

Law of Large Numbers for Self-Exciting Correlated Defaults

by

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Abstract

We consider a reduced form model for a large pool of possibly defaultable entities. We allow the times of defaults to be correlated not only by their dependence on a common factor, but also by their dependence on the extent of past defaults, therefore with a self-exciting nature. We characterize the limiting process for the mean number of defaults and the mean loss, as the number of entities becomes large.

This is a joint work with Jaksa Cvitanic and Jianfeng Zhang.