

MILKEN
INSTITUTE

Empowering Communities and Their Banks: Strategies for Enhancing Minority Depository Institutions

ARON BETRU, CHRISTOPHER LEE, RAGINI CHAWLA

ABOUT THE MILKEN INSTITUTE

The Milken Institute is a nonprofit, nonpartisan think tank.

For the past three decades, the Milken Institute has served as a catalyst for practical, scalable solutions to global challenges by connecting human, financial, and educational resources to those who need them. Guided by a conviction that the best ideas, under-resourced, cannot succeed, we conduct research and analysis and convene top experts, innovators, and influencers from different backgrounds and competing viewpoints. We leverage this expertise and insight to construct programs and policy initiatives.

These activities are designed to help people build meaningful lives, in which they can experience health and well-being, pursue effective education and gainful employment, and access the resources required to create ever-expanding opportunities for themselves and their broader communities.

ABOUT THE CENTER FOR FINANCIAL MARKETS

The Milken Institute Center for Financial Markets conducts research and constructs programs designed to facilitate the smooth and efficient operation of financial markets—to help ensure that they are fair and available to those who need them when they need them.

SUPPORTED BY

JPMORGAN CHASE & CO.

JPMorgan Chase & Co. (NYSE: JPM) is a leading global financial services firm with assets of \$2.6 trillion and operations worldwide. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, and asset management.

This research was made possible by the **JPMorgan Chase & Co.** through Small Business Forward, a five year, \$150 million initiative connecting underserved small businesses with the capital, targeted assistance, and support networks to help them grow faster, create jobs and strengthen local economies. To drive impact, Small Business Forward focuses on diversifying high-growth sectors, expanding entrepreneurial opportunities in neighborhoods and expanding access to flexible capital for underserved entrepreneurs. The views and opinions expressed in the report are those of the FinRegLab and do not necessarily reflect the views and opinions of JPMorgan Chase & Co. or its affiliates.



The Rockefeller Foundation advances new frontiers of science, data, policy, and innovation to solve global challenges related to health, food, power, and economic mobility. As a science-driven philanthropy focused on building collaborative relationships with partners and grantees, The Rockefeller Foundation seeks to inspire and foster large-scale human impact that promotes the well-being of humanity throughout the world by identifying and accelerating breakthrough solutions, ideas, and conversations. For more information, visit rockefellerfoundation.org.



CONTENTS

1	EXECUTIVE SUMMARY
3	BACKGROUND
6	POTENTIAL STRATEGIES FOR MDI CAPACITY BUILDING
6	A. Organic Growth Strategies
10	i. Partnering with FinTech to Drive Organic Growth
11	B. Inorganic Growth Strategies
13	i. Supporting a Pilot Tier 1 Capital Bank Fund
16	C. Regulatory and Policy Strategies
17	i. A Hypothetical Scenario to link MDIs, CRA, and OZs
22	ii. Engaging in Advocacy in the Emerging OZ Era
23	CONCLUSION
24	ACKNOWLEDGMENTS
25	ABOUT THE AUTHORS



EXECUTIVE SUMMARY

Small businesses are vital drivers for wealth creation and economic prosperity in America, and capital is a necessary input for the success of small businesses. For minority-owned businesses,¹ access to capital is an especially critical issue. The Milken Institute, with support from The Rockefeller Foundation and JPMorgan Chase & Co., looked at ways to promote access to capital for minority enterprises, and in particular, leveraging Minority-Owned Depository Institutions² (MDIs) as conduits for mobilizing investments to underserved communities that lack adequate access to capital.

The purpose of this paper is to analyze how MDIs can be best positioned to provide greater access to capital for minority-owned small businesses. In particular, this paper accumulates the findings of five different bodies of work that all ultimately focus on building the capacity of MDIs: an MDI overview analysis, an MDI efficiency analysis, a small business credit underwriting analysis, investment fund

- 1 Ownership by minority individuals means the business is at least 51 percent owned by such individuals or, in the case of a publicly-owned business, at least 51 percent of the stock is owned by one or more such individuals (i.e., the management and daily operations are controlled by those minority group members).
- 2 The Federal Deposit Insurance Corporation's (FDIC) Policy Statement defines "minority depository institution" as any federally insured depository institution where 51 percent or more of the voting stock is owned by minority individuals. "Minority" as defined by Section 308 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 means any "Black American, Asian American, Hispanic American, or Native American." The voting stock must be held by US citizens or permanent legal US residents to be counted in determining minority ownership. In addition to institutions that meet the ownership test, institutions will be considered minority depository institutions if a majority of the board of directors is minority and the community that the institution serves is predominantly minority.



strategies involving MDIs, and related regulatory and policy analyses.³ There is evidence that MDIs can be meaningful funding sources for minority-owned small businesses, and, as a result, we conducted an overview analysis of MDIs to understand their relative importance in serving minority communities and their role in broad-based economic development. In addition, we conducted a test of MDI efficiency relative to non-MDIs, and the results indicate that MDIs have the same level of efficiency as non-MDIs. However, with greater capacity, these institutions could provide more credit for targeted minority communities, arguably leading to greater wealth accumulation among populations that have substantial wealth gaps. Despite the potential MDIs have, they were observed to be much smaller in scale.

Subsequently, we considered three different strategies in order to build MDIs' capacity from their current state: organic growth through stronger cash-flow underwriting mechanisms, inorganic growth through mergers or acquisitions of MDIs with similar missions and structures, and new and alternative growth strategies through the federal Opportunity Zone (OZ) initiative and Community Reinvestment Act (CRA) eligibility. These three strategies may give MDIs greater capacity to serve the needs of minority communities.

³ The MDI overview analysis can be found [here](#). The MDI efficiency analysis is pending publication by end of Q1 2020. The small business credit underwriting analysis can be found [here](#). The fund strategy and the regulatory and policy strategy are included in section III of this paper.



BACKGROUND

Small businesses are the backbone of broad-based economic development, and adequate funding for these enterprises is key to ensuring their ability to create jobs. At the same time, the United States has seen a significant (and growing) underrepresentation of minority-owned small businesses.⁵ The Milken Institute has been at the forefront of investigating the root causes of this discrepancy and the related negative effects on job creation and wealth generation within minority communities.

Building on initial conversations carried out at the White House in 2016, the Milken Institute and the US Small Business Administration formed an initiative to develop actionable solutions to the challenges limiting minority-owned small businesses' access to capital. The Partnership for Lending in Underserved Markets (PLUM), a two-year pilot program, was launched to this effect in September 2016 and has since completed its research. Building on the initial findings of PLUM, the Milken Institute committed to exploring market-based solutions that specifically address the identified shortcomings in this space.

Overall, the primary source of startup and acquisition funding for all small businesses is savings and equity investments from personal networks and, secondarily, bank loans. However, for minority-owned businesses, the second most prevalent source of funding is credit cards. While credit card products are effective for short-term liquidity needs, they are not designed to catalyze long-term growth, which can place minority-owned businesses at a disadvantage and potentially stymie job creation. Increasing access to traditional bank lending, therefore, is an important component of improving the potential for both the growth of minority-owned small businesses and associated employment gains in the communities in which they operate.

Unfortunately, there is some evidence that minority-owned small businesses may have restricted financing choices. According to the findings of an article published in the *Journal of Consumer Research*,⁶ minority business owners are presented with more loan requirements and offered less help to fulfill them during their pre-application (loan inquiry) interactions with banks. These challenges could make them less likely to continue their financing application due to a negative perception of

5 In May 2018, the Milken Institute released a summary of the second phase of its Partnership for Lending in Underserved Markets, which is available [here](#). The paper provides details of the joint Milken Institute-US Small Business Administration initiative and the operational activities in two target markets. The paper also discusses challenges of minority-owned small businesses in relation to capital access. This paper attempts to build off of these key program learnings while delving specifically into the MDI sector.

