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Home Mortgage Lending by the Numbers

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Home mortgage lenders have recently come under increased scrutiny in the wake of several published studies showing that minority applicants are far more likely than whites to be denied housing credit. This article takes a look at some of the issues associated with those reports and raises the concern that simple comparisons of lenders' denial rates are not sufficient for grasping the complexities surrounding community-oriented lending.

During the past year, several Federal Reserve reports on home mortgage lending have attracted widespread attention for what they revealed about racial lending patterns. The Federal Reserve Board, in back-to-back analyses of 1990 and 1991 data gathered nationwide, reported that black and Hispanic applicants are denied credit at roughly *twice* the rate of white applicants.[1] And in a study designed to investigate the sources of differential mortgage denial rates in the Boston area, that region's Reserve Bank concluded that lenders approved conventional home purchase loans for white applicants at a much greater rate than for black and Hispanic applicants who appeared, statistically at least, to be similarly qualified.[2]

Surprisingly, these reports have elicited a sympathetic response from mortgage lenders. Rather than criticizing the studies as faulty or inadequate on any number of grounds, as they had done with respect to previous research efforts, lenders and their trade associations are now generally acknowledging that in some instances housing credit decisions in this country may have been unfair to minority applicants, even if not deliberately so.[3] Lenders that have already developed procedures to detect such bias are stepping up their efforts to further ensure equal treatment of loan applicants, while relative newcomers are scrambling to acquaint themselves with the best practices being used in their industry and elsewhere.

Certainly these new initiatives are to be welcomed, as there is every reason to think that many lenders and future applicants can benefit from innovations in the mortgage lending process. However, based on our own research, we are concerned that the interested parties will become so preoccupied with achieving similar approval rates for all racial and income groups that they will ignore several other important public issues in the operation of mortgage markets. In particular, undue attention to approval/denial statistics threatens to distract people from the broader social objectives of community lending legislation.

This *Economic Commentary* discusses some issues raised by several well-publicized reports of racial differences in mortgage lending decisions. We explain why, even though a creditor's relatively higher loan denial rate could indicate unfair treatment of some members of a particular customer group, simple comparisons of these rates from one lender to another may actually be quite misleading. We also consider how recent lending studies—and their treatment in the press—have influenced the debate over what constitutes good citizenship for lenders.

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Our research shows that even if all lenders in a community exhibited equal denial rates for each type of customer in their market, it would not necessarily follow that each was fulfilling its responsibilities for "good citizenship" as intended by Congress: The legal standard to which lenders should be held is neither obvious nor easily quantified. Proper *assessment* of the numbers, more than merely the numbers themselves, appears to be indispensable to the process.

■ Background

In general, the financial and employment experiences of successful mortgage applicants differ from those of the population at large. The typical homeowner has higher income and wealth, a more stable credit and work history, and lower non-housing debt relative to income than the average American. In addition, a larger fraction of white applicants than black and Hispanic applicants are approved for residential credit (of all types). The extent to which objective lending criteria are responsible for these differences, versus discrimination based on an applicant's race, income class, or neighborhood racial composition (redlining), has been the subject of much analysis and debate.

During the 1970s, housing policy advocates became concerned that housing credit was not flowing properly to all neighborhoods within communities at large, and that, in particular, some mortgage lenders were not adequately serving all segments of their markets. To address these problems, Congress passed the Home Mortgage Disclosure Act (HMDA) in 1975, which required certain lenders to report, census tract by census tract, the number and dollar value of home loans they made in their communities each year. Next came the Community Reinvestment Act of 1977 (CRA), which went one step further by encouraging (through the regulatory process) depository institutions to help meet the credit needs of their communities, including low- and moderate-income neighborhoods, consistent with safe and sound lending practices. Other relevant laws, the 1974 Equal Credit Opportunity Act and the Fair Housing Act of 1968 (as amended in 1988), required that lenders not discriminate against individual applicants on the basis of race, color, or ethnic origin, gender, marital status, or religion.

