Loan Availability Among Small Businesses Operating

in Urban Minority Communities*

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A. Introduction

Do banks redline urban minority communities? While redlining per se has disappeared in recent decades, the view that financial institutions are averse to lending in minority neighborhoods persists. Regarding bank lending to small businesses specifically, scattered evidence of varying quality supports the hypothesis of such lending aversion, but this evidence is dated and not comprehensive (see, for example, Bates, 2011; Immergluck, 2004). Examining firms located in metropolitan areas, we have analyzed Kauffman Firm Survey (KFS) data, contrasting the outcomes of loan applications submitted to financial institutions by small firms located in minority neighborhoods to those of businesses in predominantly nonminority areas. KFS data currently provide the only nationally representative database containing firm-specific information on geographic location as well as dollar amounts and sources of debt capital actually being used by small firms. The KFS data track small businesses starting operations in 2004 and their particular strength is inclusion of annual follow-up information on new capital raised by individual firms in the years subsequent to startup.

Our analysis of firms applying to financial institutions for loans during the 2007-2010 period compares application outcomes, while controlling for year of application, firm geographic location, and firm and owner characteristics related to borrowing risk (including, among others, owner wealth and demographic traits, business size, profitability, and credit score). Outcomes analyzed in this study include the loan application acceptance and rejection patterns of small businesses located in predominantly minority residential areas of urban America, in comparison to firms in other parts of urban regions. A direct measure of unmet credit needs analyzed herein

concerns "discouraged" borrowers, identified as firms needing credit during the previous year but not applying because they feared.

The 2007-2010 period is interesting because banks during these years experienced unusually stressful operating conditions as property values declined throughout much of the nation and loan delinquencies and defaults rose. Many financial institutions responded to these credit-market conditions by tightening their loan- approval criteria, particularly after the collapse of Lehman Brothers in late 2008. Although financial institutions have traditionally viewed minority neighborhoods as risky areas in which to lend (Bates, 1989), this risk aversion has declined substantially in recent decades. If their rising risk aversion in the recent period of financial market turmoil, manifested as tightening of loan-approval criteria, extended to minority communities in particular, then we expect to observe a disproportionate decline in loan application approval affecting firms located in these communities.

We have investigated the hypothesis of tightening credit standards affecting firms located in minority communities disproportionately, relative to cohort firms in other urban geographic areas. In fact, bank loan approval rates among small-firm applicants located in minority neighborhoods did fall disproportionately in 2009 and 2010 relative to earlier years; our analysis disentangles the effects of tightening loan approval criteria from declining applicant credit quality. While our findings demonstrate that lending criteria did tighten in 2009 and 2010 -- relative to the 2 preceding years -- this tightening was across-the-board and not disproportionate in minority neighborhoods. Additionally, our findings demonstrate that financial institutions during 2007-2010 appeared to be more sensitive to the credit needs of minority-owned firms when these businesses were in

fact located in minority communities, in comparison to those located in nonminority areas. Controlling statistically for credit risk factors, minority ownership per se was not a significant determinant of loan application approval likelihood within the minority neighborhood geographic context; the minority ownership characteristic, in contrast, was a strong negative predictor of loan approval when the applicant firm was located in urban geographic areas outside of minority communities. While the spirit of equal treatment implicit in the Community Reinvestment Act (CRA) may indeed be benefitting minority business borrowers operating in minority neighborhoods, the practice of treating loan applicants in a color-blind fashion appears to apply primarily to high net-worth minority owners and it was not apparent throughout the rest of metropolitan America.

B. Background

1. KFS database

This database was designed to facilitate efforts of researchers seeking to track a cohort of startups over an 8-year period. The target population for the Kauffman Firm Survey (KFS) was new businesses started in the 2004 calendar year in the United States; these firms were tracked through 2011. This population excludes any branch or subsidiary owned by an existing business or a business inherited from someone else. A business start was defined based on indicators of business operations, including having an Employer Identification Number (EIN), Schedule C income, a legal form, payment of state unemployment insurance or federal Social Security taxes. For the study population, a business started in 2004 that was created by 1 or more people, the purchase of an existing business, or the purchase of a franchise was defined as a new, independent business. Businesses were excluded if they first had an EIN, Schedule C income, or a

legal form or had paid state unemployment insurance or federal Social Security taxes prior to or after 2004.

The KFS collected information on 4,928 firms and surveyed them annually. Detailed information on the surveyed firms includes industry, physical location, employment, profits, intellectual property, owner characteristics, financial capital (equity and debt) used at start-up and over time, and other traits. Because certain small-firm subgroups were oversampled in the process of creating the KFS, we have weighted the data analyzed throughout this study to compensate for this oversampling. The KFS sampling frame is based on the Dun & Bradstreet (D&B) data and restricted to businesses started in 2004. These D&B data are a compilation of data from various sources, including credit bureaus, state offices that register some new businesses, and companies (e.g., credit card and shipping companies) that are likely to be used by all businesses.[i]

Our ability to investigate issues of small business loan access in racially-defined urban geographic contexts is made possible by the presence of zip-code-specific firm location information in the KFS database. We sorted firms based on their location (at the zip-code level) into 2 groups – 1) predominantly minority residential and 2) all other geographic areas within the applicable metropolitan regions -- and proceeded to investigate issues of borrowing needs and loan application outcomes using firm and owner traits, in conjunction with firm location, as explanatory variables in regression analyses of discouraged borrowers and loan application outcomes.[ii] Our focus was not initially upon minority- versus nonminority-owned-business borrowers but, rather, on whether firms in minority neighborhoods were treated differently than small businesses located in other parts of urban America. Interesting findings regarding differential

treatment of minority-business borrowers in different geographic contexts caused us to extend our analysis to probe this aspect of the bank loan evaluation process.

