ABSTRACT

The portfolio is combinations of various instruments or asset investment that structured to achieve the investment objectives of investors. Based on Markowitz portfolio theory, risk can be minimized by the diversification and combined with various instruments of investment assets. The method used in minimizing risk is Mean Variance. Although the Mean Variance can help minimize the risk, but the weight of the resulting portfolio extreme, especially if the amount of investment assets is quite a lot. Therefore, to rectify these deficiencies method is used Variance-Based Constraints (VBC) and the Global Variance-Based Constraints (GVBC) using the asset variants, standard deviation, and the value of α as a parameter for to determine the optimal weight range.

From the results of calculations performed using historical data, the optimal α reached at α = 0% to get the value of the best returns, risk, and Sharpe Ratio. While the results of testing with test data, the value of return and the Sharpe Ratio is best achieved when using VBC and GVBC, as well as its smallest portfolio risk.

VBC and GVBC method gives a good influence on the risk of Mean Variance portfolio, so the risk of a portfolio of tested produce the smallest or best value.

Keywords : *Portfolio*, LQ45, *Mean Variance*, *Variance-Based Constraints, Global Variance-Based Constraints*