ABSTRACT

Technical analysis is done in an effort to determined characteristics of data return, as well as provide information on the calculation of VaR (Value at Risk) results for shares of company listed in Jakarta Islamic Index by using estimates of volatility Autoregresive Conditional Heteroskedasticity (ARCH), Generalized Autoregresive Conditional Heteroskedasticity (GARCH), and Exponentially Weighted Moving Average (EWMA). Data obtained from the Indonesia Stock Exchange (www.idx.co.id) and Yahoo Finance in the form of daily price per January 1, 2014 to December 31, 2015. The results showed that the return data of listed companies in Jakarta Islamic Index had stationary data, did not have normal distribution. Return data of AALI, AKRA, ASII, BSDE, INDF, KBLF, MPPA, SMGR, SMRA and UNVR had heteroskedastic volatility. Return data of ADRO, ASRI, ICBP, INTP, ITMG, LPKR, LSIP, PGAS, TLKM, UNTR, and WIKA have homoskedastic volatility. Calculation of Value at Risk (VaR) through volatility estimation process with EWMA, ARCH, GARCH model, using 95% confidence level and 1 day holding period give potential loss information at each stock return value. The right Volatility Model used when calculating Value at Risk is the EWMA volatility model.

Keywords: Return of Shares , Value at Risk (VaR), EWMA, ARCH/GARCH

ABSTRAK

Analisis teknikal dilakukan dalam upaya mengetahui karakteristik data *return* serta memberikan informasi hasil perhitungan VaR *(Value at Risk)* untuk saham perusahaan yang terdaftar di *Jakarta Islamic Index* dengan menggunakan estimasi volatilitas *Autoregresive Conditional Heteroskedasticity* (ARCH), *Generalized Autoregresive Conditional Heteroskedasticity* (GARCH), dan *Exponentially Weighted Moving Average* (EWMA). Data diperoleh dari Bursa Efek Indonesia (www.idx.co.id) dan *Yahoo Finance* berupa harga saham harian per 1 Januari 2014 sampai 31 Desember 2015. Hasil penelitian menunjukkan bahwa data *return* saham perusahaan yang terdaftar di *Jakarta Islamic Index* memiliki data stasioner, tidak memiliki distribusi normal. Data return *return* saham AALI, AKRA, ASII, BSDE, INDF, KBLF, MPPA, SMGR, SMRA dan UNVR memiliki volatilitas bersifat *heteroskedastic*. Data *return* saham ADRO, ASRI, ICBP, INTP, ITMG, LPKR, LSIP, PGAS, TLKM, UNTR, dan WIKA memiliki volatilitas bersifat *homoskedastic*. Perhitungan *Value at Risk* (VaR) melalui proses estimasi volatilitas dengan model EWMA, ARCH, GARCH, menggunakan *confidence level* 95% dan holding period 1 hari memberikan informasi potensi kerugian maksimum pada masing-masing nilai *return* saham. Model Volatilitas yang tepat digunakan saat melakukan perhitungan *Value at Risk* ialah model volatilitas EWMA.

Kata kunci: *Return* Saham, *Value at Risk* (VaR), EWMA, ARCH/GARCH

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