

Racial, Economic, And Institutional Differences In Home Mortgage Loans: A Case Study Analysis Of St. Joseph County, Indiana

by

Richard A. Williams
University of Notre Dame

Reynold F. Nesiba
Augustana College, South Dakota

December, 1996

A slightly revised version of this manuscript appears in the *Journal of Urban Affairs*, 1997, V. 19, #1, pp. 73-103

Richard A. Williams is Associate Professor and Chair of the Department of Sociology at the University of Notre Dame, Notre Dame, Indiana. Reynold F. Nesiba is an Assistant Professor of Economics at Augustana College in Sioux Falls, South Dakota. Authorship is shared equally. They thank Norma Aros, Heriberto Estrada, and Elaina Cockerham for providing excellent research assistance on this project. They also thank the editor and reviewers for their many helpful comments. Mr. Nesiba sincerely thanks the U.S. Department of Housing and Urban Development for providing federal financial assistance for his research which partially funded this project. The views expressed do not necessarily reflect the views or policies of the U.S. Department of Housing and Urban Development. A version of this paper was previously presented at the 1994 Annual Meetings of the American Sociological Association. Direct all correspondence to Richard Williams, Department of Sociology, University of Notre Dame, Notre Dame, IN 46556 (Email: Williams.5@Nd.Edu).

Racial, Economic, And Institutional Differences In Home Mortgage Loans:

A Case Study Analysis Of St. Joseph County, Indiana

Abstract

Numerous studies have documented racial and economic disparities in the home mortgage market. Almost all of these have been done in large urban areas, many of which have long histories of racial conflict and discrimination. Further, little attention has been paid to *institutional* disparities, i.e. the ways in which mortgage lenders differ among themselves in their community reinvestment performance. In this study, we profile the home mortgage lending of several institutions doing business in the medium-sized urban area of St. Joseph County, Indiana. We find tremendous differences between lenders, suggesting that bank practices and policies exert a great impact on how well low income and minority neighborhoods and individuals are served. Lender characteristics, such as the legal structure of the institution (e.g., commercial bank, credit union, savings and loan), branch locations, and other factors are associated with these disparities. We conclude by suggesting that several heretofore ignored variables need closer examination.

Racial, Economic, And Institutional Differences In Home Mortgage Loans: A Case Study Analysis Of St. Joseph County, Indiana

Over the last decade, numerous authors have evaluated the existence and degree of racial and economic disparities occurring in the urban home mortgage market. From the early work done by Shlay (1987, a, b, c) and Dedman (1988) through the frequently cited study published by the Boston Fed (Munnell, Browne, McEneaney and Tootell, 1992) the results are virtually unanimous. Studies across the country show that blacks proportionally apply for fewer loans than whites, yet are rejected more often. Researchers consistently find that white neighborhoods receive many (three to four) times more loans per 1,000 mortgageable structures than do minority neighborhoods. Regression analyses, using various model specifications and data sets, agree that redlining and racial variables show consistent, significant and negative associations with home mortgage lending. This is true even after applying controls for obligation ratios, credit history, loan to value ratios, and property characteristics.

In this study, we make three important contributions to the literature on residential mortgage patterns:

First, almost all studies have focused on *aggregate* bank¹ performance, i.e., how well do *all* the lending institutions in an area do at serving the community. Very little attention has been paid to *institutional* disparities (i.e. the ways in which banks differ among themselves in their community reinvestment performance). Or, as Kim and Squires (1995) put it, most studies of mortgage lending have focused on the demand side (characteristics of borrowers, the properties

¹Throughout this manuscript “banks” refers generically to banks, savings & loans, savings banks, credit unions and bank holding companies.

they intend to purchase, and the surrounding neighborhoods) while paying little attention to the supply side (the characteristics of lending institutions). In this study, we examine measures and create indices that allow us to look at the community reinvestment performance of several institutions individually. This allows us to examine whether and why some lending institutions do better than others at serving low income and minority areas and individuals. Wide variations between lenders may suggest that bank practices and policies exert a great impact on how well different groups and areas are served. We then go a step further to see what lender characteristics, if any, seem to be held in common by the more successful and less successful sorts of lenders. In particular, we examine whether the type of institution (e.g. commercial bank, credit union, savings and loan), local or non-local ownership, the size of a bank, and locations of bank branches are related to bank performance.

Second, many analyses have focused on racial disparities in denial rates. While denial rates are important, they tell only part of the story. High denial rates may indicate that a lender targets areas and individuals ignored by others, while low denial rates are worth little if few lower income minorities ever apply. In this analysis, we examine how lenders differ in the amount of business they do with low income and minority neighborhoods and individuals. One cannot make a loan to someone who does not apply, and as we show, some institutions deal much more with low income and minority applicants than do others.

Third, almost all previous work has been done on large urban areas, many of which have long histories of racial conflict and discrimination. The situation in other types of areas is unknown. To the extent possible, we replicate previous studies to see whether similar results can be found in a moderate-sized urban area. Specifically, we examine St. Joseph County, Indiana, which contains the cities of South Bend and Mishawaka.

BACKGROUND

The history of the home mortgage legislative movement. Allegations of redlining, the systemic abandonment of low income and minority neighborhoods by banks, have persisted in American urban centers since at least the late 1960s (Benston, 144). In response to these allegations, grass roots community reinvestment groups have organized and pushed for legislative reforms to increase their access to bank credit and to bank lending data. During the 1970s, two main acts were passed in an attempt to increase access to bank loan records and to affirm the responsibilities banks have to local communities and individuals. The primary objective of the 1975 Home Mortgage Disclosure Act (HMDA) is to facilitate the examination of credit flows and of the geographic locations where credit is and is not available. HMDA requires federally regulated commercial banks and thrifts making conventional and government guaranteed (FHA and VA) home mortgage loans within Standardized Metropolitan Areas (SMAs) to disclose the geographic location of each loan originated by census tract.

The Community Reinvestment Act (CRA), formally Title VIII of the Housing and Community Development Act of 1977, states that financial institutions have “a continuing and affirmative obligation to help meet the credit needs of the entire community in which they are chartered...consistent with safe and sound operation of such institutions.” The entire community includes minority and integrated neighborhoods as well as all-white neighborhoods. The act further states that an institution’s record of meeting credit needs includes low and moderate income neighborhoods (Public Law 95-128 — October 12, 1977).

HMDA and CRA are path-breaking legislative acts. Unfortunately, during the 1980s, legislative authority failed to translate into effective monitoring. Public reports of lax

enforcement, compelling evidence of lending discrimination in major cities (see below), and a multi-billion dollar taxpayer bailout of the Savings and Loan industry all contributed to grass roots support for a stronger community reinvestment movement. Hence, key legislative reforms were made in 1989. In particular, HMDA data requirements were extended. HMDA now requires lending institutions to report not only the geographic location of originated loans as in the past, but also to report the gender, race and income of all applicants who are granted and/or denied home mortgage refinancing, home improvement loans, or conventional, FHA, or VA home mortgage loans (Canner and Smith, 1991 and 1992). These amendments greatly strengthened the quality of CRA information and HMDA data available to community reinvestment researchers (Guskind 2640).

Prior research: The national scene. Using information from HMDA, CRA, and other sources, various authors have made it abundantly clear that whites and blacks experience different results when it comes to obtaining a home mortgage. Finn (1989) found that, even after controlling for income and other factors, whites in Boston received three times as many residential loans per mortgageable housing unit as compared to blacks. In her 1987 study of Baltimore, Shlay concluded that racial composition played a large and independent role in explaining disparities in residential mortgage distribution among neighborhoods. Dedman (1988) discovered that between 1981 and 1986, Atlanta financial institutions made five times as many home loans per 1,000 housing units in white neighborhoods as in black neighborhoods having a similar income level. Studies of Chicago (Brady, Dubridges and Klepper, 1980; Dunham, 1991; Peterman, 1990; Peterman and Sanshi, 1991; Shlay 1986, 1987b, 1988; Shlay and Freedman 1986), Detroit (Blossom, Everett and Gallagher, 1988), Los Angeles (Dymski and Veitch, 1991;

Dymski, Veitch and White, 1990), and New York (Williams, Brown and Simmons 1988; Bartlett, 1989; Lueck, 1992; Caskey, 1992) produced similar findings.

Many regard the October 1992, Federal Reserve Bank of Boston's "Mortgage Lending in Boston: Interpreting HMDA Data" (Munnell, Browne, McEneaney, and Tootell, 1992) as the most persuasive study of racial discrimination in residential lending. The authors of the study attempt to address the complaints leveled at earlier HMDA data analyses and their failure to include all relevant variables regarding a bank's loan acceptance/denial decision. Rather than using HMDA data alone, these researchers supplement HMDA data with actual loan application data from Boston-area financial institutions. The authors conclude that even if two mortgage applicants are identical financially, a minority applicant is 60 percent more likely to be rejected than a comparable white applicant. This means that 17 percent of Hispanic or black residential mortgage applications, instead of 11 percent, would be denied a mortgage loan even if the minority applicant had the same obligation ratios, credit history, loan to value ratios and property characteristics as a white applicant (Munnell, Browne, McEneaney, and Tootell 1992, 44)

As with most path-breaking or "landmark" research, this one has been the target of both criticism and praise. James H. Carr and Isaac F. Megbolugbe (1993 and 1994) review and refute the critiques of several of the major criticisms of the Boston Fed study. In addition, two of the original Boston Fed researchers, Browne and Tootell (1995) respond to their critics in a recent *New England Economic Review* article. Criticisms of the original study are of three types: critiques based on default rates, charges of flawed model specification or omitted variables, and charges of flawed data.

Criticism based upon default rate evidence has been the most persistent charge against of the Boston Fed Study. Brimelow and Spencer (1993), Brimelow (1993) and Becker (1993) all

use average mortgage default rate data to claim that banks do not discriminate. They contend that since default rates among whites and blacks are similar in Boston, lenders must be acting in an impartial manner. These authors contend that if banks were discriminating against creditworthy minorities, observed minority default rates would be lower than white default rates. Browne and Tootell (1995, 57-59) posit that this line of argument is flawed for several reasons. First, the relationship between default rates and what bankers really worry about, expected profitability, is indirect at best. Second, critics assume that mortgage market discrimination will create a pool of minority applicants who on average are less likely to default than a white pool of applicants. This will not be true if discrimination is random in the sense that some loan officers simply do not like Hispanic or black applicants or the way in which they dress, act or speak. This kind of discrimination would lead to loan rejections among both highly qualified and less qualified loan applicants. Third, critics must assume that the underlying default probability distributions are the same among whites and minorities; otherwise an average white default standard applied to a minority applicant will not create an acceptance pool that has a lower average default risk. This assumption is unlikely to be true given the empirical evidence and confuses the concepts of marginal applications and average applications. Looking at averages of group default rates mixes together different applicants, different characteristics and different default rates. Therefore, they reveal little about how individual applications within those distributions are treated (Browne and Tootell 1995, 55-57 and Carr and Megbolugbe 1993, 7).

