ABSTRACT

Modification of Multifactor Model as a Basis for Making Decision in Buying and Selling Stocks in Capital Market in Indonesia

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The research is intended to find out monthly predicted stock return which can be used to make decision in buying and selling stocks with better result than that of the exisiting mean-variance model. The other objective of this research is to find empirical evidence for an accurate prediction of the new model mentioned above.

Three hypotheses are used in this research: (1) the modification of multifactor model produces higher monthly stock return than the mean-variance model before and during the crisis; (2) the modification of multifactor model is able to predict stock return more accurately than the mean-variance model before and during the crisis; (3) the modification of multifactor model can be used to make decision in buying and selling stock. at capital market.

The findings of the research show that: (1) the modification of multifactor model produced greater monthly stock return than the mean-variance model, that is 4,2% compared to minus 0,77% before the crisis and 2,35 % compared to minus 0,74% during the crisis; (2) the modification of multifactor model had higher accuracy prediction than that of the mean-variance model. (3) the modification of multifactor model could be used for making decision in buying and selling stock at capital market.

The theory of modification of multifactor model has the following characteristics: (1) it is flexible concerning the amount and variable value method, and the amount of monthly data; (2) it is adaptive to business cycles, kind of stock, prediction error estimation method; (3) it is data-driven meaning model-validity depends on quality of input data.

The general formula of the theory of multifactor model modification is the following:

$P(R_i)_{mmm,t+1} = [P(P_i)_{t+1,T1} - C(P_i)_t] / C(P_i)_t + RMAPE_{t+1,T2} * \text{Sign}(E_p)$

Notes:

$P(R_i)_{mmm,t+1}$ =predicted return of stock, i ,for the following month

$P(P_i)_{t+1}$ =predicted price of stock, i , for the following month

$T1$=amount of monthly data to be used to predict stock price by regression

$C(P_i)_t$=current price of stock, i, for this month

$RMAPE_{t+1}$= estimation of prediction error for next month; $T2$ = moving average n month.

Sign $(E_p) = -1$, if $E_p < 0$; Sign $(E_p) = +1$, if $E_p > 0$

E_p= previous error measured by percentage error or mean percentage error.

Proposition:

if $P(R_i)_{mmm,t+1} > 0$, the decision is Buy
if $P(R_i)_{mmm,t+1} < 0$, the decision is Sell
if $P(R_i)_{mmm,t+1} = 0$, the decision is Hold

Keywords: flexibility, adaptive, and data driven.