2. Past studies of small-business lending in minority communities

Immergluck (1999) used CRA data to analyze bank-lending patterns in several large metropolitan areas, and he consistently found that small firms operating in nonminority white areas had greater access to bank loans than firms doing business in minority communities. His analysis of bank lending, by census tract racial composition, to firms with annual sales under $1 million in the Philadelphia metropolitan area revealed that firms in predominantly white census tracts received, on average, 11.0 loans per 100 active businesses, while those located in black census tracts received 1.2 loans per 100 active small businesses. Controlling statistically for median family income, average business credit score, and other characteristics at the tract level, he found that going from an all-white neighborhood to an all-black neighborhood resulted in a drop of 6.8 loans per 100 small businesses. CRA data analyzed by Immergluck did not identify either the race or ethnicity of individual business owners, nor did they identify traits of individual borrowing firms.

A possible shortcoming of the CRA data analyzed by Immergluck was the absence of firm borrowings in the form of credit-card balances. More comprehensive CRA data on bank lending (including credit-card balances) to small businesses in the Chicago area were analyzed by Smith (2003) to determine if loan availability in minority neighborhoods differed from the rest of the region. Within this metro area, small-business loan availability was lowest in the City of Chicago. Smith disaggregated the City into 77 neighborhoods and examined loan availability relative to the number of small businesses

in operation. Comparing, for each neighborhood, racial composition and average household income of local residents, Smith found that loan availability in lower income and minority areas was far lower, relative to the number of businesses, than in higher income, predominantly white areas. He reported "a greater disparity in lending levels based on minority status of a geography than by income level" (2003, p. 4).

Within Chicago, the areas toward the bottom of the loan availability ranking were all low-income minority neighborhoods (Smith, 2003). The neighborhood ranking 77th was Washington Park, a low-income, predominantly African-American residential area. Gage Park (79% Hispanic) ranked 70th in loan availability on a per business basis, and average loan size was $17,200 (versus $42,000 in all other neighborhoods). The prevalent pattern in minority neighborhoods was consistently one of low loan availability coexisting with high levels of credit-card borrowing.

Bostic and Lampani (1999) investigated loan application denial patterns among small business owned by whites and blacks, using 102 explanatory variables drawn from Survey of Small Business Finance (SSBF), including 29 business characteristics, 15 owner traits, 20 most-recent-loan-application characteristics, and finally, 53 banking market and local geographic characteristics. Part of the reason black loan applicants were rejected disproportionately, they concluded, was because their firms were often located in economically depressed African-American residential areas. According to Bostic and Lampani, "our results show that the economic and demographic characteristics of a firm's local geography should be considered if a more accurate quantification of these racial disparities and understanding of their underlying sources is desired" (1999, pp. 269-70).

Analyzing young urban firms owned by African Americans and whites that actually received startup financing from banks, Bates' (1989) compared one aspect of loan terms – loan amount – for borrowing firms located within minority neighborhoods as opposed to other sections of the 28 large metropolitan areas. Representative samples of firms drawn from the Census Bureau's 1982 Characteristics of Owners (CBO) database were analyzed to explain dollar amounts of startup financing borrowed from banks. Controlling statistically for firm and owner characteristics, including owner equity investments in their ventures, minority-neighborhood location, other factors constant, resulted in smaller loan amounts; for black and white owners alike, a minority-area location was penalized. Larger loan amounts went most often to firms whose owners who were college graduates making relatively large investments of equity capital in their startup ventures, except in instances of minority-area firm location (Bates, 1989).

The findings of Immergluck (1999), Smith (2003), Bates (1989), and Bostic and Lampani (1999) discussed above are broadly complementary. We have, nonetheless, only limited solid empirical evidence on how and whether firms located in urban minority neighborhoods are penalized for their geographic location when they seek bank financing. Reviewing evidence from credible empirical studies on actual borrowing patterns, as well as treatment by financial institutions of small-firm loan applications forthcoming from ventures located in minority neighborhoods, these findings are a useful starting point. Gaps, dated data, and multiple flaws, however, plague these studies, largely due to inadequacies of the databases underlying these studies. Bates' study of loan terms (1989), for example, did not investigate loan application acceptance and rejection patterns because the Census data he analyzed provided no information on application

outcomes. Neither Immergluck (1999; 2004) nor Smith (2003) investigated impacts of individual firm characteristics or owner human capital (or demographic) traits on observed borrowing patterns because the CRA data underlying their analyses provided no information on these characteristics.