The possibilities that a model omits relevant variables and/or includes dependent variables that inaccurately reflect their relationship to the dependent variable are potential problems for any regression analysis. The Boston Fed study has been criticized by Zandi (1993) for ignoring the presence of another variable, “the subjective assessment of credit history,” when calculating an

applicant's creditworthiness. Carr and Megbolugbe (1993) respond that the variable Zandi wants included is itself "tainted by discrimination" (Carr and Megbolugbe, 1993, 7). Horne (1994a) asserts that the variables, "funds available for closing" and "the dollar amount of gifts received," are omitted. These were collected under slightly different guises. When tested neither "applicants' liquid assets," nor "the presence of a gift or grant," was found to be significant at the five percent level. Criticisms related to specification errors are also unpersuasive. The appendix of the Boston Fed study includes many different model specifications that address the potential specification problems posed by Horne (1994a and 1994b). Yezer, Phillips, and Trost (1994) assert that loan terms and mortgage denial are simultaneously determined through a process of negotiation. Browne and Tootell (1995) respond that, "A truly simultaneous determination of loan terms and mortgage denial seems doubtful on both conceptual and econometric grounds." (Browne and Tootell, 1995, 63).

Liebowitz and Day's (1993) *Wall Street Journal* editorial asserts that the Boston Fed's data set is filled with many typographical errors. Horne (1994a and 1994b) makes similar charges. In response to these charges Carr and Megbolugbe (1993 and 1994) reevaluated the Boston Fed's model. After a thorough cleaning of the data set, they found that the errors in the data set did not bias or eliminate the main results of the original study. Minority applicants were still rejected about 57 percent more often than comparable white applicants.

In sum, the defenses of the Boston Fed article put forward by Browne and Tootell (1995) and by Carr and Megbolugbe (1993 and 1994) address each of the criticisms leveled at the original article. As a result, the Boston Fed study (Munnell, Browne, McEneaney, and Tootell, 1992) in the face of severe and sometimes virulent criticism, deserves its status as the definitive study concerning the existence of discrimination in mortgage lending.

Critique of previous national research. Existing research has provided powerful documentation of racial disparities in home mortgage lending. Still, there are several limitations to these studies. Most studies have focused on large urban areas, many of which have long histories of racial conflict and discrimination. The situation in other parts of the country has not been carefully explored. Even more importantly, studies have paid little attention to variations in lending between different types of financial institutions. Do all types of lenders tend to do equally well (or poor) at serving low-income neighborhoods and groups? If not, what are the characteristics of the lenders that do better? There are at least three key reasons for wanting to know whether and why lending institutions differ in their community reinvestment performance:

First, simply finding that an individual's race or a census tract's racial composition is correlated with the likelihood of a loan being approved or denied is not proof of overt discrimination. There are other plausible explanations. Race may be simply a proxy for other economic variables such as employment record, or credit history. Unfortunately, these variables are rarely available to researchers, since federal law does not require that banks disclose this information.² Furthermore, analyses usually have nothing to say about how discrimination in other markets (e.g., the labor market) gets carried through to the home mortgage market or how the actions of realtors, home buyers, home sellers or mortgage insurance companies may influence patterns of mortgage credit allocation. Similarly, the racial composition of a neighborhood may simply serve as a proxy for the riskiness of a loan. *However*, if some financial institutions are able to make loans to low income and minority neighborhoods and individuals, while others do not, these criticisms hold less weight. If wide variation in denial rates and shares of loans to low

income and minority neighborhoods exist, one must assume that these unmeasured influences have a larger effect on some institutions than on others in order for the criticisms to remain credible. The existence of widespread variation would suggest that lender discretion plays an important role in mortgage market outcomes and should not be simply ignored because of less than perfect data disclosure on the part of financial institutions.

Second, there is a growing concern that commercial banking industry consolidation will lead to increases in average financial institution size and increase the number of bank main branches located afar. These trends in turn may adversely affect a lender's likelihood of denying a mortgage application and/or its effectiveness in originating loans to low income and minority individuals and neighborhoods. As Shlay and Goldstein (1994) note,

“It has been hypothesized that as institutions become more massive and international in scope, they will devote fewer resources to local communities, particularly within those communities where they have the fewest ties and experience.”

Campen (1993) further argues that

“it seems reasonable to suppose that when decision making power is concentrated in distant headquarters, local communities will find banks less knowledgeable about local circumstances, less concerned with solving local problems, and, especially, less susceptible to the local organizing campaigns that have been vital in bringing about agreements for improved CRA performance.”

² Only the Munnell et.al. study cited above is exempt from this criticism — but even it looked at only one city.

However, those advocating the further reduction of geographic barriers to banking and supporting greater banking industry consolidation also seem to have persuasive arguments. They contend that as loan and deposit bases become more diversified, overall banking risk is decreased and the stability of the financial system as a whole is enhanced. Furthermore, freeing up the market geographically leads to increased competition, increased services, improved credit availability and a more efficient allocation of financial resources (Mengle, 1990; Evanoff and Fortier, 1986). Also, larger institutions may have greater expertise in marketing to low income and minority areas and individuals and more resources to devote to them. As a result, the economy as a whole, including small businesses, minority neighborhoods and taxpayers are all better off with fewer, larger financial institutions.

In addition, the enormous increase in mergers in the 1980s, combined with better information from an improved CRA and HMDA, have provided opportunities for community groups to enhance community reinvestment performance through challenges to bank mergers and increased opportunities for federal financial regulatory agencies to evaluate lenders' community reinvestment performance. Community groups have successfully challenged a local bank's attempt to acquire or be acquired by another bank or bank holding company based upon CRA grounds. Furthermore, the federal financial regulatory agencies have had a greater number of merger applications requiring examination on CRA grounds prior to approval. As a result, banks must either negotiate in good faith with community groups to increase lending in low income and minority neighborhoods or risk that their merger applications be rejected. The National Community Reinvestment Coalition (NCRC) estimates that, as of May 1996, banks and savings

and loans have made CRA commitments totalling \$130 billion since the late 1970s³. These commitments reflect agreements reached with community groups and/or voluntary pledges.

Participants on each side of this debate seem to have well reasoned foundations for their assertions regarding the impact of banking industry consolidation on community reinvestment performance. Unfortunately, the empirical evidence supporting either position is extremely limited.

Kim and Squires (1995) note a third reason why supply side (lender) characteristics may be related to community reinvestment performance. Different types of institutions have different interests. Commercial banks are involved in many sorts of activities; mortgage lending is not their main line of business. Hence, banks are more likely to reject applications because of their limited commitment to mortgage lending. Mortgage lending is far more important to savings and loans. Because mortgage loans constitute a higher share of their lending activity, Kim and Squires hypothesize that savings and loans will review applications more carefully (hence avoiding racial bias) and will also be more willing to work with marginal applicants.

We can think of several other reasons why the type of institution may be important. Different types of institutions have different types of legal obligations, report to different federal agencies, and may serve different types of clientele. For example, credit unions place restrictions on membership, and may be especially willing to take risks on behalf of their membership. Certain types of mortgage companies (which we will later refer to as “Consumer Finance Corporations”) target higher-risk groups and offer them higher-interest loans. Depository institutions (e.g. commercial banks) have greater legal CRA obligations than do non-depository institutions (e.g. mortgage companies). Like thrifts, mortgage institutions and credit unions may be more heavily

³ We thank Josh Silver from the NCRC for providing us with the Coalition’s most current estimates.

dependent on mortgage lending than are commercial banks. Hence, it seems reasonable to investigate whether the legal type of the lender (commercial bank, mortgage company, savings and loan, etc.) is related to its community reinvestment performance.

Kim and Squires also argued, and found, that the racial composition of the lender's labor force was related to the approval rate for African-American borrowers. Racial minorities may feel more comfortable in a financial institution where nonwhite employees are visible. Even if the case is not handled by an African-American loan officer, the presence of African-American officers may create peer pressure for loan approval from other officers.

We suggest that similar arguments can be made for branch locations. Convenient locations are more likely to attract customers to a bank. Further, the fact that a lender has a branch location in a low income or minority area may give it a better understanding of that area and the people in it, hence improving its lending and marketing practices. If nothing else, the presence of branch locations in an area suggests that the lender is motivated to do business there. Thus, lenders that have a presence in low income and minority neighborhoods are likely to do more business there than lenders who do not.

Data and Methods

St. Joseph County is located in the North Central part of Indiana, about 100 miles east of Chicago. Its two largest cities are South Bend (population 110,000) and Mishawaka (population 40,000). The South Bend-Mishawaka MSA had a total population of 247,052 according to the 1990 Census. By race, approximately 87.8 percent of residents are white while 12.2 percent are non-white. The corresponding national averages are 80.3 percent and 19.7 percent. In this

respect, the South Bend-Mishawaka SMA is probably more representative of the U.S. as a whole than many of the larger cities previously studied.

Our study of St. Joseph County originally began when a community group asked the first author of this paper to analyze the home mortgage lending records of local banks. Even after analyzing only a few banks, it became apparent that area institutions differed dramatically in the extent to which they served low income and minority areas and individuals. We therefore decided to undertake a much more systematic data collection and analysis effort. Specifically, we gathered the following types of data:

HMDA Loan Application Registers. Starting in 1990, banks were required to provide information on every home mortgage application they received. The information included the type of loan (conventional, FHA or VA), the requested amount, the final disposition of the application (e.g., approved, denied, withdrawn, not accepted), the census tract in which the desired property was located, and the income, race and gender of the applicant(s). Complete records for the county were purchased from the Federal Financial Institution and Examination Council for 1990, 1991, and 1992. Following the practice of other researchers (e.g. Kim and Squires, 1995) we included only applications for owner-occupied homes that were either approved or denied.

Census tract data. The HMDA data sets also include some information on census tracts, while other information was gathered directly from published census reports for the county. There are 69 census tracts in St. Joseph County. Information available for each tract includes the median income of the tract, the racial composition of the tract, and the percentage of adults having only a ninth grade education or less.

