Minority Depository Institutions:

State of Knowledge, Sector Summary, Lending Activity, and Impact, 2010 – 2022

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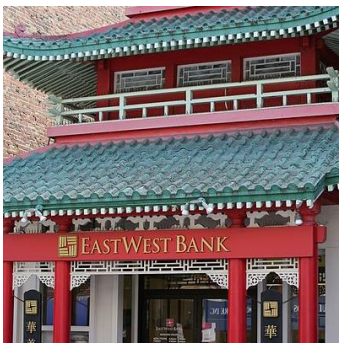

Left to right: First Bank by Coolcaeser, OneUnited Bank by John Phelan, East West Bank by Tobias Kleinlercher.

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Minority Depository Institutions: State of Knowledge, Sector Summary, Lending Activity, and Impact, 2010 - 2022

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The mission of the National Bankers Association Foundation is to ensure underserved communities have fair access to financial services, products, tools, and resources that enable them to achieve their financial objectives and enhance their prosperity.

The National Bankers Association Foundation, the 501c3 arm of the National Bankers Association, advances the mission of Minority Depository Institutions (MDIs) by addressing the underlying causes of the racial wealth gap, leveraging capital, and sharing resources. Through our four strategic pillars, we provide programs and services to support MDIs and the communities they serve: (1) financial wellness, (2) entrepreneurship and small business, (3) research and impact, and (4) collaboration and capacity building.

The mission of Johns Hopkins 21st Century Cities Initiative is to seek to build one world's largest bodies of research on urban experiences by integrating the world-renowned research expertise across the nine divisions of Johns Hopkins University and through deep, meaningful engagement with community collaborators to become a leading institute of urban research worldwide.

Our largest contributions come through innovative, compassionate research in our own home of Baltimore, based on research both of our challenges and of our sources of strength and resilience. We build cutting-edge research programs based on the need for knowledge among community partners and develop partnerships to translate that research to apply what we learn to support and to improve communities in Baltimore and throughout the world.

Introduction

The nation's 147 Minority Depository Institutions (MDIs) are mission-driven banks that provide access to credit for marginalized communities across the United States. Per the statutory definition, qualifying institutions are at least 51% owned or operated by people of color and predominantly serve communities of color. A growing body of research establishes that MDIs originate a greater share of loans across all loan types to minority borrowers and are located in places with higher poverty rates and non-white populations than places served by non-MDI financial institutions including non-MDI community banks.

Our report builds on this literature by combining two distinct but complementary analyses. In our first analysis, we examine the MDI sector as a whole from 2010 to 2022 and explore the characteristics of the places in which MDIs currently have branch presence relative to places that have non-MDI bank presence.

In our second analysis, we examine lending data for 2021 made available to us by a sample of MDI banks who opted to participate in this study. This latter analysis explores the characteristics of the places that received loans in our sample and also includes historical data and forecasting provided by Moody's Analytics that allows us to explore social, economic, and climate trends in places that received lending relative to the nation as a whole.

Topline findings from our analysis of the overall MDI sector include the following:

- Most MDI branches (62%) are located in zip codes with poverty rates higher than the national average, compared to just 38% of non-MDI branches.
- The median MDI branch is located in a zip code that is 49% non-white, compared to 21% for non-MDI banks.
- 25% of MDI branches are located in zip codes in which the MDI is the only bank with physical presence in that zip code. This means that MDIs are the only bank branch in 174 zip codes that are home to 3.5 million people.
- Deposits held at MDI branches grew by 110% from $134 billion in 2010 to $282 billion in 2022.
- Assets at MDIs grew by 34% from 2010-2022, from $246 billion to $329 billion. A significant amount of that growth occurred between 2019 and 2021.
- Zip codes with an MDI branch have higher climate risk exposure, especially for heat and wind risk, but also for flood and fire risk.

Topline findings from our analysis of the lending sample include the following:

- The 10 banks in the sample deployed 3.38 billion dollars in more than 6,000 zip codes in 2021.
- These banks collectively issued more than 20,000 Paycheck Protection Program loans to support small businesses amid the pandemic.
- Over half (52.5%) of the population is minority in the zip codes that received lending dollars and slightly more than 77% of all loan dollars flowed to zip codes with a minority population share that was 52.5% or higher.

- More than 70% of loan dollars went to zip codes that have higher poverty rates than the nation when measured at both 100% and 125% of the federal poverty line.
- Places that received lending dollars have higher rates of recorded and forecasted rates of unemployment and bankruptcy and greater risk from climate change compared to the nation as a whole.

Our analysis demonstrates that MDIs continue to serve a crucial role in increasing financial inclusion for underserved individuals and communities. As mission-driven banks, MDIs are key institutions in the broader work of closing the racial wealth gap particularly through creating opportunities for homeownership and entrepreneurship. These institutions can also serve as stabilizing forces for households and firms during times of crisis such as we witnessed with the COVID-19 pandemic. And we remain confident that MDIs and other mission-driven banks will continue to generate substantial impact in the decades to come.

This paper begins by summarizing the existing literature to provide context for our analyses. The paper then presents relevant research findings with supporting notes on methodology where appropriate. Finally, the paper provides a brief discussion of the implications of our findings, indicates future directions for research, and concludes with broad recommendations for supporting the MDI sector.

Literature Review

To understand the current state of knowledge about MDIs, we surveyed the literature on the subject by reviewing papers that were published since 2010. Our search uncovered 36 papers and reports that were published from 2010 to January 2023 where the topic was related to MDIs. The literature generally fell into one of three categories: (1) sector summaries highlighting trends and providing descriptive statistics about MDIs, (2) papers analyzing the efficiency and riskiness of MDIs, and (3) papers investigating the potential impact of MDIs and their service areas. While some papers focused on one of these categories, most spanned multiple categories.

Geography and Population Served

A large portion of the literature investigated the types of communities served by MDIs and explored their potential impact. Barth et al (2018) noted that MDIs are concentrated on the south, east, and west coasts with limited overlap among MDIs and the communities they serve. New MDIs (established since 2000) are highly concentrated in California, Georgia, and Florida, following immigrant flows to those parts of the nation (Li et al 2017). The vast majority of Black-owned banks are located in metropolitan areas where the share of Black residents is higher than the national average (Neal & Walsh 2020). Kashian et al (2014) suggest that Black-owned banks tend to locate in communities that commercial banks view as unprofitable, such that in communities where Black-owned banks hold at least 20% of deposits, more than half of people live below double the poverty line. There is broad consensus in the literature that MDIs serve communities that have much higher shares of minority and low- and moderate-income (LMI) populations (Barth et al 2018, Barth & Xu 2020, Friesenhahn & Kwan 2021, FDIC 2019, Babajanova 2022, Breitenstein 2014, Toussaint-Comeau & Newberger 2017, Neal & Walsh 2020, Kashian et al 2016, Kashian et al 2014, Howell et al 2020). Older MDIs (those established prior to 2000) were more likely to serve less white, more Black, and higher poverty zip codes than banks that recently acquired MDI status, while recently established MDIs (either recently acquired MDI status or de novo banks) were more likely to serve Hispanic or Asian American zip codes

(Kashian et al 2016). Kashian et al (2016) also found that from 2001 to 2014 more low income people and more people of color gained access to MDIs with the exception of majority Black neighborhoods, which saw a 25% shrinkage. Indeed, following the Recession, Black and Native American majority communities were more likely to live in banking deserts (Kashian et al 2018), suggesting a greater need that MDIs could potentially serve, especially since majority-minority communities tend to have more access to predatory alternative financial institutions (Small et al 2021). Indeed, Barth et al (2021) find that counties with more Black-owned bank branches have significantly fewer pay day loan stores.

Lending Activity

In terms of lending activity, it is clear that MDIs focus more on commercial real estate (CRE) lending than their peers, with 60% of MDIs being CRE specialists compared to just 25% of community banks (FDIC 2019). Looking specifically at Black-owned banks, Neal & Walsh (2020) find that they focus lending activity on small businesses, Black homebuyers, and nonprofits (especially churches).

Impact

A handful of papers focused on how MDIs respond to crises and their impact on communities by looking at the Recession and the COVID-19 pandemic. In response to the COVID-19 pandemic, MDIs disbursed more Paycheck Protection Program (PPP) loans than their peers and more credit to minority borrowers, responding to the greater need in those communities (Howell et al 2020, Friesenhahn & Kwant 2021) suggesting they are well positioned to respond to financial crises (Contreras & Ghosh 2022). Indeed, Berger et al (2022) find that if the banking industry performed similarly to MDIs, almost 2 million minority jobs would have been maintained and an additional $50 billion per year would have been available for small businesses during the Recession. Babajanova (2022) suggests that small banks such as MDIs that are vulnerable to economic downturns may perform better by focusing on neighborhoods and types of lending where they have unique expertise, which is the case for most MDIs. Kashian et al (2014) found evidence that some MDIs pass on the benefit of federal government deposits in the form of better rates on CDs for MDI customers and that this premium helped cushion the impact of the Recession. Despite the minority banking program giving MDIs preferential treatment for holding federal government deposits, only around one-third of MDIs had such deposits as of 2017 (Barth et al 2023), suggesting more could be done to help MDIs gain these benefits.

Ownership

Several papers highlight heterogeneity within the MDI sector and the close relationship between the specific ethnicity of ownership of a specific bank and the community they serve. Buckley & Kashian (2019) examine Native American-owned banks and the differences between tribal and private ownership, finding that seventh-generation principle of investment in future generations may lead to tribal banks focusing more on community development loans. Kashian et al (2020) investigate differences between Hispanic-owned banks related to ethnic heritage, highlighting differences in lending activity such as Mexican-owned banks expanding risky commercial real estate lending after the Recession while Cuban-owned banks contracted such lending. Kashian et al (2019) also looked at Asian-owned banks and found them to perform better (measured by return on assets) than commercial banks possibly due to some of them serving a financially better off customer base. Zonta (2015) examines Chinese and Korean banks in Los Angeles and New York City and finds evidence that they were more resilient during the Recession and increased market competition. Highlighting

these differences between MDIs, Toussaint-Comeau et al (2021) note that while transnational flows of capital have helped Asian- and Hispanic-owned banks grow in recent years, Black-owned banks have not benefited from such flows of capital and further struggle due to the historic wealth gap and their location in historically marginalized and economically depressed areas. Indeed, Chinese-owned banks benefit in particular from the federal government's EB-5 program where foreign investors become eligible for a green card after certain levels of investment in U.S. communities (Chiong et al 2018). Li et al (2017) explain these investments in terms of the importance of ethnic assets and bonding social capital as important ways to form customer bases.