One large, established literature effectively demonstrates that black-owned firms, after controlling for risk factors, are more likely than white-owned ventures to have their loan applications rejected by banks (see, for example, Cavalluzzo and Wolken, 2005; Blanchflower et al., 2003). Is this because of their minority ownership trait only or is part of this higher rate of rejection due to their geographic concentration in minority neighborhoods? Our analysis of KFS data seeks to extend this body of evidence, thus increasing our understanding of the difficulties faced by small businesses operating in minority community environs.

C. Statistical Overview of Credit Needs, Loan Application Incidence, and Application Outcomes

Reliance upon CRA data to measure the degree to which financial institutions are servicing the borrowing needs of small businesses located in minority communities is problematic. Although the apparent paucity of loans being extended by financial institutions may be due to minority community location, other possible (inter-related) explanations include 1) greater credit risk in the pool of local potential small- business loan applicants, 2) low actual application rates by the individual firms, 3) less actual demand for credit, 4) higher rejection rates among applicants, 5) inaccurate measurement of lending rates rooted in flawed/incomplete CRA data, and/or 6) lender discriminatory treatment of specific firm subgroups over-represented in minority areas, particularly

minority-owned firms. KFS data allow us to examine these explanations, thus narrowing the list of possible reasons for the relatively limited availability of bank loans to small businesses located in urban minority neighborhoods.

Are young small firms in minority areas less likely to apply for loans than their counterparts located in other parts of metropolitan areas? According to Table 1 statistics, these firms were more likely than others to submit loan applications to financial institutions during the 2007-2010 period. Recall that all of the applicant firms began operations in 2004, thus controlling for possible confounding impacts of firm age on loan application incidence.[iii] By way of clarification, the loan applicant percentages (Table 1) are annual percentages calculated over a 2-year period. Although the minority-area firms were more likely than others to apply in both the 2007-2008 and the 2009-2010 periods, particularly noteworthy is that 15.2% of the former submitted loan applications 2009-2010 period, well above the 10.2% application rate among the small firms located throughout the rest of the metro areas. We conclude that firms in minority areas are actively applying for loans from financial institutions, ruling out the possibility that their low actual incidence of loans received is due to low application rates.

Table 1 here

Perhaps firms located in urban minority neighborhoods have a relatively low need for credit, but this possibility is unlikely since KFS data (Table 2) indicate that minority-area firms, during the 2007-2010 period, were over 60% more likely to indicate they needed credit but did not apply for loans due to fear of refusal, compared to businesses

located outside of predominantly minority residential areas. In 2009 and 2010, for example, 30.3% of the firms in minority areas needed credit but, fearing loan application rejection, did not apply, while the percentage of small firms located in other areas needing credit but discouraged from borrowing was 18.9% (Table 2).

Insert Table 2 here

Our analysis of loan application outcomes among small firms actually applying for loans from financial institutions begins by examining percentages of firms reporting their loan applications were always approved. During 2007-2008, roughly equal percentages of the minority-area firm applicants and applicants in other geographic areas were always approved, but a sharp divergence in these approval rates characterized the 2009-2010 years: the always-approved rate among minority-area firms dropped to 45.7%, compared to 59.5% for other applicants (Table 3). Note that our rationale for comparing loan applications and subsequent approval rates for 2007-2008 verses 2009-2010 is based on the assumption that bank tightening of lending standards was particularly pronounced after Lehman Brothers collapsed in late 2008.

Table 3 here

Table 4 summarizes percentages of applicants reporting their loan requests were always denied. Our findings indicate 19.9% of the minority-area small business applicants were always denied, versus 20.8% for all others. Breakdowns of denial rates

for 2007-2008 versus 2009-2010 indicate divergence across the geographic areas, but the always-denied rates describing minority-area firms are based on small sample sizes; reported differences are thus statistically insignificant.

Table 4 here

Particularly among loan applicants rejected by a financial institution, a common response is to file another loan application elsewhere, leading to the possibility of multiple applications generating mixed outcomes – sometimes denied and sometimes approved. Table 5 summarizes this frequency of mixed outcomes, which are more frequent among minority-area firms seeking bank loans, relative to applicants located elsewhere, and this pattern of relatively frequent mixed outcomes typifies both the 2007-2008/2009-2010 sub-periods and the overall 2007-2010 time period (Table 5). Over the 4-year span described in Tables 3, 4, and 5, firms in minority areas were, in summary, 1) less likely than firms located elsewhere to have their loan applications always approved, 2) more likely to have their loan applications sometimes approved and sometimes denied, and 3) equally likely to have their applications always denied.

Table 5 here

One particular owner characteristic stands out as distinguishing small firms in minority areas from those located outside of minority neighborhoods: nearly 48% of the minority-area firms are owned by minorities, while less than 14.5% of the firms located

elsewhere are minority owned. Although minorities own nearly half of the small

businesses in minority neighborhoods, they account for only 34.5% of the loan applicants

among the broader universe of firms reporting minority-area locations. The minority-

ownership and minority-community-located traits are clearly highly correlated; Table 6

summarizes loan application approval and denial rates for minority- and white-owned

small firm subgroups (irrespective of location). Substantial differences are apparent, with

minority-owned firms reporting much lower "always approved" application outcomes,

along with a higher always denied incidence (Table 6). To clarify why small businesses

in minority neighborhoods have greater unfilled credit needs and are less likely to have

their applications for loans always approved than firms in other urban locations, we next

utilize regression analysis to explain these outcomes while controlling statistically for

owner race and other demographic traits, owner wealth and human-capital characteristics,

firm traits, including credit rating, and other factors that might shape both unmet credit

needs and loan application outcomes. A key objective is to disentangle the effects of

minority ownership and minority neighborhood firm location on small business credit

needs and loan application outcome patterns.

