James P. Scanlan

Washington, D.C. 20007
H: (202) 337-3927
O: (202) 887-4453

About 4250 Words

THE CONFUSION OVER CREDIT DISCRIMINATION [1]

by

James P. Scanlan

Since 1989, the Home Mortgage Reporting and Disclosure Act has required lending institutions to keep records on the race of applicants for home mortgages. Data maintained under the act were first released to the public in late 1991. Almost immediately, studies appeared finding that mortgage applications of minorities are rejected at much higher rates than those of whites, even when efforts are made to control for income level of the applicants. Soon enough,

---

[1] This article was tentatively accepted for publication by the editor *Brookings Review* in 1997, but the editorial board later concluded that it would be too difficult for the magazine's readers. The points that related to the pattern whereby lenders with higher acceptance rates would tend to show larger relative differences in rejection rates but smaller relative differences in acceptance rates had had previously been made in "When Statistics Lie" (*Legal Times* Jan. 1996) (Jan. 1, 1996), which also discussed the NationBank case, and would later be made in and would later be made in "Race and Mortality" (*Society* Jan/Feb 2000). The points made in the Misleading Default Rates section about the implications of higher default rates for minority lenders had previously been made in "Illusions of Job Segregation" (*Public Interest* Fall, 1988), with regard to Table IV and would later be made in "Both Sides Misuse Data in the Credit Discrimination Debate"(*American Banker* July 22, 1998). The employment discrimination case referenced in the discussion is *EEOC v. Sears, Roebuck and Co.*, on which I maintain a separate page on this site. The article references several tables. I have not been able to locate those tables but may replicate them. This item adds several footnotes apart from this one.

studies were ranking banks on the basis of the size of the racial disparity in mortgage rejection rates. One such study led in September 1995 to the filing of a major credit discrimination suit against NationsBank and its affiliates in the Washington, D.C. area. Similar lawsuits can be expected in the future.

A question remains, however, as to just how much discrimination actually exists against minority mortgage applicants. So far, attempts to answer such questions, as well as attempts to identify the situations where discrimination is severest, have overlooked certain important statistical issues.

To begin with the most obvious, studies that attempt to control for differences in income by grouping loan applicants into broad income categories almost never adequately control for income. Invariably, the group that is disproportionately concentrated in the lower income categories tends also to be disproportionately concentrated in the lower ranges within each category. This means that within each income category, minorities have lower average incomes than whites.

Further, even among persons with exactly the same income, the more advantaged group will tend to have more of other factors that reflect creditworthiness. For example, the greater assets of whites earning the same income as blacks has been well-documented. Thus, studies that attempt to control for income will typically show some racial disparity in each income grouping, and it usually will be anyone's guess whether the disparity is larger than might be explained by factors not taken into account adequately or not taken into account at all.

Misleading Default Rates

A number of observers have maintained that other evidence contradicts any inference of discrimination based on studies of racial disparities in rejection rates. They have argued that if there actually existed discrimination against minority mortgage applicants, we would expect minorities to have lower default rates. In other words, that minorities seeking mortgages are discriminatorily subjected to higher standards ought necessarily to cause minorities whose mortgage applications are approved to be more creditworthy than whites whose mortgages have been approved.

But blacks have not been found to have lower default rates than whites. In fact, blacks have been found to have much higher default rates than whites. These observers have thus made the intuitively appealing point that the data indicate that blacks have not been discriminated against in lending and may actually suggest that blacks are being favored.[2]

As alluring as the argument may be, however, it is fundamentally flawed. Almost invariably a group that on average possesses weaker qualifications among persons seeking some benefit or position will also on average possess weaker qualifications among persons receiving the benefit or position, even when there is substantial discrimination against that group. This occurs for the simple reason that the less-qualified group, being disproportionately concentrated among the applicants who have relatively weak qualifications, will tend also be disproportionately concentrated among the selected persons who have relatively weak qualifications.

---

2 See Peter Brimelow and Leslie Spencer, "The Hidden Clue," *Forbes*, Jan., 4, 1993 at 48; Gary S. Becker, "The Evidence Against Banks Doesn't Prove Bias," *Business Week*, Apr. 19, 1993; Jonathon R. Macey, Banking by Quota, *Wall Street Journal*, Sept. 7, 1994, A15; Albert R. Karr, Fed Study Challenges Notion of Bias Against Minorities in Mortgage Lending, *Wall Street Journal*, Jan. 26, 1995, at A16, col. 1.

