ABSTRACT

Portfolios aim to optimize investment into a group of assets with a certain proportion and minimize risk. In this study, portfolios will be formed based on the results of K-Means optimal clustering of stocks that are members of the BISNIS-27 Index in the 2023 major evaluation and have been validated by the Silhouette Index. Subsequently, each portfolio will be formed using the Mean-Semivariance method which focuses on minimizing semivariance as a downside risk with IHSG as a benchmark. The results obtained an optimal cluster of 5 clusters that are used as portfolios and portfolio 2 is a portfolio that has the best performance with a Sharpe index value of 4.3110% consisting of AMRT, BFIN, and UNTR stocks with a percentage allocation of funds for each stock is 34.98% AMRT, 19.79% BFIN, and 45.23% UNTR with an expected return of 0.0616% and portfolio risk using semivariance of 0.0132%. Portfolio 2 consists of stocks whose companies have high Return on Equity.

Keywords: Mean-Semivariance, K-Means, Benchmark, Silhouette Index, Sharpe Index, Portfolio, Optimal Weight, Clustering