

IAQF & Thalesians Seminar Series

Semiparametric Estimation of a Credit Rating Model



A Talk by
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Advancing the Field of Quantitative Finance Formerly the IAFE

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ABSTRACT

This paper develops a semiparametric, ordered-response model of credit rating in which ratings are equilibrium outcomes of a stylized cheap-talk game. The proposed model allows the assigned rating probability to be an unknown function of multiple indices permitting flexible interaction, non-monotonicity, and non-linearity in marginal effects. Based on Moody's rating data, I use the estimated model to examine credit rating agencies' (CRAs) incentive to bias ratings when the CRA's shareholders invest in bond issuers. I find the degree of Moody's rating bias varies significantly for both rating categories as well as the institutional cross-ownership between Moody's and the bond issuer. To obtain the statistical significance of these results, I prove a U-statistics equivalence result that is important for showing asymptotic normality for a large class of semiparametric models.

BIO

Yixiao (Ethan) Jiang is currently a Ph.D. Candidate in Economics at Rutgers University, where he also completed his B.A. in Economics and Mathematics in 2013. Jiang's research interest lies at the interface of finance and econometrics, with a current focus on estimating and testing credit risk and volatility models. His work has been presented at seminars at Vanguard, Research Affiliates, and various academic conferences, including the ASSA Annual Meeting, Financial Management Association Annual Meeting, and Econometrics Society meetings.

Jiang will join Christopher Newport University as a tenure-track Assistant Professor in August 2019.