Lending institution data. Again, the HMDA data includes some information on banks; in particular, HMDA lists the location of the parent institution, making it possible to see whether the bank is locally headquartered or not. In addition, simply by looking at the lender's name or by drawing on other knowledge we had, we could determine whether an institution was a commercial bank, credit union, savings and loan, or mortgage company. Also, a few lenders that are technically mortgage companies were instead classified as "consumer finance corporations." Such lenders tend to target groups and areas ignored by others, but also charge much higher interest rates. We used Moody's Bank and Finance Manual and McFadden's American Financial Directory to look up the amount of assets held by lenders as of 12/31/92⁴. In a few cases, when we could not locate information on a bank or were otherwise unsure as to how to code it on a particular variable, a call to the bank itself produced the needed information. While 56 different banks received applications for home mortgages during the period 1990-1992, 17 institutions made about 96 percent of the actual loans.

Information on branch locations, originally gathered for a separate project, was also used here. Each lender identified in the HMDA data was looked up in the 1995 South Bend phone book. The address of each lender's main branch and any branch locations was recorded. We then used the Census Bureau's TIGER/Census Tract Street Index, along with census maps, to identify which census tract each office was located in. Lenders were then classified as either (1) having no branches in the county (2) some branches, but none in low income areas, or (3) at least some branches in low income areas. We also originally intended to indicate whether a lender had branches in heavily minority areas, but we did not find a single branch office located in one of the

⁴ Data from the previous 12 months were used for two very small lenders who went out of business before December 1992.

county's six minority tracts (see below). We then referred back to phone books from 1990 to determine whether changes in branch locations affected the coding of any institution.

A few clarifications regarding the data are in order. In our analyses (and in the published HMDA reports), a census tract is classified as "low to moderate income" if the median income of the tract is 80 percent or less of the county median income. In St. Joseph County, 23 of the 69 census tracts are classified as low income,⁵ and these tracts have about one-fourth of the county's population and occupied housing units.⁶ Similarly, applicants are classified as low-income if their income is less than 80 percent of the county median.⁷ For our purposes, we defined a minority tract as one in which 50 percent or more of the population was non-white.⁸ Six tracts, with about 5 percent of the county's population and 6 percent of the housing units, meet this definition.⁹ All six of the minority tracts are also low income tracts.

Several caveats are noted concerning these data:

- Like most other studies, we lack information on important variables such as the credit and work histories of individual applicants and property characteristics. However, the few studies that do have such variables suggest that, even after these are controlled, variables like race and characteristics of the census tract continue to be highly significant. Further, while omission of variables may cause aggregate bank performance to appear worse than it really is,

⁵ The 23 low to moderate income tracts are 2, 4, 5, 6, 10, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, 31, 34, 35, 107, 112, and 115.01.

⁶ Published HMDA reports for 1990 and 1991 used the 1980 census classifications of low income tracts, which are slightly different than the 1990 classifications (which were not yet available when the HMDA reports came out). We use the 1990 classifications throughout our analysis, which makes our numbers more accurate but slightly different from the published reports.

⁷ HMDA uses an estimate of the County's median income each year, so as to control for factors like inflation.

⁸ Researchers have classified the race of tracts in different ways in different cities. For instance when Shlay (1987c) evaluates Baltimore she defines three tract racial categories: white, 25 percent minority; integrated, between 25 percent and 75 percent minority; Black, 75 percent or more minority. In contrast Finn defines white as a neighborhood with 70 percent or more white in his evaluation of Boston.

it is much less likely that such variables can account for apparent wide differences between banks. For example, if two banks are direct competitors, and one does a great deal of business with low income areas while another does not, it is hard to see how something like individual credit histories could account for this.

- Another important omitted variable is the interest rate charged. Some of the lenders that seem to do the “best” job of serving low income and minority neighborhoods and individuals (e.g., consumer finance companies) probably do so at a price — a much higher interest rate than is charged by others. The cost of obtaining credit should ideally be considered when evaluating a bank’s overall community reinvestment performance, but we are not able to do so here.
- The data only cover the period 1990-1992. Several banks now claim that their community reinvestment performance has gotten much better. As we will discuss later, one of the banks that had the least impressive record during 1990-1992 of serving low income and minority areas and individuals (1st Source) apparently did dramatically better in 1993. If such improvements have widely occurred, they may reflect the influence of community groups that have pressured and negotiated with area banks for changes in their lending practices. Of course, other explanations, such as the change in Presidential administrations, CRA enforcement, and changes in bank personnel may also be plausible.
- We focus only on owner-occupied home mortgage loans. Home improvement loans, small business loans, and other investments in community development should also be considered when looking at a bank’s overall community reinvestment performance.
- While more than 8,000 home mortgage loans were made during this period, only a relative handful of lending institutions were involved. As we will see, the tremendous variability

⁹ The six minority tracts are 10, 19, 20, 21, 23, and 29.

between even these few institutions strongly suggests the utility and need for examining banks separately. At the same time, the scarcity of institutions involved makes it difficult to determine why the variability exists, and it is possible that a few large, atypical lenders skew the results. While we will examine the apparent effects of such things as bank type, bank size, local ownership, and branch locations, we caution that these results must be regarded as tentative and that a much larger sampling of banks across the nation is called for.

Method of analysis. The analysis is divided into three parts.

First, we provide descriptive analyses of the community reinvestment performance of leading lenders in the area. These analyses illustrate the tremendous differences that exist among area lenders.

Second, we examine what characteristics are shared in common by those lenders that do the highest share of their business with low income and minority neighborhoods and individuals. This is perhaps the most unique part of our analysis, because it offers some ideas as to what types of lenders are most effective at attracting low income and minority applicants in the first place.

Third, we use multivariate logistic regression to simultaneously examine how characteristics of individuals, neighborhoods and lenders affect the probability of a loan application being denied. As with other studies, this will enable us to see whether, after controlling for income, the race of applicants and the racial composition of their preferred neighborhood are still associated with loan denial rates. Unlike most other studies, this analysis will let us examine whether and how lender characteristics are related to loan denial rates.

Results

Table 1 about here

Descriptive analyses of individual lenders. Table 1 provides an overview of the characteristics of the major home mortgage lenders in St. Joseph County. According to HMDA records, 56 institutions made almost 8,500 home mortgage loans between 1990 and 1992.¹⁰ However, 17 lenders accounted for almost 96 percent of all the loans that were made. We will pay particular attention to these top 17 performers (listed in the order of the number of loans they made).¹¹ Of these, the top 8, each of whom made 500 or more loans, may be of particular interest. While some of the smaller banks aim for “niche” markets (e.g. Teachers Credit Union targets teachers and their families, while some of the other small banks are concentrated in specific areas of the county), the larger institutions tend to do business county-wide and are generally direct competitors with each other in the residential lending market. (The one major exception to this is Mishawaka Federal Savings, which primarily does business in the predominantly white city of Mishawaka.)

Of the top 17 lenders, seven were mortgage companies, four were banks, one was a credit union, one was a consumer finance company, and the other four were savings and loans. Six were owned locally, four others were owned in-state, and the other seven had out-of-state ownership. In terms of overall assets, three banks were small (having assets of less than \$100 million), five

¹⁰ This figure is low, because not all institutions reported for all three years. In particular, Waterfield Mortgage was not required to file in 1990, hence its loan total is probably underreported by several hundred. Waterfield is the residential lending arm of Indianapolis based Union First Savings Bank.

¹¹ American General Finance actually placed 20th in loans made (16th if both owner and non-owner occupied loans are counted). We include it in the tables as an example of the very different lending behavior of Consumer Finance Corporations.

were medium sized (assets between \$100 million and \$1 billion) and the other nine were large (assets greater than \$1 billion).¹² Waterfield Mortgage made the most loans of any lender in the area,¹³ followed by Trustcorp Mortgage and 1st Source Bank.¹⁴

All seventeen of these lenders have branches in the county, and most also have at least one branch in a low income area of town. This is primarily because many lenders have their main office in downtown South Bend, which is itself a low income area and is surrounded by other low income areas.

Denial rates vary dramatically between lenders, ranging from almost zero to as high as 61 percent. Overall, a little over 11 percent of all home mortgage applications were denied.¹⁵

The last column of Table 1 presents a “Community Mortgage Relative Performance Index” (CMRPI) score for each bank. This is based on the information in Tables 2 and 3 concerning loans to low-income and minority areas and individuals. The higher the score, the better the lender does in making loans to low income and minority neighborhoods and individuals. We will return to this score later.

¹² Assets are based on the size of the lender’s parent company, and are not limited to assets held only in St. Joseph County. Hence, the largest lenders, in terms of assets, need not have the largest shares of the St. Joseph market.

¹³ Again, Waterfield’s edge on the others is understated because it did not report in 1990.

¹⁴ 1st Source recently announced plans to acquire Trustcorp, although both institutions would continue to operate independently. A combined Trustcorp/1st Source would be the largest home mortgage lender in the area.

¹⁵ As noted before, we follow the common practice of only including applications that were either approved or denied. It should be noted that withdrawal rates (not shown) also differ substantially between lenders. County-wide, a little over 6 percent of all home mortgage loan applications are withdrawn. However, some lenders have far higher withdrawal rates. In particular, Trustcorp, which has one of the lowest denial rates, 3.1 percent, also has the highest withdrawal rate, 18 percent. (Indeed, Trustcorp single-handedly accounts for more than 41 percent of all the loan applications in the county that were withdrawn.) Because the decision to withdraw a loan application can be affected by many factors beyond the lender’s control, most researchers pay little attention to withdrawals. The tremendous variability between banks, however, suggests that withdrawals may deserve closer attention. In particular, it could be important to know whether some lenders encourage withdrawals in order to keep their denial rate low. For our own part, we did separate analyses in which withdrawals were treated the same as denials. This

Table 2 about here

Table 2 examines bank lending in the low-income and heavily-minority areas of town.

Three types of information are presented:

1. *The percent of all its applications that a bank received from such areas.* For example, 27 percent of the home mortgage loan applications that Teachers Credit Union received were from low income areas. 1st Source Bank, on the other hand, received only 9.9 percent of its applications from low income areas.

2. *The lender's denial rate for such areas, as well as the difference between the denial rate for the area and the lender's overall denial rate.* For example, NBD Mortgage denied 14.3 percent of the applications it received from low income areas, which was 9.4 percentage points higher than its overall denial rate of 4.8 percent (presented in Table 1).

