Street initiative, a program funded by the state of Wisconsin through local collaborative partnerships focused on grassroots revitalization of historic Main Street corridors, while one borrower described participation in an ad hoc committee for downtown revitalization in a small rural town in the absence of the state-funded Main Street program.

Notably, 40% borrowers described the formation of unique local partnerships with benefits accruing to the business, partner, and other community interests. These examples of community participation that went beyond local involvement principally focused on marketing or assistance received through the normal course of business (e.g., a local EDC or TA by a community bank) are classified as "community partnerships." Borrowers reported obtaining benefits from their informal social networks with more frequency than formal resources such as Chambers of Commerce.

For example, an owner of a start-up business commented, "One totally unexpected thing is this relationship with the police department," located next to his equipment repair and resale business. What started out as employees and police officers sharing morning coffee in the parking lot grew into a reciprocal relationship wherein the business has hosted multiple

fundraisers for the police department's K9 unit and provides free repairs for critical rescue equipment, and the department keeps a close eye on the business' building and inventory, with officers informally referring business. One business with a large facility hosts fire department training and donates supplies to schools and other local institutions. Another seasonal recreational sport business in a small town explained that low cash flow could not support staff or unexpected expenses. The owner described extensive community support of the business, trading use of the facility for various types of labor from repair carpentry to help with events. One such transaction led to the owner's active involvement in a local political campaign. The owner of a fitness facility provides space for community meetings and is passionate about helping other women succeed in business through mentoring. The owner of a grocery store in a rural area explained that because there are so few businesses in town to support local causes, they saw it as their responsibility to be a reliable source of help for community projects and causes. These borrowers view their businesses as venues for community convening; the places where locals meet, both formally and informally.

Borrowers are confident in their entrepreneurial abilities

A theme that ran throughout each interview is the confidence of the borrowers, indicating a strong sense of individual self-efficacy. All but one, or 93%, of those interviewed showed a high degree of confidence in their abilities to successfully operate their businesses, solve problems, and mitigate challenges as evidenced by statements such as: "I put everything I had into the business. That's how much I believed in it. I knew I could make it work," and "I don't really need help; I just run my business." Only one owner of a small Main Street retail business on the verge of failure expressed doubts about her ability and suitability to successfully run a business. Still, one borrower that had been through a Chapter 11 bankruptcy in the previous two years and another borrower with a small business experiencing financial trouble both expressed a high degree of confidence in their abilities to achieve success and mitigate challenges.

Discussion and Recommendations

As noted previously, there has been insufficient academic attention paid to the evaluation of social outcomes and impacts of CDFI activities, particularly related to small business lending. Although this paper proposes a model for CDFIs to conduct their own qualitative evaluations, robust academic studies would add credibility to the industry's impact claims as well as quantify potential correlative or predictive links between CDFI activities and social outcome indicators. A larger evaluation study could be done, obtaining a greater sample size of borrowers in the same asset class and possibly business type (e.g., retail, manufacturing, etc.) from the same CDFIs or samples pulled from each of several similar CDFIs as in the longitudinal evaluation by Accion and the Opportunity Fund (Harder + Company, 2017). A study of community-level changes could involve a comparison of social outcome variables between communities with a concentration of small business lending by a CDFI and a community with similar characteristics but no CDFI presence as a control.

The qualitative results of the interviews suggest that the following quantitative variables could be incorporated into existing data tracking systems at Impact Seven and other CDFIs with small business loan products. Benchmarking variables at loan closing and comparing them to annual numbers could be used to track changes over time. This data could be captured in a survey in addition to other annual data collection often collected by CDFIs such as job creation and retention, changes in revenues, and other economic and financial data.

Figure 2. Possible Quantitative Impact Variables

#	Sources of local assistance for the business
#	Community partnerships
#	Strong ties
#	Weak ties
# + $	Value of benefits provided to employees
$	Salary increases for employees
$	Economic value of third-party assistance provided to the business
$	Economic value of community benefit provided by the business
$	Economic value of transactions in the informal economy (e.g., traded labor)
# + $	Loans refinanced by a traditional bank
Y/N	Provides amenity or service otherwise not available in the area
Y/N	Borrower previously turned down by bank/conventional lender
Y/N	Increase in self-confidence of borrowers related to skills and efficacy
Y/N	Changes in borrower credit scores annually compared with baseline at underwriting

The extent to which borrowers discussed specific ways in which their businesses contributed to and/or benefitted from community partnerships and organizational networking activities was unexpected and shows promise for additional study, and further points to a mechanism by which CDFI activities may be shown to positively affect community development. Indeed, the criterion for community development is met through borrowers' descriptions of social interactions with community residents and stakeholders with the intent to positively impact local issues. A related line of potential future inquiry involves the relationship between place-based economic development strategies and CDFI lending activities. Although only one-third of borrowers reported direct involvement with local economic development efforts, their descriptions of their community activities, interactions and relationships may be construed as either a cause or effect of place-based community economic development; a relationship that could be explored further.

Loh (2019, 68) asserts that evidence of placemaking activities can be difficult to identify because they are "diffuse, resting in the hands of many individuals and agencies." Additionally, placemaking strategies are typically implemented over a relatively long period of time. However, a question could be added to specifically screen for the presence of local place-based economic development efforts, such as "Are you aware of local efforts to improve the business climate and quality of life in your community such as a Main Street program [or other recognizable placemaking program as appropriate]?" If yes, broad follow-up questions could be asked, such as "How are you or your business involved?"

When I wrote the interview questions, I included several questions about the businesses' community involvement and where borrowers access help for their business. These questions could be rephrased to obtain more specific information about borrowers' social networks and the benefits obtained therein. In addition, questions could be phrased to differentiate between bonding and bridging social capital (strong and weak ties, respectively). While there are tools that have been validated as high-quality measures of social tie strength, for CDFIs' internal evaluation purposes, a simple survey could be used to quantify borrowers' strong and weak social ties by asking borrowers to recall times that they have received assistance for their businesses or times that they, through their businesses, have assisted third parties, and then categorizing each relationship on a scale; e.g., from 1 (weakest) to 10 (strongest social ties) (Abbasi et al., 2014, 69; Wright & Miller, 2010). The survey could be given to borrowers periodically to help CDFIs understand how their borrowers' social networks affect their businesses, and how the assisted businesses interact with community.

For further academic study it would be interesting to measure the density and frequency of community connections and observe: 1) the extent to which the business obtains material assistance from the community, 2) the extent to which this translates to revenue changes, and 3) the extent to which the borrower's community involvement benefits the community, and how. Connections examined should go beyond efforts associated with marketing (e.g., sponsoring a sports team). A validated tool such as the Relational Closeness Scale could be utilized to rank the perceived level of closeness with acquaintances in order to distinguish and quantify strong- and weak-tie relationships. Borrowers could be asked to recall their community relationships, perhaps those related to a specific event or business outcome, and rank their perceived closeness with the individuals involved on a scale, with 1 being a distant or weak-tie relationship, and 10 a very close, strong-tie relationship (Wright & Miller, 2010, 507). Testing or validating alternative tools to measure the strength of community relationship ties could also be a fruitful course of further study. It would also be interesting to examine community characteristics and see whether any local conditions were predictive of increased community interaction, business success, community well-being, etc.

Several small business borrowers referenced participation in the informal economy such as paying cash "under the table" for help or trading goods and services. This points to a need for technical assistance from CDFI loan officers or referrals to third-party TA providers to assist businesses with tax compliance. Tax risk issues aside, there are likely measurable quantitative benefits for community residents that could be measured. By asking borrowers for an accounting of the dollar value of economic transactions in the informal economy, an analysis of direct and indirect economic effects could be conducted via econometric input-output modeling software such as IMPLAN.

For CDFIs wishing to conduct individual borrower interviews as suggested in this paper, consider the ethical implications of assuring borrowers' anonymity or confidentiality. CDFIs may wish to do so in order to encourage borrowers to provide more open and honest feedback but may be hamstrung if a borrower demonstrates a need for a specific type of technical assistance or shares information that could put the business or the CDFI's investment at risk.

For example, one borrower interviewed as part of the subject project shared plans to obtain third-party debt capital for a business expansion but has a signed agreement with Impact Seven to avoid taking out any additional debt based on underwriting that revealed additional debt could jeopardize the viability of the business. I encouraged this borrower to speak to her loan officer about these plans. Often, when a borrower violates this agreement it results in a loan with predatory terms because the borrower cannot obtain traditional bank financing. In most cases borrowers provided more general information that I was able to share with the Impact Seven lending team without violating the anonymity promised to interviewees.

Most CDFIs conduct periodic portfolio reviews involving the assessment of borrower financials to evaluate actual performance against projections and affirming the presence and value of collateral, at a minimum. Incorporating a structured, qualitative interview process would yield valuable information both in terms of identifying ongoing borrower needs and in evaluating outcomes and impacts. Further, it is possible that just asking questions about borrowers' roles in community plants a seed; i.e., what gets measured gets changed. Because we know that social interaction with a positive purpose is the linchpin of community development, encouraging borrowers to become involved with local purposive development efforts may spur such action. For Impact Seven, I recommend the following:

Establish a trusting relationship. Most borrowers referenced the importance of the relationship with their Impact Seven loan officer. This "right-touch" approach to outreach and technical assistance appears to be a positive practice that builds trust, business management skills, and contributes to borrower self-confidence. On a related note, over half of the borrowers interviewed had worked with a small business loan officer who resigned from Impact Seven within the last year. Most borrowers reported having built a strong, trusting relationship with the loan officer, and felt less ease in approaching other staff for assistance in their absence.

Focus on financial management technical assistance. Although all but one borrower reported being "better off" because of their Impact Seven loan, several borrowers shared stories indicative of insufficient business management skills. Incorporating an assessment of knowledge and skills related to financial management during underwriting and requiring borrowers to obtain training specific to any deficiencies could improve borrowers' business management skills and loan performance.

Track bank turndowns. As discussed, borrowers consistently said that they borrowed funds from Impact Seven because they had turndowns by banks and had no other source of capital. While Impact Seven tracks "loans made bankable" or payoffs of existing loans obtained by loans from a conventional lender, the number and dollar amount of loans to borrowers with prior bank turndowns is not currently tracked but could be to quantify the extent to which Impact Seven is filling a gap in the market left by traditional lenders. This metric directly relates to the legislated purpose of CDFIs.

Conduct additional outreach and marketing. Two borrowers interviewed reported having heard negative things about Impact Seven from a third-party small business technical assistance counselor that could be addressed through providing factual information to referral partners

and further explaining available services and products to align expectations with offerings. Additionally, while several borrowers were referred by banks, several others expressed frustration that they had not been referred to Impact Seven sooner and specifically recommended that Impact Seven conduct more marketing and outreach to referral partners.

Research and develop a process for incorporating community development indicators into loan underwriting. CDFIs engaged in small business lending are typically limited to providing capital for projects that have progressed to the point of being "shovel ready." However, the interviews conducted indicate that entrepreneurs and their businesses are engaged in the interactive processes of community which has been shown to contribute positively to community development. Further, research shows that community development focused on the creation of entrepreneurial ecosystems is effective in both fostering entrepreneurship and developing community. It may be worth it for CDFIs to consider: a) community readiness for entrepreneurship, b) how various readiness factors affect loan performance, and c) how the CDFI itself might fill in any essential missing support factors or enhance the important ones.

Conclusion

CDFI lending has a clear place in economic development; providing capital, assisting underserved populations with using financial products and services, and delivering services and amenities to disinvested areas and populations. These economic activities, outputs and outcomes are observable, quantifiable and have been the subject of rigorous study.

The community development argument for CDFIs is more complex and difficult to observe and measure in action. However, emphasizing economic growth to the exclusion of community development efforts can be detrimental to overall development efforts because benefits may not accrue equitably to all residents and can exacerbate community divisions and social stratification (Larson et al., 2015). The CDFI industry was established precisely to deliver capital to borrowers, projects, and communities that lacked access to credit due to historic structural inequities and uneven development patterns. The assumption in the authorizing legislation and on the part of the CDFIs themselves and other industry stakeholders is that the provision of financial products and services results in community development.

Community issues are complex and interconnected, rendering traditional categorical, siloed interventions inadequate. Rather, "flexible, integrated vehicles and methodologies" for community and economic development are necessary to achieve success (Pigg & Bradshaw, 2003, 391). It follows that CDFI interventions alone are insufficient to achieve community development. However, their borrowers are engaged in broad-based social interaction for diverse purposes related to community and economic development. Place-based economic development strategies that leverage organizational networks to achieve local goals can similarly be said to be engaged in community development. Further study of the relationships between CDFIs, their borrowers, and their borrowers' formal and informal networks may yield evidence of additional mechanisms by which community development occurs in conjunction with CDFI activities.

CDFIs represent a broad array of institution types, providing financial products and services in a diverse set of asset classes in communities throughout the United States, with markets defined in terms of geography or population characteristics. The complexity of the CDFI industry thus precludes a standardized approach to evaluation of its social outcomes and impacts. CDFIs are primarily engaged in the provision of capital, technical assistance and development services across a diverse array of asset classes. Impact Seven provides flexible capital for small business start-ups and expansions that otherwise lack access to affordable credit. Individual interviews of borrowers support Impact Seven's assertion that their products and services fill a gap in the market for small business loan products. Although most quantitative metrics of CDFI lending activities outcomes are economic, the interviews conducted in the subject project reveal that small business borrowers interact with community in important and observable ways. Borrowers see their places of business as places that build community, where people gather, or that provide valuable services and amenities that would not otherwise be available. Examined through the lens of interactional field theory, it is logical that a significant number of businesses would report complex social interactions beyond transactional contacts between proprietor and customers, and that business owners would recognize that their pursuit of locality-oriented interests is beneficial to themselves as well as their communities. With further study, the "strength of weak ties" may be observable in these interactions, and it may be argued that CDFI borrowers build the places where the dynamic processes of community take place (Wilkinson, 1991, 8-9).

Globalization and economic restructuring have brought new, complex challenges to local community and economic development. While the CRA and the CDFI industry have incentivized at least some local reinvestment of capital, the tendency of capital to seek higher returns and regulation discouraging excessive risk-taking by financial institutions present barriers by some entrepreneurs to obtain capital for small business uses (Bridger & Alter, 2008; Congressional Research Service, 2018, 19). There is ample data on the economic impacts of the role of credit in strengthening small businesses and achieving economic growth, but economic factors are not necessarily predictive of social impacts such as quality of life indicators (Codreanu, 2012, 797). As such, CDFI lending would benefit from more rigorous academic study and expertise in order to gain a deeper understanding of how their activities and interventions affect borrowers, businesses, and communities. Individual and community-level outcomes and impacts of some common CDFI loan asset classes have been well-studied, such as affordable housing and healthcare; however, other asset classes such as small business and commercial real estate warrant further study. This paper presents a model that CDFIs themselves can use to aid their own understanding of how their activities affect small business borrowers, but further academic study is necessary to assess the extent to which the suggested quantitative outcome and impact indicators may be associated with CDFI loans. A better understanding of these relationships will help funders and other stakeholders understand how their investments translate to community impact and will help CDFIs improve services to their borrowers and identify best practices. The measurement of increases in social capital among historically underserved or disadvantaged small business borrowers, such as

people of color, recent immigrants or people with low incomes, may be of particular interest to CDFIs, stakeholders, and policy makers.

Different locations have differing capacities for action. From an interactional perspective, geography matters. It is individual residents that hold the local knowledge of the competitive advantages that add value to a location to differentiate one place from another. CDFI interventions alone cannot alter the course of uneven patterns of past development but they can mitigate them, one loan at a time, particularly if the location is already participating in a place-based local development strategy. By seeking communities that have place-based strategies in place and allocating their resources strategically to align with local plans and priorities, whether rural or urban, CDFIs can purposively target locations with enhanced capacities for collective action. (Bridger & Alter, 2009, 101-103). After all, access to capital is only one piece of community development. By gaining a clear understanding of how their interventions affect borrowers and communities, CDFIs are ideally positioned to connect scholarly and technical knowledge and capital resources with community needs.

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Capital-Raising Among Depository Minority-Owned CDFIs Before the Covid-19 Pandemic

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Capitalization is a fundamental aspect of bank viability, at all periods, but especially so for smaller banks during periods of financial crisis (Berger & Bouwman, 2013). Minority banks, including those that are certified as Community Development Financial Institutions (CDFIs) were hit particularly hard during the 2008 financial crisis. Even as the economy recovered, analysis of data up to 2013 suggested that Minority Depository Institutions (MDIs) tended to lag behind various measures of performance compared to other community bank peers, even after controlling for primary markets served (Toussaint-Comeau & Newberger, 2017).

In this paper, we focus on the capital-raising experiences of MDIs that are also CDFIs. These institutions have a CDFI certification, which is a designation conferred by the U.S. Treasury CDFI Fund for non-government financial institutions whose primary mission is community development. CDFIs may take the form of banks or thrifts, credit unions, loan funds, and venture funds. What distinguishes CDFI banks from other federally-insured and regulated institutions is that they must direct at least 60 percent of their financing to low- and moderate-income or underserved communities. Hence, a sizeable portion of mission-driven MDIs tend to be CDFIs.

With the creation of the CDFI Fund in 1994, policymakers sought to provide a source of community development financing and technical assistance to help financial institutions promote economic revitalization and community development. Even as the CDFI sector expands, however, minority CDFIs have continued to shrink and show somewhat more volatility in terms of entries and exits. The analysis in this paper attempts to investigate the trends and components of equity capital change for MDI CDFIs, as well as identify differences in capital among these banks compared to their peers.

This study includes only depository bank and thrift CDFIs, also known as community development banks (CD banks), for which financial data is publicly and more easily available. CD banks are an important segment of the CDFI industry landscape, holding almost 60 percent of the assets within the CDFI sector, with average institutional assets more than 14 times of those at CDFI loan funds.[1] The relative size of CD banks in terms of assets suggest that they represent a vehicle for significant opportunity to increase impact investment

1 See 2019 CDFI data available at https://www.cdfifund.gov/research-data/Pages/default.aspx.

through formal financial intermediation in lower-income markets. Further, mission-oriented banks play a strong intermediation role in the communities they serve, which are often areas that typically have had less access to services at mainstream banking institutions. According to research, credit to small businesses does not adjust automatically subsequent to the closing of such banks as in other markets, even with new larger acquiring banks in place (Toussaint-Comeau, Wang, & Newberger, 2019).

In addition, CDFI banks offer an excellent case to analyze the issues connected with disparity in access to capital for small firms, and the implications for the sustainability of minority-owned institutions that promote community development. The depository structure enables CD banks (and community development credit unions) to leverage far more debt from an initial investment than other CDFIs, thus providing them with more capital with which to conduct development financing (Benjamin, Rubin, & Zielenbach, 2004). Most regulated CDFIs have an equity or net asset base of five percent or less of their total assets; for every dollar of equity, they can take on nearly $20 of deposits or other liabilities (NCIF, 2002). In contrast, most non-regulated CDFIs maintain equity/net asset ratios of at least 15 percent. Furthermore, deposits represent one of the cheapest forms of capital available to CDFIs. Interest rates on savings and checking accounts are typically much lower than rates on borrowed funds, which tend to be the primary source of financing for non-regulated CDFIs (NCIF, 2002).

In the analysis that follows, we document trends in the MDI-CDFI sector compared to non-MDI CDFIs and community banks.[2] We examine the data to understand the sources of capital growth for the three groups of banks. We see that all the banks tended to increase capital primarily by accumulating retained earnings. This was particularly true for minority CDFIs in the most recent years of this analysis. We examine further the components of bank income, to understand methods for adding to retained earnings. We find, consistent with previous research, that profitability and efficiency increased for CDFIs (both minority and non-minority) enabling greater capital growth through income (FDIC, 2019). Finally, we examine asset growth and lending growth. We find results that point to the potential benefit of strong balance sheet and equity capital particularly for MDI CDFIs as banks expand on their loans or grow their various other assets.

