

Research projects at the MRIC

Pricing of Unemployment Products under the Benchmark Approach

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Abstract

Insurance against unemployment risk has recently been gaining increasing attention within many fields of actuarial research. As specific unemployment insurance products are currently at a rather early stage of introduction, to develop adequate mathematical models for the pricing and hedging of these kinds of contracts remains an open problem. A possible method to solve this problem is by means of the so called benchmark approach introduced by Platen (2004), which is a special martingale approach for the dynamic pricing of financial claims. In order to apply this method to model and calculate fair insurance premiums for unemployment products, it is necessary to investigate the dependency structures between the benchmark portfolio and the unemployment rate. The project is built on the close cooperation of an interdisciplinary research team from the fields of mathematical finance and stochastics, as well as statistics and economics