

Recent Results in Heavy-tailed and Long-range Dependent Risk Theory

This talk will survey recent developments in the setting of the classical ruin problem, when the claims process is heavy-tailed or long-range dependent. In the heavy-tailed setting, we will describe recently developed results that clarify the point at which one can expect the "single big jump" to dominate approximations to the probability of ruin as a function of the initial capital reserve of the firm. This, in turn, leads to improved ruin approximations for claims processes that exhibit heavy tails. We will also discuss a stylized ruin model in which long-range dependence is exhibited and point out some of the qualitative differences in the dynamics exhibited by the claims process along the path to ruin relative to conventional ruin models.

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