6 S. Bone, G. Christensen, and J. Williams, "Rejected, Shackled, and Alone: The Impact of Systemic Restricted Choice on Minority Consumers' Construction of Self," *Journal of Consumer Research* 41 (2014): 451-474.



the process and its outcome. Furthermore, an average of 72 percent of minorities do not have a bank branch in their neighborhood.⁷ Given the challenges faced by small businesses,⁸ especially minority-owned small businesses, it is imperative to assess which type of banks are best placed to provide access to capital for minority communities. According to a recently published market overview of minority-owned banks,⁹ there is evidence to suggest that MDIs could be meaningful funding sources for minority-owned small businesses, and therefore, important economic development engines due to their relative prioritization of small-business lending. However, these minority-owned banks are small in scale, with median total assets of certain categories of MDIs being less than \$200 million, as shown in Table 1. Many questions remain about what these MDIs would need—equity capital, human capital, technology—to prudently increase their scale, and, potentially, their impact. In addition, what community impact would result? Would MDIs prioritize small business loans?

Table 1: Medians for Selected Bank, Demographic, and Income Items by Type of Bank and Census Tract, 2017

	Total Assets (\$'000)	Number of Small-Business Loans	Small-Business Loans to Total Assets (%)	Tier 1 Capital to Total Assets (%)	Percentage of Total Population (%)				Median Family Income (\$)
					Minority	Hispanic	Black	Asian	
All FDIC-Insured Institutions	212,688	357	17.10	10.39	23.92	6.24	3.33	1.77	69,679
All MDIs	312,360	224	13.24	11.36	85.36	35.37	1.27	3.72	55,790
Black MDIs	173,477	165	19.35	9.09	91.02	4.87	73.15	1.60	46,490
Hispanic MDIs	469,282	285	8.43	10.98	96.22	93.59	0.00	0.00	42,917
Asian MDIs	363,516	194	13.27	11.87	75.46	17.40	2.83	39.18	72,801
Other MDIs	103,493	259	18.76	11.15	36.87	4.99	2.67	0.66	51,413

Source: Milken Institute, “Minority-Owned Depository Institutions: A Market Overview,” 2019

7 James R. Barth, Aron Betru, Matthew Brigida, and Christopher Lee, “Minority-Owned Depository Institutions: A Market Overview” (Milken Institute, 2019).

8 Carolyn Schulman, “Partnership for Lending in Underserved Markets: Increasing Minority Entrepreneurs’ Access to Capital” (Milken Institute, 2019).

9 Barth, Betru, Brigida, and Lee, “Minority-Owned Depository Institutions: A Market Overview.”



With a host of national policy initiatives seeking to address the lack of capital in low- and moderate-income communities, additional research into the opportunity presented by the presence of MDIs is essential. While this report provides data on MDIs' support of local small-business lending, assessing MDI capacity to serve as a fulcrum of economic development in underserved communities requires an understanding of their operational capabilities. The question, therefore, is are MDIs efficient?

A recent study compared the ROAs and small business lending efficiency of MDIs and depositories categorized as "non-MDIs."¹⁰ The study also examined these institutions for a period that included a recent macroeconomic shock, the 2008 financial crisis. Utilizing data from the FDIC Reports of Condition and Income (Call Reports) for a substantial set of banks, a Data Envelopment Analysis (DEA) was used to determine how a set of MDIs performed relative to comparable institutions. Overall, the results indicated that MDIs are not systematically less efficient than comparable non-MDIs. Recognizing that MDIs are not homogeneous, the study also examined relative efficiency across types of MDIs by racial and ethnic groupings and found that there were differences across MDI types.

As the analysis showed, MDIs are small in the broader commercial banking context, and the result of that small scale is increased susceptibility to challenges associated with increased compliance costs, operational complexity, and a fast-paced, technology-enabled market. If enhancing the scale of their impact is the target, the following questions need to be answered about MDIs' potential to be greater economic development engines for underserved markets:

- What are potential capacity improvement strategies to better enable an MDI's ability to serve these markets?
- How can these institutions attract resources for the aforementioned improvement strategies, and what are the potential implementation strategies?

¹⁰ Gregory B. Fairchild, Young Kim, Matt Brigida, Aron Betru, "Good Money after Bad? The Comparative Efficiency of Minority Depository Institutions (MDIs)" (Milken Institute, 2019). This analysis includes banks in the 50 states of the US and in Puerto Rico. [This report is pending publication by end of Q1 2020 and is a working paper].



POTENTIAL STRATEGIES FOR MDI CAPACITY BUILDING

Based on an analysis of MDI comparative efficiency, if MDIs are as efficient as comparable “non-MDIs,” the strategy to increase their capacity could be focused on growth rather than turnaround efforts. With this in mind, we placed MDI growth strategies into three categories:

1. Organic (do what you already do, but do it better) growth,
2. Inorganic (acquisition and consolidation-based) growth, and
3. Alternative actions based on new regulatory and policy strategies.

A. Organic Growth Strategies

To increase output and revenue, MDIs must compete for market share in terms of securing more deposits and borrowers alike. Larger banks have experienced considerable deposit growth, typically at the expense of smaller institutions. A key driver of this is the introduction of easier multi-point customer engagement that leverages technology and remote banking capabilities. This continues today; deposits at banks with less than \$10 billion in assets fell by 3 percent during the 12 months ending June 2019, while deposits at larger banks increased by 6 percent.¹¹ Given the regulatory importance of balancing the ratio of bank capital, lending, and deposits, the lack of sufficient deposits impedes the capacity of MDIs to serve their communities. Neighborhoods that experienced a disproportionate share of the economic slowdown since the 2008 financial crisis are largely the low-income areas MDIs serve, and, thus, access to deposits for MDIs have proven to be a challenge. To address this, the Minority Bank Deposit Program (MBDP), created in 1969 to support minority enterprise growth by leveraging federal deposits into minority banks,¹² can be a powerful tool. Although seen as a positive tool in the past, its scale has diminished in recent years. Increased federal resources for and participation in the MBDP can provide the necessary support to enable MDIs' greater scale.

¹¹ Andy Peters, “Small banks’ big challenge: Growing deposits,” *American Banker*, September 25, 2018.

¹² “About Minority Bank Deposit Program,” Bureau of the Fiscal Service, US Department of Treasury, last modified August 30, 2019, <https://fiscal.treasury.gov/mbdp/about.html>.

¹³ It is worth noting that the “Ensuring Diversity in Community Banks” bill introduced in September 2019 notes the need to scale up the Minority Bank Deposit Program to better meet its objectives.



Similarly, in terms of lending, technology has also played a significant role in enhancing underwriting standards critical to ensuring high-quality assets are on the bank's balance sheet. Post-2008, banks in minority communities experienced significant closures and consolidations. The severe contraction of banking services in low income communities triggered by the 2008 financial crisis has in turn given way to a period of experimentation and innovation, as both new entrants and incumbents have begun exploring ways to use new technology and data sources to overcome the longstanding challenges in acquiring and serving customers, especially small businesses in these communities.

A new report from FinRegLab¹⁴ details the first wave of change, as new FinTech entrants built online platforms for delivering various credit products to small businesses. Some of these companies became direct lenders in their own right, while others partnered with traditional financial institutions. They all relied heavily on technology and data to manage customer acquisition, underwriting analyses, and service delivery.

In particular, the new FinTech providers' reliance on highly-automated underwriting models and new electronic data sources facilitates faster processing and provision of smaller loans than many traditional banks are willing or able to offer. Rather than relying predominantly on traditional credit scores (personal or business), they draw on a broader range of alternative or non-traditional data, including electronic records from businesses' bank accounts and accounting software programs, sales records from e-commerce platforms and payment processors, shipping records, and even social media engagement metrics. Indeed, e-commerce platforms, payment processors, and accounting software providers have also begun offering credit to small businesses based largely on their analyses of transactional and cash-flow data.

