

Predicting bank failures using a simple dynamic hazard model

Rebel A. Cole and Qiongbing Wu,

Abstract:

We use a simple dynamic hazard model with time-varying covariates to develop a bank failure early warning model, and then test the out-of-sample forecasting accuracy of this model relative to a simple one-period probit model, such as is used by U.S. banking regulators. By incorporating time-varying covariates, our model enables us to utilize macroeconomic variables, which cannot be incorporated into in a one-period model. We find that our model significantly outperforms the simple probit model with and without the macroeconomic variables. The improvement in accuracy comes both from the time-series bankspecific variables and from the time-series macro-economic variables.

Rebel A. Cole, Departments of Real Estate and Finance, DePaul University
Chicago, IL, 60604 USA, Email: rcole@depaul.edu
Qiongbing Wu, Newcastle Business School, The University of Newcastle
Newcastle, NSW 2300, Australia, Email: Linda.wu@newcastle.edu.au