

## **Tail Approximation of Asymmetric Factor for Portfolio Credit Risk**

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Calculation of the distribution of losses from default is essential work in risk management, with particular emphasis on the tail of the distribution. In the paper of Glasserman[J. Deriv.12,2 (2004):24-42], the approximations of tail probability are developed in normal copula framework for credit risk of the description associated with CreditMetrics and the focus of credit risk modeling lies in capturing the dependence among the default obligor. In instance of interest rate model, however, we practically find the fact that some influential systematic or idiosyncratic risk factors do not follow the symmetric assumption, but relate skewness with assumed distribution. Under the closed skew normal distributions(CSN), we show the approximation of the tail of the loss distribution for multifactor, heterogeneous portfolios by a homogeneous single-factor approximation.

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