Risk and Efficiency

Almost a third of the papers looked at risk, efficiency, and long-term sustainability in the MDI sector to some extent. There is a long history in the academic literature of papers finding that MDIs are less efficient than their peers (Brimmer 1971, Boorman & Kwast 1974, Elyasiani & Mehdian 1992), and while some recent research confirms these findings (Young 2019, Breitenstein 2014, Kashian et al 2017, Toussaint-Comeau & Newberger 2017), other recent research highlights more nuanced findings that suggest a different and more complex story. Rather than comparing the efficiency of MDIs to non-MDIs ceteris paribus, Fairchild et al (2020), Barth & Xu (2020), and Barth et al (2023) compare MDIs to non-MDIs that serve similar communities using propensity score matching and how MDIs compare to comparable institutions instead of all commercial banks, finding that MDIs are not on average less efficient. Examining differences in risk aversion among MDIs, Charles-Cadogan (2017) finds that Black-owned banks are the most risk averse, followed by women-owned banks, Native-American-owned banks, Hispanic-owned banks, and Asian-owned banks. Even if MDIs may be less efficient than the rest of the banking industry without controlling for institution size or community served, that disadvantage has narrowed in recent years (FDIC 2019), suggesting a positive trend in the industry. MDIs also tend to be younger and smaller (as measured by assets) institutions than the industry as a whole, which is correlated with inefficiency (Breitenstein 2014). This suggests that equity investments in MDIs that allow them to expand and scale could lead to increasing efficiencies. Looking at capital raising around the Recession, Newberger (2018) finds that MDIs had larger losses and struggled to raise capital more than their community bank peers with the greatest disparity among Black-owned banks, suggesting that investors in MDIs need to be aligned with their mission.

Consolidation and Industry Composition

A number of papers and reports focused on how the MDI sector has changed in recent years looking at closures, mergers, and acquisitions and change in assets. Breitenstein (2014) finds significant structural volatility in the industry from the early 2000s to the early 2010s with the share of Asian-owned banks increasing and Black-owned banks decreasing. Indeed, Barth et al (2018) found that over a quarter of MDIs exited after the Recession. Kashian & Drago (2017) had similar findings but also found that there was high turnover among Asian-owned banks, with many failing banks being replaced by new ones. From 2000 to 2015, all types of MDIs except for Black-banks increased (Kashian et al 2016). Using Los Angeles County as a case study Hernandez et al (2019) also found that Asian-owned banks have grown significantly while Black- and Latino-owned MDIs have shrunk since the mid-2000s, suggesting that "greenlining" should be pursued through commercial banks putting deposits in MDIs and underwrite and purchase securities to gain CRA credit. The number of MDIs has declined since the Recession, with much of that loss concentrated among Black-owned banks (FDIC 2019). Toussaint-Comeau & Newberger (2017) raise a possible cause for concern,

finding that in some communities where MDIs closed, they were replaced by non-MDIs which may not share to same mission as their predecessors. While the number of MDIs has declined over the past several decades, that decline has mirrored community bank peers and the majority of that consolidation was voluntary, with close to 90% of assets of failed MDIs staying at MDIs (FDIC 2019). Despite the decline in the number of Black-owned banks, they greatly increased their level of mortgage origination for Black borrowers following the Recession (Neal & Walsh 2020). Barth et al (2018) and Friesenhahn & Kwan (2021) provide evidence for the need for protections against increasingly stringent regulatory requirements for MDIs in the post-Recession and post-pandemic periods.

As mentioned above, our report builds on this literature by combining two distinct but complementary analyses. In our first analysis, we examine the MDI sector as a whole from 2010 to 2022 and explore the characteristics of the places in which MDIs currently have branch presence relative to places that have non-MDI bank presence.

MDI Sector Analysis

State of the Sector

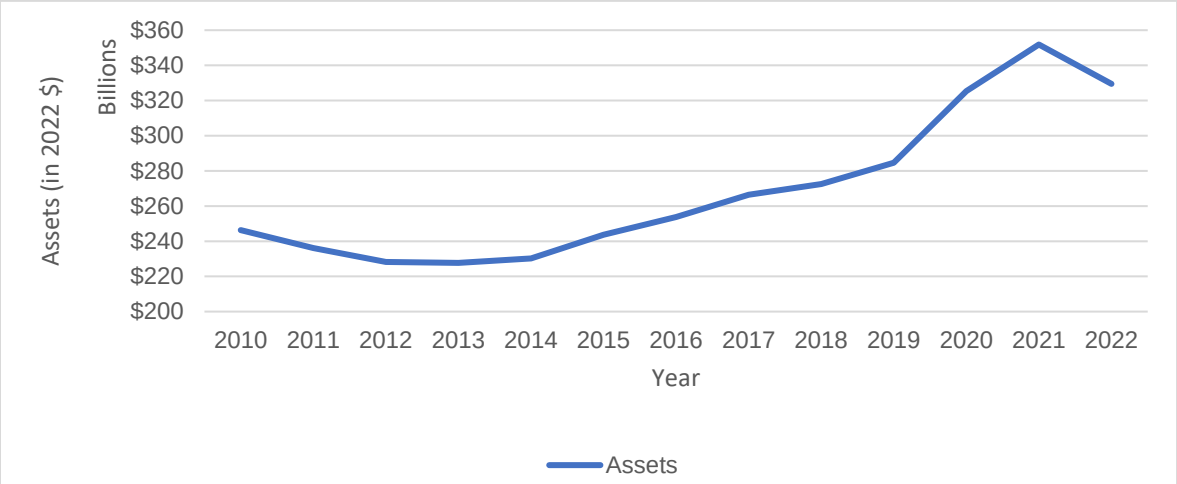
Consolidation among MDIs has largely paralleled that among the broader banking industry and, by some measures, has performed better. As of the fourth quarter of 2022, there were 147 MDIs recognized by the FDIC's Minority Depository Institutions Program. This number represents a decline from 197 in 2010 or a 25% reduction in the number of MDIs, which is lower than the decline for all FDIC-insured institutions, which saw a 32% reduction in the number of banks over the same period.[1] As of June 30, 2022, there were 1,523 MDI branches, down from 1,957 in 2010 or a 22% reduction, which is slightly higher than for all FDIC-insured bank branches (20% reduction). However, MDI branch closures were highly concentrated among a small number of MDIs, with just nine MDIs accounting for over 500 branch closures, six of which were MDIs that closed down. The International Bank of Commerce, a Hispanic MDI headquartered in Laredo, Texas, closed 181 branches from 2010 to 2022. At the same time, 54 MDIs increased the number of branches, including Cathay Bank, headquartered in Los Angeles, which opened 19 branches.

While the number of MDIs and their branches declined, the total dollar amount of assets at MDIs grew by 34% from $246 billion in 2010 to $329 billion in 2022, which almost exactly mirrors that of all FDIC-insured institutions.[2] A significant amount of that growth occurred between 2019 and 2021, when assets grew by 24% during the COVID-19 pandemic, which was also true for the industry as a whole. This recent growth in assets was driven in part by the Treasury Department's Emergency Capital Investment Program which invested $3.1 billion in the sector, as well as by private sector investments driven by racial equity in the aftermath of the murder of George Floyd. Overall, MDI assets grew by $67 billion from 2019 to 2021. A third of that growth was from Banco Popular de Puerto Rico and a quarter of that was from East West Bank. From 2021 to 2022 MDIs witnessed a $22 billion reduction in assets. Half of that reduction is accounted for by one bank, Banco Popular de Puerto Rico, which rose from $47 billion in 2019 to $69 billion in 2021, before declining to $59 billion in 2022. Almost 80%

[1] Data on all banks is taken from June 30 call reports in 2010 and 2022. Depending on the FDIC data source, this number varies between -32% and -38%.
[2] Data on MDI assets is taken from the FDIC MDI list, while data on assets at all banks is taken from FDIC Quarterly Banking Profiles.

of that reduction was among three banks (Banco Popular de Puerto Rico, Firstbank Puerto Rico, and East West Bank). Deposits held at MDI branches grew by 110% from $134 billion in 2010 to $282 billion in 2022, which was less than the 136% growth experienced by all FDIC-insured bank branches.

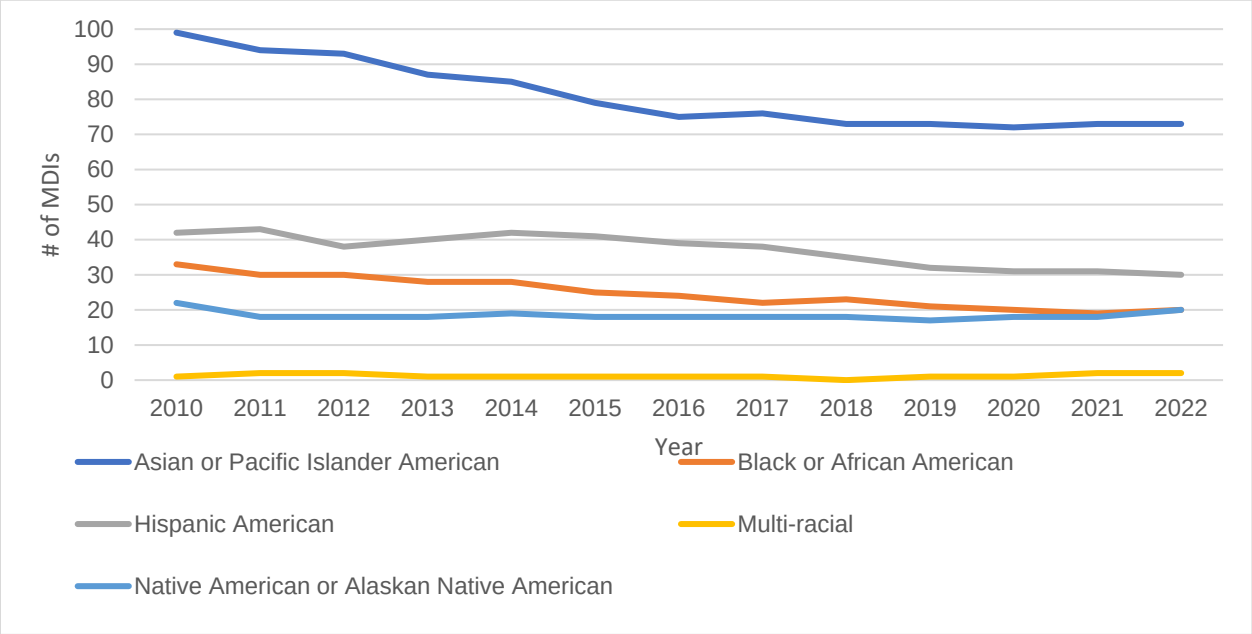
Figure 1 – MDI assets, 2010 - 2022 (adjusted for inflation)



Source: FDIC

By 2022, half of MDIs (50%) were Asian or Pacific Islander American MDIs (AMDIs), 20% were Hispanic American MDIs (HMDIs), 14% were Black or African American MDIs (BMDIs), 14% were Native American or Alaskan Native American MDIs (NAMDIs), and two percent being multiracial MDIs. Disaggregating MDIs by minority status reveals uneven change. The number of HMDIs and BMDIs declined by about the same number, 12 and 13 respectively. AMDIs accounted for half of the loss of 52 MDIs over the period, while the number of NAMDIs remained relatively similar, losing two institutions. However, in terms of percentage reduction, BMDIs suffered the heaviest losses, losing nearly 40% of institutions. It is important to note that, as highlighted in our literature review, much of this consolidation has been voluntary to achieve economies of scale and the majority of assets were retained among MDIs (FDIC 2019).

