

Title: Stable distributions and application to finance
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Abstract: This work deals with the theory of the stable distributions, their parameter estimation, and their financial application. There are given the methods of characteristic function and method of projections, which is relative to ML-methodology, for estimation of the parameters of stable distributions. We compare these methods with the conventional estimators. The quality of estimators is verified by the simulation of the sample having stable distribution with known parameters and comparing the estimates of these parameters with their real values. The aim of this work is estimation of parameters of the stable laws which is applicable for modification of ARCH/GARCH models with stable innovations.

Keywords: stable distribution, ARCH/GARCH models, characteristic function (CF) based estimators, maximum likelihood projection (MLP) estimators.