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Structure of correlations with partially surrogated price fluctuations GYUCHANG LIM, SOOYONG KIM, KAIST, KI-HO CHANG, KMA, KYUNGSIK KIM, Pukyong National university — The well-known facts of financial markets support that the price fluctuation contains information about the complexity of interactions among market participants. In this work, we present a new surrogate method to find the dependency of higher-order correlations on the magnitude of price fluctuations. By sorting returns into several groups with respect to the level of fluctuations, we show that the large fluctuations characterize the structure of temporal correlations of a financial time series. In particular, by investigating the positive and negative parts separately, we confirm that risk-averse behavior of traders is explicitly observed in financial markets.

Kyungsik Kim
Pukyong National University

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