

國立政治大學統計學系 學術演講

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題目：Portfolio Optimization via Dynamic Networks and Vine Copulas

時間：民國 114 年 5 月 12 日 (星期一) 下午 1:30

地點：國立政治大學逸仙樓 050101 教室

摘要：

This study explores the application of vine copulas combined with network-based methods for portfolio optimization. A de-GARCH technique is employed to preprocess each series to address inherent characteristics such as autocorrelation, conditional heteroscedasticity, and volatility clustering in financial time series. A similarity matrix is then computed from the multivariate de-GARCH data and used to construct a global minimum spanning tree (MST), which facilitates the identification of suitable stocks for portfolio construction. A local MST (LMST) is subsequently built from the selected stocks, and various vine copulas are applied based on the LMST structure to model their joint distribution. This copula-network-based distribution is then used to determine the portfolio weights. The empirical analysis, conducted on component stocks of the S&P 100 index over the 2019–2023 period using a rolling-window framework, shows that the proposed method achieves competitive cumulative returns compared to benchmark approaches.

歡迎參加

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