

# Why Default Rates Cannot Shed Light on Mortgage Discrimination

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## Abstract

*Some scholars argue that racial discrimination in mortgage lending can be observed in default rates. Since lenders who discriminate require higher standards for minority applicants than whites, successful minority applicants are more creditworthy and should default less often. But this conclusion requires three strong assumptions: (1) that credit characteristics not observed by the lender are uncorrelated with minority status, (2) that whites do not receive more favorable treatment than minorities in foreclosure proceedings, and (3) that the losses on minority defaults are at least equal to those for whites. If any of these assumptions is violated, higher default rates for minorities could be observed even if lenders discriminate. At best, then, default studies yield weak tests for discrimination that are inferior to traditional tests based on mortgage denial.*

The traditional approach to studying discrimination in mortgage lending is to determine whether African-American or Hispanic applicants are more likely to be turned down for a loan than are comparable white applicants.<sup>2</sup> A study by researchers at the Federal Reserve Bank of Boston based on this approach finds that these minority applicants are about 60 percent more likely to be turned down, controlling for all credit characteristics that lenders say they consider.<sup>3</sup> Several columns in popular journals have proposed an alternative way to test for discrimination in mortgage markets—by examining defaults.<sup>4</sup> This approach also has appeared, with far more qualifications, in the academic literature.<sup>5</sup> Despite all the attention, however, this so-called default approach is fatally flawed as a method for studying discrimination in mortgage lending.

The basic idea behind the default approach is simple: Assuming that lenders rank applicants by their creditworthiness, discrimination in the form of a higher standard for minority applicants implies that the lowest-ranking white applicants whose loans are approved are less qualified than the lowest-ranking minority applicants whose loans are approved. As a result, the probability of default should be higher for the least qualified whites than for the least qualified minorities.

As it turns out, black loan recipients have higher default rates than their white counterparts, on average. On the basis of this argument, the columns mentioned above conclude that there is *no* discrimination against blacks. Actually, the columns go considerably

further than that: They maintain that the Boston Fed study is flawed or invalid because it does not look at defaults. This claim does not make sense. An analysis of defaults may be an alternative way to test for discrimination, but the existence of this alternative does not invalidate the more direct approach used by the Boston Fed study.

Moreover, for three fundamental reasons, the default approach is not a legitimate alternative to the standard approach to estimating discrimination.<sup>6</sup> Ironically, these three weaknesses are all acknowledged, if not emphasized, in a recent default study that has been incorrectly interpreted by some analysts as proof that lending discrimination no longer exists.<sup>7</sup>

The first flaw in the default approach is the assumption that the average white applicant may be a very low credit risk, while the average minority applicant is a moderate credit risk. If that is so, the *average* creditworthiness of minority loan recipients could be below that of whites, even if minority applicants must meet a higher standard to obtain a loan. The leap to average default rates makes sense only if white and minority loan recipients have similar distributions of creditworthiness, which is clearly not the case.<sup>8</sup>

Some scholars recognize this point, but argue that the problem can be solved by controlling for credit characteristics.<sup>9</sup> These scholars agree that differences in average default rates between minorities and whites cannot be an indication of discrimination. However, they also claim that discrimination will show up in the difference in default rates at any given level of creditworthiness. Because minority borrowers tend to have higher default rates than white borrowers, even after controlling for credit characteristics such as income and credit history, these scholars conclude that discrimination must not be at work.<sup>10</sup>

The problem with this argument is that it ignores the fact that many credit characteristics are not observed by the lender (or by the researcher). A lender cannot determine, for example, whether borrowers have friends or relatives who will bail them out if they have trouble meeting their mortgage payments. If minority borrowers have less favorable *unobserved* credit characteristics, then they may have higher default rates than white borrowers, even when discrimination exists and *observed* credit characteristics have been taken into account. In other words if lenders turn away some minority applicants whose observable qualifications are more favorable than the observable qualifications of some white applicants who are accepted, it still may be true that the overall qualifications—including unobservable qualifications—of those accepted minority applicants are the same as, or below, the overall qualifications of those white applicants.<sup>11</sup> In formal terms, even the most sophisticated versions of the default approach require the assumption that all credit characteristics not observed by lenders are uncorrelated with minority status. This assumption is implausible; observed creditworthiness is considerably lower for minority than for white borrowers, and it is likely that the same disparities exist in unobserved credit characteristics.<sup>12</sup>

Omitted-variable problems are common in empirical research, of course. Indeed, many studies of loan approval have been criticized on exactly these grounds. The recent Boston Fed study directly addressed this problem by first interviewing lenders and then controlling for every credit characteristic that lenders said they considered. No such solution is available with the default approach, which faces an intrinsically more difficult omitted-variable problem. Whereas a loan-approval study must control for all the legitimate credit characteristics that are observed by the lender, a default study must control not only for the observed credit characteristics but also for any unobserved credit characteristics that are correlated with minority status. Because lenders are the source of information for loan discrimination studies, researchers probably cannot obtain information on these

unobserved characteristics and therefore are unlikely to solve the omitted-variable problem in a default study. Moreover, the omitted-variable bias in a default study works against the discovery of discrimination. A cynic might say that this fact explains the current popularity of the approach: People who want to prove that discrimination does not exist may be drawn to a method that is rigged to support such a conclusion.