The pattern can be illustrated by the actual data presented in a large employment discrimination suit tried in the mid-1980s. As shown in Table 1, women, who were the less qualified group of applicants in that instance, made up 70 percent of applicants without prior experience in the type job at issue and 40 percent of applicants with prior experience in the type of job; but they made up only 20 of 100 hires with experience and 30 of 100 hires without experience. So even though experienced female applicants were less likely to be hired than experienced male applicants, and inexperienced female applicants were less likely to be hired than inexperienced male applicants, the women who were hired were less likely to have experience than the men who were hired. Only 40 percent (20) of the 50 women hired had experience compared with 53 percent (80) of the 150 men hired.

[Table 1 goes here.]

Because of the possibility that other factors may have explained why both among experienced and inexperienced applicants women were less likely to be hired than men, these data may not have conclusively proven discrimination. The data nevertheless demonstrate that the fact that women who were hired were less likely to have experience than men who were hired did not show that women were being favored or even that they were not being discriminated against.

In the same suit, computerized simulations presented by both sides repeatedly demonstrated that when there are substantial differences in the qualifications of the applicants from two different groups, the persons selected from the less-qualified group will have average weaker qualifications than persons selected from the more qualified group, even in the face of pronounced discrimination against the less-qualified group.

The same tendencies operate in the credit context. Since minorities will have weaker average qualifications among mortgage applicants, they will have weaker average qualifications among persons whose applications are granted, even if substantial credit discrimination does exist. Discrimination against minority applicants may reduce somewhat the tendency for minorities who are granted mortgages to have weaker qualifications than whites granted mortgages, particularly if the discrimination is carried out principally against less creditworthy minority applicants. And, if minorities in fact had lower default rates than whites, it would suggest that discrimination against minorities is very great.

But so long as minorities have higher default rates than whites, that fact cannot refute the hypothesis of substantial discrimination against minorities. Indeed, loan officers' awareness that minorities tend to have higher default rates than whites is but another reason for concern that loan officers will be more cautious in appraising the credit histories of minority applicants than of white applicants.

The Largest Disparities

How then are we to know whether discrimination exists? Some would argue that even allowing for deficiencies in the efforts to account for borrowers' qualifications, the disparities that remain following such efforts are too great to be explained by factors not taken into account. They might also argue that there is reason to believe that the banks that have much larger racial disparities than at other banks, even taking into account the differences in incomes of applicants at various banks, suggests that something must be amiss at the banks with the largest disparities.

The efforts to appraise the size of racial disparities in rejection rates at different banks, however, may reflect the most serious misunderstanding in this area. Most people understand that when two groups differ on average with regard to some characteristic related to a desired outcome such as the securing of credit, the greater the average difference, the greater will be the disparity between the rates at which the two groups secure the desired outcome (success) and the greater will be the disparity between the rates at which the two groups fail to secure the desired outcome (failure). What few appear to understand, however, is how disparities between success rates and disparities between failure rates are affected by overall failure rates and how the two disparities tend to vary inversely with one another depending on the overall failure rates. In particular, when failure rates are high, disparities in failure rates tend to be small while disparities in success rates tend to be large; when failure rates are low, disparities in failure rates tend to be large while disparities in success rates tend to be small.

The tendency can be most easily illustrated through hypothetical test scores. Imagine two demographic groups of 100 persons each where the two groups differ significantly on average test scores and where each group's test scores are more or less normally distributed – i.e., they fall under a curve that tends to be bell-shaped. Divide Group A (the higher-scoring group) into three categories according to test scores, with 30 persons in the High category, 40 in the Middle, and 30 in the Low. Given its lower average scores, Group B will be divided up something like this: 20 in the High category, 30 in the Middle, and 50 in the Low.

These distributions are illustrated in Table 2a. Point X in Table 2a represent a relatively high cutoff score, where only persons scoring in the High range pass the test. Point Y represents a relatively low cutoff score, where persons scoring in the Middle and High ranges pass the test.

[Tables 2a and 2b go here.]

As shown in Table 2b, if we set the cutoff score at Point X, the failure rate of Group B (80 percent) would be 1.1 times the failure rate of Group A (70 percent); and the pass rate of Group B (20 percent) would be 67 percent of the pass rate of Group A (30 percent). If we reduce the cutoff score to Point Y, the disparity between failure rates increases; the ratio of the failure rate of Group B to that of Group A rises from 1.1 to 1.7 (50 over 30). On the other hand, as a result of the lowering of the cutoff, the disparity between pass rates declines; Group B's pass rate rises from 67 percent to 71 percent of Group A's pass rate (50 over 70). The tendency operates throughout the distribution, and at the points where disparities in pass rates get very small, disparities in failure rates tend to get very large.

