Implied Default Correlation Estimation

Satoshi Yamashita*, Tomohiro Tsuruga†

Abstract

In this paper, we propose a procedure to calculate default correlations using market data. We call it implied default correlation. Specifically, we propose a reduced form model with OU process which gives a simple result. The implied default correlation formula with a hazard correlation coefficient and the GLS hazard estimation method are shown. Furthermore, we estimate the parameters and show actual examples of the implied default correlation matrix. Finally, we conclude that this procedure is applicable when we calculate default correlations for a large credit portfolio or high-rating companies.

Key words : default correlation, hazard process, Ornstein Ulenbeck process, seemingly unrelated regression, generalized least squares.

*Associate Professor, Institute of Mathematical Statistics
†Technical Research Fellow, Financial Services Agency