Though the share of banks' credit portfolios from small business sources still does not match pre-crisis levels, banks also have gradually recovered their lending as the economic expansion continued in the second half of the decade, however, for firms seeking capital of less than \$1 million, the lending environment has changed as banks are less willing to meet those demands and associated costs. This has allowed non-bank platforms to move into the void and serve these capital-starved customers.¹⁵

14 FinRegLab, "The Use of Cash-Flow Data in Underwriting Credit: Empirical Research Findings" (July 2019), <https://finreglab.org/reports/cash-flow-data-underwriting-credit-empirical-research-findings/>.

15 Karen Gordan Mills and Brayden McCarthy, "The State of Small Business Lending: Innovation and Technology and the Implications for Regulation" (Harvard Business School, 2016): 34 (graph showing 20 percent as for 2017, down from peaks of 30 percent or higher in 1995 and 2009).



In addition, they have worked to automate manual processes, reduce processing times, and take advantage of electronic data sources, particularly transaction account records for their existing customers. For example, Wells Fargo found transaction account data to be invaluable to its underwriting process when it launched a “FastFlex” small business program in 2016 for existing customers to provide loans from \$10,000 to \$35,000.¹⁶

While electronic cash-flow data appears to hold great promise in small business underwriting—sufficient to draw interest from an increasing range of both traditional incumbents and new entrants—there is relatively little public empirical research available to evaluate the data’s general predictiveness or its implications for underwriting underserved populations. With this question in mind, FinRegLab conducted an empirical analysis¹⁷ using data from several nonbanks to address the following:

- Are cash-flow variables and scores useful in predicting credit risk in the underwriting process, as compared with traditional credit scores and/or credit bureau attributes?
- Do cash-flow variables and scores expand the availability of credit, particularly concerning consumers and small business owners who may have experienced constrained access to credit under more traditional underwriting criteria?
- What, if any, risks of creating a disparate impact among different demographic groups appear to arise from the use of cash-flow variables and scores in highly automated underwriting processes?

At a high level, the report concluded:

- **Predictiveness:** For the participants for which loan-level data were available, the analysis showed that the cash-flow variables and scores tested were predictive of credit risk and loan performance across the heterogeneous set of providers, populations, and products studied. The cash-flow metrics generally performed as well as traditional credit scores, suggesting that cash-flow variables and scores can provide meaningful predictive power among populations and products similar to those studied where traditional credit history is not available or reliable. Moreover, the analysis indicates that the cash-flow data and traditional credit data provided different insights into credit risk, such that the cash-flow data frequently improved the ability to predict credit risk among borrowers that are scored by traditional systems as presenting similar risks of default. These results occurred across the spectrum of traditional credit score bands.

¹⁶ “Wells Fargo Launches FastFlexSM Small Business Loan,” Wells Fargo, May 10, 2019, <https://newsroom.wf.com/press-release/consumer-lending/wells-fargo-launches-fastflex%E2%84%A0-small-business-loan>.

¹⁷ FinRegLab, “The Use of Cash-Flow Data in Underwriting Credit: Empirical Research Findings.”



- **Inclusion:** There was evidence that each of the six companies studied that had begun using cash-flow variables and scores to improve their underwriting outputs are serving borrowers who may have historically faced constraints on their ability to access credit. However, data limitations did not permit a consistent quantitative analysis across all participants. The analysis used a variety of benchmarks, including the percentage of borrowers with low or no traditional credit scores, borrower income levels, and residence in ZIP codes where racial minorities exceed 50 percent or 80 percent of the total population.
- **Fairness:** Finally, where data were available for analysis, the degree to which the cash-flow data were predictive of credit risk appeared to be relatively consistent across borrowers who likely belong to different demographic groups. Rather than acting as proxies for race and ethnicity or gender, the cash-flow variables and scores appeared to provide independent predictive value across all groups. When compared to traditional credit scores, the cash-flow based metrics appear to predict creditworthiness within subpopulations at least as well as the traditional scores, and better in selected cases. These results suggest that cash-flow variables and scores do not create a disparate impact among protected populations.

Therefore, the research suggests positive implications for MDIs wishing to serve their communities better; investing in technology matters in fueling organic growth. New sources of electronic cash-flow data already appear to be helping to make small business lending faster and less costly to underwrite, while giving lenders a deeper view of borrowers when combined with other methods. The potential to make such lending substantially more predictive and more inclusive could have impacts at multiple levels; individual business owners and their employees, their local communities, various types of financial services providers, and even for the nation's economy as a whole can benefit. The fact that so many different types of market actors are exploring the use of such data—often in partnership with each other—suggests growing recognition that the market may be undergoing fundamental changes. If MDIs wish to compete in the future of banking, investing in technology to both improve customer experience and grow deposits, as well as improved underwriting strategies that allow them to better serve their communities, is needed.



A. i. Partnering with FinTech to Drive Organic Growth

Technological advancements have enabled the rise of the “Internet of Finance,” with online, non-bank finance platforms experiencing significant growth rates throughout the first half of this decade.¹⁸ Over the years, these platforms have steadily encroached on territory once occupied solely by traditional banking incumbents (both large and small).

Rather than being thought of as villains of traditional finance, non-bank financing platforms are increasingly offering an olive branch to banking incumbents. Despite their perceived advantages, non-bank financing platforms have faced significant pressures on their business model, which has resulted in a strategic pivot from competition to cooperation. There are several reasons for this shift to a more collaborative model, including changes to venture capital investing,¹⁹ a fragmented financial services regulatory environment,²⁰ cost of capital, and cost of customer acquisition.

For incumbent banks, particularly smaller banks, the opportunity to partner with FinTechs offers several advantages. First, partnering with a FinTech allows smaller banks to be capital efficient in their strategy to incorporate FinTech into their underwriting (e.g., the less efficient option being to build the FinTech capability internally, or buy a firm with the capability). Second, from a cost and competitive standpoint, smaller banks face significant cost pressures, which makes them unwilling or unable to develop innovative products and services internally. This puts them at a competitive disadvantage relative to their larger peers that may have the capabilities to build more intuitive, tailored products capable of servicing the digital demands of their customers. From a financial inclusion perspective, the ability to utilize a FinTech platform’s underwriting methodology could not only expand a bank’s customer base but facilitate lending to areas previously considered economically unviable. Similarly, partnerships with FinTech platforms offer banks the opportunity to expand into internet- and mobile-product and service offerings.

18 In a prior report, the Milken Institute Center for Financial Markets profiled roughly 80 online, non-bank finance platforms operating in the US market. The report covers the landscape of US-based non-bank financing platforms operating in the consumer and small business financing space, and segments them according to the platform model. The report can be viewed here: <https://www.milkeninstitute.org/reports/us-online-non-bank-finance-landscape>.

19 In a 2017 report by Accenture, “FinTech and the Evolving Landscape: Landing Points for the Industry,” the amount of venture capital investments in competitive versus collaborative FinTechs in North America, in particular, has shifted dramatically from 2010 to 2015. In 2010, 40 percent of investment went to collaborative FinTech. By 2015, investment in collaborative FinTech grew to 60 percent. The report is available here: https://www.accenture.com/t20161011t031409z_w_/us-en/_acnmedia/pdf-15/accenture-fintech-evolving-landscape.pdf.

20 The US financial regulatory system is complex and, at times, convoluted, especially given our federalist system of governance. A US Government Accountability Office (GAO) report published in 2016 examined the jurisdictions of the various federal financial services regulatory authorities and found that in the absence of congressional action “it is unlikely that remaining fragmentation and overlap in the U.S. financial regulatory system can be reduced or that more effective and efficient oversight of financial institutions can be achieved.” The GAO report can be accessed here: <https://www.gao.gov/products/GAO-16-175>.



