THE UNIVERSITY   OF HONG KONG

Department of Mathematics

Numerical Mathematics and Applied Analysis Group Seminar (NMAA)

On Pricing Basket Credit Default Swaps

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on Monday, November 28, 2011 at 2:00pm
in Room 210, Run Run Shaw Building, HKU

Abstract

In this talk we introduce a simple and efficient method to compute the ordered default time distributions in both the homogeneous case and the two-group heterogeneous case under the interacting intensity default contagion model. We give the analytical expressions for the ordered default time distributions with recursive formulas for the coefficients, which makes the calculation fast and efficient in finding rates of basket CDSs. In the homogeneous case, we explore the ordered default time in limiting case and further include the exponential decay and the multistate stochastic intensity process. The numerical study indicates that, in the valuation of the swap rates and their sensitivities with respect to underlying parameters, our proposed model outperforms the Monte Carlo method.

All are welcome