A STUDY OF STRUCTURAL BALANCE IN STOCK PORTFOLIO GRAPHS

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ABSTRACT

This paper adopts the graph theoretical approach to the analysis of stock portfolios. Nineteen stock portfolios managed by a stock investor from January 1, 2010 to September 26, 2014 were converted into stock graphs and the association between structural balance in stock portfolio graphs and topological properties including graph density, clustering coefficients, degree centrality, etc. as well as performance of stock portfolios were examined. The findings will provide insights into topological characteristics of structurally balanced stock portfolios and the effectiveness of the stock portfolio diversification.

Keywords: *Graph theory, structural balance, network topology, portfolio diversification*