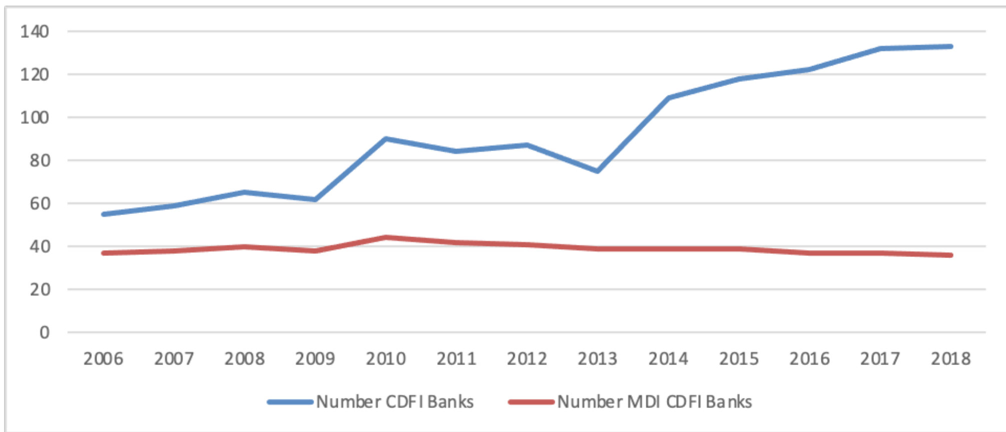
Evolution in the Number of Minority CDFIs

We construct our dataset from banks and thrifts listed as certified CDFIs by the CDFI Fund, as well as institutions listed as MDIs by the FDIC. Since the CDFI Fund does not offer a historical list of CDFIs, we construct the list of CDFI banks and thrifts using data assembled by the National Community Investment Fund. The FDIC publishes historical lists of MDI banks. The CDFI-certified banking sector has added substantial numbers to its ranks

2 Community banks are defined based on FDIC criteria outlined in the FDIC Community Banking Study available at https://www.fdic.gov/regulations/resources/cbi/study.html. The study defines community banks primarily in terms of their traditional relationship banking and limited geographic scope of operations, and includes banks whose assets are indexed to equal $1 billion as of 2010.

in the years since the financial crisis (Figure 1, since 2006). The 142 CDFI-certified banks entering the sector between 2006 and 2018 far outnumbered the 64 CDFI-certified banks leaving the sector. In particular, we see notable jumps in the year-to-year count between 2009 and 2010, and again between 2013 and 2014 when the number of CDFI banks increases from 75 to 109 banks (45 percent). The same cannot be said of minority CDFI banks, however. The relatively flat trend of MDI banks that are CDFI-certified (number ranging from 36 to 44) belies the fact that the MDI/CDFI sector has been in fact relatively volatile in terms of entry and exit rates. Between 2006 and 2018, about the same number of MDI CDFI banks left the dataset (34 banks) as entered the dataset (33 banks).

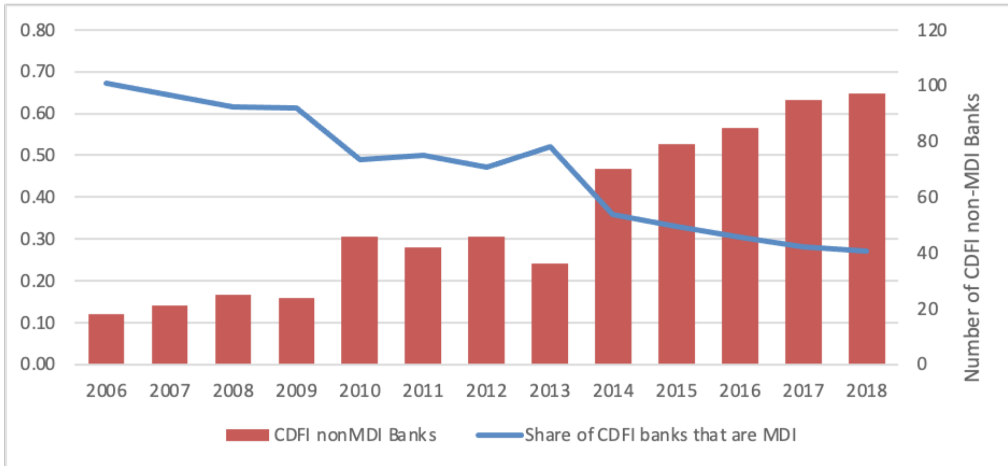
Figure 1. Number of Designated Institutions (CDFIs and MI CDFIs)



Sources: FDIC, NCIF, and CDFI Fund

Consequently, the share of banks that are both CDFI-certified and MDI-designated has fallen during the 2000s (Figure 2). In 2006, two-thirds of CDFI banks were MDIs. In 2010, 49 percent of CDFI banks were MDIs. The ratio fell to 36 percent in 2014, and by 2018, less than a third of CDFI banks were also MDIs. Over the 2006-2018 period, about 22 percent of the banks that entered into the CDFI bank sector had a minority designation. In contrast, about 52 percent of the banks that exited the CDFI sector were also MDIs.

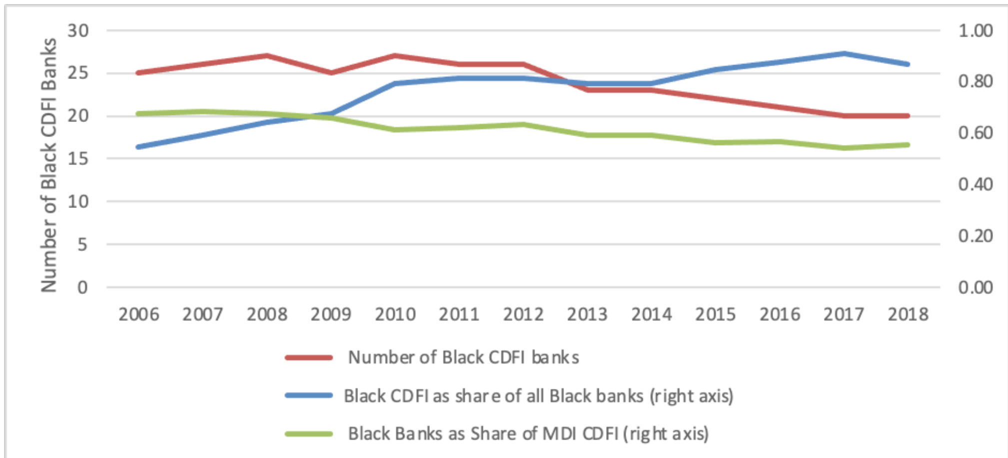
Figure 2. Change in the Composition of Minority Ownership Status of CDFIs



Sources: FDIC, NCIF, and CDFI Fund

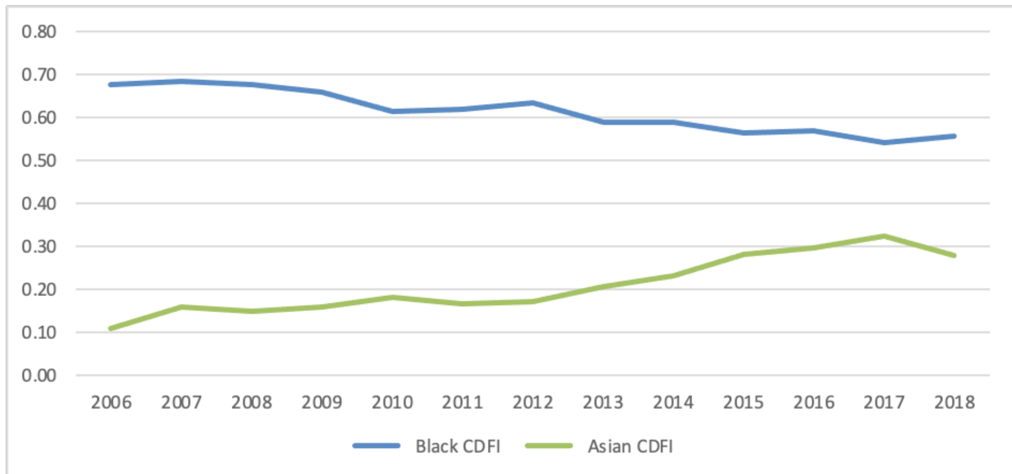
It is worth noting that Black banks are the largest contingent of MDI CDFIs (Figure 3), although this percentage has declined over time. About 56 percent of MDI CDFIs were African American banks in 2018. The share of MDI CDFI that are Asian American banks has risen over the decade to about 28 percent of all MDI CDFIs as of 2018 (Figure 4).

Figure 3. African American CDFI MDIs



Sources: FDIC, NCIF and CDFI Fund

Figure 4. Share of MDI CDFI by Ethnicity of Bank Ownership



Sources: FDIC, NCIF, and CDFI Fund

Bank Equity Capital

One of the main functions of equity capital is to act as a cushion to absorb unanticipated losses that could otherwise cause a bank to fail.[3] Indeed, the rules of Prompt Corrective Action which guide the regulators' approach to troubled banks focus on the level of bank capital–i.e. the dollar amount by which assets exceed liabilities or the net worth of the bank (Walter, 2004). Indeed all (surviving) insured institutions meet or exceed the requirements for the highest regulatory capital category, including banks that are non-MDI CDFIs and MDI CDFIs, according to the FDIC's Q3 2019 quarterly report. Even so, previous studies have shown that differences in the distribution of equity capital ratios (i.e., equity capital to assets) between banks within the different subgroups are large. This suggests that the determinants and variations in equity capital between banks are deserving of attention (Berger et al., 2008; Gropp & Heider, 2009; Cohen & Scatigna, 2014; Andrle, Tomsik, & Vlcek, 2017; Toussaint-Comeau, Newberger, & Augustine, 2020).

This analysis focuses on bank equity capital which is comprised of several accounts, including common and (perpetual) preferred stock, retained earnings, surplus, accumulated other comprehensive income and other equity capital components.[4] These are also known as core capital elements included in Tier-1 capital.[5] Common equity Tier-1 capital is widely recognized as the most loss-absorbing form of capital.

Table 1 displays the annual time-series of total bank equity capital, the average, and equity capital ratios. These measures are given for institutions in our analysis, from 2006 to 2019 (prior to the COVID pandemic). CDFI depositories had equity capital totaling more than $6.9 billion as of 2019, based on the most recent data available. The minority CDFIs were much smaller, with combined equity capital of just over $2 billion in 2019. CDFI banks, like community banks as a sector, have experienced increases in their equity capital

and their equity capital ratios during the period of analysis. These results are consistent with previous research that has examined the capital structure of banks (large and small banks, U.S and globally) and has noted the rising tendency for increased equity capital and equity capital ratios since the Great Recession.[6]

Table 1. Bank Equity Capital and Capital Ratios

	MDI CDFI				NON-MDI-CDFI				COMMUNITY BANKS			
	TOTAL EQUITY CAPITAL (000)	CAP (wgt avg) (000)	CAP/ asset	CAP/ RWA	TOTAL EQUITY CAPITAL (000)	CAP (wgt avg) (000)	CAP/ asset	CAP/ RWA	TOTAL EQUITY CAPITAL (000)	CAP (wgt avg) (000)	CAP/ assets	CAP/ RWA
2006	586,788	27,336	0.08	0.11	477,872	82,632	0.07	0.11	184,000,000	94,661	0.10	0.14
2007	619,847	29,536	0.08	0.11	563,441	85,913	0.07	0.11	193,000,000	96,030	0.10	0.14
2008	430,661	28,821	0.08	0.10	926,642	89,591	0.07	0.11	191,000,000	97,926	0.10	0.13
2009	726,596	33,369	0.09	0.12	849,897	122,402	0.10	0.17	194,000,000	107,075	0.10	0.14
2010	752,002	27,847	0.08	0.11	1,988,329	117,271	0.12	0.18	193,000,000	108,638	0.10	0.15
2011	925,341	44,612	0.10	0.18	2,039,374	120,708	0.12	0.20	207,000,000	125,157	0.11	0.17
2012	932,875	44,587	0.10	0.19	2,251,510	120,521	0.12	0.20	216,000,000	148,143	0.11	0.17
2013	866,719	40,817	0.09	0.16	1,396,925	88,757	0.10	0.15	214,000,000	161,152	0.11	0.16
2014	984,849	41,442	0.10	0.16	2,389,684	74,437	0.10	0.16	238,000,000	185,152	0.11	0.16
2015	1,020,399	47,839	0.10	0.15	2,523,061	77,537	0.10	0.14	232,000,000	231,431	0.11	0.15
2016	1,237,495	68,031	0.11	0.15	3,187,506	79,743	0.10	0.14	236,000,000	272,359	0.11	0.14
2017	1,462,040	83,428	0.12	0.16	3,681,062	83,257	0.11	0.14	241,000,000	293,517	0.11	0.14
2019	2,001,548	164,864	0.15	0.20	4,951,134	136,167	0.12	0.17	184,000,000	287,838	0.12	0.16
median	925,341	41,130	0.09	0.15	2,039,374	87,335	0.10	0.15	207,000,000	136,650	0.11	0.14

Note: The table shows the total dollar amount of equity capital (as defined in the text), and the average equity capital (weighted average) for each year. The table also shows bank equity capital expressed in terms of a ratio: the equity to assets ratio, and the equity to risk-weighted asset ratio (RWA). The latter is known as the Tier-1 capital ratio. It is the bank shareholders' equity capital plus retained earnings relative to its total risk-weighted assets (RWA).

Sources: FDIC, NCIF, and CDFI Fund

Components of Equity Capital Change

We investigate some of the ways CDFIs increase capital, by examining the aggregate annual changes in equity capital and its components from 2005 to 2019. Our approach builds on the literature that has investigated the many strategies in which banks increase equity capital, although few previous studies have focused on very small banks and CDFIs in particular (Cohen, 2013; Cohen & Scatigna, 2014; Newberger, 2018). Banks raise equity capital several ways: (1) First, through its strategy to target retained earnings. This can be done by boosting profits through increasing the spread between the interest rate charged for loans and those paid to its fund. The bank might also try to increase net income (and thereby retained earnings) by increasing profit margins on various lines of businesses, such as advisory services, or reducing operating expenses. (2) Another strategy for raising capital might involve the issuance of new equity. Finally, (3) the bank might engage in strategies

that involve changes on the asset side of the balance sheet, such as selling assets or replacing higher-weighted riskier loans with safer ones or government securities.[7]

To examine the sources of change in bank capital, we use the accounting identity that states that bank capital in time 1 (end of a period), is equal to bank capital in beginning of the period, time 0, adjusted by new capital and retained earnings. We state this as follows:

$$CAP1_1 = CAP_0 + CAP_1^n + NI_1 - DIV_1 \qquad (1)$$

Where CAP_1 stands for (book value) equity capital, CAP_1^n is newly-issued equity or other capital sources between time 0 and 1 (these include the value of shares issued from purchasing another bank or business; transfers from or to the parent company; and other income (residuals or revaluations) related to securities holdings and other financial instruments). NI_1 is net income (income – expenses); and DIV_1 is dividend payments at time 1. These are the sale or redemption of (preferred or common) stocks of that bank. $NI_1 - DIV_1$ is retained earnings.

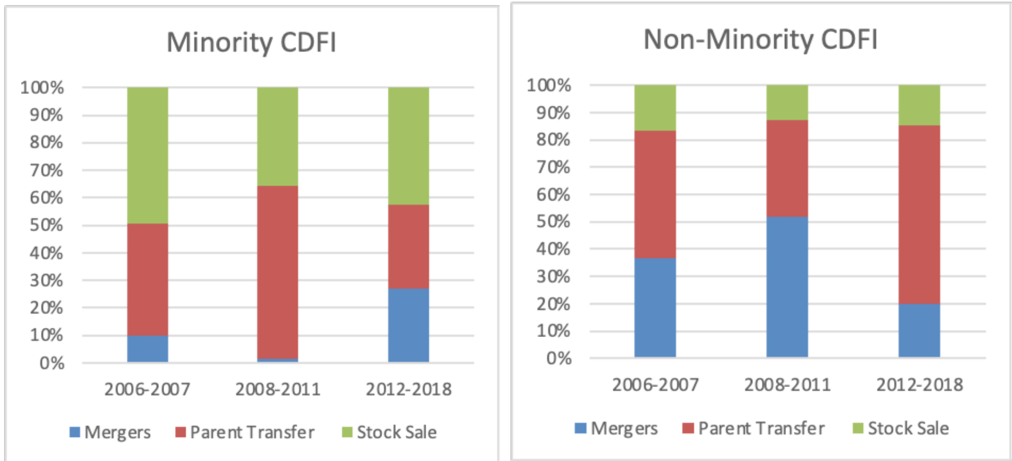
Table 2 shows the annual change in equity capital (ΔCAP) for all banks and by different types of banks. Because the Great Recession distorts the sample, we focus on the medians reported in the bottom row of the table. The results show when it comes to the aggregate changes in equity capital, retained earnings accounted for roughly 50 percent for community banks, around 40 percent for CDFIs, and somewhat less (around 30 percent) for minority CDFIs.

For minority CDFIs, newly issued equity and other capital sources thus accounted for roughly two-thirds of aggregate equity change. This trend was highlighted in Newberger (2018) who investigated the components of new equity injection for minority CDFIs, before, during and after the Great Recession. That study noted that for CDFI MDIs, one of the sources of new equity capital came from transfers from parent companies during the 2008-2011 period. These reflected, in part, TARP sales that were downstreamed from parent companies to bank subsidiaries. There was some increase in these sorts of transfers for non-minority CDFIs as well. As the number of CDFI-certified banks jumped between 2009 and 2010, this allowed more non-MDI CDFIs to become eligible for TARP (CDCI) funds.[8] As income decreased for minority CDFIs, sales of stocks also represented a higher share of change in equity capital for the group during that period. These trends can be seen in Figure 5.

7 Each of these methods for raising capital represents a tradeoff. As a bank retains more of its profit, it has less to pay it out as dividends or spend on share buybacks. As a bank sells more shares, it dilutes the stakes of existing shareholders. Enlarging risk-weighted capital ratios does not increase the actual level of capital.

8 CDCI was the Community Development Capital Initiative program under the Troubled Assets Relief Program (TARP) for banks and credit unions certified as Community Development Financial Institutions.

Figure 5. Components of Newly Issued Equity Capital



Source: Authors' analysis based on Schedule RI-A in the Consolidated Report of Conditions and Income (Call Reports)

Table 2. Decomposition of Change in Equity Capital

	CDFI					COMMUNITY BANKS				
	ΔCAP (000)	NI_t/ ΔCAP	DIV_t/ ΔCAP	(NI_t- DIV_t)/ ΔCAP	CAP_t^n/ ΔCAP	ΔCAP (000)	NI_t/ ΔCAP	(DIVt/ ΔCAP	(NIt- DIVt)/ ΔCAP	CAP_t^n/ ΔCAP
2006	116,880	0.88	-0.62	0.26	0.74	20,000,000	0.94	-0.52	0.42	0.58
2007	83,805	1.22	-0.68	0.54	0.46	18,000,000	0.87	-0.58	0.29	0.71
2008	55,557	-0.03	-0.83	-0.85	1.85	8,000,000	0.44	-0.97	-0.53	1.53
2009	250,307	-0.68	-0.16	-0.84	1.84	6,000,000	-0.44	-0.95	-1.39	2.39
2010	81,863	-0.16	-0.57	-0.72	1.72	6,000,000	0.68	-0.92	-0.25	1.25
2011	189,035	0.30	-0.30	0.00	1.00	15,000,000	0.70	-0.42	0.28	0.72
2012	108,837	1.30	-0.84	0.46	0.54	14,000,000	1.16	-0.63	0.52	0.48
2013	8,675	11.48	-9.40	2.08	-1.08	5,000,000	3.52	-1.73	1.79	-0.79
2014	255,928	0.78	-0.50	0.28	0.72	201,273	1.06	-0.60	0.47	0.53
2015	168,927	1.18	-0.76	0.43	0.57	17,000,000	1.07	-0.52	0.55	0.45
2016	107,275	2.86	-2.34	0.52	0.48	15,000,000	1.37	-0.66	0.70	0.30
2017	390,766	1.10	-0.58	0.52	0.48	18,000,000	1.12	-0.54	0.58	0.42
2019	768,121	0.84	-0.50	0.34	0.66	10,000,000	2.53	-1.30	1.23	-0.23
average	231,745	1.57	-1.32	0.25	0.75	11,707,790	1.15	-0.80	0.36	0.64
median	142,903	0.87	-0.60	0.39	0.61	14,000,000	1.06	-0.63	0.47	0.53

	MDI CDFI					NON MDI CDFI				
	ΔCAP (000)	NI_t/ ΔCAP	DIVt/ ΔCAP	(NIt- DIVt)/ ΔCAP	CAP_t^n/ ΔCAP	ΔCAP (000)	NI_t/ ΔCAP	DIVt/ ΔCAP	(NIt- DIVt)/ ΔCAP	CAP_t^n/ ΔCAP
2006	59,415	0.56	-0.28	0.28	0.72	57,465	1.20	-0.96	0.24	0.76
2007	40,347	1.00	-0.66	0.34	0.66	43,458	1.43	-0.71	0.72	0.28
2008	226	-109.14	-52.73	-161.87	162.87	55,331	0.42	-0.61	-0.19	1.19
2009	52,993	-0.93	-0.22	-1.14	2.14	197,314	-0.62	-0.14	-0.76	1.76
2010	-58,039	1.31	0.10	1.41	-0.41	139,902	0.45	-0.29	0.16	0.84
2011	34,686	-1.71	-0.12	-1.83	2.83	154,349	0.76	-0.35	0.41	0.59
2012	20,296	0.01	-0.75	-0.75	1.75	88,541	1.60	-0.86	0.74	0.26
2013	-56,600	0.18	0.19	0.38	0.62	65,275	1.68	-1.08	0.60	0.40
2014	54,655	-0.25	-0.14	-0.39	1.39	201,273	1.06	-0.60	0.47	0.53
2015	74,572	-0.14	-0.10	-0.24	1.24	94,355	2.23	-1.27	0.96	0.04
2016	-46,727	-0.20	0.75	0.55	0.45	154,002	1.93	-1.40	0.53	0.47
2017	112,587	0.81	-0.23	0.58	0.42	278,179	1.22	-0.73	0.49	0.51
2018	392,064	0.38	-0.05	0.34	0.66	266,390	1.57	-0.86	0.70	0.30
2019	149,696	0.91	-0.29	0.62	0.38	618,425	0.83	-0.55	0.28	0.72
average	59,298	-7.66	-3.89	-11.55	12.55	172,447	1.13	-0.74	0.38	0.62
median	46,670	0.10	-0.18	0.31	0.69	146,952	1.21	-0.72	0.48	0.52

Sources: Authors' analysis based on data from FDIC, NCIF, and CDFI Fund

Changes in the Components of Bank Income

Looking into the sources of retained earnings can provide us with further insights into the ways in which growth in equity capital is achieved through profitability. Again, we go to the accounting identity for net income as follows:

$$NI_t = NII_t + NOI_t - OE_t + OI_t \qquad (2)$$

Where NI is net income, NII stands for net interest income, NOI is net operating income (net non-interest income), OI is other net income (which we compute as residuals). OE is total operating expenses (which include salary, expenses of premises, etc.).

