

# ACTIVE VERSUS PASSIVE STRATEGY IN FORMING OPTIMAL PORTFOLIO IN INDONESIA STOCK EXCHANGE

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## ABSTRACT

The objective of this research is to compare portfolio performance that is formed by active portfolio strategy and passive portfolio strategy. This research was conducted on 31 shares of companies incorporated in the LQ 45 index in Indonesia Stock Exchange in the period 2009-2010. The research method used in this research is descriptive and verification method. Method is used in the active portfolio formation is security selection method with Single Index Model, while index fund is used to form passive portfolio. Based on research conducted on the four methods, (Sharpe, Treynor, Jensen's Alpha) using the t test of the one part with a 5% significance level, obtained t-statistic (7,197, 6,939, 9,110) is greater than t-table  $\pm$  (1,717) and Coefficient of Variation method (-3,071) is smaller than -t-tabel ( $\pm$  1,717). Then lead to the conclusion that the performance of stock portfolios based on an active strategy is better than a passive strategy in LQ 45 at Indonesia Stock Exchange 2009-2010 period.

Keywords: active portfolio, passive portfolio

## PREFACE

### Introduction

The Increase in Indonesia's economic growth after the impact of the US crisis, making industry in Indonesia become the target for investors to invest their capital. This rapid investment in capital market makes the need for securities analysis also increased. This is due to the investors who will invest their funds in the capital markets increasingly require information about the securities that will be closely linked to the level of expected returns and the risks faced. However, to overcome or reduce the risk, investors need to diversify through the creation of a portfolio. Markowitz (1952) have shown that the risk of investing can be reduced by combining several assets into a portfolio.

Portfolio theory are related to the investors estimation of the expectation of risk and return, as measured statistically to make its investment portfolio. Markowitz also described how to combine assets into efficiently diversified portfolios. In practice, investors of securities often diversify their investments by combining a variety of securities. However, we should be based on the investment law, when there's a high return it will be followed by the presence of high risk. As the consequences of that, it requires us to manage and monitor our investments in order to avoid an unwanted risk.

In stock portfolio investment, a variety of strategies will be used by investors to gain a performance that are comparable or exceed the performance of the market. There are two

strategies that can be selected by the investors to form the stock portfolio, namely active portfolio strategy and passive portfolio strategy. There are three strategies that can be used in the implementation of active strategy i.e. stock selection, sector rotation, and momentum strategies. In this study, for the active strategy, the stock selection strategy is used by using the Single-Index Model (SIM) method, it's one potential solution to simplify the calculation of the optimal portfolio and reviewing effectiveness under different management models. As for the passive strategy, there are two types of strategies used i.e. buy and hold strategy and indexing strategy. The establishment of the portfolio based on the passive strategy will use the indexing strategy. The establishment of the portfolio with the indexing strategy can be done by forming a portfolio similar to the market indexes, used in this study is LQ 45 index.

The object of this research are the stocks of companies that constantly appear in LQ 45 group in Indonesia Stock Exchange during the period 4 years, namely from 2009 until 2010, which consists of 31 shares.

### **Problem Formulation**

Based on the background mentioned above, the formulation of the problem can be structured as follows:

1. How is the performance of a stock portfolio based on an active strategy using the Single Index Model?
2. How is the performance of a stock portfolio based on a passive strategy using indexing strategy?
3. Is there a difference between the performance of stock portfolios based on active and passive strategies?

### **Research Objectives**

As for the goal to be achieved by the author from the implementation of this research include:

1. To determine and analyse the performance of portfolio formation based on active strategy using Single Index Model.
2. To determine and analyse the performance of portfolio formation based on passive strategy using indexing.
3. To determine and analyse the difference between portfolio performance using active and passive strategy.

### **Research Purpose**

The research result obtained are expected to bring use and benefit, including:

1. Practical Purpose  
The research is expected to be used as reference material or consideration, especially for individual investors in making an investment decisions in the stock market. In order to act appropriately in investing by using the best strategies which can be accounted for. Not just based on speculation or intuition.
2. Academical Purpose  
The results of this research are expected to increase knowledge and broaden the horizon as well as adding the experience in the field of financial management, in particular investments. But it can also make a contribution to the science in the field of financial management and can be a reference material as well as being able to provide information for further research.