A number of informative studies on credit markets and race have been based on HMDA data, as well as on information obtained from other sources, over the past 15 years. Initially, the HMDA-based research necessarily focused on the flow of credit to white and minority neighborhoods rather than on the treatment received by particular loan applicants, since that data source contained no information about individuals.[4] The general thrust behind these studies was to determine whether mortgage lenders in an area, taken collectively, originated relatively fewer loans in predominantly minority or low-income neighborhoods.

Although disparate lending patterns were indeed found to be prevalent, the data did not permit examination of whether these neighborhood credit variations arose from credit supply or demand considerations, or, put differently, from differences in the lenders' application flows or approval processes. Were predominantly minority neighborhoods receiving less credit because of lender bias, or because lenders were not encountering comparable numbers of qualified applicants?[5] Since the studies could not adequately account for the creditworthiness of individuals or the intensity of neighborhood credit demand, it was impossible to answer this question directly.

Still, many observers have been willing to blame lenders for the bulk of the imbalance.[6] Their opinion has been bolstered by a number of non-HMDA-based studies of housing and non-housing credit markets whose findings are consistent with those reported above. Consider, for example, several analyses of credit rationing and market performance based on the Survey of Consumer Finances, which collects information from a random sampling of U.S. households. After controlling for some economic and demographic characteristics, these studies attempt to ascertain from households' actual credit market experiences whether racial differences can independently affect credit flows and the selection of credit products. The results show that race matters, although to varying degrees and with varying ambiguities regarding its true role in the credit process.[7]

Eventually, many people interested in assessing the fairness of credit practices came to feel hampered by the dearth of information about individual loan applicants in the HMDA data. Moreover, prior to 1990, the law required financial institutions to report only their actual credit extensions, so it was impossible for outside observers to analyze the frequency with which lenders, either collectively or individually, both received and approved applications for property located in various neighborhoods.

Amendments to HMDA enacted in 1989 now require most urban-based depository institutions (and certain other mortgage lenders) to collect and report information on *all* individual home loan applications taken, whether approved or not. In addition, some vital statistics about the applicants must be recorded, most notably annual income, loan amount requested, gender, race, and census tract of the desired property. Regulators are charged with collecting and processing this information to prepare disclosure reports for the public, as well as to monitor lenders for compliance with both the CRA and fair lending statutes.

After the 1990 HMDA data were released in late 1991, news accounts zeroed in on the rates at which loan customers from various race and income categories were denied credit by lenders both collectively and individually. As mentioned above, the HMDA reports showed that black applicants were twice as likely to be turned down as white applicants, although the denial ratios varied among major metropolitan areas from a low of roughly 1.5 to 1 to a high of about 3.5 to 1.

TABLE 1 DISTRIBUTION OF 1-4 FAMILY MORTGAGE APPLICATIONS BY TYPE AND SIZE OF LENDER

	Number of		Percent of Applications				
	Lenders[a]	Applications	All	Minority Applicants[b]	Low-Income Applicants[c]	Minority Tracts[d]	Low-Income Tracts[e]
Type of institution							
Commercial banks	7,043	447,526	22.6	18.9	30.9	19.6	32.7
Thrift institutions	3,975	667,513	33.6	35.0	24.7	35.2	22.6
Credit unions	1,627	20,839	1.1	0.7	1.1	0.7	1.2
Bank subsidiaries	3,532	389,250	19.6	18.7	23.4	18.1	22.4
Thrift subsidiaries	1,478	154,820	7.8	8.3	8.3	8.2	8.5
Other mortgage banks	3,040	304,740	15.4	18.3	12.3	18.2	12.6
Size of institution							
More than 500 applications	774	853,319	43.0	55.2	34.7	57.0	29.8
100–500 applications	3,628	795,477	40.1	32.7	45.4	31.1	48.6
Fewer than 100 applications	16,293	335,892	16.9	12.1	19.9	11.9	21.6
Market share of institution							
More than 5 percent	1,916	813,279	41.0	43.6	46.2	42.5	49.2
1–5 percent	4,441	811,086	40.9	40.5	38.8	40.6	37.9
Less than 1 percent	14,338	360,323	18.2	15.8	15.0	17.0	12.9
Size of MSA							
More than 25,000 applications	3,545	660,927	33.3	45.3	19.1	49.7	12.3
Fewer than 25,000 applications	17,150	1,323,761	66.7	54.7	80.9	50.3	87.7
Percent minority applications in MSA							
More than 22 percent	2,055	281,863	14.2	33.9	11.2	45.3	11.4
Less than 22 percent	18,640	1,702,825	85.8	66.1	88.8	54.7	88.6
Total	20,695	1,984,688	100.0	100.0	100.0	100.0	100.0