For FinTech firms, partnering with depository institutions allows access to customers and low-cost funds, and, more importantly, the ability of this relationship to provide for a consistent national market for credit. Partnerships with depository institutions allow for non-bank FinTech platforms to leverage a bank's interest rate export capability under the Federal Deposit Insurance Act.²¹ Through this, non-bank FinTech platforms can market their products and services on a national, consistent basis without having to abide by separate and distinct usury laws adopted in the 50 states.

These partnerships can also assuage regulatory concerns about a non-bank platform given the role a partner bank plays in conducting oversight and compliance in its partnerships with third-party providers. As a regulated entity, a depository institution must adhere to FDIC and Office of the Comptroller of Currency (OCC) third-party vendor management guidelines, which essentially place the FDIC and the OCC as de-facto regulators of bank-partnered FinTech firms and provides another layer of protection.^{22,23}

Through a partnership approach, both FinTechs and incumbent banks can utilize their combined strengths to address individual weaknesses. For MDIs, partnerships with third-party FinTech firms offer the opportunity to lead in the future of banking without spending considerable resources on building the future.

B. Inorganic Growth Strategies

Because of the rising cost of compliance, risk, and regulatory management, commercial banking has become a business where scale matters more than ever. Banks that operate at scale—those with assets greater than \$1 billion—generally produce greater profitability and shareholder value. For example, as of December 2018, the median Return on Average Tangible Common Equity for all banks in the \$250-\$500 million asset range was 10.1 percent, as compared to 11.5 percent for banks in the \$1-5 billion asset range. Likewise, the median Price to Tangible Book value for banks in the \$250-500 million asset size range was 112 percent, versus 142 percent for banks with assets between \$1 and \$2.5 billion.²⁴

21 Jackson Mueller, "Bipartisan Opportunities to Legislate U.S. FinTech in the 21st Century" (Milken Institute, March 1, 2018), <https://www.milkeninstitute.org/reports/bipartisan-opportunities-legislate-us-fintech-21st-century>.

22 The US Treasury explains this unique relationship further in its "Supervisory Insights: Winter 2015," https://www.fdic.gov/regulations/examinations/supervisory/insights/siwin15/si_winter2015.pdf.

23 It is important to note that such partnerships are being challenged at the state level. Litigation covering "Valid-when-made" and "True Lender" threaten the viability of these partnerships.

24 National Banker's Association's S&P Global Market Intelligence analysis; includes public banks nationwide and excludes merger targets; financial data as of December 31, 2018; market data as of March 21, 2019. The return on tangible equity is net income divided by average shareholder equity less intangibles.



This drive for scale has fueled mergers and acquisitions and resulted in the number of FDIC-insured institutions dropping significantly over the last three decades. While some of this consolidation has been through failures—most notably during the Savings and Loan and Financial crises—most have occurred through mergers and acquisitions as institutions seek to counteract the impact that increasing regulation has on their profitability. The MDI segment is no exception to this trend. Between 2002 and 2017, approximately 95 percent of MDI consolidations involved a merger or acquisition, and approximately half of those transactions involved MDIs exclusively.²⁵

Despite this consolidation activity, MDIs remain small, and additional consolidation could be a strategy to accelerate these organizations' ability to obtain the benefits of scale. As of December 2018, there were 149 MDIs in the United States, 81 percent of which reported assets less than \$1 billion. Overall, the MDI segment's median asset size was only \$336 million. While further consolidation of MDIs could set them on a path to scale, and, therefore, more competitive and sustainable financial positions, it is important to consider the social implications of that consolidation. As described in earlier sections, MDIs disproportionately serve lower- and middle-income customers and customers whose ethnicity matches the MDI's ownership or control entity. For example, Black-owned MDIs are located in census tracts with a median Black population of 73 percent, with average household incomes 21.3 percent below the national average.²⁶ Preserving the MDIs' connection to their community, therefore, is an important variable that should be evaluated in the context of a merger or acquisition.

Commercial capital markets do consider the social implications of an institution's strategy; however, investment managers' fiduciary duty to maximize the return of their investment can run counter to the practical requirements of serving lower- or middle-income (LMI) populations. For example, providing technical assistance to customers is an expensive activity that does not necessarily contribute positively to margins in the immediate term. The activity, however, is critical to providing LMI customers the support they need to gain access to financial services and to be good stewards of the institution's resources as borrowers. Of course, increasing the capacity and financial security of LMI customers could have longer-term positive benefits for the bank, but the time frame for realizing those benefits may extend beyond the time horizon of many investment managers.

To widen the set of MDI merger and acquisition opportunities—in other words, not limiting the set of targets to only those that can be absorbed without raising additional capital—while preserving the social mission of the institutions, alternative capital sources should be considered to finance an inorganic strategy. While philanthropic or impact investment funding is less abundant than commercial

²⁵ Barth, Betru, Brigida, and Lee, "Minority-Owned Depository Institutions: A Market Overview."

²⁶ Ibid.



financing, if tactfully deployed, it could be an important means to lower the institution's cost of capital and retain a focus on its social mission. The following section describes how social impact capital could be utilized in the context of an inorganic growth strategy for MDIs.

B. i. Supporting A Pilot Tier 1 Bank Fund

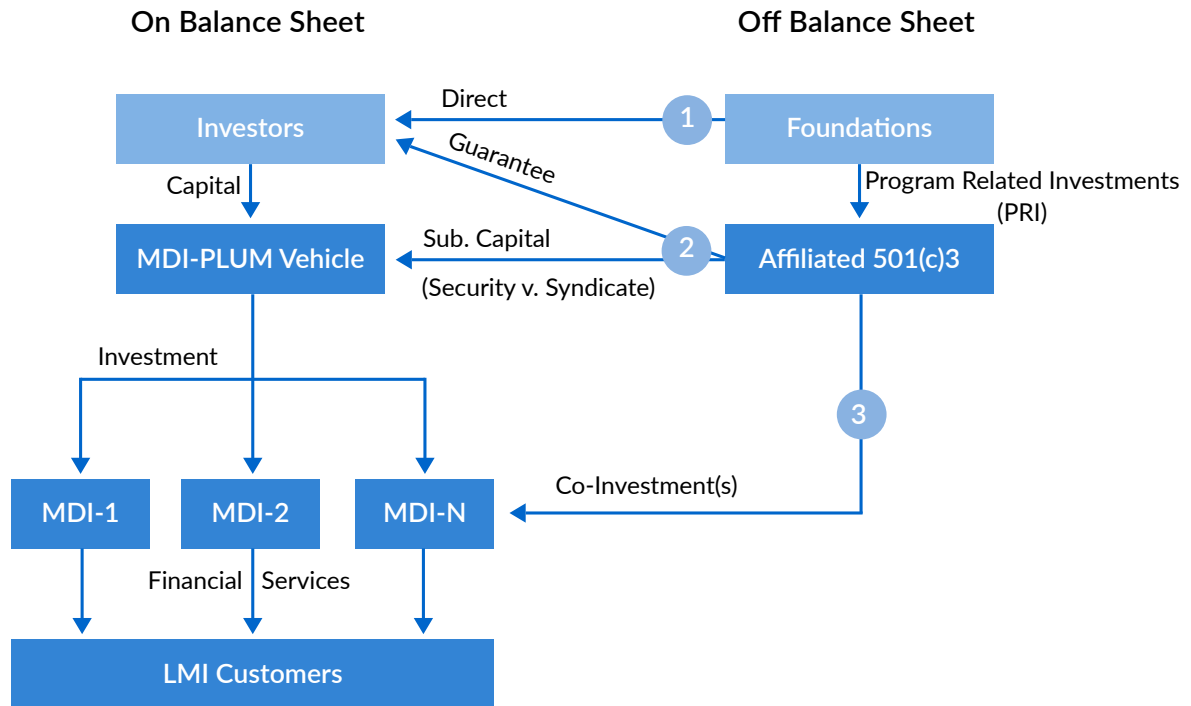
Commercial investors have mandates and incentives to invest in opportunities that prioritize financial over social returns. Philanthropic or impact-oriented investment capital (i.e., a 501(c)3, the US Internal Revenue Code classification for such entities), however, can act as an accelerant by shifting the investment risk-return profile with flexible capital and favorable terms to overcome the problem of low returns relative to high real and perceived risks that limit investment. As shown in Figure 1, this source of socially-oriented capital could be beneficial in a variety of ways during the capital formation process of an MDI inorganic growth strategy. Rather than inciting a vicious cycle where institutional consolidation results in declining service availability for LMI communities, a mission-driven MDI Acquisition Vehicle could broaden service provision for LMI customers by spreading the institutions' regulatory, compliance, and other fixed costs over a larger asset base.

