Accepted Manuscript

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Please cite this article as: J. Hao, F. He, Univariate dependence among sectors in Chinese stock market and systemic risk implication, *Physica A* (2018), https://doi.org/10.1016/j.physa.2018.05.142

Univariate Dependence among Sectors in Chinese Stock Market and Systemic Risk Implication[1]

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Abstract: In the period of financial crisis, financial assets clustered and dropped together. However, such phenomenon can hardly be predicted before it really happened. While traditional test methods can only detect pairwise relationship between two variables, we applied empirical copula to measure multi-assets univariate dependence. The test method is applied in China economy with manufactory, finance and real estate sector from 2000 to 2014. Results suggests that there exists univariate dependent relationship, although pairwise correlation had not been detected between each pair. Further, we construct dependence structure diachronically with these three sectors in stock market to generate an early warning signal for systemic risk.

Key Words: univariate dependence; empirical Copulas; systemic risk; early warning signal