

OPTIMAL DIVIDEND STRATEGIES WHEN THE TIME OF RUIN AND THE DEFICIT AT RUIN ARE TAKEN INTO ACCOUNT

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ABSTRACT. A problem that has attracted a lot of research interest is the optimal dividends problem; it is the quest for the dividend policy maximizing the expected present value of the dividend payments. In many situations, the horizontal barrier strategy is optimal. However, and despite the fact that it is a widely accepted strategy, it yields certain ruin. As the shareholders benefit from the dividends, it is reasonable to expect that they will also be affected by the deficit at ruin. Therefore, we consider value functions where the time of ruin and the deficit at ruin are taken into account, in the spirit of the so-called *Dickson and Waters modifications* of the classical value function. These modified value functions incorporate special cases of Gerber-Shiu functions. This problem is tackled within a Lévy insurance risk model or, in other words, when the underlying reserve process is a spectrally negative Lévy process.

This is a joint work with Ronnie Loeffen (RICAM, Austrian Academy of Sciences).

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Date: March 25, 2009.

2000 Mathematics Subject Classification. 91B30, 60G51, 93E20.

Key words and phrases. Insurance risk theory, optimal dividends, deficit at ruin, Gerber-Shiu functions, Lévy processes, stochastic control.