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**Characteristics of group networks in the KOSPI and the KOSDAQ** KYUNGSIK KIM, JEUNG-SU KO, Department of Physics, Pukyong National University, Busan 608-737, Korea, MYUNGGI YI, Department of Biomedical Engineering, Pukyong National University, Busan 608-737, Korea — We investigate the main feature of group networks in the KOSPI and KOSDAQ of Korean financial markets and analyze daily cross-correlations between price fluctuations for the 5-year time period from 2006 to 2010. We discuss the stabilities by undressing the market-wide effect using the Markowitz multi-factor model and the network-based approach. In particular we ascertain the explicit list of significant firms in the few largest eigenvectors from the undressed correlation matrix. Finally, we show the structure of group correlation by applying a network-based approach. In addition, the relation between market capitalizations and businesses is examined.

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