
Summary: Reinsurance is an effective risk management strategy, which plays an important role in the insurance industry. Under the principle of expected premium, this paper considers the risk of both the insurer and the reinsurer. Taking the convex combination of the VaR value of the total loss of each reinsurance party as the objective function, the theoretical solution of the optimal proportion coefficient and the optimal retention in the mixed reinsurance are obtained. In addition, the various situations of the optimal solution are discussed and analyzed, which provides the decision basis for the risk management of the insurance company.

MSC:
91G05 Actuarial mathematics
91G70 Statistical methods; risk measures

Keywords:
optimal reinsurance; VaR risk measurement; convex combination; expected value premium principle

Full Text: Link