Risk Measures Based on First Four Moments and Resulting Trading Strategies

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Abstract

In this paper we propose a method to calculate the risk measures proposed by Aumann and Serrano (2008) and Huang, Tzeng, and Wang (2012), where the former is related to stochastic dominance, and the latter hinges on central dominance. This method enables us to utilize the information about mean, variance, skewness, and kurtosis of a distribution. We demonstrate the risk measure of Huang et al. (2012) provides sufficient information for the investment decision of all constant absolute risk averse investors in the traditional portfolio selection model. A trading strategy is then constructed with respect to this measure. Our empirical results show that this trading strategy outperforms buy-and-hold trading strategy during sample period from January 2001 to October 2009, and conclude that information of higher order moments are valuable for invest decisions.