Table 6 here

D. Regression Analysis of Urban Small Businesses, Their Credit Needs, and Their Loan Application Outcomes

Statistics summarized in Table 2 indicated that small businesses located in minority

areas were more likely than firms located elsewhere to self-identify as discouraged

borrowers, i.e. they indicated a need for credit but did not apply because they feared their loan applications would be denied. Logistic regression analysis is used to delineate discouraged borrowers from other firms and the specific issue of interest is whether minority-neighborhood location is an important determinant of discouraged borrower status after other factors have been controlled for statistically. The dependent variable – discouraged borrower status – equal 1 (otherwise 0), indicating that positive regression coefficient values indicate a greater likelihood of being a discouraged borrower; results of this regression exercise are reported in Table 7.

Table 7 here

Outcomes of this analysis indicate that minority neighborhood geographic location is positively related to being a discouraged borrower, other factors being constant, and this finding is statistically significant. Beyond the firm's location in a minority area, other strong identifiers of discouraged borrower firms are 1) low business credit score, 2) owner person net worth under $50,000, and 3) minority ownership (Table 7, model 1).[iv] Item non-response patterns effectively reduce the firm sample size (model 1), causing us to estimate a parsimonious regression (model 2) that excludes certain variables prone to nonresponse. Although this adjustment increases our sample size by over 900 firms, it does not alter our findings (Table 7, model 2). In light of the fact that both the minority-area location characteristic and the minority ownership trait are important identifiers of discouraged borrowers, we interacted these 2 traits to see if they had multiplicative effects; they did not. Stated differently, while minority ownership and

minority-neighborhood location characteristics both predict discouraged borrower status, both white- and minority-owned firms located in minority neighborhoods are more likely than others to be discouraged borrowers; over-representation of minority-owned firms in these environs is not the sole cause of the increased likelihood of discouraged borrower status.

We next examine small firms that actually submitted loan applications to financial institutions and our task entails delineating prospective borrowers always experiencing approval of their applications from others. Using logistic regression analysis, the dependent variable equals 1 in cases of loan applications always being approved (0 otherwise), indicating that positive regression coefficient values imply a greater likelihood of approval. The "always approved" outcome may apply to 1 loan application or several; recall that loan application presence/absence is recorded annually in the KFS data. Explanatory variables are the same as those used to delineate discouraged borrowers from others, and the results of this regression exercise are reported in Table 8.

Table 8 here

Regression analysis outcomes indicate that minority neighborhood geographic location is negatively related to the likelihood that loan applications submitted by small businesses are always approved by financial institutions, other factors being equal, and this relationship is statistically significant (Table 8, model 1). Table 8's regression findings do suggest that discouraged borrower firms correctly identify key factors likely to cause rejection of their applications, because both low firm credit score and owner

wealth under $50,000 – the credit risk factors most accurately identifying discouraged borrowers -- are strong predictors of application rejection. Table 8's analysis of loan application outcomes confirms, as well, the presence of more stringent loan approval criteria in 2009/2010, relative to earlier years; firms applying for loans in the 2009-2010 period were less likely than those applying in 2007/2008 to be approved by financial institutions, other factors constant. Additionally, the minority owner trait was a strong predictor that loan applications of small firms would not always be approved.

Interaction of the minority-area firm location characteristic with minority ownership generated an interesting finding: the positive regression coefficient attached to this trait clearly implies that minority-owned firms located in minority neighborhoods are *more likely* to have their loan applications always approved, in comparison to minority-owned firms located outside of minority areas. This finding is further probed below. A test of the robustness of the regression findings is conducted, once again, by estimating a parsimonious model excluding 4 explanatory variables subject to item non-response (Table 8, model 2). This exercise produces an interesting result: the negative relationship between the minority-area location trait and loan applications always being approved loses its statistical significance, while other key determinants of loan application outcomes, in terms of statistical significance, are unchanged. Straightforward changes in model specification alter our confidence regarding the stability/importance of the negative relationship between this location variable and loan application approval. While minority-area location may indeed predict a reduced likelihood that a firm's applications are always approved, the robustness of this finding is lacking.

Continuing our analysis of loan applications submitted to financial institutions by small-business prospective borrowers, we next delineate applicants always experiencing denial from others. Again using logistic regression analysis, the dependent variable is set equal 1 in cases of applications always being denied (0 otherwise); positive regression coefficients therefore imply an increased likelihood of denial. The same explanatory variables employed in our previous analyses of discouraged borrowers and firms having their applications always approved are used to differentiate between prospective borrowers always experiencing loan denial and others, and the results are reported in Table 9

Table 9 here

Our analysis differentiating applicants always experiencing denial from others indicates that, although the minority-area location trait is positively related firms having all of their applications to financial institutions denied, this relationship is not statistically significant. The minority area/minority ownership interaction term, however, was statistically significant; controlling for other factors, being a minority owner of a firm located in a minority neighborhood *actually lessened* the likelihood that all loan applications result in denial. Strong identifiers of the "always denied" applicants included 1) minority ownership, 2) applying for loans in 2009/2010 as opposed to earlier years, 3) low business credit score, 4) low or negative business profits in the year prior to applying for a loan, and 5) female ownership (Table 9). Low owner wealth, a consistent indicator of weakness among potential borrowers in our earlier regression analyses (Tables 8 and 9), was not a significant predictor of applications always being denied.

