Performance Evaluation Of Mutual Funds In Indonesia

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9 March 2010

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Abstrak

This paper is an empirical assessment of the performance of mutual fund managers in terms of "market timing" and "selectivity", within the framework suggested by Treynor and Mazuy (1966) and Henriksson and Merton (1981). The relevant data set is a balanced panel of fifty five mutual funds, over a seventeen-month period beginning on February 2008 until June 2009. The result find that only four mutual fund have a good performance in market timing and four mutual fund have a good performance in stock selection. Both methods have a good indicator to reflect mutual funds performance.
Keywords: market timing, stock selection, mutual funds

JEL Classification Code: G11, G20

1. Research Background

Mutual Fund development in Indonesia current increased along with the growth of a nation's economy and capital market development. Through investments in mutual funds, the community that does not have large enough capital can invest in capital markets and obtain benefits from capital market developments. The development of mutual funds is also supported by growing investment products, so not everyone can understand the recent product investment and have the time to manage their investments. By using professional investment manager who have knowledge of securities, everybody can reduce their lack of knowledge about investment.

But the problem is how investor can choose the right investment manager for get a positive return? To solve these problem, this research focused on performance of mutual funds based on market timing and security selection. Market timing in this study is defined as the ability of managers to react to anticipated changes in the price of a security by way of investing their funds or withdraw funds from an investment in a timely manner. While security selection in this study is defined as the ability of investment managers to identify and select mispriced securities and will provide potential benefits in the future.

Research on mutual fund performance has attracted the attention of many researchers. The studies focus on the ability of managers in selecting securities in portfolios and / or pay attention to the ability of managers in the entrance / exit the market (market timing). Some research suggests the absence of support to managers with superior performance (Athanassakos, Carayannopoulus and Racine, 2002), while Bello and Janjigian (1997) found a positive relationship and significant influence on the ability of selecting and market timing for 633 mutual funds, whereas Andiel et al (1997) states that the type of aggressive growth mutual funds in particular shows the results of which support the existence of selectivity ability but do not support the ability of market timing.

These conflicting results encourage research on the performance of mutual funds in Indonesia by using the criteria of market timing and security selection.

2. Literature Review

Literature that evaluates the performance has been successfully formed the foundation of modern portfolio theory early on, especially about how assets valued. Markowitz (1952) and Sharpe (1964) important contribution on the understanding of how investors should compile a portfolio by considering risk and returns. Research Sharpe (1964), Lintner (1965) and Mossin (1966) succeeded in forming what

became known as the Capital Asset Pricing Model in which there are two parameters which assumes investors focus only on the average and variance of the return of an asset.

Meanwhile, research to understand the performance of mutual fund portfolio was first carried out systematically and extensively by Friend, Brown, Herman and Vickers since 1962. This study was conducted using samples of 152 mutual funds using data from 1953 to 1958. Friend and Vickers (1965) evaluating the performance of the portfolio of mutual funds formed randomly. The results show that the performance of mutual funds do not beat the performance of a portfolio formed at random.

Treynor (1965) developed a method to measure the performance of the portfolio is called the reward to volatility measure which is defined as the average excess return of the portfolio. This was then followed by Sharpe (1966) by developing a measure of reward to variability that is the average excess return of the portfolio divided by the standard deviation of the portfolio. Furthermore, Treynor and Mazuy (1966) develop a method to test the success of past mutual fund in anticipation of movements in capital markets, where results showed no evidence that mutual fund performance can always beat the market.

Jensen (1968) developed an absolute measure of performance based on the Capital Asset Pricing Model and has also found that mutual funds are not able to earn abnormal returns when transaction costs are included in the computation. Jensen's research does not include the potential of market timing by fund managers who make an active strategy, so the model assumes that the risk is stationary over time. This assumption will have an impact on abnormal return estimates will tend to bias when there is market timing strategies. Portfolio measurement techniques developed by Treynor (1965), Sharpe (1966) and Jensen (1968) is an extension of modern portfolio theory and the theory of capital asset pricing model.

Development of Jensen's model is also mostly done in the late 1960s. Fama (1972) and Jensen (1972) identified a two-dimensional measurement of investment performance, where investment managers distinguish between a decision and forecasting security selection decision.

However, some literature also notes the potential bias that occurs when there is market timing ability, which models the existing performance appraisal, does not consider the market timing test. For example, research conducted Grinbaltt andTitman (1989) showed that the success of market timing estimation will result in systematic risk (ßb) will tend to bias upward, while the constant (ab) will be biased downwards. In these scenarios, the model does not include market timing will lead to the mistaken conclusion that performance. Jensen successful extension of the model distinguishes two components in the assessment of the investment performance of the security selection and market timing (Gallagher, 2002). Treynor and Mazuy (1966) add a proposition to measure market timing by arguing that the linear model is not an appropriate approach when fund managers try to forecast changes in market conditions. This is implemented using quadratic functions to the manager who holds a large proportion (small) portfolios of risky securities in which the predicted market movement will increase (decrease).

