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DUPLEX-MULTI-AGENT DECISION-MAKING OF MARINE DISASTER INSURANCE BASED ON THE GREY GAME MODEL

Abstract:

This paper introduces reinsurance institutions as a fundamental decision agent and rebuilds the grey game matrix to find the optimal pure strategy of the insurance participants. The conclusions verified that when an insurance company chooses to offer marine disaster insurance, the subsidy ratio of the government plays an active role in the equilibrium strategy. When the public chooses insure and the compensation subsidy ratio is up to the threshold value, the commercial insurance company could sufficiently supply compensation for marine disasters。Similarly, the reinsurance companies choose to join the marine insurance market restricted to the compensation subsidy rate of the government. This paper presents the application of the grey game model and illustrates its usefulness as a tool to solve duplex-multi-agent decision-making in marine disaster insurance.

Keywords:

marine disaster insurance, grey game model, duplex-multi-agent, decision-making