## LITERARY REVIEW

### Portfolio Theory

A portfolio is the combination of various stocks in order to gain maximum profit, as quoted from Jogiyanto (2008).

From the definition above, it can be concluded that portfolios are several alternative investment opportunities by doing a combination of options that can provide a higher level of profit with a certain level of risk. In fact, investors often diversify their investments, which combines a variety of securities or to establish the portfolio. Keep in mind that the main objective of the portfolio is to find the optimum combination of various securities to earn maximum profit levels.

The essence of portfolio formation is allocating funds to various of investment alternatives so that the risk of the investment (as a whole) will be reduced (minimized).

### Portfolio Strategy

Generally, there are two kinds of portfolio investment strategy, i.e. active strategy and passive strategy. As described by Tandelilin (2010; 329) there are two strategies that can be taken by investors in making the portfolio formation, namely the following:

#### 1. Active Investment Strategy

Active portfolio strategy would essentially include the actions of the investor in actively doing the selection of buying and selling stocks, looking for information, following the time and stock price movements as well as a variety of other active measures to generate abnormal returns.

Active portfolio strategy objective is to achieve the performance of the stock portfolios that exceeds the performance of the stock portfolio obtained through passive portfolio strategy.

There are three strategies commonly used by the investor in carrying out active strategy portfolio:

##### 1. Stock Selection

One form of active strategies that are often performed is the selection of securities. This strategy is carried out on stocks that are expected to provide positive abnormal returns, and is usually done with fundamental analysis, though sometimes technical analysis are also used (or a combination of both).

##### 2. Sector Rotation

The investors can do this strategy in two ways, namely as follows:

- a) Investing in stocks that move on a particular sector to anticipate changes in the economic cycle at a later date.
- b) Make modifications or changes to the stock portfolio combination in different industry sectors.

##### 3. Momentum Strategy

Price momentum strategies stated that at a certain times the market price will reflect the movement of earning or the company growth. In this case the investor will be looking for the right moment, the moment the price changes that occur can provide profitability for investors through the act of selling or buying the stock.

#### 2. Passive Investment Strategy

Passive portfolio strategy typically includes investors actions which tend to be passive in investing in stocks and shares and solely based on the movement of the market

index movement. Meaning, the investors do not actively seek information or make trades that can generate abnormal returns.

There are two kinds of passive strategies, as follows:

### **1. Buy and Hold Strategy**

The investors can adopt buy and hold strategy, or to invest in a portfolio that is tailored to the market index. Buy and hold strategy, it concerns with the decision to buy shares and hold it up long enough to fulfill a specific purpose. Its main purpose is to avoid high transaction costs, information search costs, and so on.

### **2. Indexing Strategy**

Investors who use this strategy, use it by establishing a portfolio that is similar to the market index. For example, to form a portfolio composition that is similar to the LQ 45 index. Such measures are referred to as index fund. Index funds that established may be made the same as the market index consist of stocks that are most actively traded, such as blue chip stocks (stocks that are assessed as having good quality with a history of profit and consistent dividend payments), or small capitalization stocks (Husnan, 2005; 356).

## **Portfolio Performance Evaluation**

The evaluation of the portfolio performance are generally like the performance evaluation of the companies, the portfolio that which have been established also need to be evaluated for performance. Portfolio performance evaluation will be associated with two main issues, namely:

1. Evaluate whether the portfolio return that has been established providing returns that exceed other portfolio return that is used as a benchmark.
2. Evaluate whether the returns that have been obtained are in accordance with the level of risk that must be borne.