The regression findings summarized in Tables 8 and 9 suggest the lower incidence of loan applications being always approved in 2009/2010 (and the higher always denied incidence) was not rooted in declining credit quality among the loan applicants. After 2007, the small businesses analyzed in this study often faced declining prospects in the context of deepening recession and rising unemployment. Overall mean profits, for example, were lower in every year after 2007 among both the firms located in minority areas and those operating elsewhere. Among the small firms actually submitting new loan applications to financial institutions after 2007, however, an interesting pattern stands out: among applicants located both in minority areas and elsewhere, the incidence of high owner wealth, high credit scores, and average firm profits actually rose as the recession deepened. We know, furthermore, that the percentage of firms needing credit but not applying rose as the national economy deteriorated. Among firms in minority areas, for example, the discouraged borrower incidence rose from 22.8% in 2007 to 30.3% by 2009/2010. A smaller rise in the discouraged borrower incidence – from 14.8% in 2007 to 18.9% in 2009/2010 – prevailed among the small businesses located outside of minority neighborhoods.

The lower "always approved" loan application incidences in 2009/2010 (Table 3) co-existed with small-business applicants more frequently offering both high credit scores and high owner wealth. As the regression findings in Tables 8 and 9 indicated, the pattern of 2009/2010 application outcomes reflected the more stringent loan approval criteria being applied by financial institutions in those years. Overall, loan approval rates declined in synch with a rising overall quality of loan applicants and a rising incidence of unmet credit needs. We conducted an additional statistical test to investigate whether

firms in minority areas were disproportionally impacted by the post-2007 tighter lending criteria: starting with the basic regression models reported in Table 8, we interacted the minority area variable with the variables flagging years 2008, 2009, and 2010 (results not reported), but this test did not suggest that loan approval likelihood was relatively low in minority areas in those years.

A noteworthy finding emerging from our analysis of loan application outcomes (Tables 8 and 9) is that the disadvantage conveyed by minority ownership appears to be offset in cases where the applicable firm is located in a minority area. This relationship between minority ownership, firm location, and loan application outcomes is further tested in Table 10 by estimating separate regression models – focusing first solely upon firms located outside of minority areas and then upon those located within minority neighborhoods – differentiating firms always having their loan applications approved from others.

The hypothesis suggested by our earlier findings is clear-cut: among firms located within minority areas, the minority ownership trait, by itself, is hypothesized to be unrelated to the likelihood of having a firm's loan applications always approved. Among small firms located elsewhere, in contrast, the likelihood that a firm's loan applications will always be approved is negatively related to minority ownership. Stated differently, we are testing the hypothesis that minority- and white-owned firms located in minority neighborhoods are treated the same by banks; owner race is not an independent factor shaping lending decisions. In contrast, the minority racial trait, in other sections of metropolitan America, is expected to reduce the likelihood of approval. Results of these regression analyses of application outcomes among prospective borrowers located in

minority areas, versus all other firms applying to financial institutions for loans, are reported in Table 10.

Table 10 here

The regression findings clearly indicate that among firms reporting minority-neighborhood geographic locations, minority ownership is unrelated to the likelihood that loan applications are always approved by financial institutions, other factors equal. In contrast, among firms located outside of minority neighborhoods, the minority-owner trait is a statistically significant negative predictor of loan applications always being approved. Both of these outcomes support our hypothesized relationships between firm location, minority ownership and loan application outcomes. The consistent finding observed in our regression results (Tables 8, 9, and 10) is that minority-owner disadvantage is not present among loan-applicant firms located in minority communities.

E. Problem Solved? Overview of the KFS Empirical and other Considerations

The small firms actually submitting loan applications to financial institutions during 2007-2010 were a select subset of the broader universe of small businesses in the sense of being more creditworthy. Among the firms in minority areas that applied for bank loans in 2007, for example, 51.0% of the owners had personal net worth of $250,000 or more and 43.3% had high credit scores. Comparing these figures to all small businesses located in minority residential areas and their owners in 2007, much lower percentages of the owners reported personal wealth of $250,000+ and only 22.4% of the firms had high credit scores.[v] Among firms located outside of minority areas, the same

pattern of differentials between loan applicants and the broader universe of firms prevailed; 48.2% of the former, for example, had high credit scores while 24.9% of the latter did.

