Badescu, Andrei L.; **Breuer, Lothar**; **Drekic, Steve**; **Latouche, Guy**; **Stanford, David A.**

The surplus prior to ruin and the deficit at ruin for a correlated risk process. (English)

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Scand. Actuar. J. 2005, No. 6, 433-445 (2005).

The authors obtain an explicit characterization for the joint probability density function of the surplus immediately prior to ruin and the deficit at ruin for a general risk process, which includes the Sparre Andersen risk model with phase-type inter-claim times and claim sizes. It is allowed for correlation in the inter-claim times, as well as correlation between the claim times and the claim sizes. The authors consider the processes that can be analyzed using techniques for fluid queues.

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