Table 3 reports the results of the components of income, as a percent of total assets. Based on this analysis, the increase over time in equity capital, which we noted in the analysis, appears to reflect a sector that has improved in profitability and efficiency.

As Table 3 indicates, in spite of the fact that the variations across time is large, the spread between interest income and funding costs has tended to increase over time for all banks. Comparing 2008 and 2019, the spread has risen by 7 basis points for community banks, and by 10 basis points and 14 basis points for non-minority and minority CDFIs, respectively. In addition, all the banks also somewhat increased their income from non-interest paying sources.

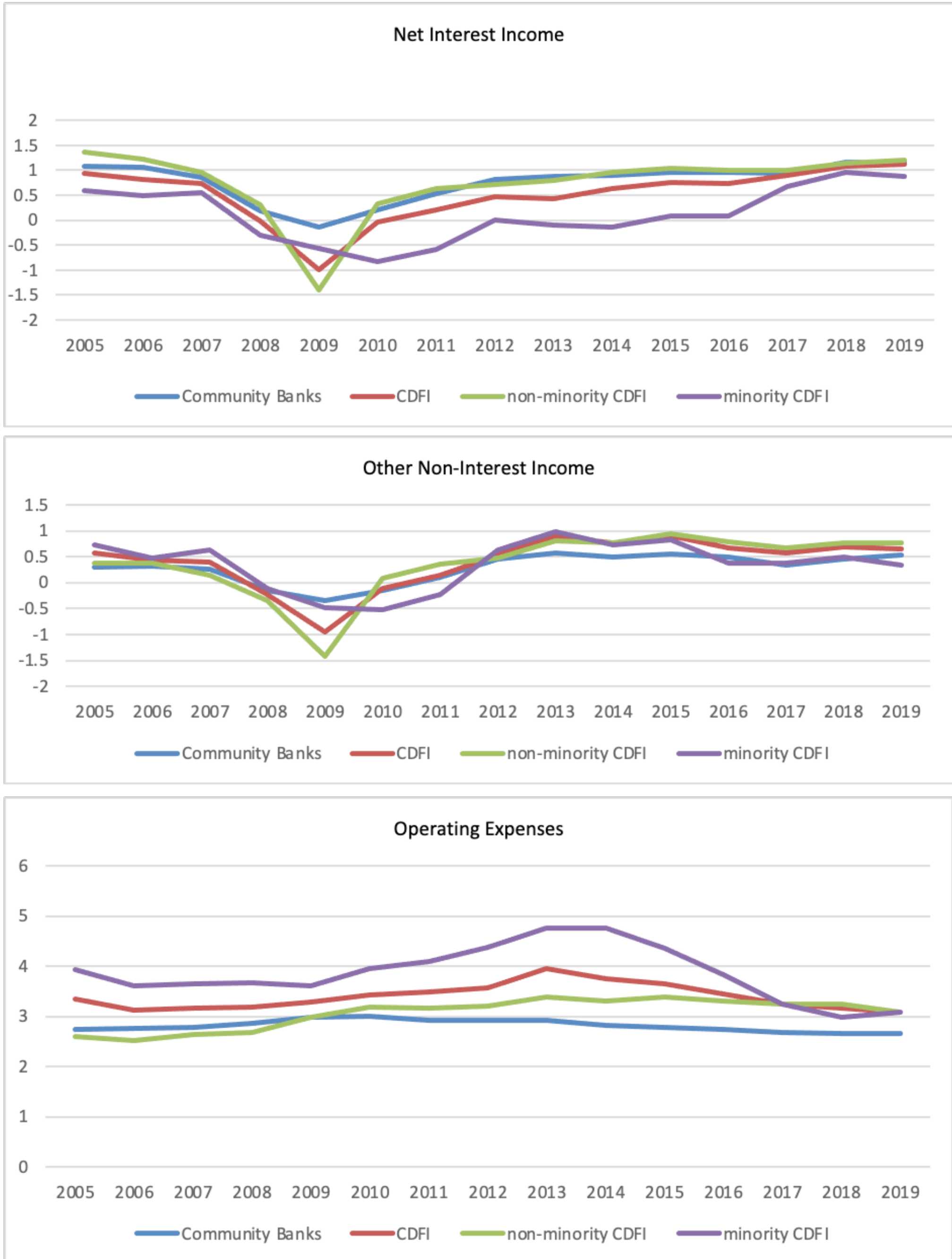
As can be noted further in Table 4, at the same time, banks have been able to reduce their operating expenses. We note this to be particularly true for the minority CDFIs, which tended to have higher expenses per assets, relative to income per assets generally over the period of analysis. Even so, from its highest number in 2013, expenses per assets for minority CDFIs went from 4.77 to 3.08 in 2019, a 169 basis-point decrease. For non-minority CDFIs, we see a 30 basis-point decrease in expenses, from a high of 3.38 in 2013 to 3.08 in 2019. Figure 6 illustrates the trends in the components of net income, by tracing the percent change year over year for those values.

Table 3. Components of Bank Income–in Percent of Total Assets

	Community Banks				CDFI				Non-Minority CDFI				Minority CDFI			
	NIt	NIIt	OI t	OE	NIt	NIIt	OI t	OE	NIt	NIIt	OI t	OE	NIt	NIIt	OI t	OE
2005	1.08	3.51	0.30	2.73	0.93	3.70	0.58	3.35	1.37	3.58	0.39	2.59	0.60	3.80	0.72	3.93
2006	1.06	3.51	0.31	2.76	0.82	3.49	0.44	3.12	1.22	3.35	0.38	2.51	0.48	3.61	0.48	3.61
2007	0.86	3.38	0.26	2.78	0.74	3.50	0.40	3.17	0.95	3.44	0.15	2.64	0.55	3.56	0.63	3.64
2008	0.19	3.20	-0.16	2.86	-0.01	3.41	-0.23	3.19	0.31	3.34	-0.35	2.68	-0.31	3.47	-0.11	3.67
2009	-0.13	3.19	-0.34	2.99	-0.99	3.25	-0.95	3.29	-1.40	2.99	-1.41	2.98	-0.57	3.51	-0.48	3.60
2010	0.21	3.36	-0.16	2.99	-0.05	3.50	-0.11	3.44	0.34	3.43	0.09	3.18	-0.83	3.65	-0.52	3.96
2011	0.54	3.36	0.11	2.93	0.20	3.55	0.14	3.49	0.64	3.44	0.35	3.15	-0.59	3.74	-0.24	4.09
2012	0.81	3.28	0.46	2.92	0.48	3.53	0.53	3.58	0.70	3.42	0.48	3.20	0.00	3.75	0.63	4.38
2013	0.88	3.24	0.56	2.92	0.43	3.50	0.88	3.95	0.80	3.38	0.80	3.38	-0.11	3.67	0.99	4.77
2014	0.90	3.22	0.50	2.82	0.63	3.61	0.76	3.74	0.96	3.49	0.78	3.30	-0.14	3.88	0.74	4.76
2015	0.96	3.19	0.55	2.78	0.76	3.50	0.91	3.66	1.03	3.47	0.94	3.38	0.07	3.60	0.84	4.36
2016	0.96	3.20	0.49	2.73	0.74	3.51	0.67	3.45	1.00	3.50	0.79	3.30	0.08	3.53	0.37	3.82
2017	0.93	3.26	0.35	2.67	0.91	3.58	0.58	3.25	0.99	3.58	0.66	3.25	0.68	3.56	0.37	3.24
2018	1.16	3.35	0.46	2.65	1.09	3.56	0.68	3.16	1.14	3.62	0.77	3.24	0.96	3.44	0.50	2.97
2019	1.16	3.29	0.53	2.66	1.12	3.54	0.66	3.08	1.21	3.52	0.77	3.08	0.87	3.61	0.34	3.08

Sources: FDIC, NCIF, and CDFI Fund

Figure 6. Growth in Net Interest Income, Non-Interest Income, and Expenses



Sources: FDIC, NCIF, and CDFI Fund

Asset and Loan Growth

While net interest income and noninterest income flow into changes to bank equity capital, decisions taken on the asset side of the balance sheet also reflect changes to equity. In the main, bank assets are comprised of loans (gross or net) (L), cash and interbank holdings (CIH), trading securities (TS), and other assets (OA). Table 4 traces the growth in each subcategory as a percent of assets, for the three groups of banks.

$$\text{Assets} = L + CIH + TS + OA \qquad (3)$$

For the period of analysis between 2006 and 2019, banks across all three groups grew their assets. The weighted average asset growth varied from year to year, but at the median, community banks and CDFIs grew their assets by 9 percent. Minority CDFIs' assets grew somewhat slower by 5 percent, at the median.

The growth in lending (measured here as gross loans as a percent of assets) either slightly outpaced or was generally on par with asset growth.[9] For the median community bank and median CDFI, lending grew by 11 percent. For the median minority CDFI, lending as a percent of assets grew by 6 percent. Other assets as percent of total assets grew by roughly 12 percent for all banks in the group.[10]

Cash and interbank holdings as a percent of assets grew for all banks, at a rate that outpaced the overall growth of assets.[11] At the median, cash and interbank trading as a percent of assets grew by more than 25 percent for all banks in the three groups. Securities holdings grew for community banks quite aggressively, by 26 percent at the median. The growth of securities as a percent of assets at CDFI banks trailed behind their growth at community banks.[12] Across bank sectors, the growth of lower-risk assets (cash and interbank) outpaced the growth of higher-risk assets (gross loans).

9 The result is consistent even for net loans reserves for impaired and non-performing loans.

10 Other assets may include bank premises, equipment other real estate owned, etc.

11 Cash and due from banks consists of vault cash, deposits held at Federal Reserve Banks (Fed), deposits held at other financial institutions, and checks in the process of collection. These accounts generally facilitate check clearing and customers' currency withdrawals and serve to meet legal reserve requirements. Their distinguishing feature is that they do not earn interest, although balances at the Fed and other depository institutions can be used to obtain correspondent banking services.

12 Regulatory rules "such as the Volker Rule" require more capital against securities, which might curb trading activities for banks with less capital.

Table 4. Growth of Assets and Growth in Categories as a percent of assets (weighted averages, reported by year)

Community Bank

	asset	cash and interbank	gross loans	other assets	securities
2006	0.14	0.24	0.98	0.22	0.18
2007	0.12	0.16	0.31	0.18	0.15
2008	0.13	0.80	0.23	0.22	0.34
2009	0.19	1.32	0.13	1.90	0.56
2010	0.05	0.57	0.02	0.04	0.38
2011	0.06	0.56	0.05	0.07	0.88
2012	0.07	0.41	0.08	0.06	0.27
2013	0.06	0.00	0.08	1.29	0.64
2014	0.09	0.18	0.12	0.07	0.13
2015	0.10	0.23	0.12	0.14	0.25
2016	0.09	0.25	0.11	0.17	0.13
2017	0.09	0.29	0.11	0.08	3.87
2018	0.08	0.19	0.10	0.11	0.08
2019	0.09	0.43	0.09	0.11	0.11
median	0.09	0.27	0.11	0.12	0.26

CDFI

	asset	cash and interbank	gross loans	other assets	securities
2006	0.16	0.20	0.16	0.23	0.06
2007	0.08	0.12	0.12	0.20	0.05
2008	0.11	0.48	0.16	0.21	0.06
2009	0.18	1.11	0.15	0.36	0.29
2010	0.06	0.48	0.02	0.09	0.16
2011	0.04	0.46	-0.01	0.09	0.20
2012	0.02	0.26	0.00	-0.07	0.18
2013	0.08	0.14	0.14	0.19	0.03
2014	0.04	0.22	0.07	0.06	-0.01
2015	0.07	0.05	0.10	0.27	0.10
2016	0.07	0.29	0.11	0.08	0.03
2017	0.08	0.13	0.10	0.07	0.06
2018	0.15	0.32	0.17	0.16	0.07
2019	0.08	0.34	0.06	0.06	0.10
median	0.08	0.27	0.11	0.13	0.06

non MDI CDFI

	asset	cash and interbank	gross loans	other assets	securities
2006	0.20	0.18	0.20	0.27	0.07
2007	0.09	0.12	0.15	0.23	-0.01
2008	0.13	0.46	0.19	0.18	0.19
2009	0.31	1.74	0.27	0.54	0.43
2010	0.08	0.40	0.04	0.07	0.23
2011	0.07	0.48	0.00	0.12	0.20
2012	0.03	0.25	0.01	-0.08	0.15
2013	0.14	0.21	0.20	0.25	0.08
2014	0.05	0.15	0.08	0.11	0.01
2015	0.05	-0.03	0.10	0.23	0.19
2016	0.07	0.34	0.10	0.12	-0.01
2017	0.08	0.10	0.11	0.07	0.05
2018	0.11	0.32	0.13	0.13	0.06
2019	0.10	0.42	0.07	0.06	0.11
median	0.09	0.29	0.11	0.13	0.09

MDI CDFI

	asset	cash and interbank	gross loans	other assets	securities
2006	0.13	0.21	0.13	0.19	0.05
2007	0.07	0.13	0.09	0.16	0.12
2008	0.09	0.50	0.13	0.24	-0.07
2009	0.05	0.47	0.03	0.18	0.15
2010	0.00	0.64	-0.02	0.14	0.00
	-				
2011	0.01	0.43	-0.04	0.04	0.20
2012	0.00	0.26	-0.01	-0.05	0.24
2013	0.01	0.03	0.04	0.11	-0.04
2014	0.01	0.38	0.04	-0.06	-0.06
2015	0.12	0.25	0.13	0.35	-0.11
2016	0.08	0.19	0.12	0.00	0.14
2017	0.06	0.23	0.08	0.07	0.08
2018	0.26	0.32	0.26	0.24	0.08
2019	0.03	0.12	0.03	0.05	0.10
median	0.05	0.26	0.06	0.12	0.08

Sources: FDIC, NCIF, and CDFI Fund

Implications and Conclusions

This paper explores the trends and components of equity capitalization for minority depository institutions that are also Community Development Financial Institutions. We began by examining the data to understand the sources of equity capital growth. Various measures of capital increased for all CDFIs, including minority and non-minority CDFIS, after the financial crisis. We did a simple exercise to examine the sources of change in bank capital. Banks tended to increase capital by accumulating retained earnings in addition to new equity sources. This was also true for minority CDFIs for the later years of this analysis.

The data suggests that CDFIs, including minority CDFIs, were becoming more cost efficient, consistent with the FDIC 2019 report of minority banks. CDFI and community banks alike have also increased the share of lower-risk assets as a share of total assets.

This study did not break down the data in terms of the ethnic or racial categories of minority CDFIs. A handful of studies explain some of the niche capital sources for specific groups of minority banks. For instance, a study by Chiong, Dymski & Hernandez (2018) examined Asian banks in California and noted the benefit of the EB-5 program for many of these institutions.[13] The economic structure of Chinese American banks in Los Angeles has the advantage of the large influx of transnational capital flowing from Asia in the hunt to identify safe havens for capital deposits. The banking infrastructure for Latinos also realizes some benefits from a transnational customer base. Hispanic banks have benefited from fee generation from the movement of remittances to Central America as unstable economies in many home countries add to the urgency of moving currency to and from the U.S. banking system.

African American banks in historically marginalized and economically depressed areas do not appear to have similar resources, however. This helps explain some of the differences in the size and financial health of these institutions. The wealth gap among African-American banks reflect the disparate economic conditions in African American communities, and those gaps deepen as individuals and communities' wealth gaps deepen.

To be sure, various government programs have been developed to increase the flow of funds through CDFIs and MDIs in order to reach underserved communities. The CDFI Fund has provided financing and technical assistance to the sector since the mid-1990s. Most recently, the Paycheck Protection Program set aside $30 billion of its $310 billion (second round) authorization for CDFIs, other community financial institutions, and banks with less than $10 billion in assets.[14] By offering PPP loans to existing customers, CDFI lenders may have helped mitigate shocks to their loan portfolios during the early phases of the pandemic, generated noninterest income that potentially flowed to profits and capital, and brought in new customers to their banks. The Small Business Mentorship Program is another government program that may work to build the revenues (and capital) of MDIs and CDFIs.[15] Through this initiative, existing (large bank) Financial Agents for the Treasury train smaller banks, including minority and CDFI institutions, to become qualified to perform financial services on behalf of the Treasury and its financial management arm, the Bureau of the Fiscal Service.[16] This designation allows smaller banks to bid on federal contracts to process billions of dollars of deposits.

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13 The EB-5 Immigration Investor visa program is a federal program in which foreign nationals are granted permanent residency when they invest $1 million dollars in a development project that provides new jobs to American workers (or $500,000 if the project is in an economically depressed area). Since 2010, at least $9.5 billion in funds have entered the U.S. via the EB-5 Immigrant Investor Program (Rosen et al., 2017).

14 Regulatory Capital Rule: Paycheck Protection Program Lending Facility and Paycheck Protection Program Loans.

15 See https://home.treasury.gov/policy-issues/small-business-programs/small-and-disadvantaged-business-utilization/treasurys-mentor-protege-program-3

16 See Citi Blog at https://blog.citigroup.com/2019/09/effecting-change-in-the-minority-banking-sector/

In addition, private-sector efforts have recently come together to support Black banks in the wake of the Covid-19 pandemic. These efforts include decisions by major corporations to shift deposits to Black-owned banks;[17] the development of a digital financial services platform for use at Black banks to help close technology gaps with larger competitors;[18] and the formation of a new entity called the National Black Bank Foundation, whose purpose is to buy stock in Black-owned banks through its Black Bank Fund.[19] These initiatives may signal a new wave of interventions that recognize, and attempt to solve for, some of the longstanding factors that challenge capital growth among MDI CDFIs.

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Supporting Entrepreneurs: A Longitudinal Impact Study of Accion and Opportunity Fund Small Business Lending in the U.S.

Accion
Opportunity Fund
Harder+Company Community Research

Abstract

For nearly 30 years, Accion and Opportunity Fund have offered business capital and advice to the small businesses often left behind by conventional lenders –women, people of color, and entrepreneurs with limited income, little or no collateral, or imperfect credit. This type of mission-based, small-dollar lending has grown in recent decades with the recognition of the strong repayment profile of these small business owners and the realization that small business lending acts as an economic development engine (Swack, Hangen, & Northrup, 2014). Mission-based lenders like Accion and Opportunity Fund do more than lend money; they often work with entrepreneurs to strengthen their businesses and help them succeed through business advising, financial education, and other services.

Measuring the success of this type of lending has generally focused on gathering such quantitative data as loan repayment rates, business survival rates, and job creation rates. While important, such results do not tell us about the social impact of these loans on household and family life, poverty alleviation, or community development.

In 2018, Accion, Opportunity Fund, and Harder+Company Community Research (2018) conducted a first-of-its-kind national, longitudinal, qualitative examination of these outcomes. The study reported on a nationwide cohort of 350 Accion and Opportunity Fund borrowers who were followed for as long as three years post-loan in order to understand the impact of small business lending services on their businesses, their personal financial security, and their overall quality of life. It also examined how business owners define success and how access to capital supports their goals.

That initial study found that entrepreneurs are diverse in terms of how they define success, their business acumen, and the support they need to be successful. It also highlighted several ways in which access to capital fuels growth for small businesses. Additionally, the research team utilized cluster analysis, an analytical technique that uses a set of multivariate analytic techniques to identify underlying groups within datasets based on a defined set of variables. The analysis identified five distinct groups of entrepreneurs based on reasons for starting their business, individual goals, and achievements since receiving their loan.