Typically, when courts consider whether a test unfairly discriminates against minorities, they look at disparities in pass rates. And it is universally accepted that one way to lessen a discriminatory effect of a test is to lower the cutoff score, thereby reducing the disparity in pass rates, even though doing so increases the disparity in failure rates. It should be kept in mind as well, moreover, that exactly the same changes would occur if, instead of lowering the cutoff, education was improved sufficiently to allow everyone scoring between the two cutoff points now to score above the higher cutoff.

Banks' lending criteria operate much like tests. At banks that have relatively lenient criteria, the minority approval rate will tend to be closer to the white approval rate than at other banks, while the disparity in rejection rates will tend to be greater than at other banks. Thus, so long as the focus is on disparities in rejection rates, the banks whose creditworthiness "tests" would be deemed to have the least discriminatory effect, as that concept usually is understood, may instead be deemed to have the most discriminatory practices. Those banks also tend to be the places where minorities, like whites, are most have their mortgage applications approved.

The tendency can be illustrated in the study that led to the targeting of NationsBank for the credit discrimination lawsuit in Washington, D.C. The study, released in December 1994 by the Washington Lawyers' Committee for Civil Rights and Urban Affairs (the public interest group that would go on to represent the plaintiffs in the credit discrimination suit), examined rejection rate disparities among the 13 largest lenders in the Washington area.[3]

The study presented tables showing overall racial disparities in rejection rates both before and after adjusting for income level. It found NationsBank to have the largest ratio of black to white rejection rates without adjustment for income (5.3) and the second largest after adjustment for income (4.5).

The study also presented data on rejection rate disparities where the basis for the rejection was poor credit, the area where, according to the study, the Justice Department has typically found most discrimination to occur. Examining the four Washington area banks that provided information on reasons for rejection, and that rejected more than 100 minority applicants because of poor credit, the study found that NationsBank rejected black applicants for poor credit at more than 15 times the rate of whites; adjustment for income caused the ratio to drop only to 11.2. By contrast, none of the other three banks had a black-to-white rejection ratio above 3.9, with or without adjustment for applicant income.

Fortunately, however, in contrast to a number of studies that have provided information on the size of racial disparities in rejection rates without presenting the underlying rejection rates themselves, the Lawyers' Committee study did provide the rejection rates themselves, at least for all income categories combined. This permits one to view the matter from a different perspective.

---

3 The study is also discussed at some length in my “When Statistics Lie" (*Legal Times* Jan. 1996) (Jan. 1, 1996).

Among the significant things one can learn from the rejection rates themselves is that NationsBank's 17.5 percent black rejection rate is the third lowest among the thirteen banks studied. And while NationsBank's unadjusted 5.3 ratio of the black rejection rate (17.5 percent) to the white rejection rate (3.3 percent) was the largest disparity in rejection rates, NationsBank had the fourth smallest racial disparity in approval rates.

Further, black applicants were rejected for poor credit in only 10.2 percent of cases at NationsBank, while they were rejected in no fewer than 24 percent of cases at the other three banks on which data were presented. And, as one would expect, the ratio of the black-to-white rates of avoiding being rejected for credit at NationsBank (90 percent) is far higher – i.e., the disparity is far lower – than at any of the other three banks, none of which had a ratio above 82 percent.

(The adjustment technique employed in the study, which divided applicants into three income groups and applied weights to the rejection rate disparities in each group, does not produce an actual adjusted rejection rate. Thus, one cannot make the comparisons in the paragraph above after adjustment for income. But it should be evident that the effect of the adjustment is relatively slight. Moreover, as explained below, the implications of the adjustment are debatable in any event.)

Misfocused Regulators

Commencing with a Washington Post series in 1993, there has been increasing acceptance of a view that the principal reason for the disparities between white and minority mortgage rejection rates may simply be the greater difficulties minorities have in meeting traditional lending criteria. Responding to that view, in March 1994, ten federal agencies involved with monitoring fair lending laws issued a policy statement placing greater emphasis on the disparate impact lenders' policies may have on minorities. The statement noted, for example, that minimum loan amounts may tend to have a greater adverse effect on minorities, and indicated that where a disparate impact of such policies is found, banks will have to justify their use of the criteria causing the impact.

It is certainly true that standard lending criteria would be expected to have a disparate impact on black and other minority loan applicants, regardless of how such impact is measured. And the more banks relax their criteria in response to the expressions of concern over that impact, the smaller will be the disparity in the rates at which blacks and whites receive loans – the traditional measure of disparate impact. But those actions can be expected also to increase the disparity in rejection rates. Thus, since federal regulators invariably focus on racial disparities in mortgage rejection rates, the very banks that are most responsive to the concern about disparate impact will tend to be subjected to the greatest scrutiny.