While the overarching strategy for an MDI Acquisition Vehicle needs to balance several technical considerations, impact-oriented capital could be utilized toward positive ends in a variety of ways. From an institutional perspective, acting as an aggregation vehicle to execute whole-bank acquisitions would introduce bank holding company requirements; therefore, it may be more advantageous for the MDI Acquisition Vehicle to focus on funding mergers and acquisitions for individual MDIs. Similarly, there are limits to how much preferred equity an institution will want to carry in its capital stack, and each institution requires its own unique Tier 1 capital mix; investors in the MDI Acquisition Vehicle would need to evaluate risk-return considerations carefully. Three strategies for foundations and philanthropists to support an MDI Acquisition Vehicle are as follows:

1. Support investors directly in creating an MDI Acquisition Vehicle. Their support could come in the form of a below-market-rate investment as a General Partner or Limited Partner to the new MDI Acquisition Vehicle or asset manager.
2. Support investors indirectly in creating an MDI Acquisition Vehicle. They could provide a partial or full guarantee, or provide a form of subordinated capital to the vehicle to reduce others' risk of investing in the strategy.
3. Support investors by co-investing directly into MDIs alongside an MDI Acquisition Vehicle. Co-investing in institutions could enhance the capital structure and positioning of the institution(s) as they seek to engage in an inorganic strategy.



Figure 1: Sources of Capital: How a 501(c)3 can help catalyze capital aggregation



Source: Milken Institute, 2019

Another aspect of employing philanthropic capital in an inorganic growth strategy is the ability to use those funds for mission-oriented activities. While the risk profile of an MDI Acquisition Vehicle could be enhanced by philanthropic support, the institutions themselves could also benefit from the support, helping to preserve the community engagement aspects of the consolidated institution. In other words, irrespective of the financing structure of merger or acquisition transaction—which may be on an all-stock or majority-stock basis between two MDIs—a consolidated institution could employ impact investment to finance a variety of mission-oriented growth activities. Figure 2 shows how philanthropic funds could be used in four key ways, whether deployed through the MDI Acquisition Vehicle, the MDIs, or the customers:

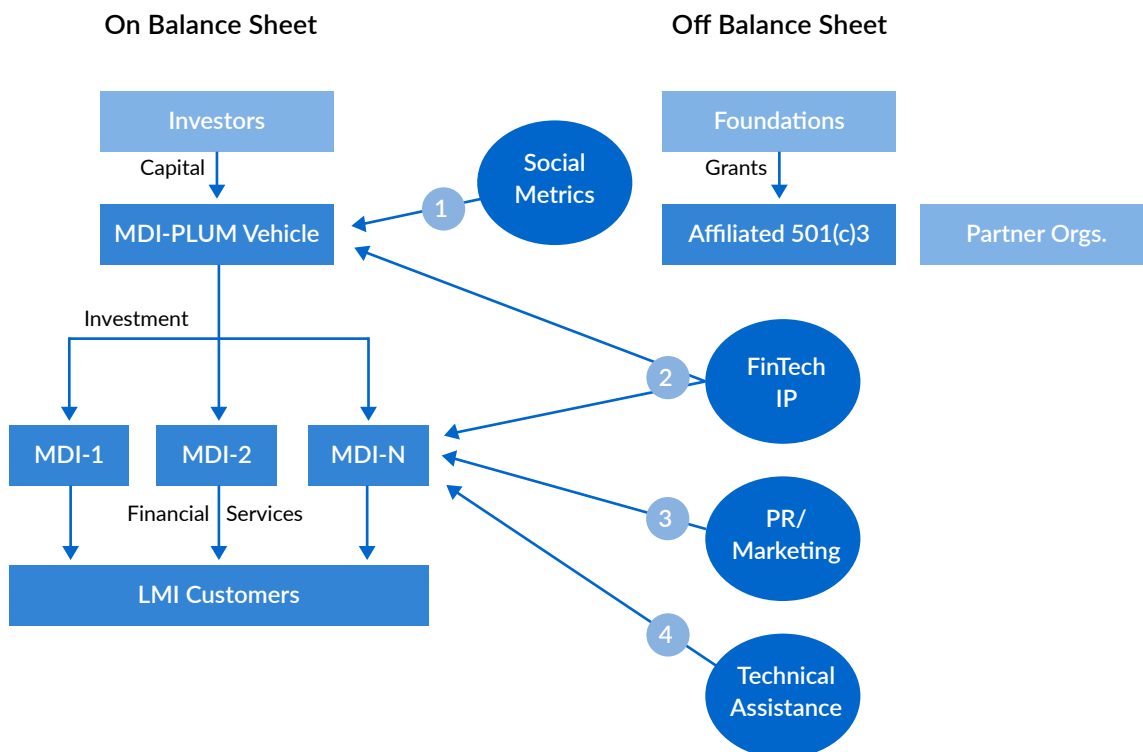
1. **Social Metrics:** Tracking the social metrics of the institution’s activities is an important component of Community Development Financial Institution (CDFI) requirements, and a means to attract lower-cost forms of capital from public sources or other sources, which could ultimately bring the institution’s costs of capital down while enabling it to perform its key role in LMI communities.
2. **FinTech Intellectual Property (IP):** As discussed in the section about alternative credit underwriting, reaching LMI customers in new ways is an important strategy for MDIs. However, the cost of building or licensing those products creates a drag on capital. Philanthropic funding could help defray the investment by commercial sources.



3. **Public Relations/Marketing:** During a merger or acquisition, the community may need reassurances that the new institution will be better equipped to serve them. Public relations and marketing associated with rebranding the consolidated institution, therefore, will be an expense that could be shouldered by philanthropic capital to defray the near-term impact on investor's capital. Over the horizon of the MDI Acquisition Vehicle's investment, ongoing marketing of new products designed to meet the needs of LMI customers could be an expense shared in some fashion by the institution and its philanthropic supporters.

4. **Technical Assistance:** As described earlier, this is a key component of serving LMI customers, who may have less familiarity with traditional banking products than other segments of the institution's customer base. Much like the tracking of social metrics, the cost of this assistance can come from a variety of sources, including philanthropy and/or public sector grant programs. To preserve the consolidated institution's focus on LMI customers, philanthropic supporters could provide this funding.

Figure 2: Uses of Capital: How a 501(c)3 can help address the problem of high customer acquisition costs



Source: Milken Institute, 2019



Employing an inorganic growth strategy to drive greater scale for MDIs could be a key strategy to increase access to financial services in LMI communities. Appropriate sources and uses of capital are critical to ensuring a post-merger institution is more efficient and effective. Given the mission-focus of MDIs, philanthropic and/or impact-oriented capital could be a key source of funding during this process. Of course, there are a host of issues to consider on a case-by-case basis in the context of deploying an MDI investment vehicle. For example, direct common equity investment in financial institutions above a certain limit can raise regulatory issues for investors, potentially subjecting them to bank-holding company treatment. Similarly, transaction structure, capital availability, and valuation will be situation-dependent and influenced by a variety of factors, such as whether the MDIs are publicly traded or privately held. Ultimately, a mission-oriented investment vehicle could be an important new source of funding to help MDIs expedite their journey to scale in a way that preserves their role in providing capital to underserved communities and ensures their institutional stability and soundness.