Figure 2 – MDIs by Minority Owner/Operator Status, 2010 to 2022



Source: FDIC

Geography Served

In 2022, MDIs had branches in 32 states and territories, in 92 different cities, and in 732 different zip codes, but their distribution was not even across the U.S. It is important to note that the geography of where these banks make loans is much more expansive, as will be illustrated later in the report using National Bankers Association's proprietary data.

The geographic concentration of MDIs also differed from that of the overall banking industry. MDIs were the only bank branch that existed in 174 zip codes, providing banking services to over 3.5 million people that would otherwise might not have access to a bank branch in their zip code. Three quarters of those branches were Hispanic American owned or operated, with two thirds of the 174 located in Puerto Rico and a dozen in Texas near the border with Mexico. Fifteen of the 174 were Native American banks in Oklahoma. Looking at it another way, in 25% of MDI service areas, they were the only bank branch present, highlighting the fact that a large part of their business model is serving communities that would otherwise not have access to mainstream financial services.

While many MDIs locate in communities without another bank, the median Herfindahl Hirschman Index (HHI), which is a measure of banking competition where higher numbers indicate less competition, is lower (4,747) in zip codes where MDIs are present than zip codes where non-MDIs are present (6,313). This means there is more banking competition in zip codes where MDIs are located, which is likely due to the fact that MDIs tend to be located in more urban areas with higher population density. Of the 732 zip codes with an MDI branch present, almost 40% had two or more MDI branches. One zip code in Rowland Heights, California had 23 MDI branches, representing 17 different MDIs, all of which were Asian or Pacific Islander American owned or operated. A zip code in McAllen, Texas had 15 MDI branches from six different MDIs, all of which were Hispanic American owned or operated.

At the state/territory level, MDIs are overrepresented in some places and underrepresented in others when compared to the banking industry overall. Of the 273 bank branches in Puerto Rico in 2022, all but two were MDIs, making up almost 18% of all MDI bank branches in the U.S. Almost a quarter of all MDI branches are located in California, compared to just seven percent of non-MDI branches. MDIs are also more highly concentrated in Texas, New York, and Oklahoma than non-MDI branches. All of the MDI branches in Puerto Rico were Hispanic American owned or operated. Of the 351 MDI branches in California, 336 (or 96%) were Asian or Pacific Islander American owned or operated. Of the 312 MDI branches in Texas, 222 (or 71%) were Hispanic American owned or operated and 85 (or 27%) were Asian or Pacific Islander American owned or operated. MDIs have a much lower share of branches in Pennsylvania, Illinois, Michigan, and Missouri, and no branches in Ohio. While most states lost MDI branches from 2010 to 2022, consistent with industry wide consolidation trends, several states, including New York and New Jersey, saw an increase in the number of MDI branches (12 and seven respectively).

Table 1 – Top 10 states/territories where MDIs have branches

State/Territory	# of MDI branches	Share of all MDI branches
California	351	23%
Texas	312	20%
Puerto Rico	271	18%
New York	120	8%
Florida	82	5%
Oklahoma	62	4%
Georgia	42	3%
New Jersey	34	2%
Hawaii	28	2%
Illinois	25	2%

Source: FDIC

Almost half of all MDI branches are located in just five metropolitan areas - Los Angeles, San Juan, New York, Miami, and McAllen. Almost 30% are located in Los Angeles and San Juan alone. Several large metropolitan areas that do not have an MDI branch include St. Louis, Pittsburgh, Phoenix, Cincinnati, Cleveland, Indianapolis, and Columbus. However, Columbus will have an MDI branch in 2023 when Adelphi Bank becomes the first new Black-owned bank to open since 2003. MDIs are also heavily concentrated in urban areas – 87% of MDI branches are located in urbanized areas compared to 68% of non-MDIs branches. The difference is even greater when comparing MDIs to non-MDI community bank branches. Just 44% of non-MDI community banks are located in urban areas. Further, eight percent of non-MDIs are located in metropolitan suburbs compared to just one percent of MDI branches and 13% for non-MDI community bank branches. Six percent of non-MDIs are located

in rural areas compared to just one percent of MDI branches and 12% of non-MDI community bank branches.

Demographics

The zip codes served by MDI branches generally had higher poverty rates and lower median incomes than zip codes served by non-MDI branches. The majority of MDI branches (62%) are located in zip codes with poverty rates higher than the national average in 2021, compared to just 38% of non-MDI branches. The median zip code where an MDI branch is located had a poverty rate of 17% in 2021, which was almost five percentage points higher than the national average, and seven percentage points higher than zip codes served by non-MDI branches. The median zip code where an MDI is located had a slightly lower median income ($32,285) than zip codes where non-MDI branches were located ($35,207). However, given that a much higher share of MDIs are located in urbanized areas, which are more expensive places to live than rural and suburban areas, the disparity is likely worse after factoring in cost-of-living. The median zip code where an MDI branch is located is 51% white, four percent Black, five percent Asian, and 34% Hispanic. The median zip code where a non-MDI branch is located is 79% white, four percent Black, two percent Asian, and seven percent Hispanic.

While the demographics of zip codes where MDIs are located differs from that where non-MDIs are located, it also varies across MDI ownership types, as shown in Table 2. The metropolitan areas that MDIs operate in tend to have higher rates of unbanked households (6.4%) than the metropolitan areas where non-MDIs operate (five percent).[3] There was not a significant difference by MDI ownership status.

[3] Source: FDIC National Survey of Unbanked and Underbanked Households. Note: Estimates were only available for 60 metropolitan areas. We averaged rates of unbanked households across all available years to increase the number of data available. Estimates were from 2017, 2019, and 2021.

Table 2 – Demographics by MDI minority owner/operator status

Owner/ operator status	Branches	White	Black	Asian	Hispanic	Unemployed	Median income	Poverty rate
Non-MDIs	77,263	79%	4%	2%	7%	5%	$35,207	10%
All MDIs	1,457	51%	4%	5%	34%	6%	$32,285	17%
AMDI	664	37%	3%	36%	18%	5%	$38,567	11%
BMDI	85	29%	56%	3%	6%	8%	$30,857	23%
HMDI	610	61%	3%	0%	95%	8%	$26,669	26%
MMDI	2	69%	3%	19%	11%	5%	$84,635	9%
NMDI	96	69%	3%	1%	7%	6%	$26,753	18%

Source: 2021 5-Year American Community Survey. Note: AMDI is "Asian or Pacific Islander American", BMDI is "Black or African American", HDMI is "Hispanic American", MMDI is "Multi-racial", and NMDI is "Native American or Alaskan Native American"

Table 2 also highlights that the MDI owner/operator status of a branch tends to reflect the racial and ethnic demographics of the community they serve. For example, OneUnited Bank, an African-American owned and operated bank headquartered in Boston, has a branch at 648 Warren Street in a Boston zip code that is 58% Black, 33% Hispanic, and 12% white. Also in Boston is Asian-American owned and operated Cathay Bank that has a branch at 621 Washington Street in a zip code that is 48% Asian. While both of these MDIs are located in the same city, their branches are located in neighborhoods that reflect the racial and ethnic ownership of the MDI banks.

Housing

The median housing value in the median zip code served by MDI branches was higher ($319,500) than that for non-MDI branches ($231,800). Similar to median incomes, this is likely due to the fact that MDI branches are in more urbanized areas and to their high concentration in high priced metro areas such as Los Angeles, where in one zip code where East West Bank has a branch, the median housing value is almost $1 million. At the same time, there is a wide range. Harbor Bank, a Black owned and operated bank headquartered in Baltimore City, has a branch located in an East Baltimore neighborhood with a median housing value of just $50,000. While housing values are higher in zip codes served by MDIs, there is a lower share of households with a mortgage, meaning that residents in MDI zip codes are less likely to gain wealth from increased housing values. Median rent is also higher in MDI zip codes by $234.

Disaggregating by minority status ownership shows significant differences across MDI ownership types, as shown in Table 3. The higher median value for MDIs is driven primarily by the large number of high housing value zip codes served by AMDIs. While the median housing value of MMDIs is over $1 million, it only includes two zip codes. The median housing value for HDMIs and NDMIs is significantly lower than non-MDIs and all MDIs. While BMDI zip codes have one of the lowest median housing values, they also have one of the highest shares of houses with mortgages. HMDI and NMDI

zip codes have some of the lowest share of houses with mortgages, with NMDI zip codes having a 20-percentage point lower share than non-MDI zip codes. At least part of this is likely due to mortgage lending being more expensive and less accessible for Native borrowers who live on land that is held in trust by the U.S. government which typically cannot be used as collateral for securing the mortgage.

Table 3 – Median housing costs in zip codes by MDI ownership status

Owner/operator status	Median housing value	Median monthly mortgage costs	Median rent	Median share of houses with a mortgage
Non-MDIs	$231,800	$1,603	$925	62%
All MDIs	$319,500	$1,959	$1,159	57%
AMDI	$662,100	$2,734	$1,540	62%
BMDI	$254,800	$1,630	$978	68%
HMDI	$132,900	$1,272	$611	46%
MMDI	$1,286,550	$2,991	$2,958	51%
NMDI	$111,850	$1,103	$535	42%

Source: 2021 5-Year American Community Survey. Note: AMDI is "Asian or Pacific Islander American", BMDI is "Black or African American", HDMI is "Hispanic American", MMDI is "Multi-racial", and NMDI is "Native American or Alaskan Native American"

The share of single-family housing is much higher in zip codes served by non-MDIs (79%) than by MDIs (67%). Again, this is likely due to MDIs serving more urbanized areas. The share of owner-occupied housing is much lower in zip codes served by MDIs (57%) than by non-MDIs (68%).