Presenting the numbers this way makes it possible to see whether, compared to other lenders in the area, a bank has relatively high or low denial rates. It also makes it possible to see whether the lender treats applications from particular areas differently than it does applications in general.

3. *The percent of a bank's loans that were made to low income and minority census tracts.* For example, American General Finance did almost a third of its business in low income areas, while Mishawaka Federal Savings made only 2.7 percent of its residential mortgages there.

A relatively low percentage of applications from an area may indicate that the bank does not target that area; or that if it does, its marketing lacks effectiveness (or is at least not as effective as its marketing is elsewhere). Denial rates are more difficult to interpret. A high denial

had little effect on our major conclusions, although it did change the relative standings of some banks on

rate could mean that a lender is particularly “unfriendly” to individual applications from certain areas (especially if the denial rate for an area is much higher than the bank’s overall denial rate). However, it could also mean that the lender, perhaps because of its marketing programs, effectively attracts many higher risk applicants from an area. Hence, a high denial rate, if combined with relatively large numbers of applicants from an area, could still result in a large proportion of loans being made in that area. However, a high denial rate combined with a low share of applications from these areas would result in relatively few loans going to these areas.

Figures 1 and 2 about here

As Table 2 and Figure 1 show, lenders differ substantially in the amount of business they do in the low-income areas of town. Some make less than 6 percent of their loans there, while a few do a fourth or more of their business in such areas. As Table 2 and Figure 2 show, this differential reflects the variability in the applicant pool and in the denial rates. Teacher’s Credit Union and Advantage Mortgage attract relatively large numbers of applicants from low income areas and have about average denial rates. Hence about one-fourth of their business comes from the low income parts of town. American General Finance has by far the largest percentage of applicants from low-income areas; hence, despite high denial rates, it still does almost a third of its business there. Similarly, Society combines above-average application and denial rates to produce an above-average share of the low-income area market. Banks which do the least business in low income areas have few applications from such areas (e.g. Indiana Federal Bank, Mishawaka Federal Savings) and/or above average denial rates (e.g. 1st Source, Norwest Bank).

some of our measures.

To view these numbers another way, about one-fourth of St. Joseph County's population and housing units are located in low-income areas, yet such areas only receive about 13 percent of all home mortgage loans. This low total reflects the fact that fewer than 15 percent of all home mortgage applications come from low income areas, plus the denial rate for low income areas (20.7 percent) is almost double the overall denial rate (11.1 percent, as shown in Table 1).

That low-income areas are underrepresented in the number of loans received may or may not be understandable. However, it is very difficult to understand why there should be so much variability between banks, particularly when institutions that seem to be direct competitors are compared. For example, among the eight largest lenders, there is a 6 to 1 differential in the amount of business done in low income areas (2.7 percent by Mishawaka Federal on the low end, 16.2 percent at Trustcorp on the high); and among the top three lenders, the differential is about 2 to 1 (7.8 percent at 1st Source versus 16.2 percent at Trustcorp).

The second part of Table 2 examines loans to minority census tracts. These are the 6 census tracts which are 50 percent or more non-white; they hold about 5 percent of the county's population and 6 percent of its housing units. As the last line of the table shows, relatively few applications are received from such areas, applications that are received are twice as likely to get rejected (24.4 percent compared to the overall denial rate of 11.1 percent) and only 2 percent of loans made go to these parts of the county. Two of the smaller lenders, American General Finance and Teachers Credit Union, do a far higher share of their business in minority areas than do most other lenders. Even among the other lenders, there is more than a 10 to 1 difference in the amount of business done in minority areas. As before, these differentials are themselves the product of radically different application and denial rates.

Table 3 about here

Table 3 shifts the focus from areas to individuals. As the last row of the table shows, about one-third of all loan applications come from low income individuals. However, because the denial rate is much higher for this group (18.5 percent versus the overall rejection rate of 11.1 percent), about 30 percent of the loans actually made go to low income individuals. American General Finance and Teacher's Credit Union both made about one-half or more of their loans to this group. The other lenders do as little as 9.5 percent (Norwest Bank) to as much as 40.9 percent (Society/Ameritrust) of their business with low income individuals. Among the 8 largest lenders the differential is more than 2 to 1 between banks, and among the 3 largest the differential is about 1.7 to 1.

Finally, the last part of Table 3 examines loans to black applicants. Blacks account for about 9 percent of the county's population, yet they receive less than 3 percent of the home mortgage loans. Relatively few blacks apply for loans (3.2 percent of the total) and those who apply are more than twice as likely as the population as a whole to have their application denied. As before, there is tremendous variability between lenders. One bank (Indiana Federal) reported no loans to blacks during this period, while another (Teacher's Credit Union) did almost 13 percent of its business with blacks. Some banks did not turn down any of the (generally few) black applications they received, while others turned down more than half of them.

Tables 2 and 3 show that there is a great deal of variability between banks on these eight different share and denial measures. However, there is also much variability within a bank across measures. Some banks do much better on some variables than they do on others. For example,

Valley American Bank is one of the leading banks in making loans to minority areas (see Table 2). However, it is nevertheless well below average in the number of loans it makes to black individuals (Table 3). Also, some banks which make many loans to low income and minority areas and individuals nevertheless have high denial rates, suggesting that those banks might be able to make even more loans than they currently do.

To get a rough idea of a bank's overall performance, we created the "Community Mortgage Relative Performance Index" (CMRPI). Our procedure was as follows:

- The 17 lenders were ranked on the percent of loans made to low income areas, minority areas, low income individuals, and blacks. They were also ranked on the corresponding denial rates.
- The rankings were then summed. Denial rates were only weighted half as heavily as shares. This is because of the ambiguous nature of denial rates. While a lower denial rate may be preferable, a high denial rate does not necessarily mean that the lender is being "unfriendly." It could just mean that the lender attracts higher-risk applicants.
- The summed rankings were then converted into a scale ranging from 0 to 100. A score of zero would indicate that the lender had the weakest performance of every lender in every category. A score of 100 indicates that the lender finished first in every category. Hence, the higher the score, the better the overall performance.

Note that, as the name implies, the index only measures performance *relative* to the other major lenders in the area. A high score could just indicate that the bank was the best performer in a bad lot. Conversely, a low score could still be a solid performance if all lenders in the area are doing well in terms of loans made to low income and minority areas and individuals. The key strength and weakness of the measure is that it avoids saying anything about *absolute* performance. Banks can argue about how many loans should go to low income and minority

areas and individuals. It is much more difficult for them to argue about what their standing is relative to other lenders in the area.

Figure 3 about here

Figure 3 and the last column of Table 1 present the CMRPI. Teacher’s Credit Union, which generally made relatively many loans to low income and minority areas and individuals while having low to average denial rates, had the best (i.e. highest) score. 1st Source Bank, which made relatively few loans to low income and minority areas and individuals, while also having some of the highest denial rates, tied for the worst (i.e. lowest) score with Norwest Bank. As Figure 3 shows, even among lenders that made roughly similar numbers of total loans there was great variability on the CMRPI.

Several conclusions can be drawn from the descriptive statistics:

- Low income areas, minority areas, low income individuals, and blacks receive a disproportionately low share of the home mortgage loans in St. Joseph county. This is because relatively few loan applications are received from such areas and individuals, while those who do apply are much more likely than the general population to have their application rejected.
- At least some of the above may be attributed to factors such as income and credit history. However, it is far more difficult to explain the tremendous bank-by-bank variability that exists. Some of the difference between banks might be attributed to the fact that some small lenders go after “niche” markets that either include (or exclude) low income and minority areas and individuals. However, even among the largest lenders, which generally compete on a county-

wide basis, there are tremendous differences in the types of applicants that are drawn to the bank and in the banks' denial rates.

Bivariate and multivariate analyses of community reinvestment market share and lender characteristics

The previous section showed that there were tremendous disparities in the community reinvestment performance of St. Joseph County lenders. In this section, we examine what characteristics, if any, tend to be held in common by those lenders who do more of their business with low income and minority neighborhoods and individuals. For convenience, we will refer to the percentage of a lender's loans that go to low income and minority neighborhoods and individuals as its community reinvestment market share.

Table 4 about here

Table 4 presents the same information as Table 1, except that banks are now sorted according to their scores on the CMRPI. At first glance, there do not seem to be many obvious relationships. Locally owned banks get both the highest and lowest CMRPI scores and are scattered throughout the rest of the rankings. The six highest scoring lenders include two small banks, two medium banks, and two large banks. For types of institutions, most mortgage companies appear in the top half of the distribution while most commercial banks appear in the lower half.

Table 5 about here

One problem with the above, of course, is that lenders also differ dramatically in the number of loans they make, hence they differ in their impact on the home mortgage market. For example, the locally owned banks with high CMRPI rankings tend to make relatively few loans compared to the locally owned banks with low ratings. Table 5¹⁶ therefore provides descriptive breakdowns of community reinvestment market share by lender characteristics. About 13 percent of all loans are made in low income areas. For credit unions, the figure is almost twice as high. Consumer Finance Corporations also do above-average business in low income areas. Branch locations are also clearly related to community reinvestment market share: lenders with branches in low income areas do two to three times more business there than lenders who do not. Patterns are similar for minority areas, and low income and minority applicants. Location of ownership, and asset size, do not show any clear and consistent relation with community reinvestment market share.

Table 6 about here

Of course, lender characteristics are somewhat correlated with each other, e.g. credit unions tend to be smaller and locally owned. To better disentangle these relationships, in Table 6 the different components of community reinvestment market share are regressed on all lender characteristics simultaneously. Specifically, the strategy is as follows: all loan applications that were approved are included in the analysis. Four dependent variables are then computed. On the

¹⁶ Data from all lenders who did business in St. Joseph County is included here and in the subsequent logistic regression analyses, although obviously the largest lenders will have the greatest impact on the findings.

first, the approved loan is coded 1 if it was from a low income area, 0 otherwise. The process is repeated for minority areas, low income applicants, and black applicants. Each of these four dependent variables is then regressed on the lender's characteristics, i.e. the legal structure of the lender, the location of ownership, asset size, and branch locations. In these logistic regressions, a positive coefficient means that this type of lender has a higher community reinvestment market share for this dependent variable, while a negative coefficient means that its share tends to be lower.

CFC's and Credit Unions are consistently more likely to make their loans to low income and minority neighborhoods and individuals than are other types of lenders. Conversely, lenders who do not have branches in low income areas tend to make relatively fewer such loans. Lenders headquartered within the county tend to make relatively fewer community reinvestment loans, but the results are not always statistically significant. Smaller lenders tend to make more community reinvestment loans, except this is not true when it comes to making loans to blacks.