There is reason to expect that programs like one NationsBank and the National Urban League jointly announced in mid-1993 to review contested mortgage rejections in 19 cities – if evenhandedly applied – will increase racial disparities in rejection rates (while reducing disparities in approval rates). Similarly, each of the actions that the complaint in the suit against NationsBank suggests that the defendant ought to have taken to be more flexible in reviewing the applications of the named plaintiffs, such as giving greater attention to compensating factors or being more receptive to explanations for credit problems – again, if evenhandedly applied – may be expected to increase the racial disparities in rejection rates on which the statistical aspect of the suit is based.

The lowering of interest rates, too, by making all applicants somewhat more mortgage-eligible, would be expected to increase racial disparities in rejection rates while reducing disparities in approval rates. Yet, though the Washington Lawyers' Committee study would find it significant that racial disparities in rejection rates increased at NationsBank and other large Washington lenders in 1993, it would do so without apparent awareness of the connection between that increase and the fact that in 1993 30-year fixed-rate mortgage rates reached their lowest point in 25 years.

Subtler Issues

The tendency for demographic disparities in rates of failing to meet some criterion of success to be greater, and demographic disparities in meeting the criterion to be smaller, where overall failure rates are low has further implications when one attempts to interpret the size of disparities between various subgroups of larger populations.

Consider what we can learn from published data on income and poverty. The data invariably show that if poverty were to decline such that all persons previously between the poverty line and, say, 50 percent of the poverty line were raised from poverty, disparities between the poverty rates of more poverty-prone groups (such as blacks and female-headed families) and less poverty-prone groups (such as whites and married couple-families) would increase; at the same time, the disparities between the rates of avoiding poverty would decline. This is the same phenomenon we observed with the lowering of cutoffs on a test.

But published income data allow us also to observe an additional aspect of the tendency for demographic disparities in failure rates to be greatest where failure is least common. For example, black and white married-couple families are much more alike than black and white female-headed families. In 1990, for married-couple families, the black median income was 84 percent of the white median income; for female-headed families, the black median income was only 62 percent of the white median income. We might therefore expect the disparity between poverty rates of black and white married-couple families to be smaller than the disparity between the poverty rates of black and white female-headed families. As suggested at the outset, other things being equal, the greater the similarity of the two groups, the smaller will be the disparity between failure rates and between pass rates.

But married-couple families are much less likely to be poor than female-headed families. In 1990, 6.9 percent of married-couple families were poor compared with 37.2 percent of female-headed families. This tends to increase racial disparities in poverty rates while decreasing racial disparities in rates of avoiding poverty. In this instance, despite the greater similarity in median incomes of black and white married-couple families than of black and white female-headed families, the racial disparity between poverty rates tends to be larger for married-couple families than for female-headed families. As shown in Table 3, among married-couple families, the black poverty rate (14.3 percent) was 2.3 times the white rate (6.1 percent), while for female-headed families the black poverty rate (50.6 percent) was only 1.7 times the white rate (29.8 percent). Of course, in consequence of the combined effects of the greater similarity in the median incomes of black and white married-couple families and the lower poverty rates of such families than of female-headed families, the black rate of avoiding poverty was much closer to the white rate of avoiding poverty among married-couple families than among female-headed families.

[Table 3 goes here.]

Now consider a study of racial disparities in mortgage rejection rates released by the Teamsters Union in August of 1995. The study, which also focused on NationsBank, examined racial disparities in mortgage rejection rates separately for each of three income groupings in four cities where NationsBank had major markets. The study found NationsBank to have one of the worst records of racial disparities in rejection rates in each of the three income groupings in each city.

The study also found that the rejection rate disparities at NationsBank tended to be larger among higher-income applicants than among lower-income applicants. The study's author interpreted this tendency as refuting NationsBank's claim that higher black rejection rates resulted from aggressive marketing to low income minority neighborhoods.

This study, however, presented tables showing the actual rejection rates for each income grouping. Though overlooked by the author, these tables showed that, not just at NationsBank, but almost invariably, among higher-income applicants the disparities in rejection rates tended to be larger, and the disparities in approval rates tended to be smaller, than among lower-income applicants. This was entirely to be expected because rejection rates were lower among higher-income applicants than among lower-income applicants. And, as with any result that is exactly what one would expect in a particular situation, neither the greater rejection rate disparities in the higher-income group that the author considered so significant, nor the smaller approval rate disparities in the higher-income group that went unremarked upon in the study, tells anything at all about whether NationsBank or any other bank discriminated against black applicants.

