Quantitative Finance > Portfolio Management

Minimizing the Probability of Lifetime Ruin under Stochastic Volatility

Erhan Bayraktar, Xueying Hu, Virginia R. Young

(Submitted on 19 Mar 2010)

We assume that an individual invests in a financial market with one riskless and one risky asset, with the latter's price following a diffusion with stochastic volatility. In the current financial market especially, it is important to include stochastic volatility in the risky asset's price process. Given the rate of consumption, we find the optimal investment strategy for the individual who wishes to minimize the probability of going bankrupt. To solve this minimization problem, we use techniques from stochastic optimal control.

Comments:	Keywords: Optimal investment, minimizing the probability of lifetime ruin, stochastic volatility.
Subjects:	**Portfolio Management (q-fin.PM)**; Optimization and Control (math.OC); Probability (math.PR)
Cite as:	**arXiv:1003.4216v1 [q-fin.PM]**

Submission history

From: Xueying Hu [view email]
[v1] Fri, 19 Mar 2010 01:45:32 GMT (370kb,D)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

Download:

- PDF
- Other formats

Current browse context:
q-fin.PM
< prev | next >
new | recent | 1003

Change to browse by:
math
math.OC
math.PR
q-fin

References & Citations
- NASA ADS

Bookmark(what is this?)