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Value of a put option to the risk-averse newsvendor

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Pages 481-500 | Received 01 Jan 2005, Accepted 01 Jun 2006, Published online: 01 Mar 2007

https://doi.org/10.1080/07408170600941607 **66** Cite this article

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Abstract

In this paper we consider an extension of the single-period inventory model with

stochastic demand where a nut ontion can be nurchased to reduce losses resulting

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v and if she

has a quadratic utility function, then maximizing her expected utility is equivalent to

minimizing the variance of the profit. Sensitivity analysis results indicate that under poor economic conditions (low sale price/high purchase cost) it may not be optimal to purchase the option. We also find that when the option writer assumes a higher risk/return for the random option payoff (that he pays the newsvendor) the newsvendor can reduce her profit uncertainty by choosing the strike price or strike quantity optimally.

Q Keywords: Newsvendor model

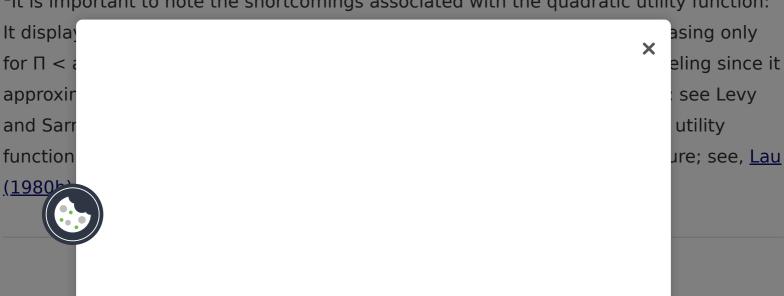
Acknowledgements

We thank two anonymous referees and the AE for their comments on the relevance of the risk premium in the calculation of the option price. We also thank Dr. Narat Charupat for discussions that helped us improve our understanding of option theory and the intricacies of nonfinancial derivative products, and Dr. Yigal Gerchak for his useful comments on an earlier version of the paper. This research was supported by the Natural Sciences and Engineering Research Council of Canada.

Notes

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¹It is important to note the shortcomings associated with the quadratic utility function:



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