A sign-based estimator for correlation between financial returns

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Abstract

This paper introduces an estimator for the correlation based on the signs of observations. Its asymptotic distribution is normal, it does not depend on the variance structure and it is invariant with respect to a wide class of models. Moreover, it is particularly suitable to study the correlation between financial returns in different markets and the impact of bad (good) news from a market on another market. Applications in the paper deal with correlation between Italian and U. S. stock returns.

Keywords: GARCH models, Invariance, Stock Returns, Skew-Normal distribution.

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