This bachelor thesis considers the mean absolute deviation as a risk measure. It deals with its properties and its application in the case of the asset allocation problem. The Markowitz model is described and we demonstrated the relation between our model with mean absolute deviation and the Markowitz model. We study the influence of changes in the input data for the linear model with mean absolute deviation. The primary data used in this thesis are historical relative rates of profit of shares in the Prague Stock Exchange. The testing is done on the selected subsets of scenarios from primary data and the stability is discussed in conclusion.