COMPUTING VaR AND AVaR IN INFINITELY DIVISIBLE DISTRIBUTIONS

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Abstract: In this paper we derive closed-form solutions for the cumulative distribution function and the average value-at-risk for five subclasses of the infinitely divisible distributions: classical tempered stable distribution, Kim–Rachev distribution, modified tempered stable distribution, normal tempered stable distribution, and rapidly decreasing tempered stable distribution. We present empirical evidence using the daily performance of the S&P 500 for the period January 2, 1997 through December 29, 2006.

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