Accepted Manuscript

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Please cite this article as: Kwon T.Y., Lee Y., Industry specific defaults. *Journal of Empirical Finance* (2017), https://doi.org/10.1016/j.jempfin.2017.10.002

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Industry Specific Defaults[☆]

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Abstract

In this paper, the hidden common factor for a default correlation model is expanded to industry. By introducing industry-specific hidden factors as random effects, a comparison is made of the relative scale of within- and between-industries correlations. Empirical analysis is based on 14,249 U.S. public firms between 1990 and 2014. A comparison study among the without-hidden-factor model, the common-hidden-factor model, and our industry-specific common-factor model show that an industry-specific common factor is necessary for adjusting time and industry specific over- or under- estimation of default probabilities. The Monte Carlo EM algorithm is adopted for model estimation.

Keywords: Intensity Credit Risk Model, Within Industry Default Correlation, Between Industries Default Correlation, Frailty, MCEM
JEL classification: C110; C150; G330; C820

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