Abstract
We consider the problem of indifference pricing of derivatives written on CAT bonds. The industrial loss index is modeled by a compound Poisson process and the number of claims as doubly stochastic process, such that its intensity varies over time. The insurer can adjust her portfolio by choosing the risk loading, which in turn determines the demand. We probably restrict the policies of the insurance company in a way that does not permit changing the risk loading during catastrophe times. We compute the price of a CAT option written on that index using utility indifference pricing.