Specification and Informational Issues in Credit Scoring [*]

Nicholas M. Kiefer [†] and C. Erik Larson [‡]

Abstract

Lenders use rating and scoring models to rank credit applicants on their expected performance. The models and approaches are numerous. We explore the possibility that estimates generated by models developed with data drawn solely from extended loans are less valuable than they should be because of selectivity bias. We investigate the value of "reject inference" – methods that use a rejected applicant's characteristics, rather than loan performance data, in scoring model development. In the course of making this investigation, we also discuss the advantages of using parametric as well as nonparametric modeling. These issues are discussed and illustrated in the context of a simple stylized model.

[†]*Mailing Address:* Departments of Economics and Statistical Sciences, Cornell University; and Risk Analysis Division, Office of the Comptroller of the Currency, US Department of the Treasury. *Email:* nmk1@cornell.edu

[‡]Fannie Mae. *E–mail:* c_erik_larson@fanniemae.com