The default approach also runs into trouble because, as several scholars have pointed out, one of the most likely causes of discrimination against minority loan applicants is precisely the fact that their unobserved credit characteristics are less favorable, on average, than those of whites.<sup>13</sup> Lenders cannot observe all credit characteristics for each buyer, but they can observe average outcomes for a group. If they observe that minority borrowers are more likely to default than white borrowers at any given level of observable credit characteristics, they may conclude that the average unobserved credit characteristics are lower for minorities and may use this information when they evaluate a minority household's loan application. In other words the existence of relatively poor unobserved credit characteristics for minorities gives lenders an economic incentive to discriminate against them. This type of behavior is called *statistical discrimination*, and it is illegal. That is, it is against the law to evaluate a single minority household's application on the basis of average unobserved minority credit characteristics.

Although the extent of statistical discrimination is not yet known, it is important to keep in mind that one must assume away what may be the principal source of discrimination in mortgage lending in order to use default rates as a test for discrimination. This comes dangerously close to assuming what one is trying to prove. Some scholars have attempted to avoid this problem by arguing that they are simply trying to isolate discrimination that is motivated by prejudice, not by the economic incentives that lead to statistical discrimination.<sup>14</sup> Discrimination is illegal, of course, regardless of its causes, but it might prove useful to determine whether one of the causes is lender prejudice. It must be recognized, however, that this supposition makes sense only if statistical discrimination is perfect; that is, if it completely eliminates the impact of unobserved characteristics on loan approval outcomes.<sup>15</sup> However, this situation would fundamentally change the interpretation of a default study, since statistical discrimination must be assumed to exist before one can obtain evidence of discrimination based on prejudice. Anyone who dismisses all discrimination on the basis of a finding that default rates are lower for minorities than for whites is not taking this fact into account.<sup>16</sup>

The second reason why the default approach cannot shed light on discrimination is that default studies are based on foreclosures, not defaults. A default by a borrower, which involves protracted failure to make mortgage payments, is not observed until it becomes a foreclosure, which results from the lender's decision to claim the loan collateral, namely the house. Lenders have a great deal of leeway in making foreclosure decisions and might be more willing to work out solutions short of foreclosure—such as a new payment schedule—for some defaulting borrowers than for others. Thus a tendency by lenders to initiate foreclosure proceedings more aggressively against minority borrowers than against white borrowers could lead to higher observed “default” rates for minority borrowers.<sup>17</sup> Anecdotal evidence indicates that some lenders try to work things out with white borrowers who make late payments but move to foreclose on minority borrowers who fall behind.<sup>18</sup> Thus relatively high “default” rates for minorities may be a symptom of discrimination in foreclosure proceedings, rather than a sign that there is no discrimination in the loan approval process.

Finally, the risk of default is not the same thing as the expected return on a mortgage, which is ultimately what lenders are concerned about. The expected return on a mortgage depends on the probability of default multiplied by the expected loss if a default occurs.

Although extensive evidence on default losses is not available, one study finds that the expected loss in the event of default is lower for blacks than for whites.<sup>19</sup> Moreover, to the extent that lenders foreclose more aggressively on loans to minorities than on loans to whites, “defaults” by whites will be observed only in the worst cases; that is, only in the cases with the highest losses. Thus the expected return on loans to minority borrowers could be higher than the expected return on loans to whites, even if minority borrowers have a higher default rate.<sup>20</sup> “Default” rates for minorities and whites may be easy to observe, but they are not easy to interpret and may provide a misleading picture of the relative returns on loans to these two groups.

Overall, the default approach is a fatally flawed method for studying discrimination in mortgage lending. Evidence that default rates are higher for minorities than for comparable white borrowers provides no support whatsoever for the claim that there is no discrimination in mortgage lending, let alone for the claim that the Boston Fed study is invalid. In fact the Boston Fed study and other recent research provide compelling evidence that racial and ethnic discrimination in mortgage lending has by no means disappeared.