This article updates the initial 2018 report[1] and provides a detailed summary of the study design and methods, followed by a summary of the overall effects of mission-based lending on entrepreneurs across the nation. It then describes five types of entrepreneurs—a set of typologies that help explain how different types of business owners' experiences change over time and offers further considerations for the community economic development field. Findings from this study not only identify opportunities for lenders to better meet the needs of entrepreneurs, they also provide evidence to other lenders, policymakers, and small business supports about the ability of micro- and small-business lending to transform lives.

Study Purpose and Goals

Accion and Opportunity Fund partnered with Harder+Company Community Research (2018) to develop and conduct a first-of-its-kind national longitudinal examination of the impact of small business loans on business owners and their households, their businesses, and their communities.[2] The study captured the business and personal experiences of 350 entrepreneurs across the country for up to three years post-loan. It also built upon existing quantitative research, with an enhanced focus on qualitative measures, such as how business owners define success and how access to capital supports their entrepreneurial goals, financial health, and quality of life.

This study used a longitudinal, mixed-methods approach to create a comprehensive, national dataset[3] addressing three key questions:

- To what extent do borrowers move toward greater financial security—both real and perceived—after receiving a business loan?
- To what extent is small business lending associated with catalyzing positive change for individual borrowers, their businesses, and their communities?[4]
- To what extent do a borrower's personal relationships and community engagement change after receipt of a business loan?

This multi-year effort harvested fresh insights into the long-term consequences of mission-based lending in the small business ecosystem. Its results revealed opportunities to strengthen the benefits of mission-based lending, suggested ways lenders may better meet the needs of entrepreneurs, and informed policymakers and industry thought leaders about the efficacy of small and micro loans both regionally and nationally.

It is worth noting that this study was conducted over the course of three economically stable years (2015, 2016, and 2017) compared to the business climate of 2020. The methods and insights detailed in this report do not reflect our current COVID-affected reality. The vulnerable business owners that Accion, Opportunity Fund, and other CDFIs serve are

1 For supplementary research methods and exhibits, please see original report (Accion, Opportunity Fund, and Harder+Company Community Research, 2018).

2 The initial 2018 study was made possible through lead funding from the W.K. Kellogg Foundation and the JPMorgan Chase Foundation, with additional support from S&P Global.

3 Participants were selected within the geographical regions that Accion and Opportunity Fund serve.

4 The team refined the study design over time and did not fully explore community-level impact.

particularly hard-hit by the instability and uncertainty of 2020, but it is outside the bounds of this study to provide perspective on those specific negative impacts. Nonetheless, the findings contained in this report still remain relevant for practitioners and policymakers in the small business space today.

The study examined six key domains (Exhibit 1). The original intent of the study was to examine the impact of each of these domains on individual business owners, their businesses, and their communities. Early on, it became clear that the three-year study period was best suited to measure medium-term impacts, with a particular focus on changes experienced by entrepreneurs and their businesses. Community-level impacts, such as neighborhood revitalization, take longer to occur and therefore are not fully explored in the study.

Exhibit 1. Evaluation Domains

Domain	Explanation
1. Business Growth and Viability	Exploring the ways in which lending services enabled borrowers to sustain or expand their businesses.
2. Mission Achievement	Examining the extent to which lending services enabled borrowers to realize their personal and business goals.
3. Financial Health	Establishing the ways in which lending services improved borrowers' financial security, ability to address financial obstacles, and capacity to prepare for long-term opportunities.
4. Financial Practices	Identifying the ways in which borrowers changed their financial practices after receiving a loan.
5. Relationships and Networks	Evaluating whether and how extensively borrowers' relationships and personal networks changed as an apparent consequence of financing.
6. Quality of Life	Determining the ways in which lending services affected borrowers' perceived well being, sense of control over daily schedule, and work-life balance.

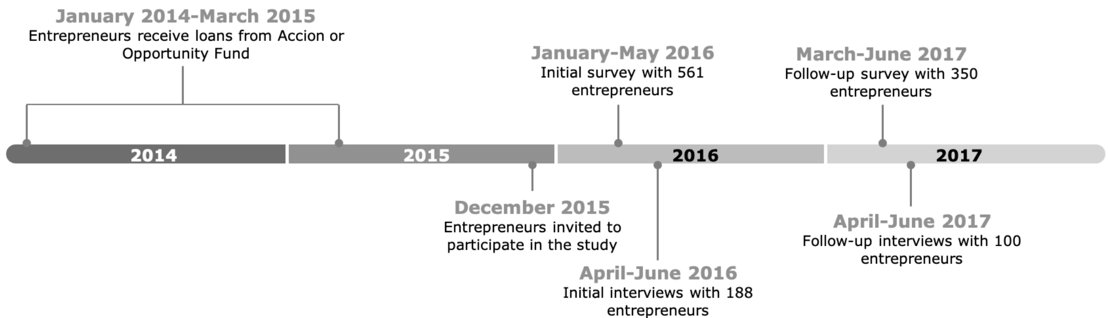
Research Methods

Surveys and in-depth phone interviews tracked small business owners for more than a year. Small business owners who received a loan between January 2014 and March 2015 and were in loan repayment as of December 2015 were eligible to participate, ensuring a meaningful amount of time had passed following loan receipt to observe change.[5]

The study used a combination of closed-ended survey questions and open-ended interviews to explore each domain. The first round of data collection in early 2016 engaged 561 entrepreneurs across the country via survey; 188 of those also participated in in-depth interviews (Exhibit 2).

5 Throughout this report, small business owners who participated in the study are interchangeably referred to as both "borrowers" and "entrepreneurs".

Exhibit 2. Impact Study Timeline



A year later, the research team successfully reconnected with 372 of these entrepreneurs (a 66.3% response rate) and completed a follow-up survey with 350 of them.[6] The research team also conducted follow-up in-depth interviews with 100 entrepreneurs to learn how they and their businesses were faring one year later.

One unique aspect of this study was the opportunity to follow entrepreneurs over time to observe how their experiences changed. The following chapter highlights key trends observed across the study sample.

This final report builds upon the preliminary findings released in January 2017, which explored responses from entrepreneurs who participated in an initial survey between 9 and 24 months post loan. This report examines how entrepreneurs' experiences changed after another year. This chapter covers study methodology. The second chapter summarizes the overall effects of mission-based lending on entrepreneurs across the nation. The third chapter describes five types of entrepreneurs–a set of typologies that help explain how different types of business owners' experiences change over time. The final chapter summarizes study insights and offers further considerations for the community economic development field.

Key Findings about the Impact of Small and Micro Loans Microloans resulted in a variety of benefits to business owners, even up to three years later. In 2017, this study's preliminary findings painted a broad picture of small business owners one to two years post-loan. The follow-up survey and interviews explored changes entrepreneurs had experienced over an additional year. The findings, presented here, reveal a clearer picture of how microloans affected entrepreneurs and their businesses over time across all six evaluation domains.

This study provided evidence that Accion and Opportunity Fund entrepreneurs are thriving two to three years after receiving a loan. By the end of the study, 94.1% of entrepreneurs in the sample were still in business, most (61.4%) for five years or more.[7] Nationwide, only half

7 Results are based on a sample of 372 borrowers who responded to the follow-up survey. Of those, 22 borrowers (6.3%) reported their businesses had closed at the end of the study. An additional 23 borrowers had closed businesses at the time of the initial survey.

of small businesses survive for five years, according to the latest Bureau of Labor Statistics data (Bureau of Labor Statistics, 2016).

Entrepreneurs continue to see impact of mission-based lending years after receiving the capital

In the initial survey, most entrepreneurs said their loan played a role in both their business and personal success, helping them start, maintain, and grow their businesses–a belief that persisted through the second round of data collection.

Other responses help parse out whether these benefits accrued from the influx of capital alone, or whether they stem, at least in part, from the guidance small business owners received from Accion or Opportunity Fund. In fact, entrepreneurs said access to capital enhanced their confidence about achieving their goals and allowed them to make tangible business improvements, such as staff expansion or new equipment purchases. But they said the financial and business advice they received helped them make improvements in their business practices, such as how they track their business finances or strategize to achieve goals. Both capital and advising services were valued, albeit for different reasons.

Many entrepreneurs appreciate the confidence and peace of mind their loan provided. In follow-up interviews, many said they felt validated by the loan, interpreting it as an indication of their potential and a sign that someone believed in them. Others said the loan provided an opportunity to expand their businesses, which gave them a renewed sense of purpose and increased personal satisfaction. "I feel better," one entrepreneur said. "[The business] gives me something to do, give[s] me something to worry about. It gives me something to complain about; it builds your life, and it's a good thing."

Entrepreneurs said their loan helped them meet personal goals: improved credit and greater confidence in their ability to achieve goals (Exhibit 3). This perception remained stable from the initial survey through the follow-up survey. This theme was common in interviews, as entrepreneurs talked about being able to save a little money and reducing their stress level knowing that their business was financially stable. Loans also helped entrepreneurs reach their business goals. Loans helped business owners acquire new equipment, expand or modify products and services, increase sales, and improve cash flow (Exhibit 3). Entrepreneurs reported roughly the same level of perceived benefit in the final survey as they had at the beginning of the study.

Exhibit 3. The lasting impact of lending services on entrepreneurs' personal and business goals

In the categories listed below, percent of entrepreneurs who said Accion and Opportunity Fund had "a lot" of positive impact.[8]

Access to capital fueled business growth

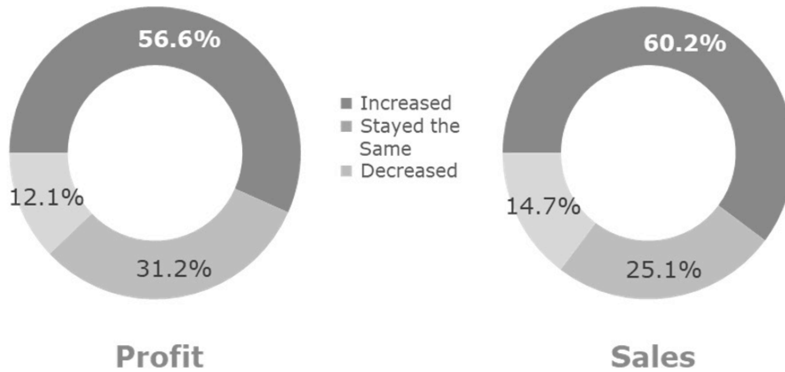
Loans helped businesses grow by providing needed capital to expand and modify services, move or add locations, and hire new employees.

Many entrepreneurs saw increased sales and profits

Survey respondents reported increases in sales and profit as businesses became established, an overall indicator of growth. More than half of business owners reported rising profit (56.6%) and sales (60.2%) in the final survey. Fewer than 15% of business owners reported a decrease in these indicators (Exhibit 4).

8 Survey respondents rated items on a scale of 1 (no impact) to 5 (a lot of impact). Values shown in this exhibit represent the combined percent of entrepreneurs who ranked the loan impact as a 4 or 5. Changes from the initial study to the follow-up were not statistically significant, based on paired-samples t-test for difference in mean scores.

Exhibit 4. Most entrepreneurs reported profits and sales increases in the six months preceding the final survey



In interviews, business owners said their loan directly affected sales and profits. For some, a loan allowed the purchase of critical supplies or equipment. "[The loan] allowed us to grow and to provide a better service," one business owner reported. "And somehow, that helped us to see something different."

Some business owners used their loan to increase business visibility

One entrepreneur reported that the loan helped with exposure. In fact, increased marketing led to more clients, more business, and improved sustainability. A handful of entrepreneurs said the training and advising offered by Accion or Opportunity Fund assisted with their marketing and publicity efforts. An entrepreneur who attended an Accion class said it helped her business get media attention. "That was really interesting and helped me to be able to put together press releases to send out to the media to get myself a little bit of coverage."

Entrepreneurs added employees and improved worker benefits

The number of paid employees increased during the study. Nearly 40% of respondents (38.3%) added employees during the study period–a total of 334.75 new FTEs. Just over 40% (43.1%) of businesses in the study had no paid employees (other than the owner) through the study period. A small number of business owners (18.6%) reported fewer employees at the end of the study, some of which may be due to the seasonal nature of some businesses.

In follow-up interviews, business owners said that hiring new workers enabled them to expand business capacity. One entrepreneurs said, "Once we got in the new staff, that opened up the whole possibility to us of adding more services into the facility." Another said adding new staff meant he now has "more time to take care of our clients, new clients." While the study did not delve into the community-wide outcomes of small business lending, businesses in this study are creating jobs in their community, helping to strengthen their local economies.

The number of business owners who offered no employee benefits during the study period fell by more than half, from 48% at the beginning of the study, to 22% by the study end.[9] Among those who offered at least one benefit at the beginning of the study, 54.3% had added at least one more a year later. Benefits ranged from sick time and paid holidays to professional development (Exhibit 5 and 6).

Exhibit 5. Business owners increased paid employee benefits
Percent of business owners that offer paid benefits.

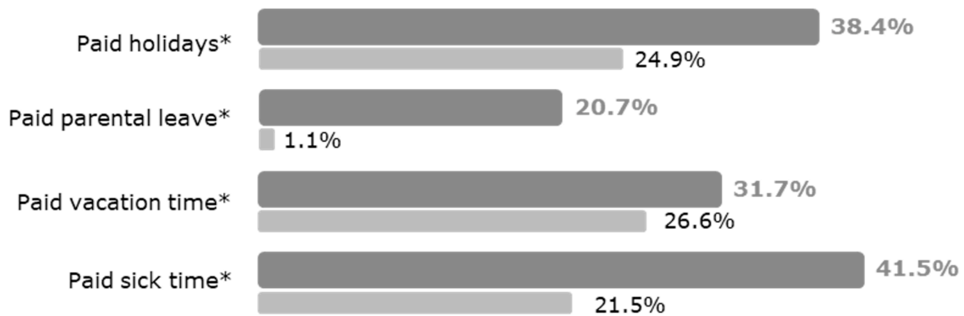
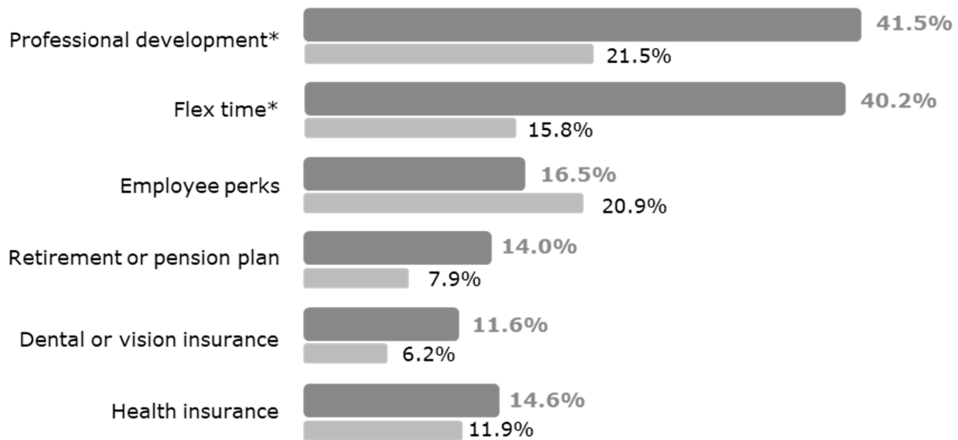


Exhibit 6. Business owners increased non-monetary employee benefits
Percent of business owners that offer non-monetary benefits.



9 The change from initial to follow up survey is statistically significant at $p<.05$.

Accion- and Opportunity Fund-supported business owners clearly prioritize the well-being of their employees–the biggest increase in types of benefits were paid parental leave, paid sick time, professional development opportunities, and flex time.

Microloans may help entrepreneurs avoid high-cost credit

By offering business owners increased financial stability through the provision of a loan, Accion and Opportunity Fund help them avoid borrowing money from family and friends, relying on high-interest credit card debt, or falling prey to predatory lenders. Many entrepreneurs said they would seek financing from Accion and Opportunity Fund again - a very common occurrence once an initial loan is paid in full.

One consequence of this increased financial stability among Accion and Opportunity Fund entrepreneurs may be increased access to credit cards: the proportion of entrepreneurs who reported having a business credit card rose during the study period from 58.2% to 65.2%,[10] perhaps an indicator that expanding success brought expanding credit access. In interviews, many entrepreneurs mentioned they have received no-interest credit card offers; however, few had used the cards. This could signal that lending services from Accion and Opportunity Fund help entrepreneurs avoid more expensive credit and that entrepreneurs are not taking on unnecessary debt.

In fact, it does not appear common for entrepreneurs to seek funding outside of Accion or Opportunity Fund. In the follow-up survey, slightly more than a quarter of entrepreneurs (26.3%) reported applying for additional financing–not including credit cards–beyond Accion or Opportunity Fund. When entrepreneurs did seek funding elsewhere, they went to a bank, credit union, or online lender.[11]

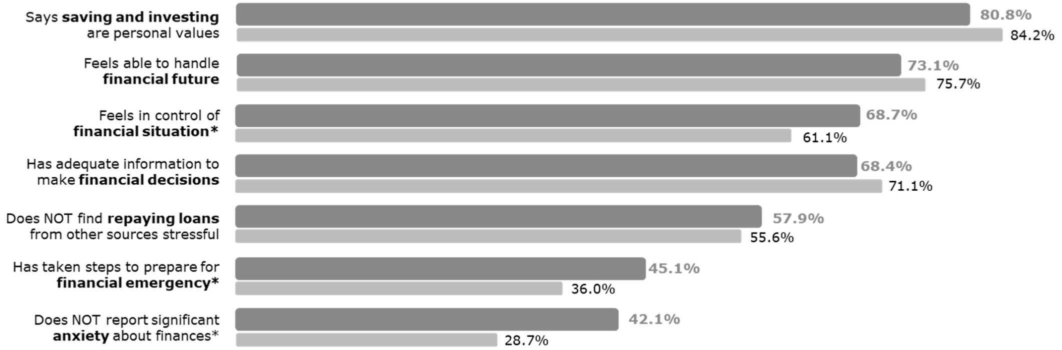
Entrepreneurs find financial security gradually

The immediate focus of many entrepreneurs was financial stability as opposed to fast growth, the 2016 preliminary survey showed. That emphasis was even stronger in the final survey, with more entrepreneurs agreeing with statements acknowledging a need for increased financial stability (Exhibit 7). The preliminary findings emphasized that many entrepreneurs were underprepared for a financial emergency. One year later, entrepreneurs were significantly more likely to report that they took steps to prepare for a financial emergency. They also said they were less worried about finances and felt more in control of their financial situation. A portion of business owners have yet to reach financial stability: more than half of entrepreneurs did not report preparing for a financial emergency, and they continue to worry about their finances.

10 The change from initial to follow up survey is statistically significant at $p<.05$.

11 Of those 91 business owners that applied for additional financing, 47.3% applied with a bank or credit union and 37.4% applied with an online lender.

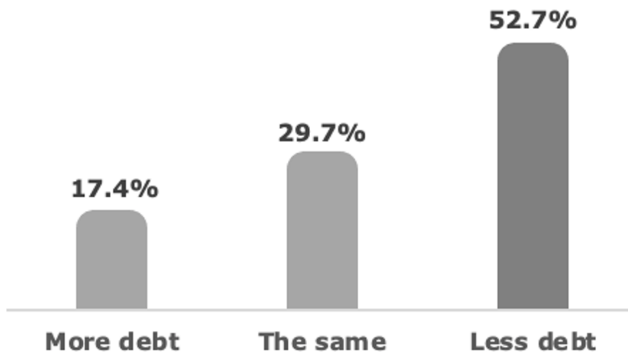
Exhibit 7. Entrepreneurs felt an increased sense of financial stability across a variety of indicators by the study's end[12]



Business owners were comfortable with their level of business debt by the follow-up survey

While most business owners (72.7%) reported they were somewhat or very comfortable with their level of debt, more than a quarter (27.2%) were somewhat or very uncomfortable. Most business owners (69.7%) reported having less than $25,000 in business debt at the end of the study. And while most of those (80.1%) said they were comfortable with that amount, others found even a little bit of debt stressful. Of those who reported business debt at the end of the study, 17.4% reported being in more debt than they were a year ago (Exhibit 8). Regardless of the amount of business debt, most business owners reported little difficulty paying their business loans (60.9%), although a small percentage (7.4%) said it was extremely difficult.

Exhibit 8. Half of entrepreneurs had less business debt at the end of the study (n=299)



12 Survey respondents rated items on a scale of 1 (not at all true) to 5 (very true). Values shown in this exhibit represent the combined percent of entrepreneurs who ranked each statement as a 4 or 5. Changes from the initial study to follow-up were measured using paired-samples t-test for difference in mean scores.

