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The impact of the market index on the topology of financial networks EDWARD MANDERE, HAOWEN XI, Bowling Green State University — We study the financial network generated from stock price returns correlation. The network topology has been used to explore and visualize the relationships between stocks. These networks have also been used in reconstructing less noisy correlation matrices for portfolio optimization. In this work, we explore the effect of adding the market index to the rest of stock network. We show that there is a very strong clustering around the index, both in S&P500 and DJIA. The mechanism that leads to these strong clustering as well as the implication to reconstructed correlation matrices will be explored.

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