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Empirical likelihood parametric estimations for GARCH-M models. (Chinese. English summary) Zbl 1313.62122

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Summary: We study inference on parameters of GARCH-M models in this paper. The empirical likelihood method is used to construct test statistics. Under mild conditions, statistics are shown to have asymptotic χ^2 distributions. Based on these statistics, test statistics for the relative risk aversion δ of a market are constructed by profile likelihood idea and are shown to be asymptotically distributed as χ^2 distribution. Simulations show that the proposed empirical likelihood statistics behave well.

MSC:

62M10 Time series, auto-correlation, regression, etc. in statistics (GARCH)
62F10 Point estimation
62F12 Asymptotic properties of parametric estimators
62P20 Applications of statistics to economics

Keywords:

GARCH-M models; empirical likelihood estimation; χ^2 distribution