Social and economic connectedness and economic mobility

To measure economic and social connectedness in communities, we used data from Opportunity Insights. To ensure that we were comparing similar communities where MDIs and non-MDIs were located, we restricted our dataset to somewhat comparable communities that had a non-white population higher than 50% and a poverty rate greater than 15%, which approximately reflects the median zip code where an MDI branch is located. Economic connectedness was significantly higher in MDI zip codes than in non-MDIs and non-MDI community bank zip codes.[4] Neighborhood economic connectedness was also higher in MDIs as was, to a lesser extent, the volunteering rate.

[4] For comparison, the median zip code in the economic connectedness dataset had a score of 0.87. The MDI score of 0.701 is at the 21st percentile, while the non-MDI bank score of 0.601 is at the 10th percentile and the non-MDI community bank score of 0.562 is at the 7th percentile.

Table 4 – Economic and social cohesion

	MDI	Non-MDI	Non-MDI Community Bank
Economic connectedness	0.701	0.601	0.562
Neighborhood economic connectedness	0.454	0.400	0.386
Friend clustering	0.081	0.084	0.117
Support	0.787	0.867	0.989
Volunteering rate	0.044	0.039	0.038
Civic orgs	0.011	0.011	0.014

Source: Opportunity Insights https://opportunityinsights.org/data/ Note: See here for definitions of economic and social connectedness.

Looking at one measure of economic mobility, the share of children in low income families who grew up to have incomes in the top 20th percentile based on household income, the counties where MDIs were located had a higher share of economically mobile people (11%) than non-MDI branches (8%) and non-MDI community banks (7%). There are also significant differences between MDIs after disaggregating by minority ownership status. AMDIs have the highest share of economic mobility (12%), followed by HMDIs (8%), BMDIs (5%), and NMDIs (4%).

Commercial

The industrial makeup of zip codes with MDI branches differ from zip codes with non-MDIs and community banks in several ways. Reflecting their greater presence in urban areas, MDI zip codes have fewer businesses in industries that tend to be more rural such as agriculture, forestry, fishing, and hunting. However, MDI zip codes also have almost less than half the share of businesses in construction and manufacturing than zip codes with non-MDIs and community banks present. In their place, MDI zip codes tend to have higher shares of businesses in educational services, health care and social assistance, and especially in professional, scientific, and technical services. In the Koreatown neighborhood of Los Angeles where 10 MDI branches are located from seven different AMDIs over 32% of the businesses are in the professional, scientific, and technical services industry. The 21201 zip code in downtown Baltimore has two BMDIs from the same bank, The Harbor Bank of Maryland. Nearly a quarter of the businesses located there are in the professional, scientific, and technical services industry, highlighting the fact that MDIs are more likely to be in urban downtowns where a high share of businesses are in the aforementioned industry.

The median zip code with an MDI branch tended to have a higher share of very small businesses with five or fewer employees, 59% compared to 56% in zip codes served by non-MDI community banks and zip codes with a non-MDI bank. Zip codes served by MDIs and non-MDIs tended to have similar

shares of neighborhood businesses[5] (66%) which is slightly higher than that of non-MDI community banks. Disaggregating by minority ownership status shows that both HMDIs (70%) and BMDIs (72%) have higher shares of neighborhood businesses.

MDI branches tend to be located in metropolitan areas that have a much higher share of employer firms that are not white owned than both non-MDI branches and non-MDI community bank branches. They also tend to be located in metro areas with higher shares of Asian and Hispanic owned firms with shares that are twice as high as non-MDIs and non-MDI community banks, as shown in Table 5. There are also significant differences between the racial and ethnic ownership status among MDIs. AMDIs have the highest share of non-white owned firms, largely due to the fact that a quarter of the firms in the median metropolitan area where an AMDI branch is located are Asian-owned, more than twice the share for non-MDIs and non-MDI community banks. More than one third of the firms in the median metropolitan area where an HMDI branch is located are Hispanic-owned, compared to just six percent for non-MDIs and three percent for non-MDI community bank branches.

Table 5 – Race and ethnicity of owners of employer firms in metropolitan areas

Bank branch ownership	Non-white	Black	Native American	Asian	Hispanic
Non-MDI	19%	2%	0%	9%	6%
MDI	26%	2%	1%	18%	11%
Non-MDI community	19%	2%	0%	8%	3%
AMDI	31%	2%	1%	25%	11%
BMDI	23%	3%	0%	11%	3%
HMDI	25%	2%	0%	18%	36%
MMDI	28%	3%	1%	22%	9%
NMDI	18%	2%	0%	6%	4%

Source: US Census Annual Business Survey, 2020

As shown in Table 6, MDI branches tend to be located in metropolitan areas where there are fewer older businesses (those that have been operating for 16 or more years). In MDI operating areas, 68% of businesses are younger than 16 years, compared to 61% in non-MDI areas and 59% in non-MDI

[5] We define neighborhood businesses as businesses whose NAICS code is categorized as retail trade; finance and insurance; professional, scientific, and technical services; health care and social assistance; arts, entertainment, and recreation; accommodation and food services; or other services.

community bank areas. This is primarily driven by AMDIs, where 71% of businesses are younger than 16 years.

Table 6 – Age of firms in metropolitan areas

Bank branch ownership	< 2 years	2 - 3 years	4 - 5 years	6 - 10 years	11 - 15 years	>= 16 years
Non-MDI	13%	13%	10%	16%	13%	39%
MDI	14%	14%	11%	17%	13%	32%
Non-MDI community	12%	12%	9%	16%	12%	41%
AMDI	16%	14%	11%	17%	13%	29%
BMDI	12%	12%	9%	16%	13%	40%
HMDI	13%	13%	11%	18%	13%	35%
MMDI	15%	14%	11%	17%	13%	31%
NMDI	13%	12%	9%	15%	12%	39%

Source: US Census Annual Business Survey, 2020

Climate Change Risk

As shown in Table 7, MDI zip codes have higher climate risk than non-MDI and non-MDI community bank zip codes across flood, fire, heat, and wind risk, as measured by the share of properties in riskier zip codes. The disparity is greatest for heat and wind risk, while flooding is slightly less of a risk and fire risk is only slightly higher in MDI zip codes. For heat risk, the average MDI zip code has 11% of properties at low risk compared to 32% of non-MDI area properties and 40% of non-MDI community bank area properties. The average MDI zip code has more than twice the share of properties with high risk of heat (46%) than that of non-MDI community bank zip codes (19%). Some of this higher heat risk is likely due to MDIs being located in cities where urban heat island effect drives up temperatures as well as a significant number of AMDIs and HMDIs locating in Southern California and Texas. Five zip codes in New Orleans are home to eight BMDI branches, all owned by Liberty Bank and Trust Company. All properties in those zip codes were ranked as being at the highest risk level for heat by the First Street Foundation, owing both to the geographic region and the fact that the city has been ranked as having the worst urban heat island of any city in the U.S.

Table 7 – Climate risk level by MDI status

Risk category	Level of risk	Non-MDI	MDI	Non-MDI community bank	AMDI	BMDI	HMDI	MMDI	NMDI
Flood	Low	85%	81%	86%	84%	80%	77%	94%	89%
	Medium	7%	10%	6%	10%	7%	13%	3%	5%
	High	8%	8%	8%	6%	14%	10%	3%	6%
Fire	Low	93%	91%	93%	98%	100%	84%	100%	66%
	Medium	6%	7%	5%	2%	0%	13%	0%	27%
	High	2%	2%	2%	0%	0%	3%	0%	6%
Heat	Low	32%	11%	40%	15%	8%	1%	3%	16%
	Medium	41%	43%	41%	58%	44%	11%	72%	61%
	High	27%	46%	19%	27%	47%	88%	25%	23%
Wind	Low	59%	42%	67%	60%	19%	5%	50%	79%
	Medium	27%	33%	23%	32%	61%	33%	50%	13%
	High	14%	24%	10%	7%	20%	61%	0%	8%

Source: First Street Foundation

Overall, this section has demonstrated that MDIs have presence in underserved and at-risk communities, as measured through several key indicators including median income, poverty rates, and climate exposure. In the next section, we examine neighborhoods that received MDI lending based on an analysis of zip codes that received loan originations in 2021. Similar to the first analysis, we find that MDI loan originations flow to undeserved and at-risk communities.

An Analysis of Lending Activity at 10 MDI Banks in 2021

The National Bankers Association (NBA) invited MDIs to participate in an analysis of loan originations to further explore how MDIs reach underserved communities. Our lending sample includes lending data at the zip code level from 10 individual MDI banks, the majority of whom are NBA member banks. Specifically, the sample captures all new loans originating in 2021. Using the zip codes tied to each individual loan, we were able to analyze lending locations in combination with the Census Bureau's Five-Year American Community Survey (ACS) data to provide a detailed community profile of the places that received lending.

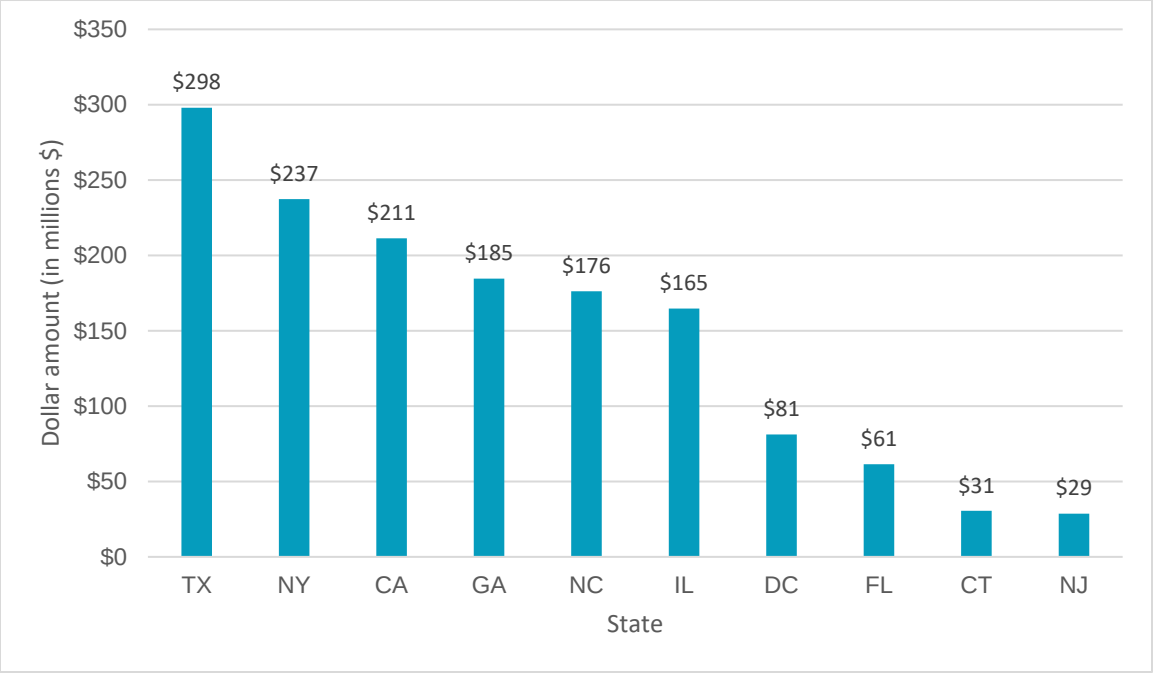
Descriptive Statistics

Our sample is made up of 10 banks, or roughly seven percent of the total number of MDIs in the sector, with a total of $16.5 billion in assets under management across the sample (representing five percent of the total assets in the MDI sector.) The median asset size of banks within our sample is $717 million

which is notably higher than the sector median asset size of $405 million, but the range in our sample covers the full spectrum, including two banks that are less than $100 million in assets, five banks that are greater than $100 million but less than $1 billion, and three banks that are $1 billion or above.

