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Doo Young Kim* (dkim@astate.edu), PO Box 70, State University, AR 72467. *Risk Based Target Lag Clustering of Time Dependent Information in Finance.*

This study proposes an efficient clustering method in a stock market based on short term risk indexes. The cross-lag time dependencies in volatility between two financial time series are investigated in order to identify lagging stocks to a set of leading stocks. Also, the arc length of log return on the weighted time line is used as another measure of risk in a stock market to cluster stocks based on risk or variability. The concept of the target lag allows a stock investor to have more flexible clustering output based on one's trading strategy. (Received September 13, 2017)