
The capital allocation problem in Insurance and Finance

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Abstract

The procedure of understanding how much each element of a portfolio contributes to the overall risk is known as the capital allocation. The portfolio may be, for example, an insurance company and its constituents the company's lines of business (auto, property, etc). Under certain assumptions, the fair amount of risk to be allocated to each line of business is related to an expectation conditional to a rare event. In this talk I'll present Monte Carlo based algorithms that can efficiently compute the required expectations.

Keywords: Capital allocation, Sequential Monte Carlo (SMC), Markov Chain Monte Carlo (MCMC)

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