Insurance control for a simple model with liabilities of the fractional Brownian motion type

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Abstract: In this paper we formulate a simple problem of insurance control for liabilities of diffusion type, driven by fractional Brownian motion. The problem reduces to a version of the fractional linear quadratic regulator for which analytic solutions have recently been obtained. The results obtained are numerically illustrated using simulations.

Keywords: insurance control, fractional Brownian motion, fractional Itô calculus, linear quadratic regulator.