Based on the theory of capital market and the awareness of the need to conduct a return analysis in conjunction with the risk, three researchers i.e. Sharpe (1966), Treynor (1965) and Jensen (1968) developed the parameters measurement of portfolio performance. These parameters can be called composite performance assessment (risk adjusted) which means that investors consider realized return and risk when evaluating portfolios. According to Tandelilin (2010), these parameters are as follow:

### **1. Excess return to variability measure (Sharpe Measure)**

Sharpe index developed by William Sharpe, his calculation is based on the concept of capital market line as a benchmark, that is done by dividing the portfolio risk premium to the standard deviation.

Sharpe index can be used to rank the portfolios based on its performance. The higher the Sharpe index of a portfolio than any other portfolio, the better the performance of the portfolio.

### **2. Excess return to non-diversifiable risk (Treynor Measure)**

Treynor Index measures the performance of the portfolio with its systematic risk (beta) as an indicator. This index view portfolio performance by linking the level of return of the portfolio with the magnitude of risk of the portfolio.

With the consideration of the systematic risk, the higher the Treynor measure value, the better the performance of the portfolio

### **3. Differential return with risk is measured by beta (Jensen Measure)**

Jensen index is an index that shows the difference between the actual level of return obtained by the portfolio with the expected level of return if said portofolio is on the capital market line.

Jensen index is the excess return above or below the security market line. Jensen index can be easily interpreted as a measure of how much the portfolio can beat the market. The index that gives a positive value means that the portfolio return is greater than the expected return (above the security market line) so it is a good thing because the portfolio has a high return relative to the level of the systematic risk.

In addition to these three measurements, there are other performance measurement that also included the return and risk factors in the calculation, which is:

#### **4. Coefficient of Variation**

To perform the investment analysis, two factors must be considered together, the return expectations and risk assets. The coefficient of variation can be used to consider the two factors together.

From the formula of coefficient of variation means that the smaller the CV value the better the asset. The smaller CV indicates the less risk assets and the greater return expectations.

### **Hypothesis**

Based on the description above, there is the hypothesis proposed in this study as follows:

"The performance of a portfolio based on an active strategy is better than the performance of a portfolio based on a passive strategy on LQ 45 stock at the Indonesia Stock Exchange period 2009-2010"

## **RESEARCH METHODS**

### **Operationalization of Variables**

Based on the title of the research, then the research variable from the title consist of portfolio performance measurement variables based on active and passive strategy that were measured using the method:

- $X_1$  = Sharpe Ratio
- $X_2$  = Treynor Ratio
- $X_3$  = Jensen Alpha
- $X_4$  = Coefficient of Variation

### **Research Sample**

The sample in this research are the stocks of the companies that constantly appear in LQ 45 group at Indonesia Stock Exchange during 4 period between 2009 until 2010.

### **Analysis Design and Hypothesis Testing**

#### **Analysis Design**

##### **1. Portfolio Establishment with Active Strategy using SIM**

For the active portfolio strategy method, stocks from LQ 45 index will be selected and the optimal portfolio will be formed using Single Index Method. Then, the performance of the established optimal portfolio will be measured through Sharpe measure, Treynor measure, Jensen Measure, and Coefficient of Variation. And compared to the performance of passive portfolio.

The analysis steps for the calculation of active portfolio strategy method is as follows:

1. Calculates the stocks return ( $R_i$ ) during the period of observation using the formula:

$$R_i = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Explanation:

$R_i$  : stock return  
 $P_t$  : stock price at time t  
 $P_{t-1}$  : stock price at time t-1

2. Calculates IHS index market return ( $R_{mt}$ ) during the period of observation using the formula:

$$R_{mt} = \frac{I_t - I_{t-1}}{I_{t-1}}$$

Explanation:

$R_{mt}$  : market return  
 $I_t$  : IHS index at periode t  
 $I_{t-1}$  : IHS index at periode t-1

3. Calculates the expected return (mean return) of the stocks during the period of observation using the formula:

$$E(R_i) = \frac{\sum(R_i)}{n}$$

Explanation:

$E(R_i)$  : mean return stock i  
 $R_i$  : individual stock return every period  
n : the number of data

4. Calculates the stock risk during the period of observation using the formula:

$$\sigma_i^2 = \frac{\sum_{i=1}^n (R_i - \bar{R}_i)^2}{n - 1}$$

Explanation:

$\sigma_i^2$  : variance or stock i risk  
 $R_i$  : stock i return  
 $\bar{R}_i$  : mean return stock i  
n : the number of data

5. Calculates the beta of the stocks using the formula:

$$\beta_i = \frac{\sigma_i m}{\sigma m^2}$$

6. Calculates the risk-free return which is symbolised by the SBI interest rate with a per semester or six monthly calculation.