Examination of bank lending in the form of SBA-guaranteed loans provides a complementary view of trends in small-business borrowing patterns among racially-defined owner subgroups. The SBA in 2009 increased its lending substantially, particularly in its 7a program providing banks with guarantees against loan default, and statistics summarized in Table 11 track the numbers and percentages of these 7a loans approved nationwide in 2009 through 2011 for 1) all existing small firms, 2) Asian-owned firms, and 3) black-owned small businesses. Particularly noteworthy is the increase in SBA loan volume to existing small firms in 2010, in comparison to 2009: overall approvals rose from 30,513 to 38,464; loans to Asian-owned firms increased from 4,439 to 5,261. Among black-owned small firms, in contrast, SBA 7a loan approvals fell from 2,711 nationwide in 2009 to 1,601 in 2010 (Table 11). This decline continued in 2011 (and again in 2012), generating a drop in the black-business relative share of SBA 7a loan approvals nationwide from 8.9% in 2009 to 3.7% in 2011.

Table 11 here

The terms "minority neighborhoods" and "minority-owned businesses" refer to diverse groups of area residents and small-business owners and, as SBA figures on loan approvals demonstrate, trends in bank lending across minority owner subgroups may diverge sharply. Analysis of KFS data indicated that small firms applying for bank loans

were most often owned by high net-worth individuals, and the most numerous minority-owner subgroups – African Americans, Latinos, and Asian Americans – differ enormously regarding both mean owner net worth and size of owner equity investments in their small businesses; the latter subgroup of owners is wealthier than blacks and Latinos (Bates, 2011). The relatively high incidence of wealthy Asian owners may explain why loan access differs substantially among these owner groups.

Our finding that loan approval criteria applicable to minority-owned firms in minority areas appear to be color-blind (Table 10) stands in need of clarification. A logical assumption is that young small businesses prefer to establish banking relationships with financial institutions located nearby, which suggests, for minority-area firms, that their bankers are often themselves located in or near minority neighborhoods. Minority neighborhoods are favored locations for financial institutions owned by minorities; Chinese-owned banks, black-owned banks, Latinos-owned banks, and the like have grown steadily in number since the 1970s, and these institutions often target clients of the same race/ethnicity. Minority neighborhoods are often preferred locations, as well, for community-development-oriented banks that target minority clients. Branches of large national banks like Wells Fargo and Bank of America, furthermore, have sought in recent years to target clients from immigrant and minority groups, which account, after all, for an increasing percentage of the nation's inhabitants. If such marketing strategies are, in fact, being widely pursued by major financial institutions, a complementary strategy would entail staffing (and monitoring) branches in minority communities to ensure that bank employees are sensitive to the banking needs of minority clients.

These trends, if indeed they are widespread, are not well documented but they may explain our findings that minority firms operating in minority communities are on balance treated in a non-discriminatory manner regarding loan application evaluation and approval. The possibility that the banking industry is being segmented geographically regarding its responsiveness to serving the credit needs of minority clients is a topic worthy of investigation. Such segmentation might also explain why minority-owned firms located outside of minority neighborhoods are less likely to experience favorable loan application outcomes since they may be dealing with bankers who are less apt to be oriented toward serving minority clienteles. At present we simply don't really know why we are observing differing small-business loan application outcomes among minority business subgroups based on their locations in metropolitan America.

F. Concluding Comments

Back in the 1930s when the Home Owners Loan Corporation (HOLC), an agency of the federal government, was formalizing the lending criteria popularly known as redlining, HOLC's specific objective was to institutionalize the idea that geographic areas where "racially inharmonious groups" resided were risky sites in which to lend (Jackson, 1985). Thus, HOLC's color-coded maps of America's urban areas shaded in red those neighborhoods where African-Americans resided. The historic concern of scholars studying redlining by financial institutions has been to document (and to criticize) the practice of defining urban geographic areas as high risk on the basis of black residents being present. This tradition is obviously rooted in viewing urban minority neighborhoods as black residential areas, which they most often were.

In the 21st century, urban minority neighborhoods in much of the United States are often immigrant minority communities. Even traditional African American communities like Harlem are no longer accurately characterized as predominantly black residential areas. As the concept of "minority community" has evolved, it has perhaps become less useful to view these communities as monolithic when the objective is to understand lending practices of financial institutions. If bankers themselves base their lending practices within minority residential areas on diverse perceptions of what does and does not heighten lending risk, then we may observe that aggregating neighborhoods where Chinese immigrants predominate with areas where Dominican immigrants are the majority, and adding in, as well, African American neighborhoods, etc., may not be useful. Is this the case presently? Should the minority community concept be redefined? We don't know for sure but we believe this is a potentially rich topic worthy of investigation in the future.

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Table 1: Percentage of Firms Applying for Loans from Financial Institutions (Annual rates)

% loan applicants:	Minority neighborhood firms	White neighborhood firms
2007-2008	12.8%	11.4%
2009-2010	15.2%	10.2%

Source: Kauffman Firm Survey (KFS), firms in urban areas only.

Table 2: Percentage of Firms Needing Credit but Not Applying Due to Fear of Denial, 2007-2008 and 2009-2010 (Annual rates)

% discouraged borrowers:	Minority neighborhood firms	White neighborhood firms
2007-2008	26.4%	15.9%
2009-2010	30.3%	18.9%

Source: KFS, firms in urban areas only.