C. Regulatory and Policy Strategies

As part of the 2017 Tax Cuts and Jobs Act, the Opportunity Zones (OZ) initiative was created to attract investment to underserved communities and spur economic development and job creation. The initiative provides significant tax incentives for investors to re-invest an estimated \$6 trillion of unrealized capital gains into state-designated OZs via investor-led Qualified Opportunity Funds (QOFs). The consensus view is that most of this capital will be equity investments into real estate development projects. While these types of assets are foundational to economic development, there is a significant risk that community members will not reap any of the near-term financial benefits. Furthermore, the initiative ultimately could result in displacement and exacerbate the inequalities that it seeks to address.

While MDIs, and indeed all financial institutions, are not eligible QOFs investments—because of a provision in the legislation that excludes organizations holding more than five percent of their assets in financial instruments—they can be critical to ensuring job creation, wealth accumulation, and balanced development in OZs. As mentioned previously, MDI branch networks are more focused on low-income communities than non-MDIs. In addition, some MDIs are also Community Development Financial Institutions (CDFIs), which can be either MDIs or non-MDIs, and they have the attendant requirement to focus at least 60 percent of their total lending or investing activities to benefit qualified target markets (e.g., low income or underserved people and places). As a result, MDIs are strongly positioned and highly-motivated to lend to OZ qualified projects, and to small businesses in the OZs. With loans from an MDI, many local small businesses could be better positioned to compete for contracts on OZ projects. In effect, if MDIs can provide loans to OZ projects, there is the potential to catalyze an economic multiplier effect through access to credit for local small businesses.



Creating deeper linkages between MDIs and capital markets could be a way to help them get the funding they need to participate in the growth potential offered by the OZs. One linkage that could potentially be built upon is the Community Reinvestment Act (CRA). Given that MDIs may be better positioned—according to CDFI Fund, a greater number of their branches reside in LMI communities—to fulfill the CRA assessment areas of other, larger financial institutions, there is a need to explore ways for MDIs to syndicate their assets in the capital markets and attract more funding to grow, especially via OZs.

C. i. A Hypothetical Scenario to link MDIs, CRA, and OZs²⁷

In 2018, the Milken Institute, in partnership with EY and Kirkland Ellis, constructed a hypothetical scenario to explore how an OZ investment could be made in two different scenarios: an affordable workforce housing real estate project, and a healthy food grocery store operating company. These vignettes were shared and discussed with the Treasury Department to highlight what regulations would be necessary to ensure the economic development intent of the initiative, and they were shared with OZ stakeholders so they can be aware of potential implementation hazards as they engage with the investment as the investor or as the local community. Below are excerpts of the vignette.²⁸

²⁷ After the writing of this report there were a series of guidances, rules and regulations published by relevant agencies and regulatory bodies that may materially impact the viability of these strategies. The Office of Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corporation (FDIC) issued proposed rules to modernize CRA. The Internal Revenue Service issued final regulations to govern the Opportunity Zone initiative. The ideas detailed in this report do not incorporate these new rules and regulations.

²⁸ Milken Institute Opportunity Zone Vignettes can be found here: <https://www.milkeninstitute.org/sites/default/files/2019-08/Milken%20Institute%20-%20Opportunity%20Zone%20-%20Workforce%20Housing%20%26%20Grocery%20Store%20Vignettes%20v190507.pdf>.

NARRATIVE OVERVIEW

Three brothers who are experienced real estate developers, Tim, Cory, and Steve, hear that a major employer is moving to their town and decide to spearhead the development of a workforce housing option for employees. The brothers have been learning about the new Opportunity Zone initiative and discover the new employer is going to be located in an Opportunity Zone.

Through 3RE, their real estate development firm, they already own assets that have appreciated significantly. 3RE sells the building and uses the gains to establish a fund ("Fund"), intending for it to qualify as an Opportunity Fund. Fund then establishes a business ("Business"), intending for it to be a qualified opportunity zone business ("Opportunity Zone Business") that will undertake the new workforce housing project in the Opportunity Zone. Before Business secures commitments or finds an Opportunity Zone Property, 3RE provides a loan to Business for finding the new property and conducting diligence.

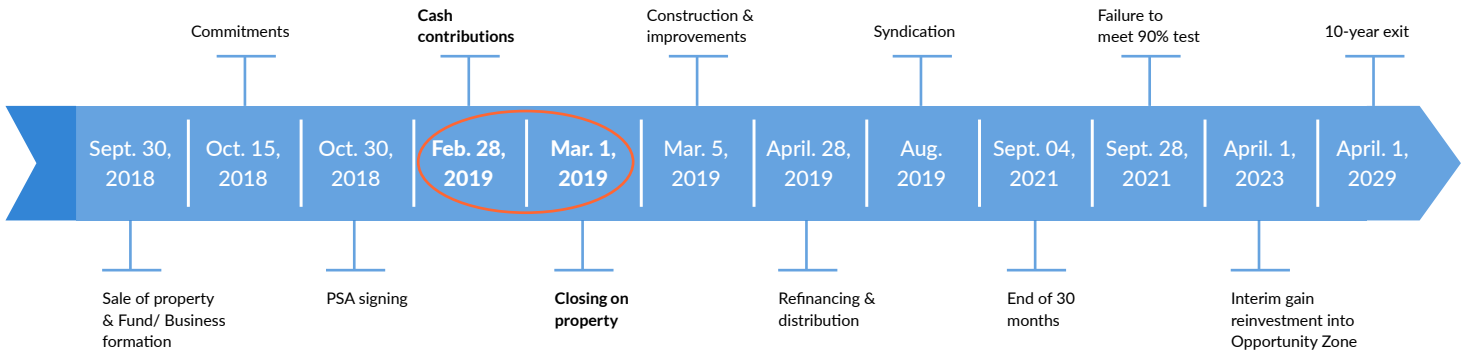
Business identifies a suitable project site comprising land with some buildings, and 3RE commits equity to Fund to acquire the property. At the same time, the brothers' friend, Sara, commits equity to Fund from gains that she realized on her stock portfolio. Business enters into a purchase and sale agreement to acquire the property and draws on the 3RE loan to fund the pre-development work. At closing, the partners in Fund contribute their equity commitments (within 180 days of realizing gains), Fund contributes the cash to Business, and Business secures a community bank loan to refinance the 3RE loan and begin construction. The workforce housing project construction takes place over the next two years, where Business draws the remaining loan proceeds to improve the property, and the partners evaluate whether to sell additional interests in Fund to further develop the project.

Over the course of its ownership in the workforce housing project, Business faces a number of decisions. Needing liquidity for another purpose, Business considers the impact of refinancing the housing project and distributing some of the proceeds to Fund and then to Fund's partners. Similarly, it evaluates the impact of using interests in the Fund as collateral for a refinancing. In addition, other compelling investment opportunities arise. One of these potential investments is another Opportunity Zone Business Property, the sale of which would require Business to sell the existing housing project in order to participate. Furthermore, Business is interested in another investment opportunity that would not require it to sell the housing projects, but it is not in an Opportunity Zone and, therefore, could have consequences for the overall Opportunity Fund status.

At the end of 10 years, the Opportunity Fund has created thousands of workforce housing options for residents in their town. The Fund's partners now wish to take advantage of the tax benefits and evaluate the optimal means to exit.