a. Lenders operating in multiple MSAs are treated as separate institutions.

b. Native Americans, blacks, and Hispanics.

c. Applicant income less than or equal to $25,000.

d. Census tracts with 30 percent or more of loan applications from minority applicants.

e. Census tracts with 30 percent or more of loan applications from low-income applicants.

NOTE: *All figures are based on 1990 HMDA data.*

SOURCE: Avery, Beeson, and Sniderman (1992).

■ The Boston Study in Perspective

Mortgage and consumer finance studies of credit applicants and loan originations have undoubtedly improved our understanding of some of the important factors at work in the markets: credit history, wealth, employment stability, non-housing debt, and variation of the loan products themselves (for instance, conventional versus federally guaranteed loans). However, when research shows that less credit appears to be flowing to low-income (or minority) applicants or neighborhoods, it is never clear to what extent lenders' decisions are based on discrimination or on objective criteria related to probable loan repayment, since race and income are correlated with many of the important objective lending factors.

Post-1989 HMDA data offer several paths for new research. The Federal Reserve Bank of Boston, motivated by reports of a 3-to-1 ratio of black-to-white loan denials in the Boston metropolitan area, took a step in one direction with its recent study of mortgage lending decisions there. The researchers based their analysis on a sample of loan applications drawn from 1990 HMDA data, supplemented by additional information about applicants' economic standing obtained from the lenders' original files.[8] The study investigated the extent to which both race and many commonly cited economic variables accounted for the observed racial differences.

The researchers discovered that even after controlling for the major economic factors thought to underlie mortgage lending decisions, loan approval rates for minority and white customers of the surveyed firms still differed. Factoring in these economic and property attributes reduced the gross ratio of about 3 to 1 minority/white loan denials by nearly half, to roughly 1.5 to 1. The remaining difference led the Reserve Bank researchers to conclude that if minority applicants had the same nonracial characteristics as their white counterparts, they would have experienced a denial rate of 17 percent, compared with 11 percent for whites.

One explanation for this disparity offered by the Boston Fed is that white applicants are coached and assisted more extensively than minority applicants—the so-called "thicker loan file" effect. However, a definitive judgment will require an investigation of the individual applicants' loan files, something that was not done as part of the Boston study.[9] Other questions remain unresolved as well. Since loan applicants from 131 different lenders were lumped together in the analysis, it is impossible to tell how widespread any bias might be. Furthermore, the results may be strongly influenced by a subset of Boston-area lenders whose credit review standards and procedures differ from those of their competitors. And finally, it is not clear how Boston's experience compares with that of other metropolitan areas, especially in those places where the gross black-to-white loan denial ratio is substantially lower to begin with.

