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Timur Misirpashaev* (missir@numerix.com), NumeriX LLC, 4320 Winfield Road, Suite 200, Warrenville, IL 60564, and **Andrei Lopatin**. *Markovian Projection in the Problems of Credit Basket Modeling*.

Markovian projection method has emerged as an extremely versatile tool in the problems of volatility calibration in the series of works by Piterbarg (2005-2006). The idea of the method goes back to Dupire (1997) and is based on a result by Gyöngy (1986) which shows how a continuous process X_t with a general adapted stochastic volatility σ_t can be replaced by another continuous process Y_t with a local volatility $\bar{\sigma}(Y, t)$ in such a way that all one-dimensional marginals remain unchanged. Specifically, one needs to put $\bar{\sigma}^2(Y, t) = E[\sigma_t^2 | X_t = Y]$. We introduce and study the counterpart of this method for a point process N_t with the application to the modeling of aggregate loss in a basket of credits. Similarly to the volatility, the local intensity $\bar{\lambda}(N, t)$ can be obtained as a conditional expectation of the general adapted stochastic intensity λ_t given the accumulated number of defaults $N_t = N$. Just as the local volatility, local intensity does not lead to satisfactory dynamics, however it is directly related to the one-dimensional data from CDO tranches, which makes it a useful intermediate object in the calibration of stochastic intensity models. (Received September 12, 2006)