

Research projects at the MRIC

Dependencies in Hybrid Markets

Francesca Biagini, Stefan Mittnik, Jan Widenmann

Abstract

The securitization of risk in insurance and reinsurance offers an interesting alternative to more traditional actuarial schemes. To this purpose, insurance companies have tried to take advantage of the vast potential of capital markets by introducing exchange-traded insurance-linked instruments such as mortality derivatives and catastrophe insurance options. At the same time, insurance products such as unit-linked life insurance contracts, where the insurance benefits depend on the price of some specific traded stocks, offer a combination of traditional life insurance and financial investment. Furthermore, new kinds of insurance instruments, which provide insurance against risks, connected to macro-economic factors such as unemployment, are recently offered on the market. These new kinds of hybrid products originate a huge demand on investigation on the dependencies between financial and insurance markets, whose dynamic interplay must be modelled and estimated. In this project we focus on analysing and modeling dependence structures in hybrid markets both from the mathematical and statistical point of view.