Comparison Value at Risk Method between Risk Metric Method, Historical Back Simulation, and Monte Carlo Simulation in hence to Predict of Investment Risk on Common Stock Properties, Periods of 2008-2014

ABSTRACT

This study is aim to investigate the useful of method VaR in hence prediction of investment risk on common stock property were listed at Indonesian Stock Exchange (BEI). The method VaR can be divided by three criteria, such as accurate, efficient, and conservative. Using time series data price of stock properties for seven years, the data has been analised using the tools of Microsoft Excel and E-views 7.

The sample of this study was property sector with purposive sampling criteria such as the stock are actively trade, the company have complete data of prices for the period of the study, and the company total asset are more than 5 (five) billion rupiah. The samples of this study are six property companies, they are Ciputra Development Tbk (CTRA), Lippo Karawaci Tbk (LPKR), MNC Land Tbk (KPIG), Pakuwon Jati Tbk (PWON), Summarecon Agung Tbk (SMRA), and Wijaya Karya (Persero) Tbk (WIKA).

The research show that Risk Metric Method is conservatif (95% confidence level) and Historical Simulation Method is the conservative (99% confidence level) in predicting Investment Risk property sector. Furthermore, Monte Carlo Method is the most efficient (95% and 99% confidence level) and the most accurate (95% and 99% confidence level) in predicting Investment Risk property sector. This result was supporting previously research by Ni'mah (2014) that Monte Carlo Simulation is the most effisien and accurate for investor predicting of investment risk with 95% confidence level.

Keywords: Historical Back Simulation, Monte Carlo Simulation, Risk Metric Method, Value at Risk.