Our sample includes one Asian bank, six Black banks, two Hispanic banks, and one Native bank. Our sample banks are headquartered across six states and represent all four regions of the United States with six banks in the South, one bank each in the Northeast, Midwest, and West, and one bank in Puerto Rico. Lending activity within the states (as measured by total dollars deployed, and excluding Puerto Rico whose bank is an outlier in size) was spread across all four regions, with significant amounts of loan dollars flowing to states in all four regions.

Figure 3 – Top 10 states by total loan amount

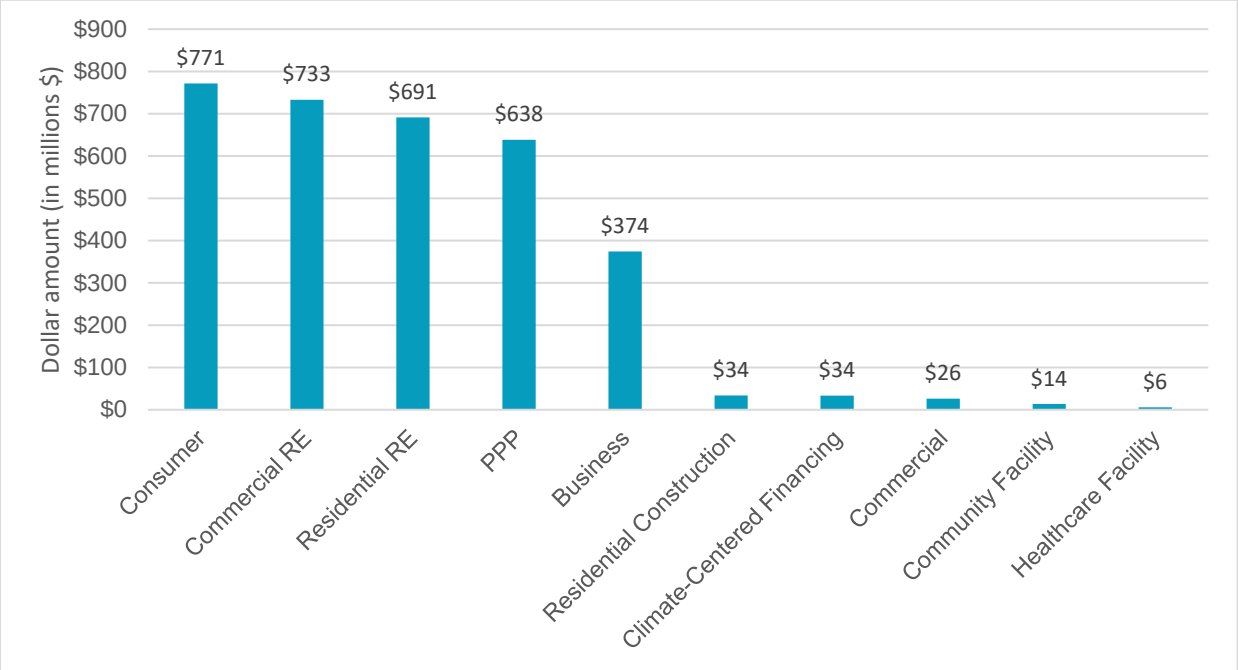


Summary Statistics

In 2021, our sample banks issued a total of 57,316 loans for a total of $3.4 billion in loan originations, with an average loan size of $59,000. Notably, the largest bank in our sample is well in excess of $1 billion in assets under management, and consequently deployed a sizable share of the total number of loans and loan dollars. When excluding that bank, the sample issued 19,921 loans for a total of $1.7 billion with an average loan size of $85,431.

The year 2021 was an outlier as regards the existence of a new (and temporary) loan product, the Paycheck Protection Program (PPP) loan, which helped small businesses stabilize and retain their workers during the early phases of the COVID-19 pandemic. The banks in the sample deployed more than 20,000 individual PPP loans, totaling $638 million dollars. Excluding PPP loans, our sample banks issued a total of 36,501 loans, for a total of $2.7 billion in loan originations, with an average loan size of $75,158. The graphic below details the top lending categories by loan amount, inclusive of PPP lending.

Figure 4 – Top lending categories by total dollar amount



As shown above, consumer lending was the highest category of lending in terms of total loan dollars. Consumer lending was also the category with the greatest number of loans issued. This largely reflects the skewed impact of a single large bank. When excluding that bank from the analysis, commercial real estate emerges as the largest category for loan volume ($563 million) and second largest for loan volume (873), while PPP emerges as the largest category for loan volume (roughly 17,000 loans) and second largest for total amount of lending dollars ($486 million). It is also important to note that climate lending[6] accounts for only $33.5 million in this analysis. But the amount of climate-related dollars could be higher as many small banks have only recently begun formally tracking or tagging loans such as home improvement loans tied to climate-related purposes with the explicit climate finance designation.

Our sample banks deployed loans in 6,052 unique zip codes, which includes lending in 3,659 distinct cities. A total of 172 million people lived in the zip codes that received lending dollars in our sample, reflecting over half (51%) of the total current U.S population. Exclusive of PPP lending, our sample banks deployed loans in 1,084 zip codes and 765 cities, with a total population across those zip codes of 18 million, or roughly five percent of the total U.S. population. Finally, exclusive of both PPP loans and our outlier largest bank, our sample deployed loans in 794 zip codes and 601 cities, with a total population of 15 million (four percent of the US population.) Thus, even when jointly excluding PPP loans and our outlier bank, lending reached slightly more zip codes than the number of zip codes with a physical MDI branch (794 versus 732), despite consisting of only seven percent of all MDIs,

[6] Climate lending is an expansive term based on the CDFI Fund guidelines that can include "projects related to climate resilience; response to or preparation for extreme weather; reduction of emissions; sustainability; energy, water, or location efficiency; or clean energy projects".

highlighting the fact that their lending geography reaches far beyond the zip codes where they are physically located.

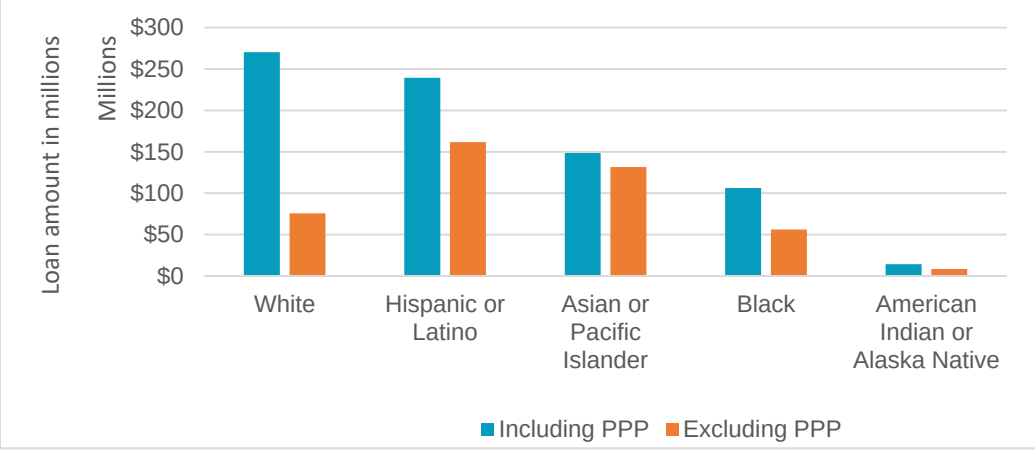
The extended reach of PPP loans into a broader base of zip codes fits with previously mentioned literature establishing that MDIs disbursed more PPP loans than their peers and issued a greater share to minority borrowers, responding to the pronounced need in those communities (Howell et al 2020, Friesenhahn & Kwant 2021). This data also fits with anecdotal testimonies from the sector that partnerships with fintech firms enabled them to deploy these loans quickly and to a broader geography than their usual market, as well as research demonstrating that fintech firms were able to reach neighborhoods with less access to traditional banking (Erel and Liebersohn 2020).

Demographics

Overall, 53% of the population in the loan geography of the lending sample is minority, and zip codes with that percentage minority population or higher account for $2.6 billion dollars (77% of all loan dollars) from the sample. When excluding PPP lending, the minority share of zip codes jumps up more than ten percentage points to 68%. In contrast, zip codes that received PPP loans were 51% minority, slightly less than the percentage share for all zip codes within the lending sample. When excluding the bank representing Puerto Rico, the minority population share increases to 68% overall and 72% when excluding PPP loans. The differences here should be contextualized in broader methodological complexities around accurately classifying Hispanic or Latino persons both within the U.S. as a whole and within Puerto Rico specifically. Similar issues arise as pertains to classifying Native Americans though it is unlikely that this greatly affected our analysis.