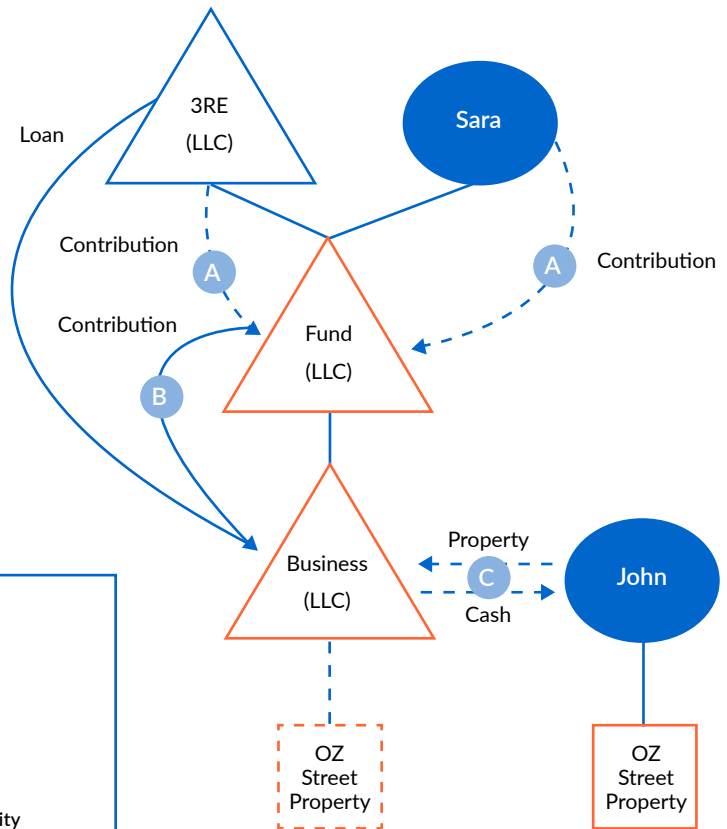
In Part 5 of the vignette series, OZ investors source project debt from community bank:



Part 5: Closing on OZ Street Property

Step 5 A On February 28, 2019, 3RE contributes \$80 to Fund in exchange for an equity interest and profits interest in Fund, and Sara contributes \$120 to Fund in an exchange for an equity interest in Fund. 3RE and Sara agree to split all proceeds pro rata until each receives the amount of their initial contributions, and thereafter 50/50.

Step 5 B Immediately after Step 5A, Fund contributes the \$200 received to Business. Fund elects to be an Opportunity Fund on IRS Form 8996, designating February as its initial month.



IRS Clarifications Needed

Issue 6: What kinds of interests may investors receive in Opportunity Funds for their investments?

Existing Clarifications

Clarification 6: An "eligible interest" in an Opportunity Fund is an "equity interest" issued by the Opportunity Fund, "including preferred stock or a partnership interest with special allocations." Prop. Reg. 1.1400Z-2(a)-1(b)(3). "Services rendered to a QOF are not considered the making of a [qualifying investment]. Thus, if a taxpayer receives an eligible interest in a QOF for services rendered to the QOF or to a person in which the QOF holds any direct or indirect equity interest, then the interest in the QOF that the taxpayer receives is not a [qualifying investment]...." Prop. Reg. 1.1400Z2(a)-1(b)(9)(ii).

Source: Milken Institute, Opportunity Zone Vignettes



With the goal of understanding if MDIs that lend to OZ projects can qualify for CRA, and thereby use their positive performance to catalyze a rising tide in the Zones, the hypothetical scenario built on the vignettes and created the following more detailed scenario:

- As shown in the vignette, 3RE obtains debt financing for its workforce housing project within an OZ, which may be in the form of working capital loans, construction loans, Commercial and Industrial (C&I) loans, or Commercial Real Estate (CRE) loans (collectively, QOZP loans). The QOZP loans will be obtained from a minority-owned depository institution (MDI) whose lending area includes OZ1.
- The MDI1 will initially fund the QOZP loans on its balance sheet, and the MDI1 may obtain warehouse financing for the QOZP loans from various lenders. The MDI1 will underwrite the QOZP loans and similar loans in accordance with underwriting criteria designed to make the loans eligible for inclusion in a securitization.
- Once MDI1 has aggregated a critical mass of QOZP loans made to one or more QOFs in the manner described above, MDI1 will engage an investment bank (“Underwriter”) to structure and place securities backed by a pool of QOZP loans. In this transaction, MDI1 will create a Delaware statutory trust (“Trust”) and will transfer QOZP loans to the Trust in exchange for equity interests in the Trust (“Trust Certificates”).
- The Trust Certificates will have an aggregate principal balance equal to the balance of the QOZP loans deposited into the Trust and will be issued as a single class of certificates in minimum denominations of \$100,000. For tax purposes, the Trust will be a “grantor trust,” and the Trust Certificates will be treated as beneficial ownership of a pro-rata interest in the QOZP Loans. Collections on the QOZP loans will be distributed pro rata to holders of the Trust Certificates in accordance with their percentage interests. MDI1 will service the loans on behalf of the Trust. The Trust Certificates will not be rated. The Trust Certificates will be assigned a Committee on Uniform Securities Identification Procedures (CUSIP) and will be held through a Depository Trust Company in book-entry form.
- It appears that the issuance and sale of the Trust Certificates will be subject to the US Credit Risk Retention Rules. MDI1, as sponsor of the transaction, will retain 5 percent of the Trust Certificates in accordance with those rules.
- The Underwriter will offer the Trust Certificates pursuant to Rule 144A under the Securities Act of 1933 to US persons who are “qualified institutional buyers” (QIBs) under that rule. The offering will be specifically targeted to QIBs that are insured depository institutions (IDIs).



- IDIs are required to comply with the Community Reinvestment Act (CRA). We understand that an IDI can receive consideration toward their CRA compliance by making certain types of investments in an MDI, even if that investment is outside the IDI's assessment area, and that one type of such investment is purchasing a loan participation from the MDI in a loan that serves the latter's market area.
- The Trust Certificates are very similar to purchasing a participation interest in a pool of whole loans from a lead lender, in that the Trust Certificates represent a pro-rata interest in the pooled QOZP loans with equal risk with respect to collections and losses among all holders of the Trust Certificates (including the MDI) on a pro-rata basis, and in that the MDI continues to service the QOZP Loans. The Trust Certificate format offers certain advantages over a participation interest, in that the pooled loans are transferred to the trustee of the Trust, and because the book-entry format facilitates transfers and pledges of the Trust Certificates thereby enhancing liquidity.
- Ideally, regulatory guidance is provided and that an IDI investing in Trust Certificates under the aforementioned structure would be eligible for the same type of consideration toward CRA compliance, as it would if it had purchased participation interests in the QOZP Loans from the contributing MDI.
- In a further iteration of this structure, several different MDIs could pool QOZP Loans into a single Trust, again selling a single class of Trust Certificates through an underwriter. This approach would add the advantage of diversification of risk. Under this scenario, the 5 percent risk retention could be distributed among and held by each of the contributing MDIs as originators as long as each contributed at least 20 percent of the total pool. Note that each MDI would take back a proportionate interest in the entire pool rather than an interest representing a proportionate share of only the loans that it contributed.
- With a replenished balance sheet, MDI1 will be able to finance not only more Opportunity Zone transactions within its lending area but also local non-OZ businesses (grocery stores, restaurants, etc.), thereby continuing to meet its mission of support to its community.

Taken together, these steps raise a series of CRA regulatory questions that must be addressed by all three of the federal banking regulators (Federal Reserve, Office of Comptroller of Currency, and Federal Deposit Insurance Corporation) and each of the state banking regulators charged with safeguarding the CRA statutes. As such, more analysis is required for this strategy.



Nonetheless, for the next decade, OZ investments could be a powerful force in the MDIs' targeted communities. MDIs need to understand what their role can be in such an investment market. Determining regulatory assurances of whether QOZP Loans and the Trust Certificates purchased by QIBs would qualify for CRA is critical to this effort.

C.ii. Engaging in Advocacy in the Emerging OZ Era

As the OZ initiative is currently structured, MDIs can participate by creating and operating Qualified Opportunity Funds. Low-income communities, however, would greatly benefit if MDIs serving OZs could themselves be eligible for investments from Opportunity Funds. However, because Qualified Opportunity Zone Businesses cannot have more than 5 percent of their assets in "nonqualified financial property" (as defined in paragraph (8) of 26 USC section 1397C(b)), MDIs are excluded from eligibility for Opportunity Fund investments. Even CDFIs, which can be either MDIs or non-MDIs and must demonstrate that at least 60 percent of their total lending or investing activities benefit qualified target markets (e.g., low-income or underserved people and places) are excluded. Legislative action would be required to address the exclusion of these institutions.

