THE IMPACT OF FINANCIAL CRISIS ON BURSA MALAYSIA USING MINIMAL SPANNING TREE

Hafizah Bahaludin*

Department of Computational and Theoretical Sciences, Kulliyyah of Science, International Islamic University Malaysia, Bandar Indera Mahkota Campus, Jalan Sultan Ahmad Shah, 25200 Kuantan, Pahang, Malaysia

*Corresponding author email: hafizahbahaludin@iium.edu.my

ABSTRACT

In recent years, there has been a growing interest in the financial network. The financial network helps to visualise the complex relationship between stocks traded in the market. This paper investigates the stock market network in Bursa Malaysia during the 2008 global financial crisis. The financial network is based on the top hundred companies listed on Bursa Malaysia. Minimal spanning tree (MST) is employed to construct the financial network and uses cross-correlation as an input. The impact of the global financial crisis on the companies is evaluated using centrality measurements such as degree, betweenness, closeness and eigenvector centrality. The results indicate that there are some changes on the linkages between securities after the financial crisis, that can have any significant effect on investment decision making. Promoting some alternative investment strategies to investors can achieve sustainable development goals (SDG). For instance, the investment in infrastructure and innovation are crucial drivers of economic growth and development in which related to SDG 9. Achieving the SDGs will create a world that is more sustainable, equitable, and prosperous. In order to get there, investors must adapt their strategies to deliver not only financial results but positive social and environmental outcomes as well

Keywords: Financial Network, Minimal Spanning Tree, Centrality Measures