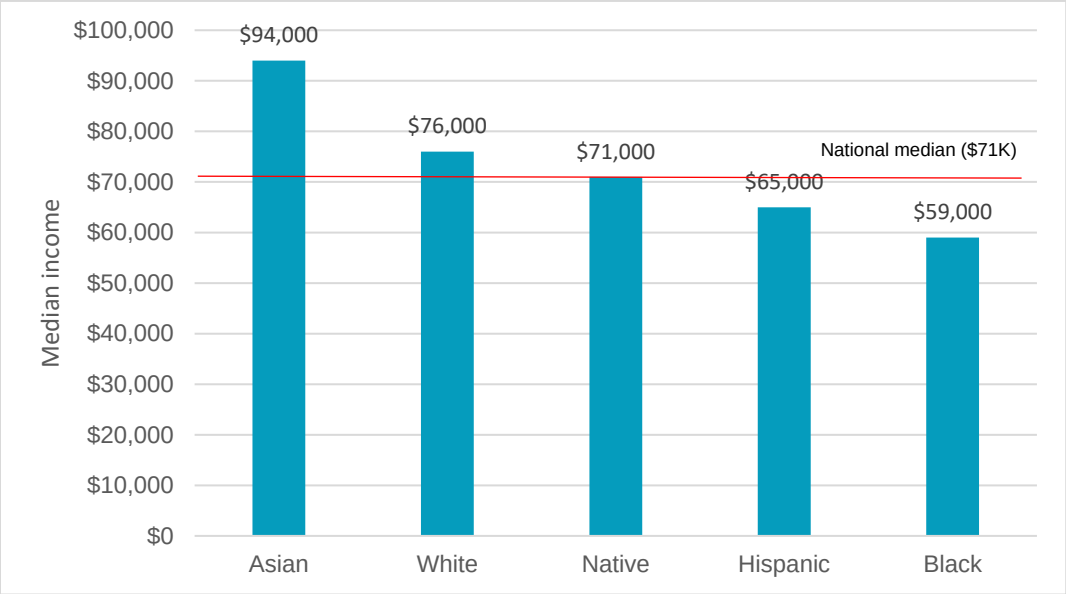
The sharp divergences when including or excluding PPP loans is further illustrated in the figure below which shows the amount of loan dollars received by each race or ethnicity both inclusive and exclusive of PPP loans. When including PPP, a higher share of loan dollars went to white borrowers relative to other groups, whereas a lower share of loan dollars went to white borrowers when excluding PPP loans. Importantly, 77% of all loans, 84% of non-PPP loans, and 46% of PPP loans from our sample do not have the race of borrower recorded. Rather than rely on proxies which could introduce distortions, we opt to limit our analysis in the figure below to loan dollars tied to originations that explicitly captured the race of the borrower.

Figure 5 – Race of borrower by loan amount



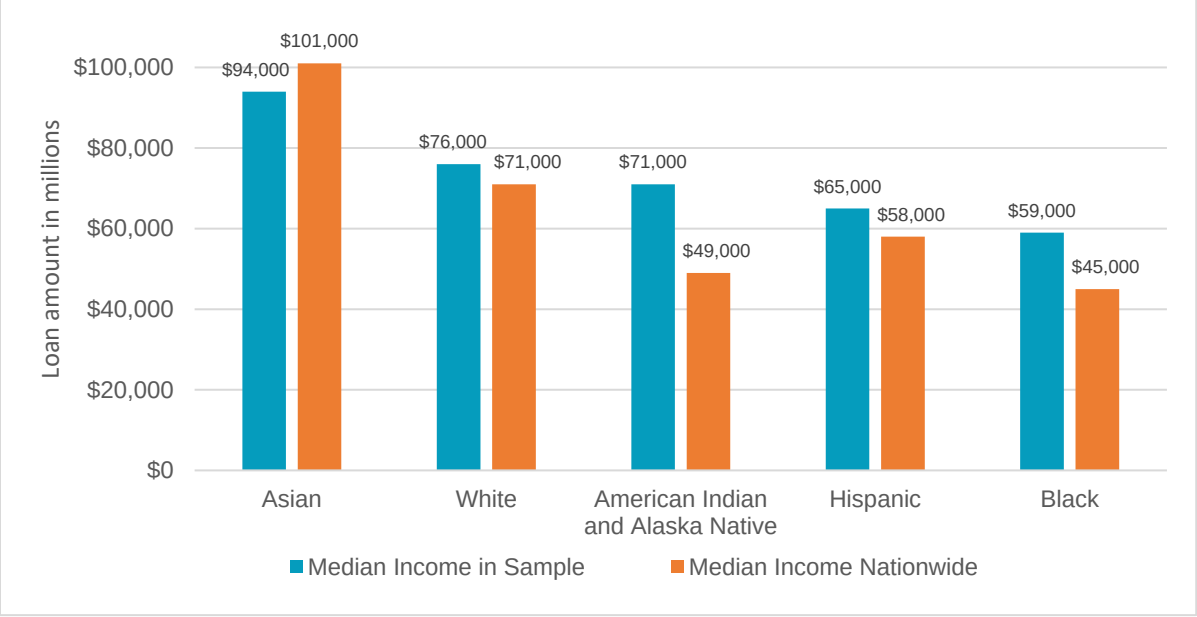
The overall median household income for all zip codes in our sample was $71,765, which is roughly comparable to the national median household income in 2021 of $70,784. Nevertheless, median household income by race varied widely in the zip codes: Asian and white median incomes were higher than the national median, American Indian and Alaska Native household income matched the national median, while Black and Hispanic incomes were lower than the national median.

Figure 6 – Median household income by race



Median income by race for the zip codes in our sample was also roughly comparable to median income by race nationwide, though Native, Black, Hispanic, and white median income were higher in our sample relative to the corresponding national statistic whereas Asian median income was lower.

Figure 7 – Median income by race in sample vs nation

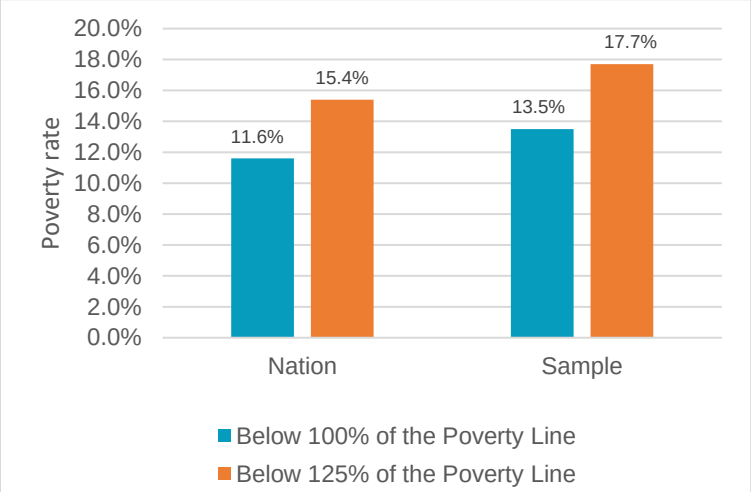


Excluding zip codes that received PPP loans, median income by race in the sample was still slightly higher than the national median by race for Black households ($47K) but was lower than national median by race for Hispanic ($51K), white ($63K), Asian ($86K), and American Indian and Alaska Native ($61K) households.

There are two important caveats for interpreting this household income data. First, this data is captured at the zip code level, but large zip codes can mask substantial disparities at the census-tract or block/neighborhood level. Second, this data does not capture the income levels of individual borrowers, so it is possible that median income for individual borrowers is lower than the median household income of the zip code in which they live.

Zip codes that received lending have populations with higher percentages of poverty relative to the nation. Specifically, 13.5% of people in zip codes from our sample are living in poverty versus 11.6% of the nation's total population in 2021. Zip codes with this poverty rate or higher account for $2.6 billion of total lending dollars, roughly 76% of all lending dollars in the sample. Since being just above the poverty line still indicates extreme financial hardship and vulnerability, we also calculate rates of being only 1.25 times (or 125%) above the official poverty line. This measure reveals a slightly bigger gap: 18% of people from the zip codes in the sample are 125% below the poverty line, versus 15% of the nation's population in 2021. Zip codes with this rate of 125%-based poverty or higher received $2.5 billion or 74% of total lending dollars in the sample.

Figure 8 – Poverty rates in MDI lending areas vs national average



When further disaggregating rates of poverty and household income by race, we find that places that are 51% or greater Black or Hispanic have much higher poverty rates (measured at 125% of the poverty line) and lower median household income relative to places that are 51% or greater Asian or white. (None of the zip codes in our lending sample were 51%+ American Indian or Alaska Native.)

Table 8 – Poverty and household income by majority race

Race/ethnicity	Percent below 125% of the poverty line	Median household income
Black	27%	$45,000
Hispanic or Latino	28%	$49,000
Asian	12%	$107,000
White	16%	$76,000

Demographic data also varied widely based on loan product. For example, zip codes that received consumer loans were nearly 89% minority, with 44% living 125% below the poverty line, and with a median household income of only $30K. Whereas, zip codes that received commercial real estate loans or PPP loans were less heavily minority (58% and 51%) and had lower poverty (22% and 17%) and higher median household income ($68K and $73K).

Similarly, demographic data at the zip code-level also varied widely by state. The following table shows data for the top 10 states based on received loan dollar amounts.

Table 9 – Demographics of top 10 states by loan amount

State	# of loans	Total $ amount (in millions)	Minority	Below 125% poverty line	Median income
TX	5,882	$298	63%	18%	$68,000
NY	1,046	$237	58%	19%	$86,000
CA	1,956	$211	65%	16%	$87,000
GA	1,744	$185	53%	17%	$64,000
NC	1,984	$176	42%	18%	$60,000
IL	1,037	$165	49%	15%	$82,000
DC	245	$81	64%	18%	$99,000
FL	1,214	$61	54%	18%	$61,000
CT	122	$31	43%	15%	$86,000
NJ	302	$29	53%	14%	$96,000

Notably, the table above is inclusive of PPP loans. In standard years absent this loan category, the minority share and percentage in poverty would likely be higher for the states that issued a large number of PPP loans.

In summary, our analysis finds that the 10 banks in our sample deployed a substantial amount of lending into minority communities with a significant portion of that lending flowing to communities with high rates of financial hardship. In the next section, we deepen our analysis of these zip codes to include both historical, current, and projected data along key variables including unemployment and bankruptcy rates.

