FRI/E3.1
16:30–16:50

Utility indifference pricing of CAT bonds for insurance companies facing finite demand

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We consider the problem of pricing catastrophe related bonds (CAT bonds) for an insurance company which can control the size of its risk portfolio (and thereby the evolution of its wealth) via the risk loading.

We present the Hamilton-Jacobi-Bellman equation for the related optimal control problems and give conditions under which they can be solved, such that we get an indifference price. Numerical examples are presented.

[1] CARMONA, RENÉ (ED.): *Indifference pricing: Theory and applications.* Princeton University Press 2009.

[2] M. EGAMI AND V. YOUNG: Indifference pricing of structured catastrophe (CAT) bonds. *Insur. Math. Econ.*, **42** (2008),771–778.