HANIK AULIA. Analysis of Stocks Movement Pattern for Leading Stocks Identification Using Clustering Technique, Case : Listed Stocks on Indonesian Stocks Exchange. Supervised by BAGUS SARTONO and DEDI BUDIMAN HAKIM

Global financial crisis that happened on 2008 in United States has triggered a fluctuation in money market that spread to all over the world. Indonesian government has been forced to stop all trading activities on 8-10 October 2008 in order to compress the chaos. The research aimed to determine clustering on stocks with similar pattern of movement based on stock closing price movement, before and after global crisis period, used for investor reference in term of investment decision making in order to reduce the risk which come from the fluctuation. Time Series Clustering method was used to determine the optimal number of cluster based on pattern resulted by time series data. The research showed that the series of stock data formed three cluster based on stock closing price movement for both period, before and after 2008 crisis. The dendogram test for both period gave a value for entanglement 0.4, which was close to zero.

This value showed that the cluster formed by the series of stock data for period before global crisis had a good alignment with the cluster formed by the series of stock data for period after global crisis. We can conclude that global crisis gave almost similar impact to stocks in the same cluster. Market capitalisation and leverage can be used by investor as general guidance for initial selection of stocks.

Leading stocks identification provided the information that generally sub-cluster 1 member stocks refer to INDF, BRNA, and GGRM. While for sub-cluster 2 generally refer to MYRX, HMSP, and SCMA.

Keywords: cluster, initial selection, crisis stock, time series clustering