

Change of Measures for Frequency and Severity

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Abstract

Lost Cost --pure premium-- defined as $Frequency \times Severity$ is determined for many insurance products provided by Property and Casualty Insurers. The compound Poisson process is a probabilistic model that accounts for both $Frequency$ and $Severity$. By considering a compound Poisson process, one can trace how Loss Cost evolves over time. In this paper, it is shown how the changes in $Frequency$ and/or $Severity$ impact the manner that probabilities are assigned to a compound Poisson process.

Keywords: Lost Cost, Frequency, Severity, change of measure, compound Poisson process, Radon-Nikodym derivative.