■ Variation among Lenders and the Importance of Loan Applications

In fact, there is compelling evidence that, nationally, lenders differ from one another in many important respects. In a recently released technical paper, we analyzed the broad issue of lender differences in credit flows to minority and low-income households (see table 1).[10] Our examination of all HMDA-reporting lenders—over 9,000 firms accounting for nearly 2 million home-purchase loan applications in 1990—reveals that 14 percent of applications and 12 percent of loans were associated with minority applicants. However, about 40 percent of all lenders reported *no* minority applications that year.[11] And of those lenders that did receive minority applications, 8 percent had no minority originations and 3 percent had *only* minority originations. Half of the lenders originated 8 percent or fewer of their loans to minorities, while one-fourth extended more than 18 percent.

The question, then, is whether the substantial differences among lenders in their credit origination rates to minority/low-income applicants stem primarily from differences in the volume of minority/low-income applications received, or from differences in the actions taken on those applications. We conclude that for the United States as a whole, the variance across lenders in either minority or low-income loan originations, relative to total originations, is overwhelmingly accounted for by the variance in application rates, *not* by actions taken on the applications.

Moreover, it appears that differences across lenders in either their application flows or approval processes cannot be accounted for by variations in clientele or loan products. We find that only a small portion of the disparity in this regard can be explained by differences in the type of loan being sought (loan size, FHA/VA versus conventional, and so on) or in the applicants' personal characteristics as recorded in the HMDA data (income, gender, co-applicant, etc.).

Furthermore, most of the cross-lender variances cannot be explained by the geographic markets served. When we compare lenders operating in the same market, we see that those with high minority application rates tend to draw their relatively larger volume of minority business from a broad range of neighborhoods, rather than from predominantly minority areas alone. Similarly, those who process a disproportionately smaller ratio of minority applications than their competitors also tend to do so throughout the market.

■ Equal Treatment and the CRA

Equal credit opportunity is only one aspect of federal fair credit and housing laws. The larger body of legislation addresses concerns that housing credit is not flowing properly to all neighborhoods within a community and, in particular, that some housing lenders are not adequately serving all segments of their communities. With respect to the broader intent of the legislation, studies emphasizing minority-to-white loan denial rates can fail to place the numbers in proper perspective. And despite the clear focus of the CRA and other fair credit and housing legislation on individual lenders' responsibilities, studies of lender bias generally have not been designed to account for differences in individual lenders' practices.

While it is tempting, when comparing lenders operating in the same market, to conclude that those with the highest minority-to-white denial ratios are guilty of illegal behavior, there are other plausible explanations. For example, some may receive a relatively large proportion of minority applications as a result of aggressive promotion and product development. Although such an institution may have a relatively high minority-to-white denial ratio, it may be a community leader in actual credit originations to minority applicants.[12] The CRA requires more of lenders than merely providing credit on equal terms to similarly situated applicants. The entire thrust of the law has been to encourage banks to *seek out* lending opportunities in all the neighborhoods of their community, as well as to develop products and programs that meet the needs of diverse groups of people.

Moreover, since lenders also vary in terms of their product specialties (conventional mortgage loans, FHA/VA loans, home improvement loans, small business loans, and so on), due allowance will need to be made for effort and results on several fronts. If public attention remains fixated on home loan denial rates, lenders may make adjustments to their product mix, service areas, and marketing strategies that will result in more equal denial ratios, but poorer actual service.

■ Conclusion

How low-income and minority populations or neighborhoods fare in the marketplace for consumer and housing finance is an important social concern, and previous studies on credit availability have advanced our understanding of how the markets function. However, with regard to compliance, the lender—rather than the applicant or neighborhood—is clearly the appropriate unit of analysis. Just as previous research reveals that neighorhoods' or applicants' demographic and financial characteristics differ markedly from one another, lenders too should be regarded as heterogeneous in the markets they serve and in the methods they use to penetrate them.

Research studies suggesting that certain groups or neighborhoods may not be receiving their fair share of credit, or that lenders collectively may not be complying with all relevant laws and regulations, must be taken seriously. At the same time, making judgments about the actual performance of individual lenders requires a broad array of facts to be assembled, certainly more than just denial ratios.

