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Xin Guo^{*} (xinguo@ieor.berkeley.edu), 4173 Etcheverry Hall, dept of IEOR, UC at Berkeley, Berkeley, CA 94720-1777, and Onur Filiz, Jason Morton and Bernd Sturmfels. *Toric models for correlated defaults.* Preliminary report.

We propose a new and simple model for correlated defaults. Probabilistic analysis and parameter estimation procedure is provided via results from geometry. Statistical analysis shows promising results in correcting the correlation smiles and in exhibiting heavy tails in default probability distribution across trenches, especially in light of copula models. (Received September 20, 2007)