Entrepreneurs track expenses carefully but do not always plan for unexpected costs

Business owners were slightly more likely to track their finances after receiving services from Opportunity Fund and Accion, indicating they were moving away from informal tracking practices, such as noting expenses in a notebook or checkbook, and instead adopting financial software or other tools.[13] Follow-up interviews showed that although most entrepreneurs track their business expenses and income very closely on a daily basis, few were equipped to use that information to project costs or plan for financial downturns.

Entrepreneurs report flexible schedules and better quality of life

During the follow-up survey, 42.0% of entrepreneurs reported dedicating 40-59 hours per week to their business; 26.0% reported working more than 60 hours per week. Nearly a quarter of entrepreneurs (28.9%) also had a job outside of their business. The proportion of respondents working more than 40 hours per week or having an outside job did not change appreciably between the initial and follow-up survey.

However, business owners said during the follow-up interviews that their schedules were increasingly flexible. Many said this flexibility allowed them more time to focus on marketing and increasing sales rather than just dealing with the day-to-day operations. Others said that they used this increased flexibility to attend their children's' sports events, go on a vacation, or take a quick break from work. Often, gaining this kind of flexibility was an important reason people started businesses. Many business owners said their loan improved their quality of life. As a food truck owner in New York said, "[receiving the loan] has changed my lifestyle. I go on family vacations. I have savings. That kind of stuff. ... Yes, life is better."

Accion and Opportunity Fund's support has been vital for entrepreneur success

The preliminary report highlighted business owners' overwhelmingly positive feedback about working with Accion and Opportunity Fund. A year later, most continued to feel positive about their experiences. Many pointed to the transparent and easy loan process. "The process was quick," one business owner said. "It was so streamlined, it was easy." Many commented on the support they received from their loan officer. "She made it extremely easy for me," another business owner said. "I'm just so grateful to her. That I can call her and, even if she's busy, she gets back to me, returning my phone calls–I can't tell you about a better relationship."

Entrepreneurs said they appreciated that Accion and Opportunity Fund would work with them again should they face new challenges. "There were some situations where I needed a couple more days, and they were very flexible," one business owner said. "It isn't like today is the due date, and it is today. You can reach an agreement with them."

13 The change from initial to follow up survey is statistically significant at $p<.05$.

Drilling down: business closures

Twenty-two owners closed their business during the same time period of the study. These businesses closed after receiving loans from Opportunity Fund or Accion and most of those closed businesses shared they closed because they needed more capital (Exhibit 9).

Exhibit 9. Reasons Businesses Closed (n=22)[14]

There were no apparent trends among the type of business, location, age or other identifying factor. Business types included construction, educational services, food services, health care, manufacturing, retail, transportation, and wholesale trade.

Half (50.0%) of business owners, however, said more capital would have saved their businesses. Yet more than a third (36.3%) said access to capital had no bearing on their decision to close, noting external factors that funding couldn't touch.

Cluster Analysis

Entrepreneurs vary in terms of the types of businesses they run, the reason they obtain loans, and the amount of capital they need. Yet any overall analysis of the effects of lending necessarily obscures the smaller currents that move one entrepreneur in one direction, and another somewhere else.

To dig deeper into what really changed for entrepreneurs over time, and why these changes occurred, the research team employed a data analytic technique called *cluster analysis* to distinguish several different types of entrepreneurs based on their responses in the follow-up survey conducted in 2017–two to three years after receiving a loan. Cluster analysis uses a set of multivariate analytic techniques to identify underlying groups within datasets based on a defined set of variables. In this case, groups were identified by the following key variables:

14 Borrowers were able to select multiple reasons for closing their business; percentages add up to more than 100.

1. Change in sales and profit during the past six months
2. Change in personal/household savings during the past six months
3. Employment outside of business
4. Ability to draw a salary from the business in the past six months
5. Business financial stability (i.e., sufficient revenue to cover expenses and withstand a financial emergency)
6. Personal and business financial services used such as business savings account, credit card, insurance, retirement account
7. Business tracking tools used
8. Comfort with current level of business debt
9. Personal financial security, such as financial stress and ability to plan

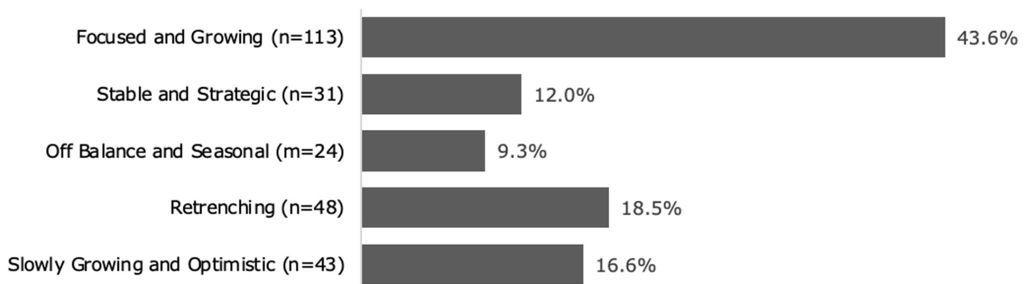
Only businesses that were open at the time of the follow-up survey and that responded to all cluster analysis questions were included in this data analysis (n=259).

Five distinct "clusters" or groups of entrepreneurs emerged from the analysis. The groups differ from one another in terms of why they started their businesses, what their goals are, and what they achieved during the study. Quantitative measures from the borrower survey, as well as additional detail from borrower interviews, created the basis for each cluster profile in this report.

Each profile explores how the entrepreneurs in the cluster changed over time and provides specific insights into the distinct successes and challenges experienced by each group.

As distinct as these clusters are in many characteristics, they do not differ substantially in terms of industry sector, business revenue size, or along demographic lines including age, sex, and ethnicity or average loan size. That is, there is roughly equal diversity of such characteristics in each of the clusters.

Exhibit 10. Breakdown of all entrepreneurs by cluster (n=259)



The following sections explain what makes each cluster unique. Each section provides an overview of cluster characteristics, what the impact of their loan has been, how entrepreneurs in each cluster are planning their future, and the implications of these findings. First, we look at the largest of the clusters, Focused and Growing, then move on to Stable and Strategic, Off Balance and Seasonal, Retrenching, and last to Slowly Growing and Optimistic.

Cluster 1: Focused and Growing

The largest of the clusters, the Focused and Growing group is made up of 113 entrepreneurs dedicated to expanding their businesses.[15] These business owners have experienced recent financial success and are poised to continue this trajectory. This group has the largest percent of business owners reporting increases in sales and profit, as well as a rise in personal take-home pay during the study period. In fact, they started strong and remained strong, reporting growth at the beginning of the study and going on to continue expanding their businesses because of their loans. Members of this cluster are generally full-time entrepreneurs. By the end of the study, none of the business owners in this cluster held a second job. Several trends set this cluster apart.

Focused and Growing businesses saw early success

The majority of entrepreneurs in this cluster (73.2%) experienced growing sales at the time of the preliminary survey, and a similar number (71.7%) saw growth in profits during the same period. An entrepreneur with a carpentry shop in Colorado said that he went to Accion after suffering a difficult year and saw gains within a year of his loan. "[The loan] helped us to be able to pay off some of our vendors and our accounts," he said. "It helped tremendously on our cash flow." During his first interview—a year after he received his loan—the carpentry shop owner said he saw sales well on their way to doubling the previous year's. "[It's May and] we've had $250,000 in sales … last year our entire production was $360,000," he said. "We had a tough year, so we're really ramping up, and it feels really good." The vast majority of entrepreneurs in this cluster (90.8%) drew a salary from their business at the start of the study; only a small number (12.5%) relied on a second job. By the end of the study, none had another job.[16]

Business owners in this cluster were goal- and growth-driven since the launch of their business

As the name of the cluster indicates, Focused and Growing business owners saw themselves on a growth trajectory even before applying for their first loan. Many of those interviewed cited goals for business expansion and saw their loans as opportunities to help accelerate that growth. An entrepreneur with a video production company in New York illustrated this trend. The owner sought a loan "[to] purchase high-end cinematography equipment. [But] the main goal was to get into more significant professional production work." For those with brick-and-mortar businesses, growth meant moving to a larger location, hiring more employees, or adding locations. A fitness studio owner in Florida explained it this way: "[My goal is] to expand it a little bit more and be able to have a space double … the one I have now." For solely owned and operated businesses, such as consulting practices, growth goals included attracting larger projects and bigger and more stable clients. Many hoped to add employees. An Illinois-based accountant exemplified this trend. "2016 [was] about growth;

15 Thirty-two of the 113 borrowers in this cluster also participated in in-depth interviews.

16 The change from initial to follow up survey is statistically significant at $p<.05$.

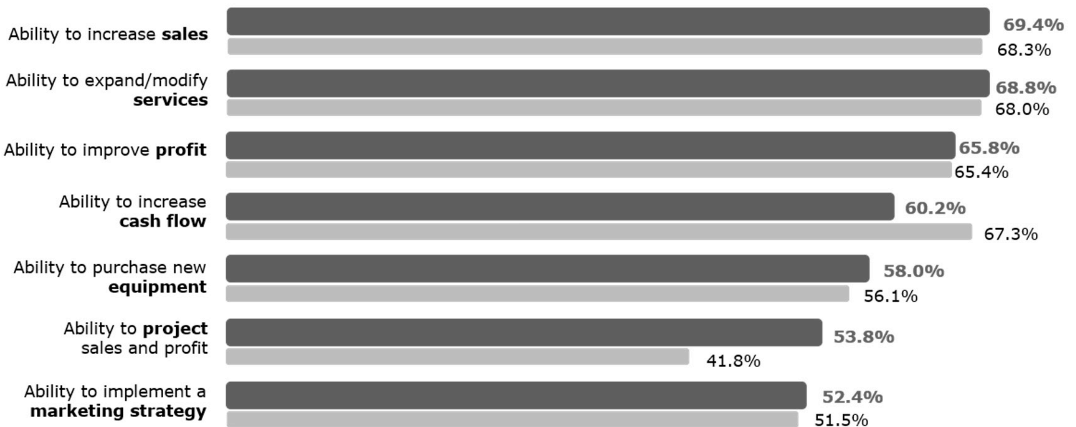
it [was] about establishing my brand for my business, [and] getting prepared to hire people. Long term, 2017 and 2018, I want to increase my revenue stream at least by 100%. And I am trying to bring in more people to work for me as well as a partner for my business."

Microloans had a long-lasting positive influence on these entrepreneurs and their businesses

Entrepreneurs in this cluster sought loans for two principal reasons: to expand their businesses (41.1%) or continue them (46.4%) by maintaining inventory or paying general and administrative expenses. Loans obtained from Accion or Opportunity Fund helped entrepreneurs and their businesses in key ways. Entrepreneurs said that loans helped them feel more confident that they could achieve their goals. Loans contributed to a sense of financial stability and made entrepreneurs feel surer of their ability to improve their credit. Business owners said that their loan significantly improved their ability to expand or modify services, increase sales, increase overall business profit, and improve cash flow (Exhibit 11). For some items, the impact of the loan increased from the initial survey to the follow-up one a year later. For example, at the start of the study, 41.8% of business owners said their loan had a lot of impact on their ability to project sales and profit; in the follow-up survey, 53.8% said the same–nearly a 30% increase.

Exhibit 11. Lending services had a strong and lasting impact on these entrepreneurs and their businesses

In the categories listed below, the percent of entrepreneurs who said Accion and Opportunity Fund had "a lot" of impact.[17]



17 Borrowers were asked to rate the impact of Accion or Opportunity Fund on 18 items. Survey items were rated on a scale of 1 (no impact) to 5 (a lot of impact). Values shown in this exhibit represent the combined percent of borrowers who ranked the loan's impact as a 4 or 5. The chart lists only those items where at least half of all borrowers in this cluster rated it a 4 or 5 in either the initial survey or the follow-up. Changes from the initial survey to the follow-up were not statistically significant based on paired-samples t-test of the difference in mean scores.

A clothing boutique owner in New York expressed this increased sense of impact at the time of the follow-up survey. "As a result of the loan, I was able to buy more inventory, which in turn gave me more revenue from different revenue streams, which then meant my cash flow was healthier, which then allowed me to bring on employees. It's a trickling effect." Several interviewees noted this effect, some attributing the improvement not only to the increase in capital, but also to the advice and networking opportunities made available through Accion and Opportunity Fund.

Loans had the most impact on business owners who leveraged their capital

Interviewees in this cluster fell into three categories when it came to loan benefits. About a third said they saw little or no meaningful impact from the loan. Another third used the loan for discrete, necessary expenses and saw moderate impact. The remaining third leveraged their loan for larger impact.

Some entrepreneurs would have been fine without a loan. About a third of entrepreneurs said that the loan on its own was not the reason for their success. This was especially true of those entrepreneurs who were approved for less capital than they applied for, and thus were unable to accomplish the goals they originally set out to achieve. Most said that they could have built their businesses without the loan by looking for other ways to support growth. Two entrepreneurs felt that getting a loan was a mistake; their businesses were not ready for the influx of capital and they were unprepared for the responsibility of paying it back.

Some entrepreneurs used their loan for one-time purchases. Business owners who used their loan for one-time expenses reported only moderate overall impact. For example, some borrowers used loans to repair equipment, to bring equipment into regulatory compliance, or to purchase additional inventory. Although the loan made a big difference at a specific moment for them, business owners did not attribute their long-term success to it.

Some business owners leveraged their loans for larger impact. For a portion of entrepreneurs, the loan played a pivotal role in launching or expanding their businesses. Often, the loan came at just the right time. Without it, these business owners said they might have missed an opportunity (to buy a new business, for example). These entrepreneurs also leveraged their capital for the maximum impact. One entrepreneur used his loan to create a marketing campaign that led to a three-fold sales increase.

Entrepreneurs in this cluster improved financial record keeping

At the end of the study, entrepreneurs in this cluster had significantly improved their financial tracking practices. They attributed this directly to their involvement with Accion and Opportunity Fund. At the beginning of the study, 30.6% of entrepreneurs said they had changed their business finance tracking at least somewhat because of Accion or Opportunity Fund loans or financial advising. By the study's end, this increased by a third to 40.7%.[18] Most entrepreneurs (75.2%) had adopted moderate or advanced business financial tracking practices by the study conclusion, meaning they used accountants, software, or other formal

means of tracking cash flow. This was an increase from 65.5% in the initial survey.[19] Before her loan, one entrepreneur said, her business tracked expenses in a notebook. "We wrote everything in books. And now, yes, it is different because there is more income and movement, and little by little, we're learning how to manage things better." About a quarter of business owners continued to track finances informally, using a notebook or a checkbook. Those who use informal tracking said it worked best for them. Some have very small businesses that don't warrant complex tracking, and others don't feel comfortable enough using technology.

Several interviewees said the loan application process itself inspired a new focus on financial details, including financial tracking practices, organized record-keeping, and overall financial management. In her second interview, a graphic designer in New Mexico noted the incremental improvements she had made. "I'm tracking [my business finances] weekly at least. I keep track of how much profit I'm making and how much I'm about to put away."

These borrowers are job creators

By the end of the study, two thirds of the business owners in this group (67.3%) had employees, an increase from about half (52.2%). This group was more likely to have employees than business owners in other clusters, and they were more likely to hire additional employees from start to the end of the study. The average number of full-time equivalents (FTEs), excluding the business owner, increased from 2.1 at the time of the initial survey to 3.4 during the follow-up survey–an average increase of 1.3 FTEs per business.[20] In fact, businesses in this cluster alone added 166.75 FTEs during the study, which accounts for 49.8% of the FTEs added across all entrepreneurs in the study.[21] Interviewees said they hired employees so they could focus on the strategic aspects of their businesses and, eventually, work fewer hours themselves. In some instances, business owners hired temporary employees to meet peak-time demand. A custom clothing maker in New Mexico was in this group. "I have seasonal, temporary employees when I do sign the big contracts," she said. The rest of the year, she needs far fewer workers. While the study did not delve into the community-wide outcomes of small business lending, businesses in this cluster are creating jobs in their community, helping to strengthen their local economy.

Businesses experienced increased financial stability

Three out of four business owners (77.0%) in this cluster saw increases in sales and profit from the time they received their loan through the end of the study. Correspondingly, these entrepreneurs demonstrated the highest levels of financial stability (Exhibit 12) among the clusters. Many made changes that led to a greater sense of control over both their current[22] and future finances.[23] These business owners developed financial plans, separated business

19 The change from initial to follow up survey is statistically significant at $p<.05$.

20 For the purposes of this analysis, we treated all reported part-time employees as 0.5 FTE and all reported full-time employees as 1.0 FTE, although hours range from employer to employer and not all part-time employees are exactly at 0.5 FTE status. The change from initial to follow up survey is statistically significant at $p<.05$.

21 "Net FTEs added" refers to the total of all new FTEs minus those lost.

22 The change from initial to follow up survey is statistically significant at $p<.05$.

23 The change from initial to follow up survey is statistically significant at $p<.05$.

and personal finances, and invested more in savings. Most said business revenue was sufficient to cover expenses and adequate to withstand emergencies. To address emergencies, most said they had personal and business savings, or could use credit. A small group of interviewees said they would return to Accion or Opportunity Fund for help in an emergency. Nearly all (92.9%) said that they are somewhat or very comfortable with the amount of debt they carry; with many saying they carried little or no balance on cards or lines of credit.

Exhibit 12. Entrepreneurs felt more financially stable by the study's end

Category	% that reported "most of the time" or "always"
Monthly revenue is sufficient to cover operating costs	98.3%
Able to meet business debt and other obligations on time	98.2%
Able to pursue growth opportunities for business	83.1%
Able to predict monthly take-home pay	82.3%
Able to withstand negative events	79.5%
Cash reserves sufficient to withstand financial	67.9%

Entrepreneurs also reported increases in their personal and household savings. By the study's conclusion, 53.1% noted an increase in personal or household savings, compared to 43.1% reporting such an increase in the preliminary survey.[24]

As noted earlier, Focused and Growing is the only cluster in which all business owners drew a salary from their businesses, and most (90.8%) had been doing so before the start of the study.[25] By the study's end, more than half saw their take-home pay increase. Although the extent of the increase isn't known, some interviewees said it allowed them put more money into household savings, feel more at ease with day-to-day expenses, and take family vacations for the first time in years.

Business owners in this cluster continue to focus on expanding their businesses

Most projected increased sales (86.9%), rising profit (85.0%), greater personal and household savings (74.1%), and a rise in take-home pay (74.1%). A smaller number of business–less than half–anticipated hiring more employees, either full- or part time. Generally, those who expected rising sales, profit, and savings at the beginning of the study

24 The change from initial to follow up survey is statistically significant at $p<.05$.
25 The change from initial to follow up survey is statistically significant at $p<.05$.

went on to report increases in these areas in the follow-up survey, showing their predicting and planning ability.

Growth and stability bring personal benefits to entrepreneurs in this cluster. The New York-based food truck owner is planning to expand to different locations and adopt new cuisines. At the time of his second interview, he was in the process of buying another food truck. Increasing profits allowed him to hire more employees, freeing him to focus on his growth strategy. Like many other entrepreneurs who have experienced growth over the last few years, he noted that improved business also meant improved life quality. "I go on family vacations and have savings," he said.

The general success of Focused and Growing business owners suggests that although their loans served as an accelerant for their growth, other factors also played a role. Entrepreneurs in this cluster may benefit from support that can catalyze business growth in ways that manage and minimize risk. For example, while this group of entrepreneurs can generally handle instability in sales and revenue, and some feel they could handle a financial emergency, not all possess sufficient business savings or financial plans to manage larger scale financial challenges.

The Focused and Growing cluster is characterized by a strong beginning and continued trajectory toward growth. Business owners in this cluster differ from other groups in their solid foundations and feelings of confidence, which they are more likely to attribute to Accion or Opportunity Fund than other groups. Business owners in this group face the unique challenge of defining their goals for success and finding a path toward meeting those goals through safe, smart financial and business decisions.

Cluster #2: Stable and Strategic

Similar to businesses in the Focused and Growing cluster, business owners in this group are generally doing well. Most experienced increases in revenue, take-home pay, and household savings in the six months prior to the end of the study. What makes this cluster unique is that all 31 entrepreneurs[26] have another source of income outside their business. Some have formal "second jobs," while others maintain other ventures as hobbies, second businesses, or informal "gigs." Business owners in this cluster are careful planners focused on strategic and careful growth.

Stable and Strategic business owners have additional income sources

At the start of the study, most of these entrepreneurs (80.6%) held a job outside of their business. By the study's completion, all had another job.[27] For some in this cluster, the "other" job is the primary source of income. Others have successful small businesses as their primary source of income and maintain outside freelance or part-time work for additional financial security. In fact, there is an important distinction to be made within this cluster: some of its members are serial entrepreneurs and intend to always have multiple income sources. Others would rather focus solely on their business and hold outside jobs out of necessity.

