



The Chinese University of Hong Kong
Department of Statistics

Seminar

Pricing and Hedging Insurance Risks Using Principle of Equivalent Forward Preferences

By

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Abstract

Since an indifference approach to value insurance risks has been adopted in Young and Zariphopoulou (2002), the actuarial pricing and hedging problem has been substantially revisited in the literature, by extending the underlying financial market, considering various insurance products, and generalizing to a portfolio of policies. All of these works used the classical expected utility preferences in their indifference arguments. Recently, a novel concept called forward investment performance process has been introduced in Musiela and Zariphopoulou (2008). In this talk, we revisit the pricing and hedging problem for insurance risks using indifferent forward performance preferences to rectify a drawback in modeling under the classical expected utility framework. Instead of adopting the dynamic programming principle, we approach the problem via the tools of backward stochastic differential equations (BSDEs). Using the technique of enlargement of filtration, together with super-martingale sub-optimality and martingale optimality principles, we solve the problem by representing the prices and hedging strategies for insurance risks in terms of BSDEs.

Keywords: Indifference approach; Forward preferences; BSDEs; Enlargement of filtration; Martingale optimality principle.

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Time: 2:30 p.m. - 3:30 p.m.
Venue: Liang Y C Hall - LHC Room 104
The Chinese University of Hong Kong

ALL INTERESTED ARE WELCOME !!