Now consider a further aspect of the adjustment procedure in the Washington Lawyers' Committee study discussed earlier. For reasons noted at the outset, a crucial problem with the Lawyers' Committee's adjustment procedure is that it does not address income and other differences within each income category. But the procedure has an additional problem. The study applied weights, based on the black representation in each income grouping, to the rejection rate disparities in each category, rather than to the rejection rates themselves. Thus, the technique tended to reduce somewhat the overall disparities as result of the greater concentration of blacks in the lower income categories, where rejection rate disparities are smaller. But applying the same technique to approval rate disparities would increase the disparities in approval rates as a result of the greater concentration of blacks in the lower income categories where approval rate disparities are larger.4

To be sure, there will be all sorts of departures from the patterns I have described. For example, the tendency for the greater similarity of certain subgroups to reduce both disparities in rejection rates and disparities in approval rates may outweigh the tendency for the disparities in rejection rates to be smaller between the subgroups that have the lowest rejection rates. The fact that one lender discriminates, or discriminates more than others, will tend (other things being equal) to cause both the disparities in rejection rates and the disparities in failure rates to be larger than at other banks. But, whether or not they predominate in every case, the tendencies described above are an essential part of the picture, and without understanding them it will be impossible to draw any useful conclusions from the data.

***

4 See the Adjustment Issues sub-page of the Vignettes page of jpscanlan.com regarding the way adjustment of rates for differing characteristics of comparison groups yields the same percentage reduction in relative differences in the favorable and the adverse outcome (as well as the odds ratio) so long as the adjustment involves attributing one group's profile to that of the other group, rather than attributing a common profile to both groups. Those observations do not hold with regard to adjustments of the disparity itself (as in the study discussed in the text above) rather than adjustment of the underlying rates (as is the more common approach).

Regrettably, the interpretation of information on mortgage lending practices is not the only area where the failure to understand the extent to which demographic disparities in failure (or success) rates are influence by the prevalence of failure in the particular setting. Despite the usefulness of income and poverty data in demonstrating this tendency, studies of income patterns have universally discussed increasing, or decreasing, demographic disparities in poverty rates without recognition of the extent to which these changes are near inevitable consequences of overall declines or growth in poverty.

For more than a decade, leading medical journals in the United States and the United Kingdom been giving great attention to the fact that in the face of overall declines in mortality, racial and socioeconomic disparities in mortality have been increasing. That declining mortality almost invariably leads to increasing demographic disparities in mortality rates, as well as declining disparities in survival rates, somehow goes unnoticed.

In 1992, considerable attention was given to a study finding that despite the greater similarity of highly-educated blacks and white than of blacks and whites in the nation at large with regard to most factors that would affect the health of infants, racial differences in mortality for infants born to college-educated parents were comparable to those found in the entire population. Observers speculated that racism or genetic differences must be accounting for this counterintuitive finding.5 No one appeared to recognize, however, that just as racial disparities in mortgage rejection rates will tend to be great and racial disparities in mortgage acceptance rates will tend to be small among high-income applicants, racial disparities in infant mortality rates will

5 The article (Schoendorf KC, Hogue CJR, Kleinman JC, Rowley D. Mortality among infants of black as compared with white college-educated parents. N Engl J Med 1992;326:1522-26), which is also discussed in my "Race and Mortality" (*Society* Jan/Feb 2000) as well as in times D.7 (Comment on Lynch) and D.70 (Comment on Mackenbach) on the Measuring Health Disparities page of jpscanlan.com.

tend to be great and racial disparities in infant survival rates will tend to be small where parents are well-educated, simply because infant mortality for all groups is so rare where parents are well-educated.

Clearly, there is a great need for those interpreting demographic differences in these and related areas to develop a better understanding of the statistical tendency I have attempted to describe. Such an understanding may enable researchers even to solve the mystery of whether racial bias is playing a significant role in the observed racial disparities in mortgage lending.

I am inclined to think, however, that, notwithstanding my disagreement with the asserted implications of default patterns, those who maintain that lending disparities are principally attributable to racial differences in meeting even-handedly applied standard lending criteria are probably correct. I am also inclined to think that, whether or not the relaxation of those standards and other programs to enable increasing numbers of marginal applicants to qualify for mortgage loans is ultimately a good thing even for the loan applicants, such measures may offer the most likely avenue for materially expanding the availability to credit to minority communities. If that is so, however, it is crucial that regulators and others studying credit discrimination issues come to recognize that the continuing focus on rejection rate disparities eventually will create a powerful disincentive for lenders to implement such measures.