7. Composing optimal portfolio based on Single Index Models. Rank the stock based on Excess Return to Beta (ERB)

$$ERB = \frac{R_i - R_f}{\beta_i}$$

Wherein:

- ERB : excess return to beta
- $R_i$  : stock expected return
- $R_f$  : risk-free return
- $\beta_i$  : beta securities i

The stocks with a low excess return to beta ratio will not be included into the optimal portfolio. Thus a cut off point are needed as the boundary to determine the limit value of the excess return to beta. This point can be determined with the following steps:

- a. Sort the stocks by the value of excess return to beta from the largest value to the smallest value. Stocks with the large value of excess return to beta are the candidates to be included to the optimal portfolio.
- b. Calculates  $B_i$  value for each number-I stocks with the following formula\*:

$$B_i = \frac{\beta_i^2}{\sigma_{ei}^2}$$

- c. Calculate  $C_i$  value with the following formula:

$$C_i = \frac{\sigma_m^2 \sum_{j=1}^n (\bar{R}_j - R_f) \beta_j}{1 + \sigma_m^2 \sum_{j=1}^n \left( \frac{\beta_j^2}{\sigma_{ej}^2} \right)}$$

- d. Determine the value of cut off point i.e. the largest  $C_i$  value
- e. Stocks that form the optimal portfolio is the stocks that have a greater excess return to beta value or the stocks with the excess return to beta value at point  $C^*$ . Whereas the stocks that have the excess return to beta value is smaller than the excess return to beta at point  $C^*$  is not included in the optimal portfolio (Elton & Gruber, 2007).
- f. Determine the optimal proportion

Determine the optimal proportion can be done by first looking the  $Z_i$  of each asset included in the optimal portfolio combination.  $Z_i$  value sought by the following formula:

$$Z_i = \frac{\beta_i}{\sigma_{ei}^2} (ERB_i - C^*)$$

Then after that, can be calculated the optimal weight of each asset that included on the optimal portfolio combination by using the following formula:

$$X_i = \frac{Z_i}{\sum_{j=1}^n Z_j}$$

Wherein:

- $Z_i$  = the proportion scale of securities i
- $B_i$  = beta securities i
- $\sigma_{ei}^2$  = variance of residual error of the securities number-I(\* which is also the unsystematic risk
- ERB = Excess Return to Beta of securities
- $X_i$  = the proportion of number-i securities\*

- g. Calculate the expected return and the risk of the portfolio

$$R_p = \sum X_i \bar{R}_i$$

$$\sigma_p^2 = \beta_p^2 \sigma_m^2 + \left( \sum_{i=1}^n W_i \sigma_{ei} \right)^2$$

## 2. Portfolio Establishment with Passive Strategy using Indexing

The analysis steps for the calculation of passive portfolio strategy method is as follows:

1. Calculates the stocks return ( $R_i$ ) during the period of observation using the formula:

$$R_i = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Explanation:

- $R_i$  : return of index i  
 $P_t$  : price of stock/index at period t  
 $P_{t-1}$  : price of stock/index at period t-1

2. Calculates the return of LQ 45 index market ( $R_{mt}$ ) during the period of observation using the formula:

$$R_{mt} = \frac{I_t - I_{t-1}}{I_{t-1}}$$

Explanation:

- $R_{mt}$  : market return  
 $I_t$  : LQ 45 index at period t  
 $I_{t-1}$  : LQ 45 index at period t-1