An Analysis of the MDI Sample Using Moody's Analytics Data

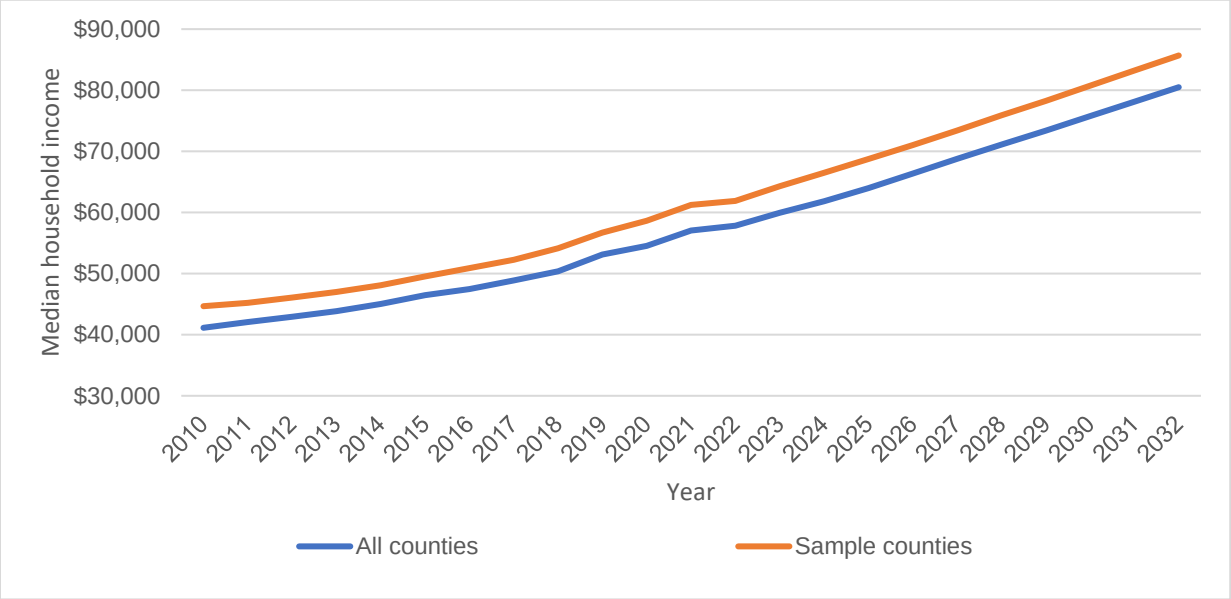
Through a special research partnership with Moody's Analytics, we were able to further explore economic, social, and climate trends within our sample and compare them to the broader nation. To conduct this analysis, Moody's matched the zip codes from our lending sample to their corresponding counties (and postcodes for climate data). This allowed us to examine the counties that received lending dollars relative to all counties or postcodes. Importantly, we chose to be inclusive of counties that received PPP loans for this analysis because we anticipate that our lending sample banks will continue to establish themselves in a sizable percentage of these newly reached markets and geographies. As a result of this choice, 37% of all U.S. counties appear in the lending sample.

Using Moody's data, we examined three key economic and social variables: median household income, median unemployment rates, and total number of bankruptcy. All data reflects the value as of December 31st in a given year. For our analysis of each variable, we include summary statistics for 2021, and then provide a graph showing historical and projected data establishing trends for 2010-2032. Overall, we find that median household income, median unemployment rates, and median number of bankruptcies are all higher both historically and forecasted in our sample relative to the broader population. Below, we discuss each of these findings in more detail and provide supporting visualizations.

Household income

The median county in our sample had a median household income of $61,243 in 2021 which is higher than the median of $57,055 for all counties but lower than the national median based on individual household data of $70,784. In the chart below, we combine historical data and forecasting data to compare median income for counties in our sample versus all counties. We find that the median household income for counties in our sample has consistently led by an average of $3,507 per year and is projected to continue to lead into the future.

Figure 9 – Historical and forecasted median household income

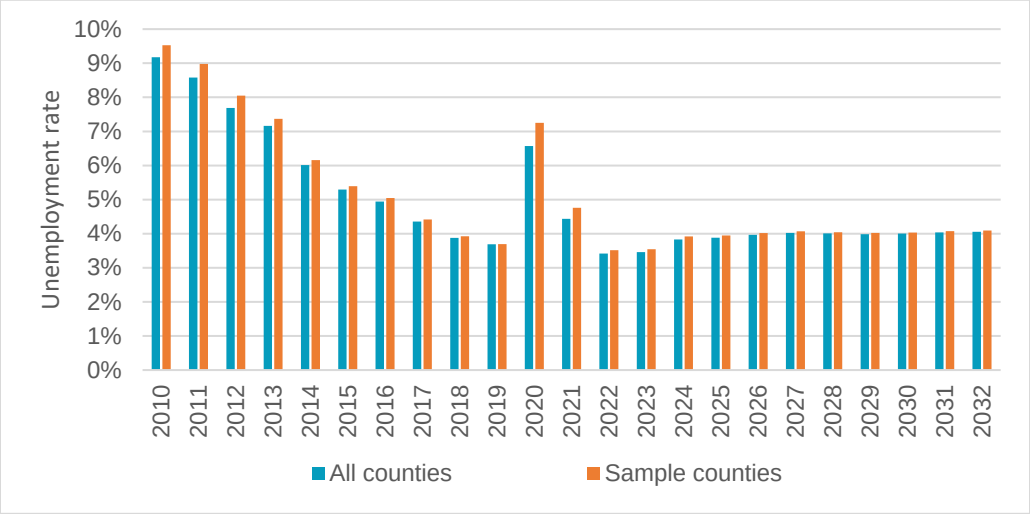


This data shows that there is little difference in median household income between counties in the lending sample versus all counties, but that counties in the lending sample have slightly higher income at the median. Notably, this statistic does not tell us about the full distribution of income (e.g., whether the median is higher because there are more people earning high incomes in counties in the lending sample or fewer people earning low incomes) and further research is needed to determine if there are notable rates of income inequality within counties in the lending sample relative to all counties. As mentioned in a previous section of this report, this difference could be due to the fact that MDIs tend to locate in more urbanized areas, which have higher costs of living that could offset higher median incomes.

Unemployment rates

The median county in our sample had an unemployment rate of 4.8% in 2021 which was slightly higher than the median 4.4% for all counties. In the graph below, we combine historical data and forecasted data to compare median unemployment for our sample and all counties. We find that the median unemployment rate for counties in our sample has been consistently higher by an average of 0.2 percentage points, and that it is projected to remain higher into the future, albeit by smaller margins than in the previous two decades.

Figure 10 – Historic and forecasted unemployment rates

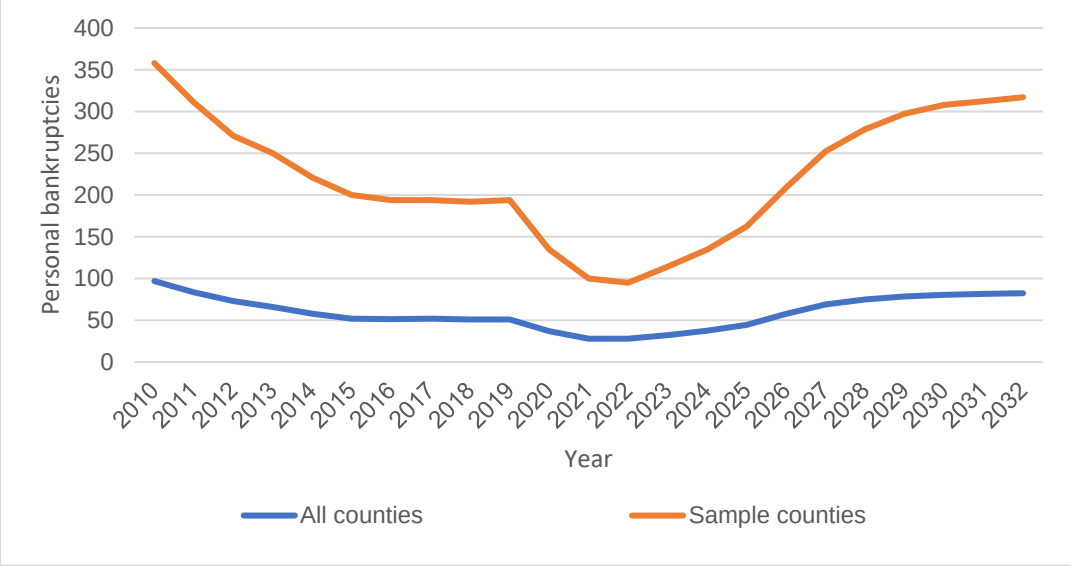


While the degree of difference in unemployment is small, the gap is noticeably wider in the years following the Great Recession when the labor market was still recovering and wider in the 2020-2021 period when the labor market experienced a shock from the pandemic. This may suggest that the counties in our sample may have local labor markets that are more vulnerable to macroeconomic shocks and contractions.

Bankruptcy rates

The median county in our sample had 100 personal bankruptcies in 2021, compared to only 28 for the median county across all counties. Combining historical and forecasted data, we find that the median county in our sample has consistently had a substantially higher number of bankruptcies with an average of 160 more bankruptcies per year, a gap that is projected to continue and widen over time.

Figure 11 – Historic and forecasted bankruptcies



The sizable number of bankruptcies in counties in our sample suggests that there may be significant economic hardship below the median income levels in those counties. If so, this would fit with our earlier analysis of zip codes from the lending sample which found higher rates of poverty relative to the national rate. The projected data similarly indicates that there may be sustained and increasing economic hardship in these counties over the next decade.

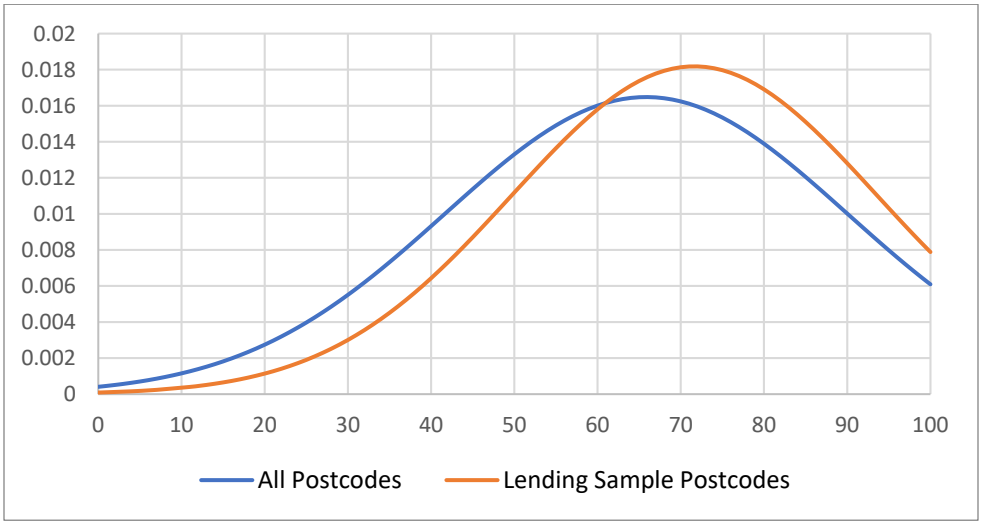
Climate risk

As part of our research partnership with Moody's RMS, we were also able to explore climate risk by matching the zip codes in our lending sample with the postcodes for geographic locations across the nation. The climate risk scoring ranges from 0 to 100 and is spread across 30 years with a historical baseline year and at least a full decade of projection. The aggregate score combines distinct areas, each with their own corresponding risk scores for fire, flood, heat stress, hurricane, earthquake, and water stress (shortage). Higher scores indicate places that already face substantial risks and are projected to get worse, whereas lower scores indicate places that are currently experiencing little risk and are not projected to experience large increases in risk.