In further developments Henriksson and Merton (1981) reported that investment managers can not follow an investment strategy that is always successful in the return on market portfolio over time. Henriksson and Merton's research is successful in developing valuation of portfolio performance using security selection and market timing. While Grinbalt and Titman (1989) suggested that some mutual funds consistently abnormal return obtained systematically by taking shares which can realize a positive excess return.

Henrikkson (1984) tested the performance of 116 market timing of mutual funds. His research shows there are only three mutual funds that have the ability to market timing. Meanwhile, Chua and Woodward (1986) perform the same tests in

Canada, the United States and Britain with the results showing the performance of mutual funds based on market timing is bad. Meanwhile, Sinclair (1990) tested the ability of managers in market timing, shows that the performance returns by using market timing is bad. Another study in Greece that tested stock selection and market timing conducted by Phillipas (2002) who found that investment managers in Greece failed to make an investment with the right market timing and by using the total performance index will reduce the ability of the manager in stock selection. Some things that cause the failure of stock selection and market timing by fund managers in Greece because the majority of investment managers are relatively young age and lack of experience and easy to move between an investment company.

Several empirical studies in the United States proves that the strategy of active management is not able to beat the market (Jensen, 1968; Grinbalt and Titman, 1989; Elton et al, 1993; Gallagher, 2001). Some research also shows that mutual funds not managed to "timing the market" (Treynor and Mazuy, 1966; Henriksson, 1984; and Becker et al, 1999). Meanwhile, Sinclair (1990) to evaluate market timing and stock selection, the first in Australia, found that inversely with market timing in mutual funds would reduce the profitability of stock selection. Hallahan and Faff (1999) also examined the market timing and stock selection in Australia found little evidence to support that the fund will be a success with market timing.

3. Research Methods

All the population of all mutual funds registered with Bapepam, while the study sample was taken from equity mutual funds registered with the Capital Market Supervisory Agency period February 2008 - June 2009. Of 68 mutual fund shares listed in June 2009, data showed complete mutual funds that are 55 mutual funds.

To measure the performance of mutual funds based on market timing and security selection in this research will use the method of Henriksson and Merton

(1981) and Treynor and Mazuy (1966). Security Selection in this study illustrates the ability of investment managers to identify mispriced securities. While market timing in this study, indicating the ability of investment managers to reposition their portfolios to take advantage of the prediction of price movements.

Model Henriksson and Merton (1981) divides the performance into two factors as in formula 1 and 2.

$$R_{pt} = a_p + \beta_{p1} . X_t + \beta_{p2} . Y_t + e_{pt} \quad (1)$$

or

$$R_i - R_f = a_p + \beta_{p1} . (R_m - R_f) + \beta_{p2} . \text{Max} (0, R_m - R_f) + e_{pt} \quad (2)$$

where
R_{pt} is the portfolio return (R_i) in period t less the risk free return (R_f)
a_p is the abnormal return that describes the ability of stock selection
β_{p1} is the coefficient of market return (R_m) less the risk free rate
X_t is the market return less the risk free rate period t
β_{p2} is a coefficient that describes the ability of market timing
Y_t is max (0, X_t) is a dummy factor which would be worth 1 if the X_t greater than 0, and is 0 when X_t smaller than zero.
e_{pt} is a random error

Meanwhile, the model of Treynor and Mazuy (1966) divides the performance into two factors as in formula 3 and 4.

$$R_{pt} = a_p + \beta_p . X_t + \gamma_p . X^2_t + e_{pt} \quad (3)$$

or

$$R_i - R_f = a_p + \beta_p . (R_m - R_f) + \gamma_p . (R_m - R_f)^2 + e_{pt} \quad (4)$$

In the model of Henriksson and Merton (1981) a mutual fund is said to be successful in terms of market timing when β_{p2} is positive. When the market returns from the portfolio of mutual funds can beat the risk free rate β_{p2} is positive which means the

ability of investment managers in performing market timing is good, vice versa. While the model of Treynor and Mazuy (1966) a mutual fund is said to succeed if ?É is positive. While from the standpoint of stock selection can be seen in the aþ where if the value is positive it means that a portfolio of mutual funds managed to provide returns equal to or above the market return.

To obtain R_{pt} obtained from;

$$R_{pt} = \ln\left[\frac{NAV_{t+1}}{NAV_t}\right] \quad (5)$$

Where: NAV is net asset value

The level of risk-free results in this study using an interest rate of Bank Indonesia Certificates (SBI), while R_m obtained by using a proxy index (IHSG) as follows:

$$R_m = \ln\left[\frac{IHSG_{t+1}}{IHSG_t}\right] \quad (6)$$

4. Result and Discussion

Almost all mutual fund managers admit that they manage to have good performance. But hail testing showed that in the period 2008-2009 is marked by a sharp decline in JCI so, it has made a lot of mutual fund performance declined significantly. Testing is done either by using the model Model Henriksson and Merton (1981) and Treynor and Mazuy model (1966) in 55 mutual funds show results as seen in table 1 and table 2.

