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**Wanmo Kang\*** (wanmo.kang@kaist.ac.kr), 335 Gwahangno (373-1 Guseong-dong), Yuseong-g, Daejeon, and **Paul Glasserman** and **Perwez Shahabuddin**. *Large Deviations in Multifactor Portfolio Credit Risk*.

The measurement of portfolio credit risk focuses on rare but significant large-loss events. This paper investigates rare event asymptotics for the loss distribution in the widely used Gaussian copula model of portfolio credit risk. We establish logarithmic limits for the tail of the loss distribution in two limiting regimes. The first limit examines the tail of the loss distribution at increasingly high loss thresholds; the second limiting regime is based on letting the individual loss probabilities decrease toward zero. Both limits are also based on letting the size of the portfolio increase. Our analysis reveals a qualitative distinction between the two cases: in the rare-default regime, the tail of the loss distribution decreases exponentially, but in the large-threshold regime the decay is consistent with a power law. This indicates that the dependence between defaults imposed by the Gaussian copula is qualitatively different for portfolios of high-quality and lower-quality credits. (Received February 13, 2008)