Overall, postcodes in our lending sample have a median aggregated risk score of 78 which is ten points higher than the median of 68 for all postcodes in the United States. Roughly 60% of postcodes in our lending sample have an aggregated climate risk score above the median risk score for all postcodes in the United States, while 53% of postcodes in our lending sample have a median risk score of 75 or higher. Finally, nearly 28% of postcodes in the lending sample have median aggregated risk scores of 90 or above.

The figure below shows the full normal distribution of median aggregated risk scores for postcodes in our lending sample versus all postcodes in the United States – both of which are normalized against all global geographies. Notably, both curves in the figure are leftward skewed, illustrating that the overall country faces slightly higher risk than other geographies around the world, and that postcodes in the lending sample have a higher risk than the U.S. as a whole.

Figure 12 – Climate risk distribution



Since climate risk can also be driven by outlier events (e.g. a once in a century storm that had a low probability of occurring), it is also helpful to disaggregate across risk categories and to analyze averages that can be skewed by outliers. In terms of projecting risk, it is not possible to accurately predict the number of extreme weather events a postcode will experience in a given time period, but projections can provide insight into the expected distribution of risk based on an understanding of the climate conditions most likely to give rise to an uptick in the number of climate events such as hurricanes.

Disaggregating the risk score into the six areas outlined above reveals substantial variation in risk, reflecting the large variance in locational risk based on geographic features. For example, postcodes in the lending sample have slightly higher risk of wildfire but slightly lower risk of heat stress. In addition, due to the overrepresentation of postcodes in states like Texas and Florida, the average postcode in the sample has a higher risk from hurricanes than the overall nation.

In the table below, we plot average risk scores for postcodes in the lending sample based on the top ten states as measured by total loan dollars received. Importantly, these averages reflect only the places that received lending dollars within a state and are not necessarily indicative of the overall risk threshold for the states themselves. Composite scores in the table below tend to be notably higher than the scores for each risk category. One way to think about this is to treat a score of 50 as an overall average for all global locations: if a given location has risk exposure that is above that midpoint in multiple risk categories, the overall risk profile jumps up substantially, relative to locations that are not above those thresholds.

Table 10 – Climate risk scores for lending sample post codes within top 10 states

Location	Overall	Flood	Heat	Hurricane	Earthquake	Water Stress	Wildfire
GA	92	52	60	77	2	46	75
FL	92	36	43	92	44	50	66
NJ	88	16	52	85	39	58	49
NY	87	19	53	81	55	57	33
DC	87	7	53	81	30	53	72
CT	86	30	51	84	30	58	47
NC	85	54	33	88	8	43	65
TX	72	20	51	45	4	70	70
US	***72***	***28***	***53***	***46***	***17***	***56***	***61***
CA	62	15	46	0	18	77	78
IL	57	29	74	0	0	74	44

One important finding from the table above is that the average postcode from the lending sample in 8 out of the 10 states has a higher average composite risk score than the median composite score for all postcodes in the U.S. Similarly, for 7 out of 10 states, the average composite score for postcodes in the lending sample is higher than the median for all postcodes in the lending sample, which suggests that the vast majority of loan dollars flowed to places with proportionately higher risk. The table also illustrates that in addition to predicted ongoing climate issues such as heat stress or water stress, many of the places in the lending sample face heightened tail risk from disruptive extreme weather events such as hurricanes or wildfires.

Overall, this data indicates that the places that received lending dollars face greater climate risk exposure than the overall nation. These findings fit with our earlier analysis of the zip codes in which MDIs are located which showed that places with MDI presence have higher climate risk than places with non-MDI and non-MDI community bank presence. The heightened risk documented here could influence a variety of variables related to well-being for individuals and communities including especially health outcomes such as asthma rates and costs associated with insuring and repairing homes and businesses. Since our earlier analysis showed higher rates of poverty in the places that received lending versus the overall nation, it is likely that many of the people and places most negatively impacted by worsening climate conditions will have the least amount of financial resources to prepare, mitigate, and respond to climate disasters. This concern is particularly pronounced as regards extreme weather events that can devastate areas quickly and with little advance warning.

Discussion and Recommendations

This white paper has leveraged two unique analyses to provide insight into the places in which MDIs are located and conduct their lending activities. Our findings demonstrate that MDIs continue to significantly reach underserved people and communities, providing vital access to capital and credit.

Our first analysis highlighted the promising growth in assets and deposits experienced by the MDI sector over the last decade. It also highlighted pronounced geographic concentration, identifying several major cities where MDIs had no presence, which may suggest that the sector needs to broaden its scope to reach communities and people that may still be cut off from capital flows. Even still, MDIs were the only bank in 174 zip codes, providing banking services to 3.5 million people who would not otherwise have access to such services. Our first analysis also highlighted significant market consolidation, which may indicate acquired economies of scale on the one hand or government or market failures that threaten the vitality of the sector on the other hand. Confirming the literature, this analysis also found that the racial and ethnic composition of MDI service areas tend to reflect the racial and ethnic ownership status of MDIs.

Our second analysis highlighted the substantial reach of MDI lending, particularly as illustrated by Paycheck Protection Program lending activity. This analysis also confirmed that communities served by MDIs experience profound economic challenges and are at heightened risk from climate change exposure particularly as regards wildfires and hurricanes. One major implication of this latter insight is that while MDIs are well-positioned in terms of location and target markets to respond to heightened needs of at-risk communities, MDIs may also themselves be more sensitive to the negative impacts of cyclical or unexpected economic downturns and climate-related disasters as regards the health of their balance sheets and their ability to minimize loan defaults.

Areas for future research

This paper combined two complementary analyses to provide a robust view of the MDI sector and its lending activities. We envision future research that builds on both analyses in several key ways. First, while our paper documented trends in bank consolidation within the MDI sector relative to the banking sector as a whole, more research is needed to isolate discrete causes and outcomes related to that consolidation, disaggregated by the race/ethnicity of MDI ownership. Such work will enable identification of key vulnerabilities that may need to be addressed to ensure long-term survivability of financial institutions that may be particularly sensitive to market pressures, systemic issues, or economic downturns.

Second, our analysis begins to explore measures of social and economic mobility in the places with MDI presence. But robust analysis is needed of places with MDI presence and places that receive MDI lending to enable identification of potential causal relationships for social capital, connectedness, and mobility. Future research could also explore social and economic mobility for individual borrowers, perhaps based on a longitudinal study of outcomes for individual borrowers relative to a control group. Additionally, while our analysis suggest that MDI lending provides strong social benefits to high poverty and majority-minority communities, rigorous causal research is needed to measure the impact of such financial investments in communities. Simply put, what are the welfare implications of MDI lending in such communities? Can past expansions of this type of lending and credit be causally linked to improving welfare and economic mobility for residents, families, neighborhoods, and businesses?

Third, while the lending sample data recorded loans at the zip code level, we know that zip codes can exhibit significant heterogeneity relative to more granular geographies such as census tracts. Future research should therefore examine lending at more granular neighborhood and individual person, family, and business levels to provide even greater understanding of potential deep impact. However, it is crucial that such research balance data privacy with specificity. Such research can help make the case for continued investment in MDIs.

Finally, most loans in our lending sample did not record the race of the borrower, thereby limiting our ability to calculate the percentage of loans and dollars flowing to each group. As MDIs increase their capacity to record more granular data, future research can provide greater insight in this area. In addition, our lending sample is racially skewed in ways that also suggest skew toward urban areas, though as our first analysis showed, MDIs in general are more heavily represented in urban areas. Future research should therefore seek to disaggregate urban and rural areas to quantify meaningful similarities and differences. Such disaggregation will support deeper understanding of potential challenges or opportunities. Similarly, economic research on Native American people and places remains woefully underdeveloped and more research is needed to identify specific challenges for this demographic as pertains to banking activities such as the impact of land ownership being held in trust.

Recommendations

Our analyses have demonstrated that MDIs play an important role in providing credit and capital to underserved communities. To further financial inclusion and extend the sphere of impact, MDIs need support from a broad range of stakeholders. In this section, we provide recommendations for three focal areas that derive from our research findings.

First, government, corporate, and philanthropic sectors should continue to drive additional capital to MDIs to enable them to increase the amount of lending and further broaden the geographies of their lending – both of which will allow capital and credit to reach even more individuals and communities at the margins. This capital support can take many forms, including Tier 1 investments, short- and long-term deposits, loan syndication opportunities for large-scale financing, technical assistance grants to support digitization, and more. Government can also incentivize private investment into MDIs via legislation that creates tax credits for such investments and in the case of other banks, explicitly provide CRA credit for such investments.

Second, given the elevated exposure to climate change in the communities that have MDI presence and/or that have received MDI lending, it is imperative that MDIs be well-positioned to increase their climate-centered financing activities. Governments at every level should prioritize MDIs as key institutions in the ecosystem of clean energy, green infrastructure, and localized adaptation and mitigation projects, including by allocating federal dollars from landmark legislation such as the Inflation Reduction Act and the Infrastructure and Jobs Act to be deployed by MDIs for climate-centered financing. Not only will such allocations increase the ability of MDIs to lend, but it also taps into MDIs ability to leverage their relationship with small and minority businesses. This in turn can ensure that these businesses are empowered to provide goods and services to support climate change mitigation.

Third, in light of how well MDIs were able to deploy PPP loans as a response to the pandemic, policymakers should prioritize these institutions in all future fiscal programs set up as emergency responses to urgent capital, credit, or liquidity needs of businesses and households. Such prioritization should include ensuring that MDI leaders are consulted on all aspects of program design, implementation, and evaluation based on their unique insights regarding the needs of vulnerable individuals and communities.

Conclusion

As with many similar minority institutions such as historically Black colleges and universities (HBCUs) and tribal colleges, minority banks have an outsized impact in creating widespread opportunity and mitigating the effects of systemic racism. Our analysis highlights how MDIs allocate capital to minority-majority communities and to communities with higher rates of poverty, unemployment, bankruptcy, and climate risk exposure relative to the overall nation. Our work also highlights how these institutions have served as stabilizing forces for households and firms during times of crisis such as the Covid-19 pandemic.

Given their impact, policymakers and the broader universe of corporate and philanthropic stakeholders should prioritize supporting MDIs as part of the broader strategy to close the racial wealth gap and expand opportunities for social mobility and place-based revitalization. The next few years in particular hold potential to be an inflection point for the nation as new sources of federal dollars flow to communities across the U.S. to support infrastructure, clean energy, semiconductor production, and other key investment areas. We are confident that MDIs will continue to expand their social impact and we look forward to producing additional research that helps to deepen understanding of this vital sector.

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