Table 1.
Result summary for Henriksson and Merton Method

Parameter	Regression Coefficient		Significance	
	Positive (%)	Negative (%)	Significant (%)	Not Sig.(%)
aá	28 (51)	27 (49)		
ßá	55 (100)	0 (0)	55 (100)	0 (0)
ßá	41 (75)	14 (25)	5 (9)	50 (91)

In table 1 a summary of the results of treatment of 55 stock mutual funds registered with the Capital Market Supervisory Agency. From the existing results in table 1, can be seen that all parameters of the beta (ßp1) showed positive significant results. At constant (aá) reflects the ability of investment managers in the selection of stocks, obtained results of 28 positive and 27 performing mutual funds have a negative performance. While the beta parameter (ßá$_{p2}$) reflect the ability of investment managers in performing market timing, obtained results of 41 mutual funds managed to record positive and 14 negative beta. Mutual funds are said to have good performance when the value of the constant parameters and parameter values ßá$_{p2}$ is positive. Of the 55 equity funds, using a model of Henriksson and Merton was only 16 that have a positive performance in terms of determining the accuracy of stock and exit / entry in investment.

Table 2.
Result summary for Treynor and Mazuy Methods

Parameter	Regression Coefficient		Significance	
	Positive (%)	Negative(%)	Sig. (%)	Not Sig.(%)
aá$_p$	36 (65)	19 (35)		
ßá$_p$	55 (100)	0 (0)	55 (100)	0 (0)
?á$_p$	32 (58)	23 (42)	20 (36)	35 (64)

In table 2, can be seen that all parameters of beta (ßá$_p$) showed positive significant results. At constant (aá$_p$) which reflects the ability of investment managers in the stock-selection, the results obtained 36 positive and 19 performing mutual funds have a negative performance. While the gamma parameter (?á$_p$) reflect the ability of investment managers in performing market timing, diperoleh hasil 32 reksaanda berhasil membukukan gamma positif and 23 negatif. Mutual funds are said to have good performance when the value of the constant parameters and parameter values ?á$_p$ is positive. Of the 55 equity funds, using a model of Treynor and Mazuy turns out

there are 18 who have a positive performance in terms of determining the accuracy of stock and exit / entry in investment.

Table 3, presented a six-performing mutual funds in terms of stock selection based on the method of Henriksson and Merton and Treynor and Mazuy method. From table 3, it appears there was 4 of 6 mutual funds that show consistent good results using the method of Henriksson and Merton and Treynor and Mazuy method.

Table 3.
Rangking Sixth of Mutual Fund based on *Stock Selection*

No.	Methods	
	Henriksson and Merton	Treynor and Mazuy
1	Reksaanda Growth to Prosper	Paramita premium
2	Panin Anda Prima	Reksaanda Growth to Prosper
3	Panin Anda Maksima	Panin Anda Prima
4	Pratama Saham	Syailendra equity opportunity fund
5	First state indoequity sectoral fund	Pratama saham
6	Fortis infrastruktur plus	Panin anda maksima

Table 4 next presented the names of 10 mutual funds performed well in terms of market timing based on the method of Henriksson and Merton and Treynor and Mazuy method. While based on market timing from 10 mutual funds with positive values of the market timing was the result of the method of Henriksson and Merton and Treynor and Mazuy method showed that only 4 of consistent good performance

Table 4.

Rangking Sixth of Mutual Fund based on *Market Timing*

No.	Methods	
	Henriksson and Merton	Treynor and Mazuy
1	paramita premium	reksaanda milenium equity
2	jakarta blue chip	andareksa mawar
3	si anda saham optimal	si anda saham
4	si anda saham	TRIM kapital
5	makinta mantap	GMT anda ekuitas
6	lautandhana equity	schroder anda prestasi plus
7	capital equity fund	manulife saham andalan
8	manulife saham andalan	rencana cerdas
9	mahanusa anda ekuitas	jakarta blue chip

10	andareksa mawar agresif	mahanusa anda ekuitas

From the various facts presented in the table above, this indicates a decrease over the period 2008 JCI which was then followed by the rebound to June 2009, it looks there are 4 mutual fund that has a good selection of stock performance by using both methods. As for the performance of mutual funds based on market timing is also acquired 4 companies a good performance by using both methods.

5. **Conclusion**

From the descriptive results above, obtained results that the use of the method of Henriksson and Merton and Treynor and Mazuy use of methods able to indicate the portfolio of mutual funds that have good performance. The use of methods of Henriksson and Merton and Treynor and Mazuy method, capable of recording a performance based on the ability of managers in selecting the investment portfolio as well as kamampuan managers to determine the right time to enter / exit the market. The use of both methods improve the portfolio performance assessment during the third tool is based on a portfolio of measurement technique developed by Treynor (1965), Sharpe (1966) and Jensen (1968).

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