ABSTRACT

Investment diversification in the face of so many investment opportunities, various risks associated are problematic, investors need to know which pair of securities will generate consistent and sustainable returns over the long run. Multivariate Generalized Autoregressive Conditional Heteroscedastic Dynamic Conditional Correlation (MGARCH-DCC) and Wavelet Coherence offer unique approach to investigate the time-varying conditional volatility and correlations and ascertaining the holding each pair of securities. The present research employs securities from publicly listed companies divided into eight sectors of Karachi Stock Exchange (KSE-100). To achieve the research objectives, the data from 63 publicly listed companies divided into Banks, Textile, Foods, Cement, Oil & Gas, Chemicals, Auto, Pharma, the stock prices of all those companies were selected and transformed into log returns, total 10 years of data was selected beginning from 2010-2019, thereafter, composite index was calculated for all sectors. The volatility modeling was done using MGARCH-DCC and holding period was analyzed with Wavelet Coherence method. For the purpose of validating our research objectives MGARCH-DCC model has been applied and interpretation done on Microfit. Our study has identified three investment strategies based on the (2 pairs of securities) and methods applied as above, these strategies are short, medium, long term and those pairs of securities which are not recommended. For investment purpose this study emphasizes the optimal holding period for two pairs of securities to reap maximum return on investment.

Keywords: MGARCH-DCC, Wavelet Coherence, Diversification, Stock Prices, KSE-100 Index