Hence, at least in St. Joseph County, some types of lenders are much more likely to make Community Reinvestment loans than are others. Consumer Finance Corporations seem to specialize in such loans; and credit unions, perhaps because of their clientele, also do above average business here. Branch locations are also a key factor. Most large lenders in the area have at least one branch in a low income neighborhood. (This may be one thing that is different about St. Joseph County compared to larger urban areas.) Lenders that do not have low income branches do relatively little in the way of community reinvestment loans. Finally, the results provide only mixed evidence for the contention that small or locally owned banks do a better job of serving local communities. While this is sometimes true, particularly for smaller banks, effects are not always significant and sometimes run in the opposite direction.

Multivariate analyses of loan denial rates

Most analyses of home mortgage lending focus on denial rates. In this section, we replicate and extend that work to St. Joseph County. We examine simultaneously how characteristics of the applicant (income, race, gender, and type of loan requested), characteristics of the area the applicant wishes to buy in (income, racial, and educational composition), and the characteristics of the lender (type of bank, location of ownership, and asset size) are related to the probability of having a loan application denied. Note that, as we pointed out before, a bank's denial rate may or may not be a good indicator of how "friendly" the bank is towards its applicants. For example, a high denial rate may simply indicate that the bank attracts many low income, higher risk applicants. This becomes less problematic when multiple variables, such as income, are controlled for.

Table 7 about here

Table 7 presents the results of logistic regressions of loan denial on characteristics of the applicant, area the desired home is located in, and the lender. Variables are entered hierarchically in five stages. Since coefficients are fairly stable from one model to the next, we focus most of our discussion on the fourth and fifth models.

As Model 4 shows, higher income applicants, applicants from higher income areas and/or better educated areas, and those seeking a conventional rather than an FHA or VA loan¹⁷ are less

¹⁷ Note that, unlike any other variable, the effect of conventional loans reverses sign once lender characteristics are added to the model. This reflects the fact that many types of lenders (e.g. credit unions)

likely to have their loan applications denied. Perhaps surprisingly, female applicants are also less likely to be denied. Blacks, on the other hand, are more likely to have their applications denied. However, the racial composition of the tract is not related to loan denial, at least once the income and educational composition of the tract is taken into account. If any areas are being “discriminated” against, it appears to be because of their income rather than their racial composition.

Characteristics of the lender are also related to the probability of a loan being denied. Credit unions, mortgage companies, and savings and loans all have lower denial rates than do commercial banks. Banks headquartered out of state have significantly higher denial rates. The very largest banks deny more loans than do the very smallest. Branch locations is another very critical variable: banks with locations in low income areas turn down fewer loans than banks without such locations.

These results replicate previous analyses, which showed that, even after controlling for a host of relevant variables, blacks are more likely than others to have their applications denied. In addition, our results are consistent with Kim and Squires (1995), who found that some types of lenders were more likely to deny loans than were others. However, Kim and Squires also argued that some lenders would review applications more carefully and be more willing to work with marginal applicants, and hence would be less prone to racial “bias”. If this is also true in St. Joseph County, we should find that there are significant interactions between lender characteristics and characteristics of individuals and areas; for example, the negative effect of race should be larger for some types of lenders than for others.

do not offer FHA or VA loans. Hence, type of lender, type of loan, and denial rate are all correlated with each other. These factors get disentangled once characteristics of the lender are included in the model.

There are many potential interaction terms that could be added to the model, and including all of them would no doubt result in severe problems of multicollinearity. We therefore relied on stepwise regression procedures to determine which interactions would be included. The results are shown in Model 5. Several things stand out.

- Kim and Squires found that the effect of race on denial rates was less for savings and loans than for commercial banks. We find no such difference here.
- We do find significant interactions between the race and income of the applicant with the location of the lender's ownership. One interpretation of these interactions is that lenders whose main office is located out of state are less affected by the applicant's race, and more affected by the applicant's income, than are lenders with ownership within the county or state; that is, the decisions of out-of-state lenders are driven more by economic than by racial factors.
- There is also a statistically significant interaction between the assets of the lender and the median income of the tract. The very largest lenders tend to be more affected by tract income than are the very smallest.

Discussion

Previous studies have shown that, nationwide, low income and minority areas and individuals are less likely than others to apply for home mortgage loans; and when they do apply, their applications are more likely to be rejected, even after factors such as income are controlled. Our analyses show that St. Joseph County, Indiana, is no exception to this general pattern.

These differences can be, and have been, attributed to such factors as credit history and how good of a risk the desired property is. Like most other studies, our analyses cannot perfectly

control for such factors. However, such explanations only apply to the performance of all banks collectively. Our analyses show that there are huge differences between banks in the number and types of applications they receive and in their loan denial rates. Such differences strongly suggest that bank discretion and lending practices have a substantial impact on the number and amount of loans made.

Our analyses also found that, in St. Joseph county at least, these discrepancies were associated with lender characteristics. Credit Unions and Consumer Finance Corporations did more of their business with low income and minority neighborhoods and individuals than did other types of lenders. For credit unions, this may reflect the nature of their clientele; for CFC's, it probably reflects their targeting of groups and areas that are often ignored by others. Lenders with branch locations in low income areas also did more business there. Of course, St. Joseph County may be somewhat unique, in that most of the largest lenders have at least one low income branch, often in downtown South Bend. It may be that "branch locations in low income areas" is simply an indicator of the extent to which a lender includes any of South Bend in its marketing area. For example, Mishawaka Federal Savings and other lenders which lack branch locations in the low income areas of South Bend often do not have many branches in the rest of the city either. Further, while downtown locations may be convenient for the residents of many low income neighborhoods, that probably isn't why most lenders set up their offices there. Examinations of localities where branch locations in low income areas are not so common might give a better feel for how important such offices are and how the behavior and success of lenders is related to them.

Like Kim and Squires, we also found that lender characteristics were related to denial rates. Perhaps because of their differing options and economic interests, some types of lenders (e.g. commercial banks) tended to have higher denial rates than did others. Unlike Kim and

Squires, we did not find that the effect of race was any less for thrifts than it was for other types of lenders. One possible explanation is that in Milwaukee, which Kim and Squires studied, greater racial conflict has affected lenders in ways that have not occurred in St. Joseph County. Or, the effect found in Milwaukee may have been produced by a few racially sensitive lenders who coincidentally happened to be savings and loans.

We did find that lenders owned out of state seemed less affected by race and more affected by income than were other lenders, suggesting their decisions may be more economically than racially driven. This does not necessarily mean that blacks would be better off applying to an out of state lender though. Since many blacks are also low income, the smaller effect of race on denial rates for out of state lenders will tend to be offset by the greater effect of income. Further, while out of state lenders may treat blacks and whites more “equally,” they treat them equally harsh, since, as the model also shows, out of state lenders tend to have higher overall denial rates.

We noted earlier that there was much concern about what the effect of increasing bank concentration would have on community reinvestment. We did find that small, locally owned banks tended to have lower denial rates than did others. However, we also found that this did not consistently result in them doing more of their total business with low income and minority neighborhoods and individuals. Large, out of state lenders may have higher denial rates, but they seem to at least partially compensate for that by sometimes attracting more low income or minority applicants. As we argued before, denial rates can be deceptive, and more needs to be known about what attracts applicants in the first place.

Obviously, it would be wise to try to replicate these findings in other cities; as noted before, it is always possible that a few large, atypical lenders are skewing the results. But, even within St. Joseph County, we saw substantial variability within categories of lenders, suggesting

there are many other important variables affecting lenders which have not been examined yet.

What other sorts of factors motivate a lender to have superior performance, and what exactly is it that the better lenders do that make them more effective? Anecdotal experience from St. Joseph County suggests that future research should focus on the following:

Exposure to political pressure. In the early 1990s, a local community group, CASH PLU\$, entered into negotiations with selected area lenders. One of those chosen was 1st Source, the lender which received the lowest score on our relative performance index. After extensive negotiations, 1st Source refused to sign a formal agreement, but apparently did make significant changes in its lending practices (see below for examples). Recent reports indicate that the bank made as many home mortgage loans to blacks in 1993 as it had in the three previous years combined. Further, the bank now appears to perform well above average on many of the factors we have examined here. Indeed, 1st Source Bank was awarded the 1994 Master Locksmith Award by the South Bend Human Rights Commission for its efforts to promote fair housing throughout the local community. Whether these dramatic changes are due to the political pressure of CASH PLU\$ is unclear, but it would certainly seem worthwhile to examine the effects of such pressure more closely.

Institutional attitudes, values and beliefs. This could be one of the most difficult things to measure, but it could also be one of the most important. Do the administrators and personnel of a lending institution believe that community reinvestment should be a goal? If so, is this belief based on social values or is it a pragmatic response to legal obligations? Do key figures in the organization believe that they can promote community reinvestment (e.g. via advertising, community outreach, special credit programs), or do they feel that this is beyond their control (e.g. they cannot make community reinvestment loans because people do not apply for them, or if

they do apply they aren't qualified)? Does the institution have programs for its employees that are designed to promote racial sensitivity and awareness of the problems of low income and minority loan applicants? Regardless of the formal positions and policies of the lender, what values are actually held by employees and what actually happens in practice? Interviews with bank personnel might be one way of getting such information. Observational studies might be another.

Advertising practices. CASH PLUS and other community organizations often pressure banks to advertise in minority newspapers, use minorities in their ads, etc. It needs to be determined whether banks that actually do this are more effective in attracting low income and minority applicants.

Minority outreach. One possible explanation for low application rates is that some groups, particularly minorities, may feel uncomfortable with traditional bank settings. Banks which go out into the community and recruit, or which send loan representatives to non-traditional settings (e.g. neighborhood centers), may be able to attract a larger applicant pool. Minority loan officers and board members may be another important factor in attracting minority applicants. For example, during summer 1994 1st Source had bank employees canvas low-income areas, informing South Bend residents of the bank's products and services. 1st Source also conducted a bilingual homebuyer's workshop and translated some of its brochures into Spanish.

Credit programs. Banks often claim that credit problems make minorities and others more likely to have their loans denied. However, some institutions have credit counseling programs which help people to put their financial affairs in order. Lenders which are willing and able to provide such services may find that it pays off with more loans (and more profits) in the

future. 1st Source, for example, has held credit counseling seminars and established what it calls Credit Starter/Credit Builder loan products.

