Portfolio selection under Cramer-Lundberg dynamic

J. Cerda-Hernández [1]

[1] National Engineering University – Department of Economics

In this work, we examine the combined problem of optimal portfolio selection rules for an insurer in a continuous-time model where the surplus of an insurance company is modelled as a compound Poisson process. The ruin probability of this process is minimized by the choice of a suitable investment strategy for a capital market index. Also, we present numerical solutions in some cases.

References

[1] Robert C. Merton (1969). *Lifetime Portfolio Selection under Uncertainty: The Continuous-Time Case*, The Review of Economics and Statistics, **51 − 3** , pp. 247-257

[2] Merton Robert C. (1971). Optimum Consumption and Portfolio Rules in a Continuous-Time Model. *Journal of Economic Theory* **3**, pp. 373–413

[3] Hipp, C. and Plum, M. (2000). *Optimal investment for insurers. Insurance: Mathematics and Economics* **26**, 215–228.

[4] Hipp, C. and Plum, M. (2003). *Optimal investment for investors with state dependent income, and for insurers. Finance and Stochastics*, **7**, 299–321.

[5] Ramasubramanian (2009). *Lectures on Insurance Models. Hindustan Book Agency, India, New Delhi .*