Table 3: Small Firms Filing Loan Applications with Financial Institutions: Application Outcomes, Approval Rates (Annual rates)

New loan applicants:	Always approved	Number of applicants, all loan outcomes
A. Minority neighborhoods:		
2007-2008	66.0%	97
2009-2010	45.7%	94
2007-2010	56.0%	191
B. White neighborhoods:		
2007-2008	67.0%	339
2009-2010	59.5%	285
2007-2010	63.6%	623
n	503	814

Source: KFS, firms in urban areas only

Table 4: Small Firms Filing Loan Applications with Financial Institutions: Application Outcomes, Denial Rates (Annual rates)

New loan applicants:	Always denied	Number of applicants, all loan outcomes
A. Minority neighborhoods:		
2007-2008	10.3%	97
2009-2010	29.8%	94
2007-2010	19.9%	191
B. White neighborhoods:		
2007-2008	16.8%	339
2009-2010	25.7%	285
2007-2010	20.8%	623
n	168	814

Source: KFS, firms in urban areas only

Table 5: Small Firms Filing Loan Applications with Financial Institutions: Application Outcomes, Firms Filing Multiple Applications Resulting in Mixed Outcomes (Annual rates)

New loan applicants:	Sometimes approved, sometimes denied	Number of applicants, all loan outcomes
A. Minority neighborhoods:		
2007-2008	23.7%	97
2009-2010	24.5%	94
2007-2010	24.1%	191
B. White neighborhoods:		
2007-2008	16.2%	339
2009-2010	14.8%	284
2007-2010	15.6%	623
n	143	814

Source: KFS, firms in urban areas only.

Table 6: Comparing Minority- and White-Owned Firms: New Loan Applicant Approval Rates in Urban Areas in 2007-2008 as Opposed to 2009-2010 (Annual rates)

New loan applications:	Always approved	Always denied
A. Minority-owned firms:		
2007-2008	47.0%	27.8%
2009-2010	41.0%	35.8%
B. White-owned firms:		
2007-2008	70.2%	12.8%
2009-2010	59.3%	24.2%

Source: KFS, firms in urban areas only.

Table 7: Identifying Discouraged Borrowers (Logistic Regression Analysis)

	Model 1:		Model 2:	
	Regr. coeff.	Std. error	Regr. coeff.	Std. error
Minority area	.295*	(.083)	.292*	(.075)
Minority owner	.410*	(.083)	.380*	(.069)
Min. area*min. owner	-.266	(.139)	-.230	(.124)
2008	.130	(.079)	.134	(.069)
2009	.197*	(.076)	.214*	(.069)
2010	.125	(.070)	.112	(.071)
Industry exper.	-.009*	(.003)	-.004	(.003)
Startup exper.	.215*	(.055)	--	
Hours worked	.008*	(.001)	.008*	(.001)
Owner age	.003	(.002)	-.003	(.002)
Owner age sq.	.000	(.000)	.000	(.000)
Female owner	.202*	(.063)	.188*	(.057)
Educ: college graduate	-.066	(.058)	-.077	(.052)
Owner wealth: high	-.730*	(.074)	-.660*	(.061)
Owner wealth: medium	-.334*	(.063)	-.334*	(.063)
Home-based firm	-.094	(.060)	--	
# employees	.001	(.002)	.006*	(.002)
Net profit/loss	-.158	(.142)	-.191	(.128)
Annual sales	.035	(.024)	--	
LFO: corp.	.099	(.053)	--	
Credit score: high	-.455*	(.074)	-.404*	(.068)
Credit score: medium	-.456*	(.067)	-.407*	(.061)
Constant	-.993*	(.441)	-.844	(.395)

n	4,781		5,707	

*Statistically significant, 5% level (2-tail test).

Table 8: Loan Application Outcomes -- Always Approved (Logistic Regression Analysis)

	Model 1:		Model 2:	
	Regr. coeff.	Std. error	Regr. coeff.	Std. error
Minority area	-.368*	(.191)	-.289	(.182)
Minority owner	-.897*	(.231)	-.749*	(.201)
Min. area*min. owner	.945*	(.351)	.728*	(.328)
2008	-.213	(.182)	-.238	(.170)
2009	-.393*	(.181)	-.429*	(.162)
2010	-.417*	(.200)	-.426*	(.175)
Industry exper.	.025*	(.007)	.013	(.007)
Startup exper.	-.397*	(.131)	--	
Hours worked	-.007*	(.003)	-.004	(.003)
Owner age	.066	(.049)	.072	(.044)
Owner age sq.	-.001	(.001)	-.001	(.000)
Female owner	-.344*	(.174)	-.235	(.162)
Educ: college graduate	-.018	(.145)	-.021	(.133)
Owner wealth: high	.730*	(.195)	.590*	(.189)
Owner wealth: medium	.438*	(.212)	.458*	(.192)
Home-based firm	.023	(.173)	--	
# employees	-.014	(.009)	-.013	(.007)
Net profit/loss	.363	(.265)	.268	(.225)
Annual sales	-.027	(.024)	--	
LFO: corp.	-.088	(.144)	--	
Credit score: high	.678*	(.187)	.631*	(.170)
Credit score: medium	.503*	(.188)	.428*	(.163)
Constant	-1.384	(1.102)	-1.606	(1.063)

n	638		688	

* Statistically significant, 5% level (2-tail test).

