

## Abstract

In order to create maximum investment profit with a small risk, then assets drafted into portfolio. Lot of assets can be selected by investor but generally assets can be divided into two groups based on its risk category : risky asset and risk free asset. Also There are many existing portfolio optimization models, one of which is a model of the Mean Absolute Deviation (MAD), which was introduced by Hiroshi Konno and Yamazaki (1991). This model is a development of the existing models, namely Mean-Variance models (MV) where the difference is in the form of risk measures or the objective function. Mean Absolute Deviation model present in linear programming form so the computation time needed is faster than Mean-Variance model which is quadratic programming form.

This final project mainly discussed portfolio optimization problem that combine both risky assets and risk-free assets which is traded in the Indonesian market using MAD models that will be compared to the results with MV model. Results of this final project shows that risk generated by MAD model is greater than MV model, however the difference between this two models are not significant. Fluctuations of returns for both models have the same tendency. Computation time needed by MAD model is faster than MV model when the number of assets used in a portfolio is greater than 28. Sharpe Ratio portfolio performance value generated by the model MAD lower than the MV models, but they are still better than the performance of the LQ 45 index.

**Keywords:** Portfolio, Stock, Deposito, *Mean Absolute Deviation*, *Mean-Variance*, *Asset Allocation*