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## Notes

1. This critique draws heavily on the author's recent book, *Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination* (The Russell Sage Foundation, 1995).
2. This critique uses the terms “African American” and “black” as synonyms, and uses the term “Hispanic” to designate individuals who can trace their ancestors to Spain (or Portugal), usually through a country in South or Central America or the Caribbean, such as Cuba, Puerto Rico, or Mexico. According to usage in the U.S. census, Hispanics can be of any race, but for simplicity non-Hispanic whites are referred to as “whites.”
3. This study was conducted by Munnell et al. (1992). For a detailed review of the study, see Carr and Megbolugbe (1993).
4. These authors include Becker (1993), Brimelow (1993), Brimelow and Spencer (1993), and Roberts (1993).
5. See Peterson (1981) and Berkovec, Canner, Gabriel, and Hannan (1994).
6. For additional criticism of the default approach, see Galster (1993), Ross (forthcoming), Tootell (1993), and Yinger (1993). One issue not considered here is that the default approach focuses on a single type of discriminatory behavior and cannot observe other kinds; for example, Tootell (1993) shows that redlining does not affect default probabilities. Discrimination in other types of lender behavior is considered in

- Yinger (1993). This critique does not consider several technical, econometric problems with the default approach. For a discussion of these problems, see Ross (forthcoming). Finally, the main default study, Berkovec et al. (1994) focuses on FHA loans, which disproportionately serve minorities, and the results might not apply to the majority of mortgages, which are not insured by FHA.
7. The study was conducted by Berkovec et al. (1994). Two recent articles (Karr, 1995, and Associated Press, 1995) proclaim that the new study challenges the conclusion that there is discrimination in mortgage lending. A third article (Seiberg, 1995) claims that the Berkovec et al. article “is one of a handful of recent reappraisals of lending discrimination that challenges the conventional wisdom that banks discriminate against black Americans.”
  8. See Peterson (1981) or Tootell (1993) for a careful discussion of this issue.
  9. See Berkovec et al. (1994).
  10. See the excellent review of this literature by Quercia and Stegman (1992).
  11. The same problem arises when a credit variable that is correlated with minority status is not observed by the researcher. See Tootell (1993).
  12. Berkovec et al. (1994) acknowledge near the end of their argument that, “While we have sought to exploit the data set as fully as possible in order to account for all relevant determinants of default likelihoods and losses, it is likely that some variables were omitted.”
  13. See Shear and Yezer (1985) and the references cited therein.
  14. See, for example, Berkovec et al. (1994), who say in their last paragraph that their results “relate only to what has been called uneconomic discrimination. Estimation findings are not inconsistent with what has been called statistical or economic discrimination, even if the assumptions underlying the basic prediction hold.”
  15. Technically, perfect statistical discrimination minimizes the bias in estimating discrimination based on prejudice but does not eliminate this bias altogether. See Ross (forthcoming).
  16. Glenn Canner, one of the authors of the recent default study (Berkovec et al., 1994) is clear on this point. He told Albert Karr, of *The Wall Street Journal*, “that it would be unfair to say the study proves lending bias doesn’t exist. There are other forms of discrimination than the kind targeted by his study” (see Karr, 1995).
  17. This point is recognized by Berkovec et al. (1994), who say in their last paragraph that “if discrimination led lenders to foreclose more quickly on black borrowers than other borrowers, this could result in higher default rates for black borrowers.”
  18. One example was explored by CBS News in “A Matter of Interest,” *60 Minutes*, November 15, 1992. See also Byers (1994).
  19. See Quercia and Stegman (1992, p. 354). The Board of Governors of the Federal Reserve System (1993, table 15) finds that a lender’s profitability is not affected by the share of its loans that go to blacks. Berkovec et al. (1995) find that the loss from default is not higher for whites than for minorities, controlling for credit characteristics

observed when the loan is granted. This procedure has the same weakness as the first weakness of the default approach itself: It depends on the unrealistic assumption that unobserved characteristics have the same distribution for whites and for minorities. Otherwise, the impact of lender behavior (such as discrimination in foreclosure decisions) on relative minority loss rates might be overwhelmed by the impact of unobserved credit characteristics. By the time a default occurs, the credit characteristics that were unobservable when the loan was granted have been revealed, so this assumption could be tested by determining whether the addition of controls for credit characteristics at the time of default alters the loss disparity between minorities and whites. No study has taken this step.

20. The need to focus on returns is noted by Becker (1993), who says that if banks discriminate, “the mortgage loans approved for minority applicants would be more profitable than loans to whites.” Becker returns to the default argument, however, when he says that “the rate of default on loans approved for blacks and Hispanics by discriminatory banks should be lower, not higher, than those on mortgage loans to whites.”

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