Table 9: Loan Application Outcomes -- Always Denied (Logistic Regression Analysis)

	Model 1:		Model 2:	
	Regr. coeff.	Std. error	Regr. coeff.	Std. error
Minority area	.414	(.222)	.282	(.195)
Minority owner	1.021*	(.225)	.879*	(.210)
Min. area*min. owner	-1.281*	(.379)	-1.082*	(.362)
2008	.226	(.225)	.431*	(.218)
2009	.672*	(.221)	.705*	(..215)
2010	.657*	(.234)	.663*	(.233)
Industry exper.	-.028*	(.009)	-.016	(.009)
Startup exper.	.224	(.157)	--	
Hours worked	.006	(.004)	.007	(.004)
Owner age	-.087	(.058)	-.060	(.057)
Owner age sq.	.001	(.001)	.001	(.001)
Female owner	.613*	(.182)	.669*	(.173)
Educ: college graduate	-.217	(.174)	-.097	(.161)
Owner wealth: high	-.355	(.221)	-.214	(.214)
Owner wealth: medium	-.111	(.227)	-.161	(.208)
Home-based firm	-.094	(.193)	--	
# employees	-.007	(.009)	-.013	(.009)
Net profit/loss	-.737*	(.326)	-.637*	(.254)
Annual sales	-.005	(.0494)	--	
LFO: corp.	-.089	(.170)	--	
Credit score: high	.537*	(.199)	-.497*	(.188)
Credit score: medium	.493*	(.210)	-.423*	(.198)
Constant	1.165	(1.318)	-1.606	(1.063)

n	638		688	

* Statistically significant, 5% level (2-tail test).

Table 10: Loan Application Outcomes -- Always Approved (Logistic Regression Analysis)

	Model 1: Minority neighborhood.		Model 2: White neighborhood.	
	Regr. coeff.	**Std. error**	**Regr. coeff.**	**Std. error**
Minority owner	-.206	(.331)	-.879*	(.238)
2008	-.821	(.442)	-.0449	(.209)
2009	-1.169*	(.393)	-.229	(.216)
2010	-.598	(.429)	-.445	(.245)
Industry exper.	.024	(.017)	.022	(.009)
Startup exper.	-.288	(.303)	-.377*	(.172)
Hours worked	-.021*	(.009)	-.005	(.004)
Owner age	.216	(.125)	.034	(.056)
Owner age sq.	-.002	(.001)	-.000	(.001)
Female owner	.681	(.423)	-.552*	(.196)
Educ: college graduate	-.259	(.339)	.002	(.180)
Owner wealth: high	.469	(.419)	.845*	(.232)
Owner wealth: medium	.711	(.523)	.322	(.239)
Home-based firm	-.251	(.402)	.131	(.202)
# employees	-.006	(.012)	-.021*	(.010)
Net profit/loss	.289	(.627)	.408	(.308)
Annual sales	.096	(.071)	-.036	(.058)
LFO: corp.	-.192	(.305)	-.069	(.168)
Credit score: high	.329	(.414)	.867*	(.242)
Credit score: medium	.368	(.445)	.569*	(.234)
Constant	-3.301	(2.795)	-1.754	(1.316)
n	147		484	

* Statistically significant, 5% level (2-tail test).

Table 11: Numbers of SBA 7a Loan Guarantees Approved by the SBA in Recent Years: Loans to Existing Businesses Only, Nationwide Approvals.

Year	2009		2010		2011	
	#	%	#	%	#	%
All existing firms	30,513	100%	38,464	100%	38,145	100%
Black owned	2,711	8.9%	1,601	4.2%	1,410	3.7%
Asian owned	4,439	14.5%	5,261	13.7%	5,371	14.1%

Source: SBA Lending Statistics for Major Programs (downloaded from SBA's website www.sba.gov/about-SBA-Services/7571.

Note: "Year" refers to federal government fiscal years.

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[i] For more information about the KFS survey design and methodology, see Robb et. al (2009). A public use dataset is available for download from the Kauffman Foundation's website and a more detailed confidential dataset is available to researchers through a data enclave provided by the National Opinion Research Center (NORC). For more details about how to access these data, see www.kauffman.org/kfs.

[ii] Note that the KFS firm observations analyzed throughout this study represent individual firms during specific individual years of operation. Thus, for example a small business applying for a bank loan in 2007 and then again in 2010 will appear as 2 separate observations in our summary statistics and regression exercises. Data recorded for this hypothetical firm appearing twice in the sample are often time specific and thus, values of individual variables will differ across years; for example, data on variables like credit score and firm sales will vary from year to year.

[iii] Business owners were asked about new applications for credit in each calendar year. They were instructed to "include new as well as renewal applications for lines of credit and other types of loans" and to "not include applications for credit cards, loans from owners, or trade credit with suppliers."

[iv] Definitions of the explanatory variables used in our regression analyses, although often self-explanatory, require clarification in some cases. "Owner wealth: high" identifies owners having personal net worth of at least $250,000; "owner wealth: medium" identifies owners with wealth in the $50,000 up to $250,000 range; Annual sales and net profit/loss variables are measured in $ millions.

[v] The KFS asked business owners to include business and home equity when asking about net worth.