

THE MODIFIED TEMPERED STABLE DISTRIBUTION, GARCH MODELS  
AND OPTION PRICING

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*Abstract:* We introduce a new variant of the tempered stable distribution, named the modified tempered stable (MTS) distribution and we develop a GARCH option pricing model with MTS innovations. This model allows the description of some stylized empirical facts observed in financial markets, such as volatility clustering, skewness, and heavy tails of stock returns. To demonstrate the advantages of the MTS-GARCH model, we present the results of the parameter estimation.

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