Bank growth strategy and goals. In a period of rapid banking industry consolidation, some banks plan to grow through interstate bank mergers. In order to successfully pursue this strategy, these institutions must conform with the Community Reinvestment Act or risk that their mergers will be challenged and denied on CRA grounds. This may explain Society's eagerness to reach an agreement with CASH PLU\$ in St. Joseph County.

In conclusion, the greatest success of this study is the way it has illustrated the tremendous variability between lending institutions in St. Joseph County, Indiana. We have identified lender characteristics that seem to be associated with that variability. At the same time, it is clear that the most commonly suggested lender characteristics (type of bank, size, location, branch offices) cannot account for all of the variability that exists between different lenders. We think it is now important to examine other factors that may be motivating lenders. Further, we need to go beyond just looking at particular characteristics of banks and look at what it is that the banks actually do. Banks which adopt particular practices and procedures may be more effective than those who do not. Those practices and procedures need to be identified before we can get a clear idea of why lenders differ so dramatically in their community reinvestment performance.

References

- Bartlett, S. (1989). Bank closings discriminate, report asserts: services for minorities decreasing in New York. *New York Times*, January 31, B-1.
- Becker, G. (1993). The evidence against banks doesn't prove bias. *Business Week*, April 19, 18.
- Benston, G. J. (1979). Mortgage redlining research: a review and critical analysis discussion. in *The regulation of financial institutions: proceedings of a conference held in October 1979*, Sponsored by the Federal Reserve Bank of Boston and the National Science Foundation, Conference Series No. 21, pp. 144-195.
- Blossom, T., Everett, D., & Gallagher, J. (1988). The race for money. A Four-Part Series. *Detroit Free Press*, July 24-27.
- Brady, A., Dubridges, A., & Klepper, C., (1980). *Lending patterns and race in Southern suburbs: a community reinvestment act study*. Park Forest, IL: South Suburban Fair Housing Coalition.
- Brimelow, P. (1993). Racism at Work? *National Review*, April 12, 42.
- Brimelow, P., & Spencer, L. (1993). The hidden clue. *Forbes*. January 4, 48.
- Browne, L. E., & Tootell, G. M. B. (1995). Mortgage lending in Boston—a response to the critics. *New England Economic Review*, (September/October), 53-78.

- Campan, J. T. (1993). Banks, communities and public policy. in *Transforming the U.S. financial system: equity and efficiency for the 21st century*, pp. 221–249. G. A. Dymski, G. Epstein, & R. Pollin. (Eds).
- Canner, G. B., & Smith D. S. (1991). Home mortgage disclosure act: expanded data on residential lending. *Federal Reserve Bulletin*, 77, pp. 859–881.
- Canner, G. B., & Smith, D. S. (1992). Expanded HMDA data on residential lending: one year later. *Federal Reserve Bulletin*, 78, pp. 859–881.
- Carr, J., & Megbolugbe, I. F. (1993). Another look at the Boston Fed's mortgage discrimination study. *Housing Research News*, 1,2: 1, 5–8.
- Carr, J., & Megbolugbe, I. F. (1994). The federal reserve bank of Boston study on mortgage redlining revisited. *Journal of Housing Research*, 4, 2 : 277–314.
- Caskey, J. (1992). Bank representation in low-income and minority urban communities. Working paper of the Research Division of the Federal Reserve Bank of Kansas City. December, RWP 92–10.
- Dedman, B. (1988). The color of money. *Atlanta Journal & Atlanta Journal Constitution*, May 1–4.
- Dunham, C. R. (1991). *The unknown lenders: the role of mortgage bankers in the Chicago metropolitan area*. Chicago: Woodstock Institute.

- Dymski, G. A., & Veitch, J. M., (1991) A wonderful life it's not: bank lending for affordable housing in Los Angeles. Unpublished paper.
- Dymski, G. A., Veitch, J. M., & White, M. (1990). Taking it to the bank: poverty race and credit in Los Angeles. A Report to the City of Los Angeles. Los Angeles: Western Center on Law and Poverty.
- Evanoff, D., & Fortier, D. (1986). Geographic expansion in commercial banking: inferences from intrastate activity." in *Toward Nationwide Banking: A Guide to the Issues*, Baer, H. & Gregorash, S. F. (Eds). Chicago: Federal Reserve Bank of Chicago, 39–58.
- Finn, C. (1989). Mortgage lending in Boston's neighborhoods, 1981–1987: a study of bank credit and Boston's housing. Boston: Boston Redevelopment Authority.
- Guskind, R. (1989). Thin red line. *National Journal* October 28, 2639–2643.
- Horne, D. K. (1994a). Evaluating the role of race in mortgage lending. *FDIC Banking Review*, Spring/Summer, 1–15.
- Horne, D. K. (1994b). Mortgage lending, race, and model specification. Preliminary draft. Federal Deposit Insurance Corporation, Division of Research and Statistics.
- Kim, S., & Squires, G. D. (1995). Lender characteristics and racial disparities in mortgage lending. *Journal of Housing Research*, 6, 99–113.
- Liebowitz, S., & Day, T. (1993). A study that deserves no credit. *Wall Street Journal*, September 1, A14.

Lueck, T. J. (1992). Banks shut in poor areas stir worries. *New York Times*, August 17, B-1.

Mengle, D. L. (1990). The case for interstate branch banking. Federal Reserve Bank of Richmond, *Economic Review*, November/December, 3-17.

Munnell, A., Browne, L. E., McEneaney, J., & Tootell, G. M. B., (1992). *Mortgage lending in Boston: interpreting HMDA data*. Federal Reserve Bank of Boston, Working Paper No. 92-7, October.

Peterman, W. (1990). *Mesodynamics of mortgage lending in Chicago and its suburbs*. Chicago: Chicago Fair Housing Alliance.

Peterman, W., & Sanshi, Q. (1991). Lending discrimination in metropolitan Chicago: continuing connection between race, racial change and mortgage credit. in Chicago Fair Housing Alliance (eds.) *Credit by color: mortgage discrimination in Chicagoland*. Chicago: Chicago Fair Housing Alliance.

Shlay, A. B. (1986). *A tale of three cities: the distribution of housing credit from financial institutions in the Chicago SMSA from 1980-1983*. Chicago: Woodstock Institute.

Shlay, A. B. (1987a). *Maintaining the divided city: residential lending patterns in the Baltimore SMSA*. Baltimore: Maryland Alliance for Responsible Investment.

Shlay, A. B. (1987b). *Credit on color: the impact of segregation and racial transition on housing credit flows in the Chicago SMSA from 1980-1983*. Chicago: Chicago Fair Housing Alliance.

Shlay, A. B. (1987c). *The underwriting of community: evaluating federally regulated depository financial institutions' residential lending performance within the Baltimore SMSA from 1980–1984.* Baltimore: Maryland Alliance for Responsible Investment.

Shlay, A. B. (1988). Not in that neighborhood: the effects of housing and population on the distribution of mortgage finance within the Chicago SMSA from 1980–1983. *Social Science Research*, 17, 137–163.

Shlay A. B. & Freedman, S. (1986). *Islands of opportunities: mortgage banker residential lending within the Chicago SMSA from 1980–1983.* Chicago: Woodstock Institute.

Shlay, A. B., & Goldstein, I. J. (1997). Proving disinvestment: The CRA research experience. Draft of a chapter forthcoming in *The politics of community reinvestment: legislation organizing and financial reform*, Shlay, A. B. (Ed). Philadelphia, PA: Temple University Press.

U.S. Statutes at Large. (1980). Washington D.C.: U.S. Government Printing Office.

Williams, P., Brown, W., & Simmons, E. (1988). *Race and mortgage lending in New York City: a study on redlining.* Brooklyn: Medgar Evars College, Center for Law and Social Justice.

Yezer, A., Phillips, & Trost, R. P. (1994). Bias in estimates of discrimination and default in mortgage lending: the effects of simultaneity and self-selection. *Journal of Real Estate Finance and Economics.* 9,3: 197–215.

Zandi, M. (1993). Boston Fed's bias study was deeply flawed. *American Banker*, August 19,
13.

Table 1**Bank Characteristics**

Bank Name	Demographic Characteristics				Overall Lending		
	Type of Institution	Ownership	Size	Branches	Loans Originated	Denial Rate	CMRPI
Waterfield/UFSB of Indiana	Mortgage company	In state	Large	Some LowMod	1330	5.5%	64.1
Trustcorp Mortgage	Mortgage company	Local	Small	Some LowMod	1263	3.1%	62.5
1st Source Bank	Bank	Local	Large	Some LowMod	947	12.9%	21.9
Inland Mortgage	Mortgage company	In state	Medium	Some LowMod	834	5.8%	63.0
Valley American Bank & Trust	Bank	Local	Medium	Some LowMod	672	11.7%	42.2
Standard Federal	Savings and loan	Out of state	Large	Some LowMod	560	8.8%	44.8
Mishawaka Federal Savings	Savings and loan	Local	Medium	No LowMod	546	8.4%	26.0
Society/Ameritrust	Bank	Out of state	Large	Some LowMod	501	32.2%	46.9
Precedent Financial Corp	Mortgage company	In state	Small	No LowMod	320	0.9%	65.1
Norwest Mortgage	Mortgage company	Out of state	Large	Some LowMod	270	6.9%	41.7
Advantage Mortgage	Mortgage company	Out of state	Large	Some LowMod	201	13.7%	71.4
Sobieski Federal S & L	Savings and loan	Local	Small	Some LowMod	178	3.3%	65.1
Indiana Federal Bank	Savings and loan	In state	Medium	No LowMod	139	7.9%	31.8
Norwest Bank of Indiana	Bank	Out of state	Large	Some LowMod	126	5.3%	21.9
Teachers Credit Union	Credit union	Local	Medium	Some LowMod	111	9.0%	84.4
NBD Mortgage	Mortgage company	Out of state	Large	Some LowMod	59	4.8%	53.1
American General Finance	Consumer finance	Out of state	Large	No LowMod	34	61.4%	59.9
<i>39 other lenders</i>					380	30.8%	
<i>All 56 lending institutions</i>					8471	11.1%	