All financial institutions, including CDFIs and MDIs, have more than 5 percent of their assets in the form of non-qualified financial property. The original purpose of this exclusion in the Federal Enterprise Zone statute was to exclude conventional financial institutions or market-rate investment vehicles that are viable without subsidy from benefiting from federal tax incentives. CDFIs (especially MDIs that are also CDFIs) are different, and their creation as a class of financial institutions occurred after the formation of the Federal Enterprise Zone statute. CDFIs, including MDIs that are also CDFIs, are required to submit annual reports on their aggregate activities to the US Treasury Department to maintain their certification status.

As previously mentioned, MDIs are already working in low-income communities eligible for OZ designation. They know the markets and have strong records of creating a positive impact in low-income communities. MDIs, especially those designated as CDFIs, are highly effective in leveraging private resources, which could dramatically enhance the economic impact of the OZ investments, according to the US Treasury's CDFI Fund, typically a \$1 investment into a CDFI will yield \$10 of new lending and investment into distressed communities.

Smaller in scale, many businesses and projects located in designated Opportunity Zones may not be able to directly utilize the type of investment incentive offered by Opportunity Funds due to capital structure, size, or inability to pay sufficient returns to meet Opportunity Fund expectations. These businesses, however, are important to the economic vitality of OZs.



Through an advocacy campaign that targets legislative change on the need for a modification in the OZ legislation that would allow CDFIs, as well as MDIs with that designation, to become eligible OZ investments, capital could be channeled to these institutions. With increased capital to fuel their capacity, CDFIs—and in particular MDIs—could be more effective in serving their communities and further the original intent of the OZ initiative.

CONCLUSION

MDIs could be an effective resource for minority communities, provided their capacity is improved to serve minority-owned small businesses better. MDIs and their branches tend to service the minority populations that correspond to their institutional ownership/management. Furthermore, research that analyzed small business lending and ROA efficiency pre- and post-recession shows that MDIs are as efficient as their non-MDI counterparts.

Regardless of these encouraging findings, MDIs are small in the commercial banking context and are more susceptible to challenges associated with increased compliance costs, operational complexity, and a fast-paced, technology-enabled market. To enhance their capabilities, a series of strategies are available. First, MDIs could enhance their organic growth potential by improving their utilization of technology to drive deposits and lending growth, especially by leveraging the Minority Bank Deposit Program while investing in underwriting processes that enhance their balance sheets and increase access to capital for underserved markets. Second, an inorganic merger and acquisition-driven growth strategy could accelerate the institutions' ability to obtain the benefits of scale, with lower operating costs and/or improved efficiency ratios, thus making them generally more profitable and with greater capacity to serve their customers. Third, integrating MDIs in the developing OZ market presents a powerful way to achieve an economic multiplier effect in low-income communities. For MDIs to fulfill that economic multiplier role, deeper linkages between the institutions and capital markets must be created, and alternatives leveraging new regulatory and policy strategies could be considered.

The series of studies reflected in this paper show what it might take for MDIs to better serve their communities and the potential for philanthropic capital to catalyze strategies and other forms of capital to accelerate their growth and their drive toward commercial sustainability. MDIs are currently underutilized, and acting on a combination of the strategies above may build their resilience and impact on the communities that need it most.



ACKNOWLEDGMENTS

James R. Barth, Professor, Auburn University; and Senior Fellow, Center for Financial Markets, Milken Institute

Ben-Ari Boukai, Graduate Intern, Center for Financial Markets, Milken Institute

Matthew Brigida, Associate Professor of Finance, SUNY Polytechnic Institute; and Senior Fellow and Financial Education Advisor, Center for Financial Markets, Milken Institute

Gregory B. Fairchild, Professor, Darden Business School, University of Virginia; and Senior Fellow, Center for Financial Markets, Milken Institute

Megan Juelfs, Associate Director, Research Initiatives Institute for Business in Society, Darden Business School, University of Virginia

Young Kim, Statistician, Darden Business School, University of Virginia

Melissa Koide, CEO and Director, FinRegLabs; and Vice Chair, Milken Fintech Advisory Board

Stephen Kudenholdt, Head of Structured Finance, Dentons

Wendell McCain, Chairman and CEO, Onset Capital Partners; and Principal, MDI Keeper's Fund

Jackson Mueller, Associate Director, Center for Financial Markets, Milken Institute

Daniel Murphy, Policy Manager, Financial Health Network

Nguyen Nguyen, Finance PhD student, Auburn University

Michael Piwowar, Executive Director, Center for Financial Markets, Milken Institute

Kim Saunders, Senior Advisor, Center for Financial Markets, Milken Institute; Principal, MDI Keeper's Fund; and President, National Bankers Association

Carolyn Schulman, Director, Center for Regional Economics, Milken Institute

Jiayi Xu, Finance PhD student, Auburn University

Glenn Yago, Senior Director, Jerusalem Institute for Policy Research; Senior Fellow, Milken Institute



ABOUT THE AUTHORS

Aron Betru

Aron Betru is the managing director of the Center for Financial Markets at the Milken Institute. With more than 20 years of experience, Betru leads the Institute's Access to Capital work, which includes initiatives on Opportunity Zones and minority-owned banks, and other strategic, innovative financing initiatives to enhance social impact, both in the US and in developing economies. Betru is a member of the steering group for the Blended Finance Taskforce launched by the Business & Sustainable Development Commission as well as co-chair for the Partnership for Lending in Underserved Markets, a joint initiative with the Milken Institute and the US Small Business Administration. Prior to the Milken Institute, Betru was the co-founder and chief executive officer at Financing For Development, specializing in innovative financing solutions for international development; Betru pioneered new ways of leveraging guarantee-backed financing of public health commodities, mobilizing millions of dollars in both commercial lending for malaria and trade financing for reproductive health. Betru's extensive experience includes international development roles at the United Nations Foundation, TechnoServe, and Dalberg Global Development Advisors, as well as private sector experience at McKinsey & Co. and Goldman Sachs. Betru is also a term member of the Council on Foreign Relations and a regular contributor to the *Global Health and Diplomacy* magazine, writing on innovative finance in public health, as well as a contributor to the global dialogue on pandemic financing with speaking engagements at the National Academy of Sciences and *Voice of America Interviews*. Betru is a board member of Calvert Impact Capital and FHI Foundation. He holds an MBA from Columbia University, an MA from Johns Hopkins University School of Advanced International Studies, and a BA in economics and international studies from Northwestern University.

Christopher Lee

Christopher Lee is a director at the Center for Financial Markets at the Milken Institute, where he also leads the Capital for Innovation program. Lee has previously worked as an entrepreneur, civil servant, private equity investor, and investment banker. He has completed transactions in nearly 30 countries and more than 10 sectors, including technology, financial services, health care, real estate, and telecommunications. Lee has led research on innovative finance, and his writing has appeared in *Reuters*, *American Banker*, *The Hill*, *BioCentury*, *MIT Innovations*, and other publications. He is a member of the Bretton Woods Committee and serves on the advisory council for CureSearch Catapult, an organization that invests in new treatments for pediatric cancers. He holds degrees in finance and foreign affairs from the University of Virginia.



Ragini Chawla

Ragini Chawla is an associate at the Center for Financial Markets at the Milken Institute. Chawla works on the Institute's Access to Capital work, which focuses on strategic, innovative financing nationally and internationally. Chawla graduated from New York University in 2018 with a BA in economics and international relations, and she completed a thesis paper on what the China-Pakistan Economic Corridor reveals about the design of China's One Belt One Road Initiative.