26 Nine of the 31 borrowers in this clusters participated in in-depth interviews.

27 The change from initial to follow up survey is statistically significant at $p<.05$.

Some business owners are serial entrepreneurs

Take the case of a roadside motel owner in New Mexico. He and his wife already operated a network engineering consultancy firm when they decided to add a business. "About five years ago, my wife and I decided that we'd come back to New Mexico and rebuild the motel," which has been in his family for decades. They used an Accion loan to pay for work on the motel. And it became a great success. "In March of 2015, our income [from the motel] was $14,000. Our income at the same time this year [2016] was $27,000. … We are very profitable. We're now looking at building new businesses, which is fun because we have enough cash flow to do that."

A New York-based music producer said he also acts on the side and intends to continue. A women's empowerment life coach in Boston also works regularly as an interpreter. "I get a pretty good amount of money from that," she said.

Some hold second jobs out of necessity

One New Mexico entrepreneur in this group works two accounting jobs in addition to running a small Chinese medicine and acupuncture practice, which she bought with the support of her microloan. As her acupuncture client base has grown, she's decreased her accounting hours. "I was doing accounting four days a week," she said. "Now I shifted to where I do acupuncture five days a week and accounting maybe 12 hours a week instead of more like 30." The owner of a speech therapy clinic in Southern California said she plans to leave a part-time job as her clinic expands.

Some keep their outside jobs because their businesses are seasonal. Others hang onto jobs for the benefits. A golf charity fundraiser in Illinois said he has a part-time, off-season job to offset his warm-weather business. "I've got this income coming in the winter months now, and that will afford me to still have some time to make sales calls and [do] marketing things for the following golf season," he said.

Some of the entrepreneurs in this cluster are on the threshold of going full-time with their businesses. Although the number of people with second jobs increased during the study,[28] the hours spent at their second job generally decreased.

Loan capital helped entrepreneurs solidify progress and grow

The majority of business owners sought a loan in order to maintain or expand their current business operations (as opposed to launching a new business). Stable and Strategic business owners said that their loans helped them expand and modify business services, purchase new equipment, and increases sales and cash flow (Exhibit 13). Their loans also helped entrepreneurs personally; most (63.3%) said they felt more confident about achieving their goals, and about half (56.7%) felt more financially stable.

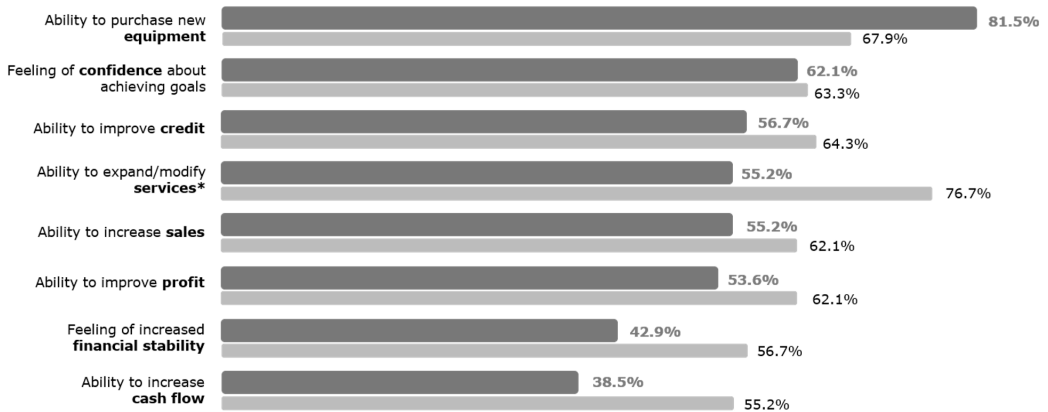
In general, entrepreneurs perceived greater benefit from the loan during the preliminary survey than they did later. For example, in the preliminary survey, more than three-quarters (76.7%) believed that their interactions with Accion or Opportunity Fund contributed

28 The change from initial to follow up survey is statistically significant at $p<.05$.

markedly to their ability to expand or modify products and services; in the final survey, just over half (55.2%) felt that way.[29] This may be because these business owners received their loan as they worked to turn side gigs into more stable businesses, so the sense of benefit came immediately after they had the money to pursue their goals.

Exhibit 13. Lending services had a strong initial impact

In the categories listed below, percent of entrepreneurs who said Accion and Opportunity Fund had "a lot" of impact.[30]



Access to capital bolstered entrepreneur confidence and supported business investment

The capital and accompanying business advice from Accion and Opportunity Fund improved confidence and created a greater sense of financial stability for most of the interviewed borrowers.

Capital allowed entrepreneurs to make strategic investments in their businesses. Unlike businesses in other clusters that sometimes used their loans to cover gaps in cash flow, the majority of interviewees in this cluster shared that they were targeted about their spending. For instance, the Illinois business owner who organizes golfing fundraisers for charities used his loan to develop a game that fuses miniature golf with poker–an innovation that increased his sales. An Illinois-based transportation entrepreneur used her loan to buy her first 15-passenger van, which led to a dramatic increase in her business's capacity to take low-income individuals to work and seniors to medical appointments.

Loans led to a domino-effect of good feelings for business owners. The majority of Stable

29 The change from initial to follow up survey is statistically significant at $p < .05$.

30 Borrowers were asked to rate the impact of Accion or Opportunity Fund on 18 items. Survey items were rated on a scale of 1 (no impact) to 5 (a lot of impact). Values shown in this exhibit represent the combined percent of borrowers who ranked the loan's impact as a 4 or 5. The chart lists only those items where at least half of all borrowers in this cluster rated it a 4 or 5 in either the initial survey or the follow-up. The statistical significance of any difference in mean scores from the initial to the follow-up survey was determined using a paired-samples t-test.

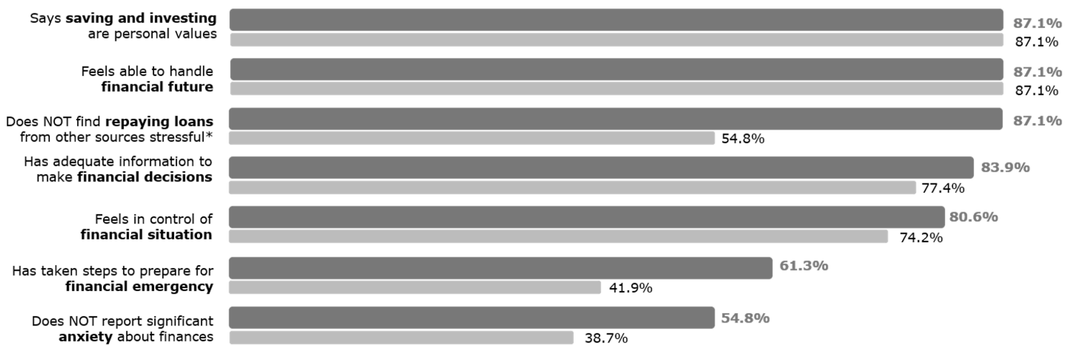
and Strategic business owners told interviewers that loans played a role in bolstering their self-assurance. For many, like the women's empowerment life coach, one good thing led to the next. "The revenue of my business has definitely grown because I have a more clear brand and a very clear strategy of how to grow my business, and that was all due to the loan," she said. "The biggest thing has been the confidence that I've gained in myself. … I'm really proud of it." The New York music producer had a similar experience. "Accion helped me tremendously to give me the confidence to keep my business going," he said.

Loans helped increase business financial stability.

Entrepreneurs in this cluster experienced increases in sales, profit, and take-home pay, similar to entrepreneurs in the Focused and Growing cluster. In the follow-up survey, most Stable and Strategic entrepreneurs (64.5%) reported that their sales and profit rose in the six months prior,[31] and 54.8% said their take-home pay had increased in that period.[32]

Stable and Strategic entrepreneurs also reported increased financial stability at the end of the study, saying they had sufficient resources to cover expenses and the ability to withstand a financial emergency.[33] Most reported they were comfortable with their debt level, had a plan for financial emergencies, and were generally in control of their financial situation (Exhibit 14).

Exhibit 14. By the end of the study, most entrepreneurs in this cluster felt financially stable across myriad of indicators[34]



*Change from initial to follow up is statistically significant at $p<.05$

One of the biggest changes for this cluster was related to comfort with business debt. In the initial survey, about half (54.8%) said that they were comfortable repaying loans from

31 The change from initial to follow up survey is statistically significant at $p<.05$.

32 The change from initial to follow up survey is statistically significant at $p<.05$.

33 This is based on the composite score of survey items concerning financial stability. Stable and Strategic business owners increased their average financial stability score from the initial survey (M=3.84, SD=0.69) to the follow-up (M=4.17, SD=0.61). The increase in the average score is statistically significant at $p<.05$.

34 Survey items were ranked on a scale of 1 (no impact) to 5 (a lot of impact). Values indicate the combined percent of borrowers who ranked impact as a 4 or 5. Change from initial to follow-up was measured for statistical significant using a paired-samples t-test for difference in mean scores.

sources other than Accion or Opportunity Fund. This increased to 87.1% by the final survey. This also reflects the overall low levels of debt held by these businesses. Most entrepreneurs (77.4%) said they owed less than $25,000. Of those with any amount of debt, about half (51.6%) reported they are very comfortable with the amount.

Business owners in this cluster are prudent. They are also planners. This may be one factor that leads them to prioritize financial stability. The Illinois transportation businesswoman exemplified this value. "Because of [my loan from Accion], I actually created a cushion within my account where we'll always have enough money to take care of any kind of expenditures that come from accidents," she said.

Stable and Strategic entrepreneurs saw improved quality of life

Some business owners discussed improvements to their work-life balance, each saying the loan was the reason. The entrepreneur who provides van transportation said, "I've been able to pay for my daughter to go to the college. … We actually took a family vacation in 2016, which was the first real family vacation that we've been able to take since 2009." The Southern California speech therapist had a similar experience. "[I am] spending more time with my family … that definitely has been a big win," she said. Another entrepreneur said that the loan allowed her to hire, giving her more time with her family. Another noted that the loan helped her expand services, which led to increased sales, which led to more take-home pay, which meant she could buy things to improve life for her family.

Most of these entrepreneurs reported that their businesses are also their passion, giving them a deep sense of personal satisfaction. "When you love to do what you do, it's not really work," the music producer said. An owner of a sun tan lotion business expressed a similar sentiment: "It gives me joy to continue with my company."

A solid business plan is critical for these business owners

Stable and Strategic business owners value planning. In the follow-up survey, 58.1% reported having a business plan, and in interviews, they talked about using business plans to guide their decisions. In fact, in interviews, many business owners in this category said that the single best advice they could give to an aspiring entrepreneur was to formulate a good business plan.

Most entrepreneurs in this cluster have businesses that are growing slowly, and this is reflected in their realistic and strategic growth plans. "I would like to see … a 3-5% increase in business each year," the van transportation provider said. The Chinese medicine practitioner shared a similar pace of growth. "[Last year] business growth increased a little bit, probably 5%," she said. The women's empowerment life coach from Massachusetts added, "Right now, I have a financial goal for this year to make $50,000 net."

Members of this cluster are among the most likely to talk about the value of a long-term plan. However, only some have strengthened their financial tracking practices. Compared to 6.5% of business owners reporting advanced tracking on the initial survey, 12.9% employed

advanced tracking practices by the end of the study.[35] Those who employed moderate business tracking decreased from 64.5% to 45.2%, suggesting that many of those who have strengthened their business tracking already had moderate practices at the start of the study.

Stable and Strategic entrepreneurs identify different ways of reaching success

This group's multiple business ventures and consistent additional employment set them apart from other clusters. But they differ among themselves in how they want to attain financial success. Some want to succeed by expanding their primary business and eliminating the need for a second job; others hope for multiple successful businesses, even at a small scale. But all were concerned about moving forward carefully, at a safe, steady pace. The owner of a speech therapy clinic voiced such caution. "Basically, it's my goal to grow, but to find out how to do that carefully," she said. "I don't want to grow ignorantly and unnecessarily. I want to make sure that I have a consistent amount of healthy profits before I make such moves."

This cluster exemplifies that not all entrepreneurs with multiple income sources want to focus on one business venture. Although a small and vocal minority from the interviews cite a desire to quit their second job, not everyone shares this priority, and many in this group prefer to have other jobs and businesses. The interviews illuminated how a second job can provide ongoing financial stability, putting the entrepreneur in a better position to pay their loan. With prudent planning, these business owners can continue their multi-faceted approach to long term success.

Cluster #3: Off Balance and Seasonal

Recent financial distress is a key characteristic for this small and hard working group of 24 entrepreneurs.[36] They are struggling and are the only group to report falling sales and profits throughout the study. They also reported low levels of financial stability. They own seasonal businesses and often have another job; only half draw a salary from their business. Although their debt level is low, it feels burdensome. Perhaps it's no surprise, then, that this group was less likely than other groups to say that their loans benefited their business, and less likely to expect business growth.

External factors challenge these entrepreneurs

Many of these entrepreneurs were faced with unanticipated challenges outside of their control and unrelated to the capital they accessed through Accion or Opportunity Fund. The problems they faced took time and attention from their businesses and meant owners didn't reap the benefit of their efforts. For example, a Northern California entrepreneur who provides work space and start-up business support to other aspiring entrepreneurs lost ground when he was sidelined by an injury and had to close up shop for four months.

A woman who runs an electronic medical billing company in Florida had to deal with

35 The change from initial to follow up survey is statistically significant at $p<.05$.

36 Seven of the 24 borrowers in this cluster also participated in in-depth interviews.

electronic theft, which took time away from her work with clients. "Someone got into my account unauthorized and grabbed some money from the account, and I had to close that account and reopen a new one," she said. To complicate matters, changes to her clients' health insurance policies meant she wasn't paid promptly for her services.

They have seasonal businesses

Entrepreneurs in this cluster often operate businesses with highly seasonal and/or unpredictable revenue cycles. In the preliminary survey, these entrepreneurs reported that they didn't expect year-round business activity, and none anticipated much revenue during the winter. About a third (29.2%) said that most of their revenue came during a single season.[37]

Of the seven entrepreneurs in this group who participated in interviews at the beginning and end of study, five talked about the challenges of seasonality at length. A Colorado-based landscaper called it "feast or famine." He added, "The seasonality of the business probably is the hardest part." Other businesses in this group, including a traveling craft vendor in New Mexico, a horseback riding camp in also in New Mexico, a motorcycle mechanic in Northern California, and a paint-your-own pottery company in Arizona, explained similar challenges.

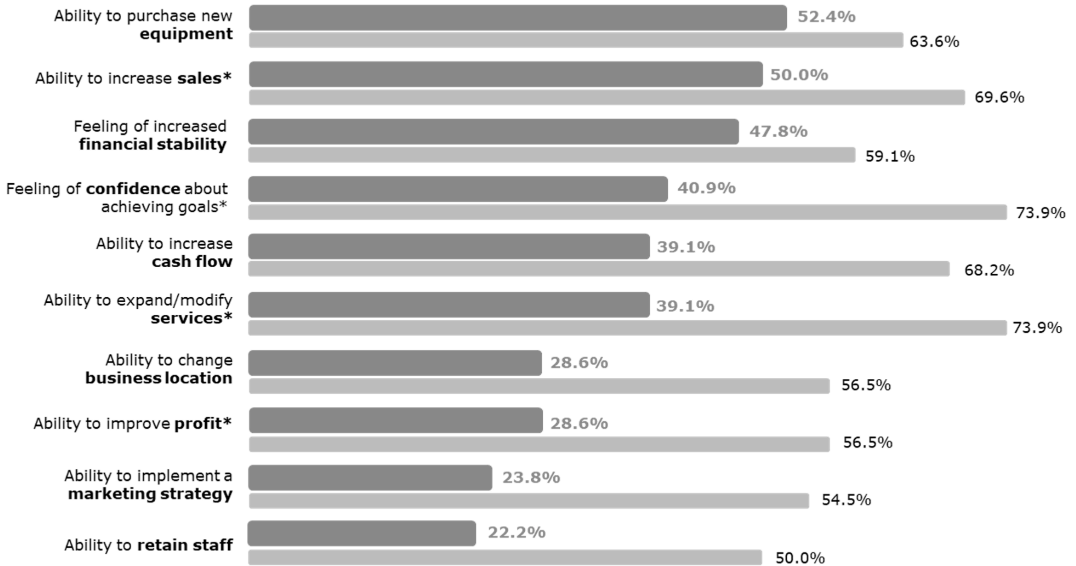
The benefits of microloans are fleeting for these business owners

About half of the entrepreneurs in this cluster (54.2%) sought a loan to maintain their business operations. The other half included entrepreneurs who hoped to expand their businesses (33.3%) or launch a new business (12.5%). They reported that access to additional capital provided an initial boost, but by the end of the study, the benefit was little more than a memory. In the initial survey, they reported that their loan was an obvious asset, letting them expand and modify services. They felt confident that they could achieve their goals and increase their sales (Exhibit 16). By the follow-up survey, those feelings had cooled. Unlike entrepreneurs in other clusters, these business owners no longer reported the benefits they originally identified.

37 Seasons are defined as follows: winter (December, January and February), spring (March, April and May), summer (June, July and August), and fall (September, October, November).

Exhibit 15. Microloan benefits are short-lived for these business owners

In the categories listed below, percent of entrepreneurs who said Accion and Opportunity Fund had "a lot" of impact.[38]



*Change from initial to follow up is statistically significant at $p<.05$

Loan impact varies by use of loan

Entrepreneurs provided more nuanced explanations of the perceived benefits of their loans in interviews. A few interviewees noted little or no impact from their loan, while others saw moderate or significant effect.

A small number said they had other options to access capital. Two business owners who participated in both the initial and final interviews said they could have borrowed from other sources; therefore, their loans had little or no impact beyond what they might have accomplished on their own. The owner of an Arizona-based paint-your-own pottery studio used her loan to invest in a second retail location. Although her sales increased, at the follow-up interview, she wondered if she had picked the wrong spot for a second location.

Some business owners used their loans for strategic spending and saw moderate benefit. Three interviewees said that, without their loans, they might have missed an important business opportunity or might have made choices that weren't favorable in the long run. One

38 Borrowers were asked to rate the impact of Accion or Opportunity Fund on 18 items. Survey items were rated on a scale of 1 (no impact) to 5 (a lot of impact). Values shown in this exhibit represent the combined percent of borrowers who ranked the loan's impact as a 4 or 5. The chart lists only those items where at least half of all borrowers in this cluster rated it a 4 or 5 in either the initial survey or the follow-up. The statistical significance of any difference in mean scores from the initial to the follow-up survey was determined using a paired-samples t-test.

entrepreneur reported that he might have sought credit from a "loan shark" and potentially damaged his credit. Instead, his loan enabled him to buy needed equipment, cover a cash shortage, and build a stronger credit history. Another entrepreneur in this small group used the loan to bolster marketing, achieve a "more professional" look, and purchase equipment.

Still, entrepreneurs sometimes wondered whether getting a loan and running a struggling business was truly the best choice for them. Two additional businesses shared they are struggling and not sure whether obtaining a loan was the best idea at the time. One business owner is thinking about taking a hiatus from the business if things do not turn around quickly; another hopes to get his business in good enough shape to sell.

Off Balance and Seasonal business owners have benefited from advice and support outside of access to capital

While most entrepreneurs came to Accion and Opportunity Fund looking for capital, interviewees said that the advice they received helped them weather external challenges. Several entrepreneurs said they were able to restructure their loan repayments when sales or profit decreased drastically. Others spoke about being able to contact Accion and Opportunity Fund with questions as they encountered challenges. In addition, Accion and Opportunity Fund provided entrepreneurs with connections and networking opportunities. Despite other challenges, the owner of the horseback riding camp spoke of how she changed her business model after contact with an Accion connection. "The summer program that I run was the idea of my mentor that Accion [connected] me with," she said. By replacing individual riding lessons with group lessons, she changed the trajectory of her business. "I make so much money during the summer doing it that it pays for almost all my expenses during the year. It's fantastic."

A motorcycle mechanic said he benefitted from the experience of Opportunity Fund staff. "When you talk to them, they just understood, because I'm sure they deal with a hundred different business ideas and people every day." He advises other entrepreneurs to take advantage of this gold mine of experience. "If you have needs, let people know you have them because they're out there willing to help ... there's a lot of information … that you'll receive if you ask."