Table 2**Loans to Census Tracts**

Bank Name	Low income Census tracts			Minority census tracts				
	% of Apps.	Denial Rate / Diff.	% of Loans	% of Apps.	Denial Rate/ Diff.	% of Loans		
Waterfield/UFSB of Indiana	15.7%	10.4%	4.9%	14.9%	1.8%	8.0%	2.5%	1.7%
Trustcorp Mortgage	16.6%	5.6%	2.4%	16.2%	1.6%	14.3%	11.1%	1.4%
1st Source Bank	9.9%	31.5%	18.6%	7.8%	1.6%	41.2%	28.3%	1.1%
Inland Mortgage	14.4%	7.1%	1.3%	14.1%	3.1%	3.7%	-2.1%	3.1%
Valley American Bank & Trust	15.1%	20.9%	9.2%	13.5%	6.4%	24.5%	12.8%	5.5%
Standard Federal	15.1%	21.5%	12.7%	13.0%	2.4%	26.7%	17.9%	2.0%
Mishawaka Federal Savings	3.0%	16.7%	8.3%	2.7%	0.3%	0.0%	-8.4%	0.4%
Society/Ameritrust	18.9%	43.6%	11.4%	15.8%	2.6%	63.2%	31.0%	1.4%
Precedent Financial Corp	10.2%	3.0%	2.1%	10.0%	1.2%	0.0%	-0.9%	1.3%
Norwest Mortgage	10.3%	13.3%	6.4%	9.6%	1.0%	33.3%	26.4%	0.7%
Advantage Mortgage	27.9%	18.5%	4.7%	26.4%	2.1%	20.0%	6.3%	2.0%
Sobieski Federal S & L	18.5%	2.9%	-0.3%	18.5%	1.1%	0.0%	-3.3%	1.1%
Indiana Federal Bank	7.3%	9.1%	1.1%	7.2%	1.3%	0.0%	-7.9%	1.4%
Norwest Bank of Indiana	6.0%	37.5%	32.2%	4.0%	0.0%	0.0%	-5.3%	0.0%
Teachers Credit Union	27.0%	21.2%	12.2%	23.4%	8.2%	0.0%	-9.0%	9.0%
NBD Mortgage	11.3%	14.3%	9.4%	10.2%	1.6%	0.0%	-4.8%	1.7%
American General Finance	44.3%	71.8%	10.4%	32.4%	6.8%	66.7%	5.3%	5.9%
<i>39 other lenders</i>	14.0%	53.2%	22.5%	9.5%	2.4%	53.8%	23.1%	1.6%
<i>All 56 lending institutions</i>	14.4%	20.7%	9.6%	12.9%	2.3%	24.4%	13.3%	2.0%

Table 3**Loans to Individuals**

Bank Name	Low Income Applicants			Black Applicants				
	% of Apps.	Denial Rate/ Diff.	% of Loans	% of Apps.	Denial Rate/ Diff.	% of Loans		
Waterfield/UFSB of Indiana	35.1%	7.7%	2.2%	34.3%	5.1%	18.1%	12.5%	4.4%
Trustcorp Mortgage	33.1%	2.6%	-0.6%	33.3%	2.8%	2.8%	-0.4%	2.8%
1st Source Bank	22.5%	21.2%	8.3%	20.4%	3.8%	43.9%	31.0%	2.4%
Inland Mortgage	35.8%	3.8%	-2.0%	36.6%	2.4%	9.5%	3.8%	2.3%
Valley American Bank & Trust	24.7%	18.6%	6.9%	22.8%	1.8%	28.6%	16.9%	1.5%
Standard Federal	31.1%	14.1%	5.3%	29.3%	3.3%	30.0%	21.2%	2.5%
Mishawaka Federal Savings	20.5%	18.9%	10.5%	18.1%	0.2%	0.0%	-8.4%	0.2%
Society/Ameritrust	52.1%	46.8%	14.5%	40.9%	3.4%	40.0%	7.8%	3.0%
Precedent Financial Corp	39.9%	0.8%	-0.2%	40.0%	2.5%	0.0%	-0.9%	2.5%
Norwest Mortgage	27.2%	12.7%	5.8%	25.6%	4.5%	15.4%	8.5%	4.1%
Advantage Mortgage	37.8%	11.4%	-2.4%	38.8%	5.2%	25.0%	11.3%	4.5%
Sobieski Federal S & L	40.2%	6.8%	3.5%	38.8%	2.2%	0.0%	-3.3%	2.2%
Indiana Federal Bank	21.9%	15.2%	7.2%	20.1%	1.3%	100.0%	92.1%	0.0%
Norwest Bank of Indiana	12.0%	25.0%	19.7%	9.5%	0.8%	0.0%	-5.3%	0.8%
Teachers Credit Union	50.8%	12.9%	3.9%	48.6%	13.1%	12.5%	3.5%	12.6%
NBD Mortgage	21.0%	15.4%	10.5%	18.6%	6.5%	25.0%	20.2%	5.1%
American General Finance	76.1%	67.2%	5.8%	64.7%	9.1%	87.5%	26.1%	2.9%
<i>39 other lenders</i>	39.0%	52.8%	22.0%	26.6%	1.1%	16.7%	-14.1%	1.3%
<i>All 56 lending institutions</i>	33.0%	18.5%	7.4%	30.3%	3.2%	23.7%	12.6%	2.7%

Table 4**Bank Characteristics by CMRPI**

Bank Name	Demographic characteristics				Overall lending		
	Type of Institution	Ownership	Size	Branches	Loans Originated	Denial Rate	CMRPI
Teachers Credit Union	Credit union	Local	Medium	Some LowMod	111	9.02%	84.4
Advantage Mortgage	Mortgage company	Out of state	Large	Some LowMod	201	13.73%	71.4
Precedent Financial Corp	Mortgage company	In state	Small	No LowMod	320	0.93%	65.1
Sobieski Federal S & L	Savings and loan	Local	Small	Some LowMod	178	3.26%	65.1
Waterfield/UFSB of Indiana	Mortgage company	In state	Large	Some LowMod	1330	5.54%	64.1
Inland Mortgage	Mortgage company	In state	Medium	Some LowMod	834	5.76%	63.0
Trustcorp Mortgage	Mortgage company	Local	Small	Some LowMod	1263	3.14%	62.5
American General Finance	Consumer finance	Out of state	Large	No LowMod	34	61.36%	59.9
NBD Mortgage	Mortgage company	Out of state	Large	Some LowMod	59	4.84%	53.1
Society/Ameritrust	Bank	Out of state	Large	Some LowMod	501	32.21%	46.9
Standard Federal	Savings and loan	Out of state	Large	Some LowMod	560	8.79%	44.8
Valley American Bank & Trust	Bank	Local	Medium	Some LowMod	672	11.70%	42.2
Norwest Mortgage	Mortgage company	Out of state	Large	Some LowMod	270	6.90%	41.7
Indiana Federal Bank	Savings and loan	In state	Medium	No LowMod	139	7.95%	31.8
Mishawaka Federal Savings	Savings and loan	Local	Medium	No LowMod	546	8.39%	26.0
Norwest Bank of Indiana	Bank	Out of state	Large	Some LowMod	126	5.26%	21.9
1st Source Bank	Bank	Local	Large	Some LowMod	947	12.88%	21.9
<i>39 other lenders</i>					380	30.78%	
<i>All 56 lending institutions</i>					8471	11.10%	

Table 5**Low Income and Minority Lending by Characteristics of Lender**

	Low/Mod Income Areas	Minority Areas	Low Income Applicants	Black Applicants
All lenders	12.9%	2.0%	30.3%	2.7%
Type of lender				
Bank	11.0%	2.4%	25.4%	2.2%
CFC	17.4%	2.9%	63.8%	1.5%
Credit union	24.6%	6.8%	39.8%	8.9%
Mortgage company	14.5%	1.8%	33.5%	3.3%
S & L	9.2%	1.2%	25.3%	1.3%
Location of ownership				
Within county	12.2%	2.2%	26.6%	2.4%
In state	13.5%	2.1%	35.1%	3.2%
Out of state	13.7%	1.5%	31.6%	2.8%
Asset size				
< \$100 million	15.4%	1.4%	34.8%	2.6%
\$100M to \$1B	11.4%	3.4%	27.9%	1.9%
> \$1 Billion	12.7%	1.4%	30.0%	3.3%
Branch locations				
No branches in county	4.2%	0.7%	25.5%	0.7%
No LowMod branches	6.7%	1.0%	27.1%	1.0%
Some LowMod branches	14.2%	2.2%	31.0%	3.1%

Table 6

Logistic Regression Models for Community Reinvestment Market Share Regressed on Lender Characteristics

<i>Variable</i>	Low Income Neighborhoods			Minority Neighborhoods			Low Income Individuals			Blacks		
	<i>B</i>	<i>S.E.</i>	<i>Exp(B)</i>	<i>B</i>	<i>S.E.</i>	<i>Exp(B)</i>	<i>B</i>	<i>S.E.</i>	<i>Exp(B)</i>	<i>B</i>	<i>S.E.</i>	<i>Exp(B)</i>
Type of bank (commercial banks is reference category)												
CFC	1.815*	0.385	6.138	2.516*	0.890	12.375	1.848*	0.279	6.344	0.849*	1.089	2.337
Credit union	0.903*	0.190	2.468	0.768*	0.335	2.156	0.561*	0.160	1.753	1.945*	0.319	6.991
Mortgage co.	0.026	0.124	1.027	-0.564	0.343	0.569	-0.063	0.082	0.939	0.524*	0.261	1.688
Savings & loan	-0.077	0.126	0.926	-0.348	0.342	0.707	-0.070	0.088	0.932	-0.173	0.300	0.841
Location of ownership (out of state is reference category)												
Within county	-0.512*	0.121	0.599	-0.206	0.310	0.814	-0.558*	0.085	0.572	-0.102	0.254	0.903
In state	-0.071	0.121	0.931	0.287	0.363	1.332	0.121	0.086	1.128	0.003	0.225	1.003
Asset size (> \$1 billion is reference category)												
< \$100 M	0.654*	0.138	1.924	0.523	0.370	1.686	0.666*	0.091	1.946	-0.370	0.294	0.691
\$100m to \$1 B	0.181*	0.097	1.198	1.053*	0.215	2.865	0.159*	0.071	1.172	-0.586*	0.207	0.557
Branch locations (some LowMod is reference category)												
No branches in county	-2.368*	0.460	0.094	-6.235	6.697	0.002	-0.663*	0.187	0.515	-5.015	4.379	0.007
No LowMod branches	-1.068*	0.155	0.344	-1.324*	0.419	0.266	-0.405*	0.096	0.667	-0.751*	0.372	0.472
Constant	-1.779*	0.096		-3.965*	0.251		-0.744*	0.069		-3.594*	0.212	

* Significant at the .05 level.