Despite the legitimate issues about lender bias that can be investigated through the lens of loan denials, lenders, community groups, and regulators still must try to forge a consensus on the CRA compliance standards. What will it take for the interested parties to agree that lender A is helping to meet the credit needs of its entire community, but lender B is not? How important is effort, and how important are actual results? And what kinds of results?

Our own sense of the CRA compliance process is that no hard and fast numerical standards exist because everyone involved recognizes that individual markets *are* characterized by different problems, opportunities, and constraints. The very fact that mortgage lenders differ substantially from one another in terms of the share of their credit extensions going to applicants of different income and racial groups is a manifestation of that reality. Our research indicates that much more attention than has been exhibited thus far should be paid to the pattern of loan applications reported by lenders. By itself, this will not end the debate over what is expected from participants in the CRA process. But a broadening of the discussion, with a shift away from judgments based on one or two numbers, could lead to more informed decisions about lender performance.

■ Footnotes

1. See Canner and Smith (1991, 1992).

2. See Munnell, Browne, McEneaney, and Tootell (1992).

3. See, for example, "Boston Fed Finds Racial Discrimination in Mortgage Lending Is Still Widespread," *The Wall Street Journal*, October 9, 1992.

4. Using HMDA data, Canner (1981), Avery and Buynak (1981), Avery and Canner (1983), and Bradbury, Case, and Dunham (1989) compare the differences in mortgage credit originations between predominantly white and predominantly minority neighborhoods in various metropolitan statistical areas (MSAs). Schafer and Ladd (1981) gathered information on some lender-specific, individual mortgage loan applications in New York and California, but they aggregate the data over lenders within MSAs to examine their credit approval actions collectively. Calem (1992) contrasts the experiences of individual lenders participating in a Philadelphia-area mortgage-lending plan with those that did not take part. His paper does document the existence of lender differences in the penetration of minority communities, but the primary focus is on the characteristics of the voluntary mortgage plan operated by a group of lenders. Avery (1989) notes the differences between studies based on lending in a neighborhood and those that look at lending procedures adopted by individual institutions.

5. For a review of these demand-side factors, see Board of Governors of the Federal Reserve System (1988).

6. For a taste of the media's approach to the issue, see "The Color of Money," *Atlanta Journal-Constitution*, May 1-6, 1988; "The Race for Money," *Detroit Free Press*, June 24-27, 1988; and "Federal Data Detail Pervasive Racial Gap in Mortgage Lending," *The Wall Street Journal*, March 31, 1992.

7. See Canner, Gabriel, and Woolley (1991), Gabriel and Rosenthal (1991), and Duca and Rosenthal (1992). Avery, Elliehausen, Canner, and Gustafson (1984) describe the 1983 Survey of Consumer Finances.

8. The HMDA data contain no information regarding an applicant's credit or work history, wealth, non-housing debt, or down payment. The Boston sample consisted of 1,000 blacks and Hispanics and roughly 3,100 whites who applied for conventional home loans there in 1990. The 131 lenders augmented their HMDA data with 38 additional pieces of information on each applicant, taken largely from application forms, credit bureau reports, and loan-underwriting worksheets.

9. Viewing the loan files could shed some light on this hypothesis, as well as enable trained examiners to confirm or reject predictions of bias obtained from the statistical model.

10. Although our analysis reveals substantial differences among lenders in regard to their housing market activities, we do not attempt to draw conclusions about lender discrimination. Rather, we emphasize that the HMDA data do not contain enough relevant information about the loan applicants to draw firm conclusions regarding the reasons for observed differences in either application or denial rates. See Avery, Beeson, and Sniderman (1992).

11. We treat each lender/MSA combination as a separate firm; our full sample contains roughly 20,000 lenders on this basis.

12. The current public discussion of denial rates obscures another important aspect of CRA, namely, that it allows lenders to fulfill their obligations in several other ways. These other channels, which include home improvement and community development loans, need to be accounted for in the CRA review process.

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