Off Balance and Seasonal business owners wrestled with financial volatility

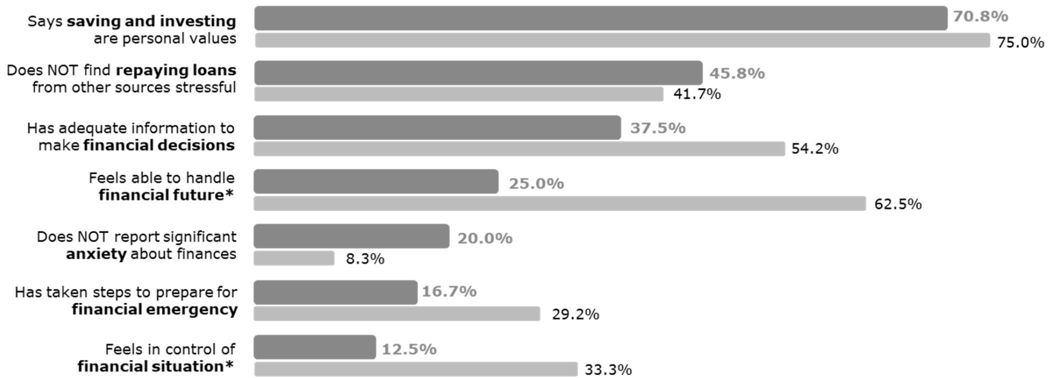
Business owners in this cluster are worried. They are worried about an emergency they cannot cover. They are worried about declining revenue and profit. And they are worried about their inability to predict take-home pay. Many feel like they must count every penny to keep their heads above water. Business owners said profit, sales, and take-home pay had all fallen recently (Exhibit 16).

Exhibit 16. Financial health lagged in final survey

Business owners lack a sense of financial control

Recent declines in several measures of financial health made these business owners nervous about the future. Although the influx of capital from Accion and Opportunity Fund served as a short-term boost in resources and confidence for them, by the end of the study, entrepreneurs said they felt less control over their financial situation and less able to handle their financial future. At the time of the initial survey, these entrepreneurs already had a low sense of control over their finances, with only a third (33.3%) saying that they felt in control. By the end of the study, only 12.5% felt in control (Exhibit 17).

Exhibit 17. By the end of the study, business owners felt less financially stable[39]



In the follow-up survey, more entrepreneurs expressed low confidence in their ability to predict take-home pay due to the unpredictability of business activity. Only about a third (29.2%) felt they could predict their monthly take-home pay. Given the seasonality of their businesses, interviewees said, it was difficult to predict revenue from month to month. This made for rising stress levels. A hair salon owner reported, "My life is more stressful, more accelerated. … I feel like I used to be more comfortable doing my things before."

Entrepreneurs feel unprepared for financial emergencies

Although these business owners consistently expressed their willingness to surmount any challenge and go forward, only 16.7% said they have sufficient cash reserves to withstand a financial emergency—the lowest among all the clusters. In the follow-up survey, a third (33.3%) reported their debt was higher than it had been a year earlier. The owner of the paint-your-own pottery shop felt stretched to the limits. "If I had something catastrophic, I'm not sure how I would deal with it," she said. "I'm pretty tapped out financially." The entrepreneur with the horseback-riding camp feared a serious vet bill. "If one of my horses gets sick … I do not have anything in the bank ready to pay for that bill."

Entrepreneurs in this group said they had not planned for a financial emergency. If faced with one, most said they would rely on a credit card. The landscaping business owner imagined a series of options. "I'd probably see if my credit cards can handle it first. If not, I'd probably go to friends or family. Third, to Accion or something like that."

39 Survey items were rated on a scale ranging of 1 (no impact) to 5 (a lot of impact). Values shown in this exhibit represent the combined percent of borrowers who rated the impact as a 4 or 5.

Business owners in this cluster are focused on today

In the follow-up survey, most borrowers (70.8%) said their finances were a significant source of worry. Perhaps due to that worry, this cluster is much more attuned to the day-to-day cash flow than members of other clusters, and is more likely to employ a fairly high degree of advanced tracking. This held firm throughout the study, however closely monitoring finances did not result in better outcomes for this cluster.

Although in the final survey more than half of the members of this cluster (58.3%) said they had a business financial plan, no one participating in an in-depth interview had one. Interviewees instead emphasized consistent tracking of expenses and sales.

Despite challenges, off Balance and Seasonal entrepreneurs are committed to moving forward

The motorcycle mechanic described small business ownership as a story of "ups and downs." And that seemed to be the case for this cluster, where entrepreneurs weathered a downturn but were still working to reach financial stability. Off Balance and Seasonal entrepreneurs dealt with unanticipated expenses and revenue fluctuations, yet often lacked financial plans to address these challenges.

Despite the hardships, these business owners are committed to their entrepreneurial identities, but they need extra support. For instance, the business owner who provides workspace to aspiring entrepreneurs was forced to make big changes when an injury sidelined him for four months. "I had an injury and couldn't run [my business] … Accion stepped in and helped me a lot. … They gave me a month off and then readjusted my loan amount and reassessed the time frame on the loan. … From soup to nuts, they were willing to work with me and get through the situation," he said. In the end, this business owner was able to cover his refinanced payments. "The money I had left from their loan helped me make that bridge of the four months, and I was able to stay in business that way," he said.

The New Mexico horseback riding business is one outstanding example of how an entrepreneur can improve her business prospects. The advice she received from a mentor played a critical role in her success. "I actually didn't really apply for the loan for the money. I applied, really, to get the services that Accion provides," she said. She credits those services even more than the cash for her recent success. "I love the people at Accion," she said. "They've made me part of their family. I really feel like I'm part of their family." She advises peers to take advantage of what CDFIs and community resources offer. "Take classes. Go to Accion, go to [the] Small Business Development Center, the SBA."

On the whole, Off Balance and Seasonal entrepreneurs feel uncertain about the future. Unexpected expenses and revenue fluctuations were common, as was the absence of a plan to manage them. Seasonal businesses present unique challenges and opportunities that require creative problem-solving and continued outreach for support to meet their fluctuating needs.

Cluster #4: Retrenching

The Retrenching cluster is made up of 48 entrepreneurs[40] with businesses at a crossroads. Although most experienced success during the study–68.8% increased their sales and profit–the number of those who were able to take home a salary fell drastically, from 42.6% in the first survey to one business owner (2.1%) in the final survey.[41] The meaning of that decline is not entirely clear. It could be an indication that entrepreneurs in this cluster are consciously reinvesting in their businesses as many noted a focus on positioning their business to become more established. Entrepreneurs in this cluster report a sense of optimism about the future, both in terms of their personal financial security and their anticipated business success.

Entrepreneurs don't take a salary from their business (yet)

As stated earlier, while more than half (68.8%) of these business owners reported improved sales or profits during the study,[42] only one entrepreneur in the entire cluster drew a salary at the time of the final survey, a drop from 42.6% in the initial survey.[43] Small business owners commonly forego paying themselves, especially soon after a launch or at key growth points. Some interviewees said that, although they don't draw a salary, they use business proceeds to pay rent or other personal expenses. Others said they didn't need a salary from their business, often because they have a second source of income. These owners reinvested their profits in the business. For example, an entrepreneur who operates a film festival with her spouse said that they don't earn any income from their business, as each year any profit is put back into the business or is used to pay debt from previous years.

Some entrepreneurs started their businesses as side gigs

About half of the interviewees in this cluster started their business as a side job–a business that was only active seasonally, for a couple of days per week, or during the owner's free time. A video producer in Florida started his business with his brother as a side job because they were both good at it; the husband and wife who run a film festival started it as a way to make niche movies available to a Southern California audience one weekend per year; a swap meet toy vendor from Colorado started his business as a way to earn extra income on the weekends. Similar to some of the Stable and Strategic entrepreneurs, many of these business owners started their businesses exclusively to earn additional income, never intending them to be their full-time focus. For instance, the toy vendor, who can only sell toys on weekends when the swap meet is open, will continue to maintain a weekday job. Because the film festival only occurs one weekend per year, the owners will also continue to work regular jobs the remainder of the year.

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40 Thirteen of the 48 entrepreneurs in this cluster participated in in-depth interviews.

41 The change from initial to follow up survey is statistically significant at $p<.05$.

42 This percentage is based on the share of entrepreneurs who said that either sales or profit had increased. In the final survey, most borrowers (58.3%) said sales had increased, and 56.3% said profit had increased.

43 The change from initial to follow up survey is statistically significant at $p<.05$.

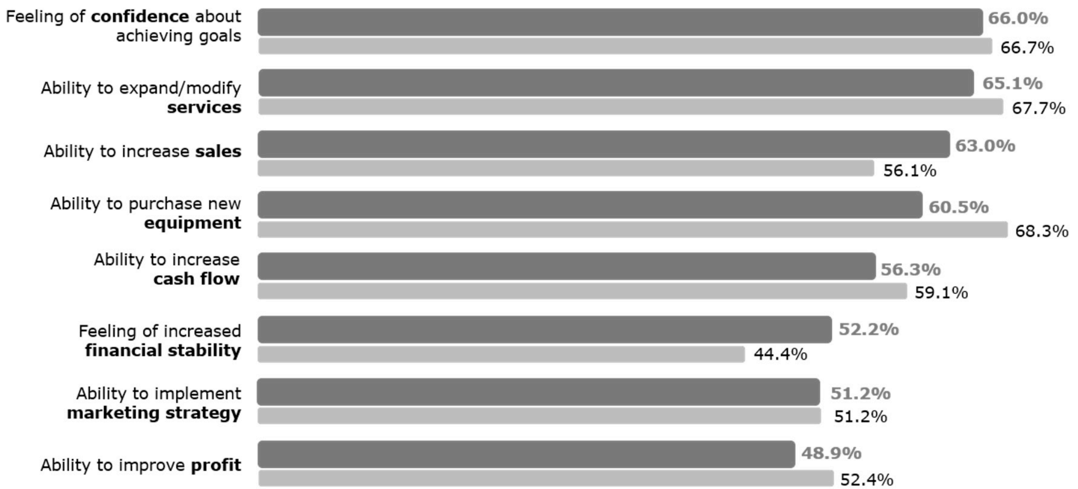
Business owners in this cluster value microloans and felt significant initial boost from their loans

This cluster has the largest percentage of entrepreneurs (25.0%) who obtained a loan specifically to launch a business. The loan made business dreams come true. That was the case for the owner of a uniform shop in Southern California. "My main goal when I went for the loan was to get the business started, and, with the loan, I was able to do that," she said. Another 39.4% sought a loan to expand an existing business. About a third (35.4%) sought capital to maintain a business, for example, to pay general and administrative expenses or maintain inventory.

Support from Accion and Opportunity Fund–in the form of capital, advice, and networking–helped business owners make strides toward their goals. In fact, this cluster gave some of the highest ratings for the perceived overall impact of Accion and Opportunity Fund across several areas of business. Two thirds of the business owners in this group indicated that their loan played a major role in improving sales, acquiring new equipment, and expanding or modifying products and services. A similar number said that their loan helped them feel confident about achieving their goals (Exhibit 18).

Exhibit 18. Lending services had an ongoing impact on business owners and their businesses

In the categories listed below, percent of entrepreneurs who said Accion and Opportunity Fund had "a lot" of impact.[44]



44 Borrowers were asked to rate the impact of Accion or Opportunity Fund on 18 items. Survey items were rated on a scale of 1 (no impact) to 5 (a lot of impact). Values in this exhibit represent the combined percent of borrowers who ranked the loan's impact as a 4 or 5. This exhibit shows only those items on which at least half of all borrowers in this clusters rated the item a 4 or 5 at either the initial survey or the follow-up. Change from initial to follow-up survey is not statistically significant based on paired-samples t-test of difference in mean scores.

Loans helped entrepreneurs feel like they had valid businesses

Most interviewees said that the Accion and Opportunity Fund loans helped them purchase specific items that made them more competitive. The loan itself, the business advice, the accompanying networking opportunities, and the enhanced competitiveness resulted in a sense of increased legitimacy – a feeling that their enterprise was now the real deal.

Loans helped businesses increase efficiency and competitiveness. Most interviewees said their loans enabled them to make purchases that fundamentally improved their business output, elevating their sense of being "real players" in their field or community. The Florida video production business owners bought equipment to speed the editing process. "In this work, if you can finish faster, we can take care of more clients, so that will give us an advantage," he said. An online variety store owner based in Florida said the loan led to an expanded product line. "Now I'm spending a lot more time working on the business than I was because … the more money I make, the more products I buy."

Others purchased commercial vehicles (e.g., construction truck), equipment, or property that they could use later for business expansion. Those who used the loan to increase inventory said it allowed them to better establish their markets. That was the experience of an energy drink distributor in New Mexico. "[Buying more inventory] helped me establish with the retailers that I'll have the product, and that I'm able to buy more product along with it."

The loan and accompanying lender services helped businesses become established and gain legitimacy. Entrepreneurs reported that their loans enabled them to accelerate their business growth, establish their operations as legitimate businesses, and focus their endeavors more tightly. The owner of an Illinois-based online tea shop said her loan led to "explosive growth." "The loans have really pushed the company from this hobby … into a legitimate online business." A Northern California café and crêperie owner said that her loan capital enabled her to quit a second job and focus entirely on her own business. "Since I quit my job, the business improved considerably," she said. Other entrepreneurs said that the quick turnaround between loan application and approval enabled them to take advantage of timely opportunities. "I got the loan right before Christmas, [which is] a good time to get a business going," said the owner of an online variety store. The swap meet toy vendor said he has been able to focus his business, dropping a line of housewares and specializing in just toys. Because of advice from Accion, he even changed the name of his business to reflect this new focus.

Although all business owners sought a loan because they needed more capital, a small group of interviewees said that the networking and marketing support they received had an even greater impact on their businesses than the loan itself. The owner of a barbershop in Southern California said that his lender has a partnership with a local news station, which did a TV profile on the shop–a major marketing win.

Entrepreneurs use profit to further their business goals

Many business owners in this cluster saw sales and profits increase, and improved their ability to meet their financial obligations. Many also strengthened financial tracking practices. However, at the end of the study, only one business owner in this group reported drawing a

salary. As noted earlier, interviewees said that when they didn't write themselves a paycheck, it was because they didn't need it (they had a second source of income), because they use their profits to pay their living expenses directly (did not separate their personal and business finances), or because they chose to reinvest any revenue back into the business.

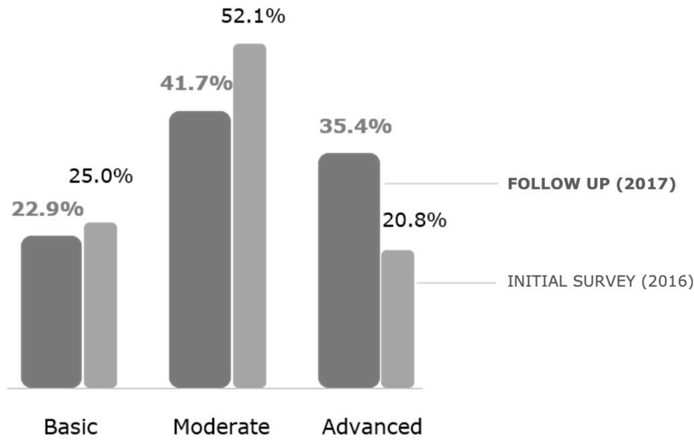
Although most entrepreneurs said in the final survey that they didn't take a salary from their business, about a quarter (22.9%) said their take-home pay increased in the same period. Many interviewees said that they don't always keep their business and personal finances separate, and often, take-home pay doesn't come in the form of a salary. Rather it is business revenue used to pay business and household expenses. This makes sense, especially for those entrepreneurs who started their business as a side gig or for newer businesses not yet making a profit. Some entrepreneurs, such as the Florida-based online variety store owner, said that they would rather re-invest earnings in the business. "I don't really have a salary because, at this point, I don't need it," she said. "I get money from Social Security and pension. I'd rather reinvest [business profits] into the company right now."

Some business owners may delay drawing a salary because they have payroll and other costs to cover. For example, the Florida video production business recently hired its first employee. The employee receives a paycheck every other week, but the brothers who own the business take only a quarterly commission after covering payroll and other costs.

Business owners have improved their financial tracking practices over time

The portion of entrepreneurs who use advanced tracking practices increased from 20.8% on the initial survey to 35.4% in the follow-up survey (Exhibit 19). Despite this increase, few Retrenching entrepreneurs attributed the change to their interactions with Accion or Opportunity Fund. At the beginning of the study, more than half (59.6%) said they had not changed their business finance tracking because of the loan. A slightly larger number (62.6%) said the same thing at the end of the study. Interviewees indicated that when they did change their tracking practices–for example, moving from using a notebook to using Excel–it was to meet the needs of a growing business. With more things to keep track of, they wanted a more sophisticated tracking method.

Exhibit 19. More business owners employed advanced tracking practices at the end of the study



Business owners can meet their financial obligations, but they may not be prepared for emergencies

Given the nature of some of the "side gig" businesses in this cluster, entrepreneurs may experience unpredictable business activity. Yet, most are able to meet their financial obligations, paying bills and loans on time (Exhibit 20).

Exhibit 20. Most business owners can repay current debt but are not prepared for emergencies[45]

Category	% that reported "most of the time" or "always"
Able to meet business debt and other obligations on time	**91.7%**
Monthly revenue is sufficient to cover operating costs	**77.1%**
Business could withstand negative events	**66.0%**
Able to pursue growth opportunities for business	**60.4%**
Able to predict monthly take-home pay	**52.2%**
Cash reserves are sufficient to withstand financial emergency	**39.6%**

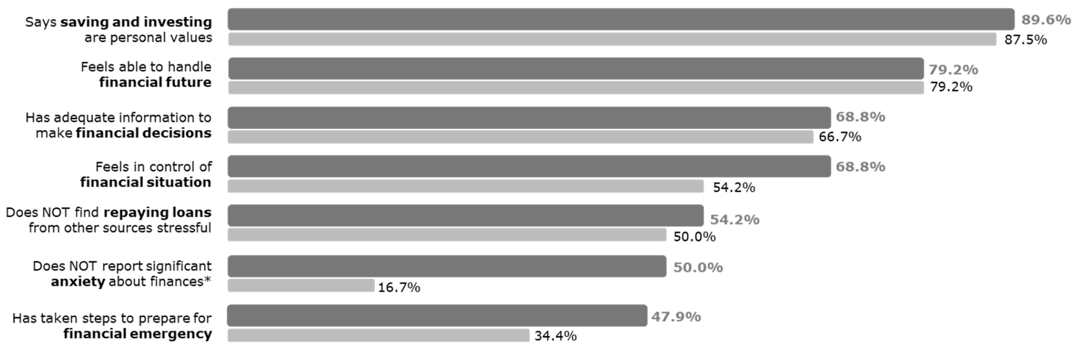
45 Survey items were rated on a scale of 1 (rarely) to 4 (always or almost always). Values shown in this exhibit represent the combined percentage of borrowers who ranked the impact as a 3 (most of the time) or 4.

While most Retrenching business owners are optimistic about weathering negative events, only 39.6% reported that they could withstand a true financial emergency. Most said that if they faced a relatively small financial emergency, they could tap into savings. But for larger things, most said they would need outside help. The owner of a house cleaning service in Northern California said she had both personal savings and business reserves that she could dip into for small shifts in her business but she would go to Opportunity Fund if a significant emergency occurred. "In the event I have a significant expense, I know they'd help me."

Retrenching business owners are optimistic about the future

Even though they are not taking home income from their businesses, entrepreneurs in this cluster expressed some of the highest confidence in their personal financial stability. They felt like they were in control of their financial future and they reported experiencing little stress over such financial obligations as loans (Exhibit 21). In the initial survey, Retrenching entrepreneurs were upbeat about all indicators except one: They found finances a significant source of anxiety. But by the final survey, things had turned around. In the first survey, only 16.7% of Retrenching entrepreneurs reported that they were not worried about finances. But by the final assessment, half (50.0%) said they were no longer worried.[46]

Exhibit 21. Business owners feel capable of meeting their future financial needs



*Change from initial to follow up is statistically significant at p<.05

From the first survey, most Retrenching entrepreneurs anticipated increases in sales (89.6%), profit (91.7%), and take-home pay (63.8%). Interviewees said they hope to expand their businesses, so they would soon demonstrate increased stability.

Retrenching businesses face unique challenges

While Retrenching entrepreneurs often possess high commitment and optimism, they face unique obstacles. Some have dipped into personal savings to stay afloat. Others are

46 The change from initial to follow up survey is statistically significant at $p<.05$.

unprepared for emergencies, and still others rely on a limited set of strategies without ever seeing success. The film festival owners typify this struggle. “We’ve lost money every year, but we’re working to get to year number five. Then I think we will be much more viable,” the festival owner said. Yet the results have been dispiriting. “Every year I sit down and try to make a budget, and every year it falls apart.” These entrepreneurs’ commitment to their businesses, regardless of circumstance, is a defining characteristic of this group.

Cluster #5: Slowly Growing and Optimistic

Slowly Growing and Optimistic entrepreneurs have not let setbacks get in the way of their goal of future financial stability. Many of these 43 entrepreneurs[47] started their companies to fulfill a specific dream or out of a desire to be their own boss. They used their loans to purchase equipment, pay off debt, or move to a better location. Although many of these business owners appreciated the initial influx of loan capital, ultimately, this cluster reported the lowest impact from lender services. Although these business owners said they can meet their monthly financial obligations, they also reported the lowest level of comfort with the size of their business debt. Despite these challenges, entrepreneurs are confident about the future of their business, anticipating increases in take-home pay, sales and profit.