Table 7

Logistic Regressions of Denial on Characteristics of the Applicant, Census Tract, and Lender

<i>Variable</i>	Model 1: Individual Characteristics		Model 2: Model 1 + Tract Characteristics		Model 3: Model 2 + Lender Characteristics		Model 4: Model 3 + Branch Locations		Model 5: Model 4 + Lender Interactions	
	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>
Individual characteristics										
Income (in \$1000s)	-0.036*	0.002	-0.028*	0.002	-0.018*	0.002	-0.018*	0.002	-0.042*	0.004
Black applicant	1.006*	0.150	0.794*	0.160	0.839*	0.170	0.875*	0.171	0.350	0.288
Female applicant	-0.293*	0.098	-0.289*	0.098	-0.286*	0.106	-0.282*	0.106	-0.380*	0.109
Conventional loan	0.977*	0.086	1.107*	0.087	-0.226	0.126	-0.406*	0.130	-0.450*	0.128
Tract characteristics										
Median income of tract			-0.030*	0.006	-0.023*	0.006	-0.024*	0.006	-0.027*	0.007
% minority in tract			-0.004	0.003	-0.002	0.003	0.000	0.003	0.001	0.003
% in tract with < 9th grade education			3.282*	1.080	2.874*	1.178	2.438*	1.186	2.298*	1.213
Type of bank (commercial banks is reference category)										
CFC					1.468*	0.168	0.234	0.227	0.101	0.232
Credit union					-0.717*	0.292	-0.640*	0.293	-0.642*	0.298
Mortgage company					-1.514*	0.150	-1.604*	0.142	-1.543*	0.143
Savings and loan					-0.949*	0.120	-1.205*	0.139	-1.174*	0.143
Location of ownership (out of state is reference category)										
Within county					-0.772*	0.115	-0.722*	0.115	-1.386*	0.208
In state					-0.667*	0.149	-0.791*	0.146	-2.385*	0.213
Asset size (> \$1 billion is reference category)										
< \$100 M					-0.773*	0.183	-1.173*	0.190	-2.669*	0.608
\$100m to \$1 B					0.023	0.115	-0.127	0.122	-0.579	0.345
Branch locations (some LowMod is reference category)										
No branches in county							1.566*	0.191	1.609*	0.196
No LowMod branches							0.810*	0.172	0.748*	0.176
Black & location of ownership interactions										
Black, within county ownership									0.708	0.387
Black, in state ownership									0.991*	0.408
Applicant income & location of ownership interactions										
Income, within county ownership									0.022*	0.005
Income, in state ownership									0.045*	0.005
Median inc of tract & asset size interactions										
Median tract income, < \$100M assets									0.043*	0.016
Median Tract Income, \$100M to \$1B Assets									0.014	0.009
Constant	-1.538	0.103	-1.006	0.257	0.544	0.288	0.754	0.291	1.630*	0.325

* Significant at the .05 level

Figure 1: Percent of all Home Mortgage Loans that Go to Low Income Areas

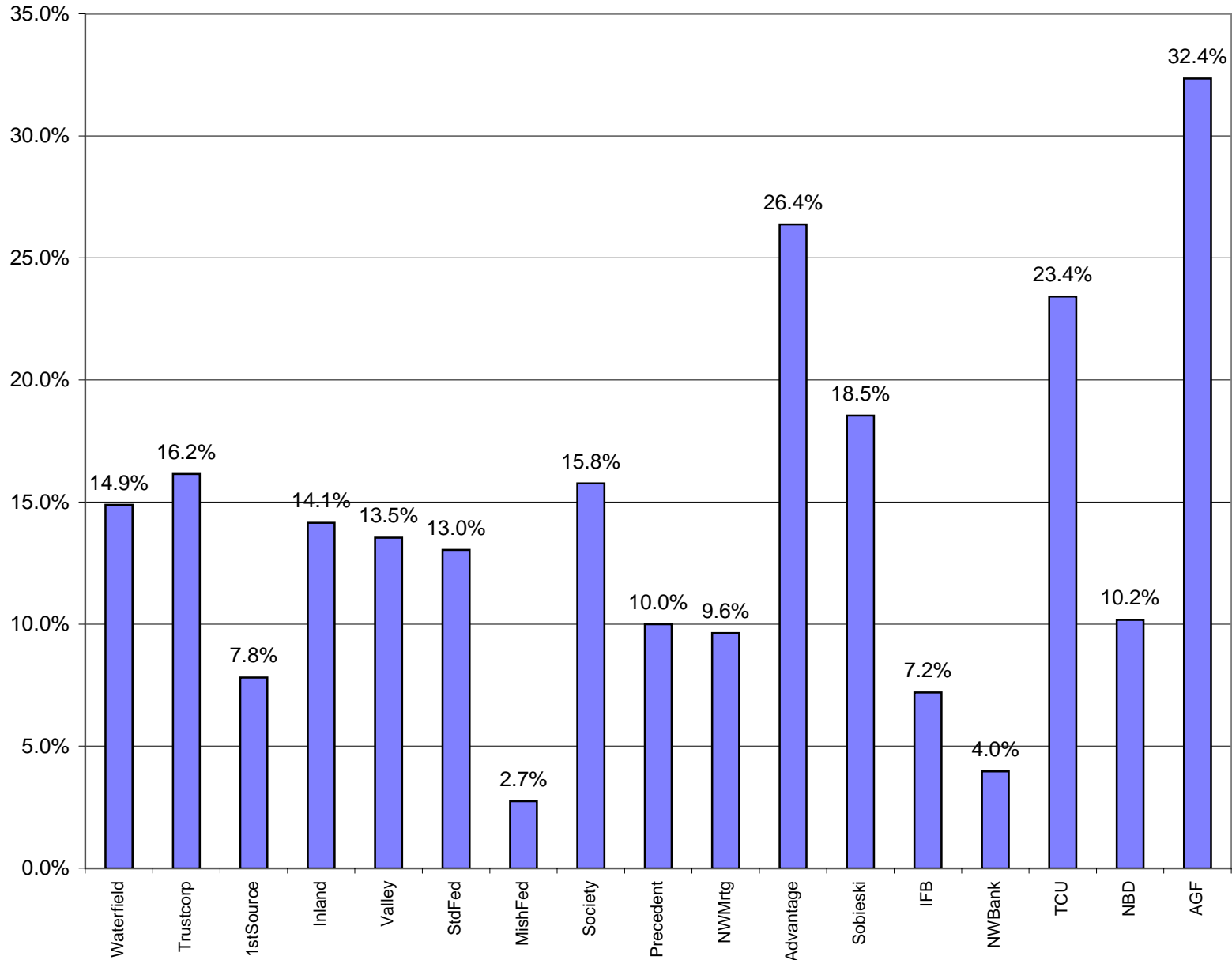


Figure 2: Application and Denial Rates for Low Income Areas

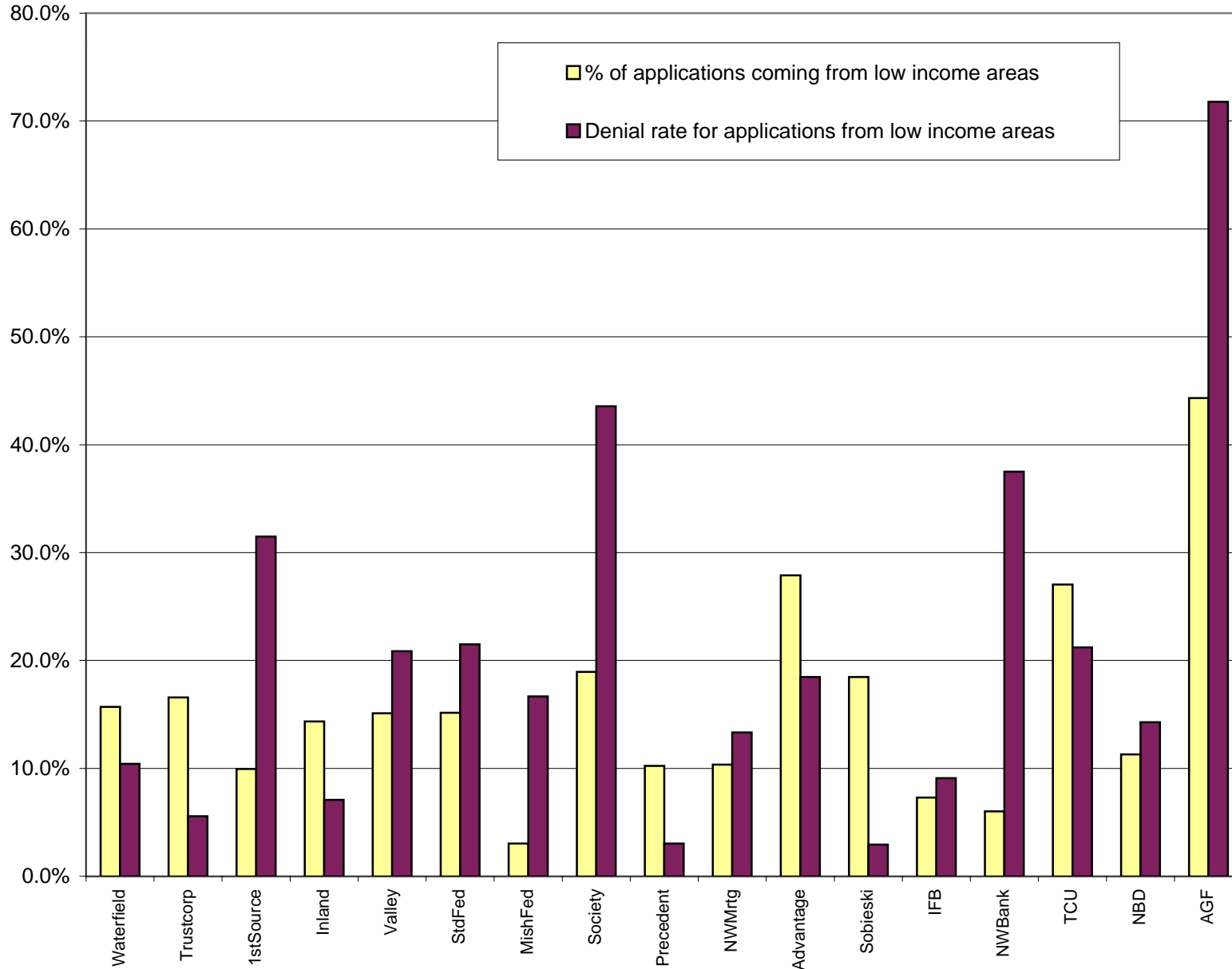


Figure 3: Community Mortgage Relative Performance Index