Many operate “niche” businesses

Numerous entrepreneurs in this cluster serve niche markets. There is a boutique serving women who have had mastectomies, an artisanal jam maker, an artist who restores religious imagery, and a sports program for people with special needs. Although some entrepreneurs created their businesses to fulfill a long-time goal of being their own boss, others turned a hobby into a small business. These businesses have a limited client base, requiring the entrepreneurs to adapt and expand their products and services to keep their clients engaged. The New York-based entrepreneur who restores religious imagery is focused on this need. “We are trying to grow; we are trying to innovate our markets.” The owner of the artisanal jam company had similar plans. “Our biggest goal for the year is to land an airline account and to launch our new product line.”

Slowly Growing and Optimistic businesses are set apart by their income volatility

Inconsistent cash flow was the principal factor interviewees in this cluster highlighted related to lagging business growth. Almost all interviewees reported unpredictable business activity, and unlike the Off Balance and Seasonal businesses where the low activity months were usually more cyclical, these entrepreneurs described more unpredictable ebbs and flows in income. More than half of the business owners in this cluster (60.5%) did report an increase in sales or profit in the final survey; however, some said they had drained their savings to some degree (18.6%), and others said they hadn’t been able to save more (79.1%). Although their businesses showed some growth, they often were not as profitable as owners would have liked, which put a crimp on financial independence and the entrepreneur’s sense of financial stability.

47 Thirteen borrowers from this cluster participated in in-depth interviews.

The owner of a gutter and siding business in Colorado is a veteran of such ups and downs. “Last month and this month are two different things. Right now, they’re almost night and day.” A graphic designer in Southern California noted similar monthly fluctuation, with some long dry spells. “There are low seasons, months with very low income, and, especially, after the end of the year, production is really low because people don’t want to do much business.”

In the four years that the artist who restores religious images has been in business, he has seen his share of dramatic swings. “I have seasons when I can earn two, three times what I would make with a weekly paycheck. And then there are weeks when I don’t make much… So when I do well, it’s time to back myself up a little, to save in order to be able to survive the times when it gets difficult.” Because most business owners lack sufficient cash reserves to withstand the low periods, some won’t pay themselves in order to cover costs.

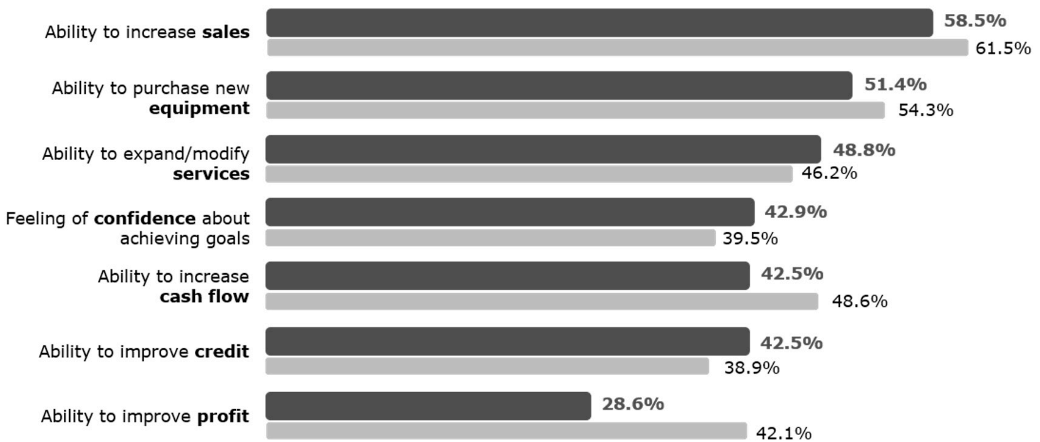
Microloans have had some tangible impacts, but entrepreneurs don’t always see the role of the lender in their success

About half of the entrepreneurs in this cluster (48.8%) sought a loan in order to maintain operations, and the other half (46.5%) borrowed to pay for an expansion. Only two (4.7%) sought capital to launch a business.

Compared to other clusters, a smaller number of these business owners rated lending services from Accion and Opportunity Fund as having a significant impact on their businesses. In both the initial and final survey, a little more than half reported that their loan significantly helped them increase sales or acquire equipment (Exhibit 22).

Exhibit 22. Only some business owners said lending services had important effects

In the categories listed below, percent of entrepreneurs who said Accion and Opportunity Fund had “a lot” of impact.[48]



48 Borrowers were asked to rate the impact of Accion or Opportunity Fund on 18 items. Survey items were rated on a scale of 1 (no impact) to 5 (a lot of impact). Values in this exhibit represent the combined percent of borrowers who ranked the loan’s impact as a 4 or 5. This exhibit shows only those items on which at least 40% of all borrowers in this clusters rated the item a 4 or 5 at either the initial survey or the follow-up. Change from initial survey to the follow-up is not statistically significant based on paired-samples t-test of difference in mean scores.

Access to capital helped some entrepreneurs acquire needed resources; for others, it created breathing room

Slowly Growing and Optimistic interviewees said they benefited from their loans in two key ways: access to capital gave them breathing room to focus on establishing their business; and, the loan helped pay for needed resources during crucial times in their businesses.

Access to capital provided breathing room

About half of the interviewees said that the loan gave them time to take stock. These entrepreneurs often used their loans to pay off debt or catch up on bills. Some set aside a bit of cash to ensure that they could focus on strengthening their businesses. Some of these entrepreneurs were approved for a smaller loan than what they had applied for, so they couldn't always use the money as they originally intended. For example, a San Francisco Bay Area owner of a carpet cleaning business sought a loan to repair the business's vans, but the loan amount was not enough to cover the repairs, so the owners used the loan to pay bills instead. "[The loan] gave us some breathing space with bills that were due: advertising bills, rent, and other bills that were piling up. It gave us a little more wiggle room to be able to concentrate more on the actual business instead of just paying off everything that we owed at the time. It gave us a good break." While this breathing space was significant at the time, most of these business owners said that the impact of the loan was not long-lasting, since they ended up with more debt and continued to have unpredictable cash flow that at times made repaying the loan difficult.

Two entrepreneurs felt that in hindsight, the influx of cash was not the best solution for them, particularly when their debt load was already high. The Southern California owner of an auto repair shop said she felt the loan added to her already existing debt without giving her enough capital to make a significant dent in it. She said, "nothing really changed. It was a $10,000 loan. I owed about $50,000 [in] other debt. I still had to juggle other cards."

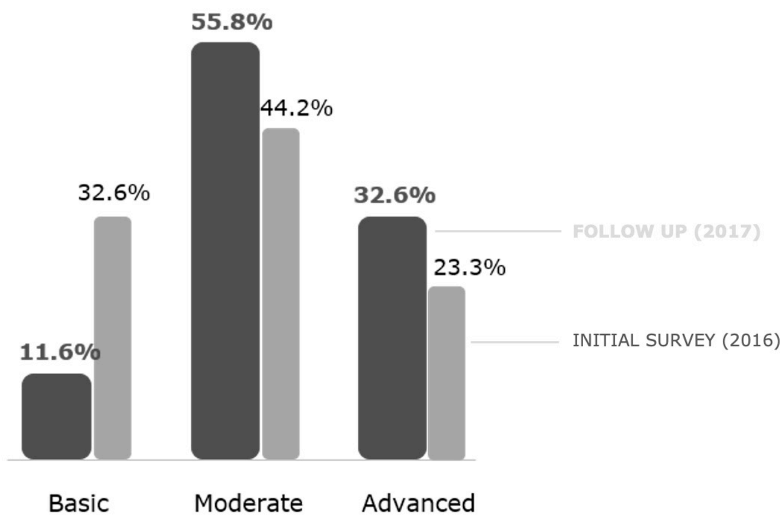
Access to capital provided a boost at crucial times

For the other interviewees, the influx of capital came at a pivotal moment. These Slowly Growing and Optimistic business owners used the loan to buy equipment they needed for growth, fix broken equipment, pay for business licenses, or launch websites to help better market their businesses. The owner of the Colorado gutter and siding business said using his loan for marketing led to an increase in business at a crucial time. "There was an upswing right after I got the website done," he said. The loan also covered signs on the business's trucks, which also helped. "[It] gave me a little bit more balance at home to spend time with my kids. They're getting older and getting ready to leave the nest, and so this year, having some of that other advertising out there full-time kept me from having to always go and pass out flyers and knock on doors and things like that, where I would never see the kids."

Slowly Growing and Optimistic business owners are formalizing their financial practices

This group began the study least likely to use more than basic financial tracking; 32.6% reported such practices as using a notebook or checkbook to track business finances. However, by the final survey, 55.8% employed "moderate" practices and 32.6% reported "advanced" practices (Exhibit 23).[49]

Exhibit 23. Almost all business owners now have moderate or advanced financial tracking practices



The proportion of business owners who said they had substantially changed their business finance tracking as a result of the loan or interactions with Accion or Opportunity Fund was 12.5% on the initial survey and 11.7% on the follow-up survey–a smaller percentage than other clusters.

These entrepreneurs are good trackers, but not great planners

Entrepreneurs in this cluster are meticulous about tracking their expenses and sales, whether on paper or by computer, but they are relatively inexperienced in projecting sales, profit, or take-home pay. Most interviewees, including a Northern California café owner, said that they track their expenses and sales almost daily–a common practice the evaluation team observed in small businesses with seasonal or unpredictable revenue. "I track it [my cash flow] every day, mostly through my cash register app," the café owner said. The owner of the Colorado gutter and siding business said he sees tracking as "just simple basic accounting. I do it by hand on paper. I don't use a computer program. I like to be able to look at the numbers."

Although few businesses in this cluster have formal business plans, some are taking steps in that direction. The owner of the gutter and siding business said that he started to develop

a plan, but "in construction, it's so hard to have a financial plan. The amount of work you have changes from week to week, month to month, and so [a] financial plan is very hard. … It can change your whole scope of thinking, and now you're just trying to survive." On the other hand, a Florida entrepreneur who creates athletic programs for special needs children said that the influx of capital from her loan allowed her to plan for the future. "Our expenses are more balanced. They're not as scattered as they were when we first moved into the location and got all the equipment. I think that if we didn't have the loan approved at the time, we still would've been more in the red and a lot farther from that [break]-even point than we are now."

Some entrepreneurs in this cluster are prepared for surprises, just not big surprises

In interviews, some said they are prepared to cover moderate expenses such as equipment repairs. The owner of an auto repair shop said she had faced financial emergencies in the last year, including a $1,500 van repair bill. But, she had "some money in the bank" to cover it. The café owner faced similar expenses but did not see them as emergencies. "It's more like expected." However, it is clear that not all entrepreneurs in this cluster are well prepared. At the end of the study, only a quarter (25.6%) said their business could withstand a negative event, and an even smaller number (9.3%) said their businesses had sufficient cash reserves to withstand a financial emergency (Exhibit 23). Therefore, while some business owners have the funds to cover minor expenses, they do not have the cushion they need to handle larger challenges.

Exhibit 24. Most business owners can meet their current debt but are not prepared for emergencies[50]

Category	% that reported "most of the time" or "always"
Monthly revenue is sufficient to cover operating costs	76.7%
Able to pursue growth opportunities for business	50.0%
Able to meet business debt and other obligations on time	44.2%
Able to predict monthly take-home pay	37.2%
Able to withstand negative events	25.6%
Has sufficient cash reserves to withstand financial emergency	9.3%

50 Survey items were ranked on a scale from 1 (rarely) to 4 (always or almost always). Values shown in this exhibit represent the combined percentage of borrowers who ranked an impact as a 3 (most of the time) or 4.

Business owners in this cluster are uncomfortable with their level of business debt

While nearly half of these entrepreneurs (44.2%) said they could meet their business debt and other obligations on time, they are far less comfortable with their debt level than members of other clusters. In the final survey, almost two thirds of these entrepreneurs (65.2%) said they were somewhat or very uncomfortable with their level of debt. Additionally, 72.1% reported difficulty paying their debt, indicating that it was a source of stress. The auto repair shop owner is in that group. "I still have debt…it's killing us," she said. This is surprising given that, by the end of the study, almost all Slowly Growing and Optimistic business owners reported they had the same amount of debt (41.9%) or less debt (46.5%) than they did a year earlier. Some Slowly Growing and Optimistic business owners told interviewers that their loan added more stress with few benefits.

These entrepreneurs anticipate growth

This cluster was among the least likely to experience changes in take-home pay. Most (67.4%) said that their take-home pay remained the same over the past six months. However, three-quarters (76.7%) anticipate an increase in their take-home pay in the coming six months.

The same is true for sales and profit. While less than half of business owners (41.9%) reported an increase in both sales and profit in the past six months, most (81.4%) anticipate increases.[51]

Slowly Growing and Optimistic business owners need cash flow to achieve their goals

Some Slowly Growing and Optimistic entrepreneurs are stuck; they want to hire more people, develop additional products, or purchase equipment to expand their businesses, but they aren't able to yet. At the end of the study, nearly half of these entrepreneurs said they were rarely (11.9%) or only sometimes (38.1%) able to pursue business growth opportunities. The owner of the gutter and siding business was in this predicament. "I'm just a small company. I could take on more work if I had more people, but to have more people, I have to have more money."

The interviews offer some insight into the strategies some entrepreneurs are implementing to improve their businesses. "I actually started going to school … for music management," an Illinois event and music planner reported. He is also managing a local band. The owner of the auto repair shop "signed up for some business coaching of someone who owns a successful shop." And the café owner is constantly on the lookout for new locations for her business.

Slowly Growing and Optimistic business owners need to open new doors to move from positivity to practicality

Entrepreneurs in this cluster are particularly hopeful for the future. They have realistic goals that are focused on short-term improvements to their business, such as hiring additional

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51 At the beginning of the study, 92.3% anticipated increases in sales and profit. The change between the two surveys was not statistically significant at $p<.05$.

help or upgrading equipment or location. Yet some appear to be at an impasse, unable to afford the things they know would allow them to grow. They are also stressed about their debt and are not sure they could withstand a financial emergency.

Unlike Off Balance and Seasonal business owners, who generally know when their growth seasons occur, Slowly Growing and Optimistic entrepreneurs' "seasons" aren't truly cyclical. For example, the religious imagery restoration business owner may be hired for a large restoration that temporarily boosts his income. Revenue at the post-mastectomy boutique fluctuates with insurance payments, so sometimes the owner receives many payments at once, and other times she waits weeks.

Although some Slowly Growing and Optimistic entrepreneurs have long-term goals for their businesses (the entrepreneur who restores religious art dreams of becoming "a global wholesale seller of crafts"), they haven't necessarily developed a plan to achieve those goals yet. Many in this group aim to translate their overall optimism into a clear path forward for their business.

Conclusions and Implications

CDFIs and other mission-based lending services play a crucial role in revitalizing distressed local and regional economies. Small business lending creates opportunities for low-wealth communities to participate in and benefit from financial services, disrupting structural and systemic causes of poverty (Pinsky, 2001). Microfinance in particular provides a way for new entrepreneurs to launch or grow a business, paving the way for women, people of color and immigrants to reach financial security for themselves and their families.

Among the challenges CDFIs face is the need to demonstrate that their strategies bring lasting change to communities (Theodos & Seidman, 2017). There is also growing interest in internally focused learning to continue to strengthen lending services (Ibid). This study is an important step forward in conquering that challenge. It explores the longer-term impacts of microlending on small business owners across the country and offers insights into how small business owners define success and the outcomes they achieve over time. These findings ultimately can be used to guide future investments in entrepreneurs, their businesses, and their broader communities.

What did we learn?

Most entrepreneurs are thriving

By many indicators, entrepreneurs are better off than they were at the beginning of the study and expect to continue their business success. Over one in four entrepreneurs in the study were Focused and Growing business owners, on a trajectory to continue to grow their sales and profits. Many entrepreneurs improved their financial management practices, are more financially stable, and have a more favorable work-life balance as a direct result of their loan.

Success means something different to every small business owner

Some owners want to expand, hire more workers, bring in more revenue, and multiply profits. Others intend to hold their secure "day jobs" and have a small business on the side for additional income. Others are happy with their current levels of sales and revenue. For entrepreneurs, success is personal: a sense of autonomy over life and livelihood. Understanding that success looks different to every entrepreneur can help ensure lending supports more small businesses to meet their goals.

Small business owners have different needs

Just as success has different definitions, this study provides empirical data showing the ways in which entrepreneurs' needs differ. Although some small business owners benefit by devoting loan capital to specific uses, such as equipment purchases or investment in marketing, others benefit just as much from the technical assistance and guidance they receive from lenders. Business owners with a second business or second job have unique long-term planning needs, particularly if they wish to ultimately jettison that second job. Other entrepreneurs serve niche markets with unpredictable or seasonal demand and require technical assistance to gird them for this market instability.

Small businesses create jobs

These small business owners added over 300 new FTEs during the course of this study. Many small business owners were able to hire new workers and expand their benefits in meaningful ways.

Short- and long-term loan impact varies by borrower type

One key finding of the cluster analysis was that each cluster perceived the impact of their loan on their personal and business goals differently. While nearly all clusters initially found their loans highly beneficial, this perception did not persist for all groups. For some, tangible benefit faded once the capital was spent. The gain appeared to last longer for small business owners who had a targeted use for the loan, such as an equipment purchase, and for those not relying on Accion and Opportunity Fund's loan alone to cover existing expenses.

Microloans are a boon to business owner confidence and quality of life

Microloans boost myriad business indicators: they improve cash flow, allow staff expansion, and make equipment purchases possible. But for many entrepreneurs, just as important was the lift in self-confidence the loan sparked, giving them the sense that someone took a chance on them. Loans gave small business owners determination and certainty about tackling their goals. Further, loans heightened their sense of legitimacy as entrepreneurs. While such holistic benefits are hard to measure, they are a clear indication of the personal worth of mission-based lending.

What's left to study?

Research is needed to understand the effect of small and micro business lending on community level indicators

Initially a large-scale goal of this study was to look at how microfinance affects communities. Tracking community-level metrics would include understanding how an entrepreneur's networks change and grow over time, generational impacts of entrepreneurship (i.e., how business owners' children relate to entrepreneurship), and how business owners contribute to wider neighborhood and community development. However, during study design, it was determined that long-term community-level outcomes were beyond the scope of this project. Community transformation takes time, and entrepreneurship is just one of many elements that can make a difference at a community level. Further exploration is needed to determine how microfinance interventions may link to longer-term community-wide development indicators such as neighborhood revitalization and poverty alleviation.

Additional objective measures of financial growth are needed

The study was based heavily on entrepreneur self-report. Therefore, some financial indicators may suffer from bias, as it is only natural for respondents to paint a positive picture about their businesses. Although this study looked at self-reported change in measures such as take-home pay, revenue, and sales, it did not look at objective measures of such changes. Specific and accurate measurement of these changes can be difficult because small business owners track finances in a variety of ways. Determining how to collect such data remains an ongoing challenge. Yet an analysis of this information could deepen our understanding of how small and micro business lending affects financial health.

Ongoing exploration of the link between advising services and entrepreneur outcomes is needed

Accion and Opportunity Fund provide affordable capital and support services to their clients. Support can vary from one lender to the next and is often based on individual entrepreneur needs. Matching the type and amount of support received to entrepreneur outcomes such as financial tracking, financial security, and quality of life could further demonstrate how advising services impact small business owners and help identify which services are needed to maximize these benefits.

How can this study's results support entrepreneurs?

Financial volatility impacts small business owners differently depending on their levels of financial stability

On average, small business owners were more financially stable and prepared to withstand financial emergencies at the end of the study than they were at the beginning. For several clusters, this meant their businesses were more profitable. Some entrepreneurs were able to project sales and revenue and save money to cover unexpected costs. But this was often not the case for entrepreneurs with high levels of financial instability, such as the seasonal

business owners in the Off Balance and Seasonal cluster and those still unable to draw a salary in the Retrenching cluster.

Consider how entrepreneur clusters indicate business trajectories

It is expected that most entrepreneurs will experience highs and lows over the course of their businesses. It is possible then that the clusters identified in this study represent phases that business owners may go through as they adapt to the challenges of entrepreneurship. Entrepreneurs in the Focused and Growing cluster may have been small and struggling to make ends meet at some point but were able to get their business ready for growth. Stable and Strategic entrepreneurs could face future challenges that cause them to course correct and slow down, similar to Retrenching entrepreneurs. Slowly Growing and Optimistic entrepreneurs may use their financial tracking abilities to achieve future stability. Recognizing these characteristics in entrepreneurs can help address their individual needs and help them move to a future path of success.

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