3. Calculate the expected return (mean return) of the stocks during the period of observation using the formula:

$$E(R_i) = \frac{\sum (R_i)}{n}$$

Explanation:

- $E(R_i)$  : mean return of stocks i  
 $R_i$  : individual stocks return every period  
n : the number of data

4. Calculate the variance during the period of observation using the formula:
5. The establishment of the portfolio with indexing method can be done by forming the portfolio composition similar to the LQ 45 index. This method called index fund. Wherein the proportion of each stocks based on the Equally Weighted method. And next, calculate the expected return and risk of the portfolio with following formula:

$$R_p = \sum X_i \bar{R}_i$$

$$\sigma_p^2 = \beta_p^2 \cdot \sigma_m^2 + (\sum_{i=1}^n W_i \cdot \sigma_{ei})^2$$

### 3. Portfolio Performance Evaluation

In analyzing the performance of active portfolio strategies and passive portfolio strategies, risk adjusted return will be used as a benchmark in the comparison of the performance of the portfolio, namely by:

#### a. Sharpe Index

$$S_p = \frac{(\bar{R}_p - R_f)}{\sigma_p}$$

Wherein:

- $S_p$  = Sharpe Index  
 $R_p$  = average return of the portfolio

$R_f$  = average return of risk-free asset  
 $\sigma_p$  = standard deviation of the portfolio

**b. Treynor Index**

$$T_p = \frac{R_p - R_f}{\beta_p}$$

Wherein:

$T_p$  = Treynor Index  
 $R_p$  = average return of the portfolio  
 $R_f$  = average return of risk-free asset  
 $\beta_p$  = systematic risk of the portfolio

**c. Jensen Index**

$$J_p = R_p - [R_f + \beta(R_m - R_f)]$$

Wherein:

$J_p$  = Jensen Index of the portfolio  
 $R_p$  = average return of portfolio p during the period of observation  
 $R_f$  = average risk-free rate during the period of observation  
 $R_m$  = average market return during the period of observation  
 $\beta_p$  = Beta portfolio p

**d. Coefficient of Variation**

$$CV_i = \frac{\text{Risk}}{\text{Expected Return}}$$

Wherein:

$CV_i$  = coefficient of variation for assets number-i

**The Design of Hypothesis Testing**

In analyzing the differences in the performance of the portfolio, it can be done with Independent Sample T-test, because it's due to be tested whether there is any difference in the performance of each the portfolio, i.e. active strategy portfolio and passive strategy portfolio. The steps are as follows:

1. Formulate the hypothesis
  - $H_o : \mu_a = \mu_b$ , portfolio performance based on active strategy is not greater than passive strategy.
  - $H_a : \mu_{1,a} > \mu_{1,b}$ , portfolio performance using Sharpe ratio based on active strategy greater than passive strategy.
  - $H_a : \mu_{2,a} > \mu_{2,b}$ , portfolio performance using Treynor ratio based on active strategy greater than passive strategy.
  - $H_a : \mu_{3,a} > \mu_{3,b}$ , portfolio performance using Jensen alpha based on active strategy greater than passive strategy.
  - $H_a : \mu_{4,a} < \mu_{4,b}$ , portfolio performance using coefficient of variation based on active strategy smaller than passive strategy.
2. Determine the level of significance, that is 5%
3. Determine t-statistic with the help from SPSS software.
4. Testing criteria
  - Looking for the t-statistic of 1 side with the help of the computer
    - For the right side hypothesis testing
      - Ho accepted if the value of t-statistic  $\leq$  (t-table)
      - Ho rejected if the value of t-statistic  $>$  (t-table)

- For the left side hypothesis testing  
 $H_0$  accepted if the value of t-statistic  $\geq (-t\text{-table})$   
 $H_0$  rejected if the value of t-statistic  $< (-t\text{-table})$   
 Or  
 If  $\text{sig} > \alpha$  then  $H_0$  accepted  
 If  $\text{sig} < \alpha$  then  $H_0$  rejected
5. Deduce the statistic conclusion

## RESULT OF THE RESEARCH

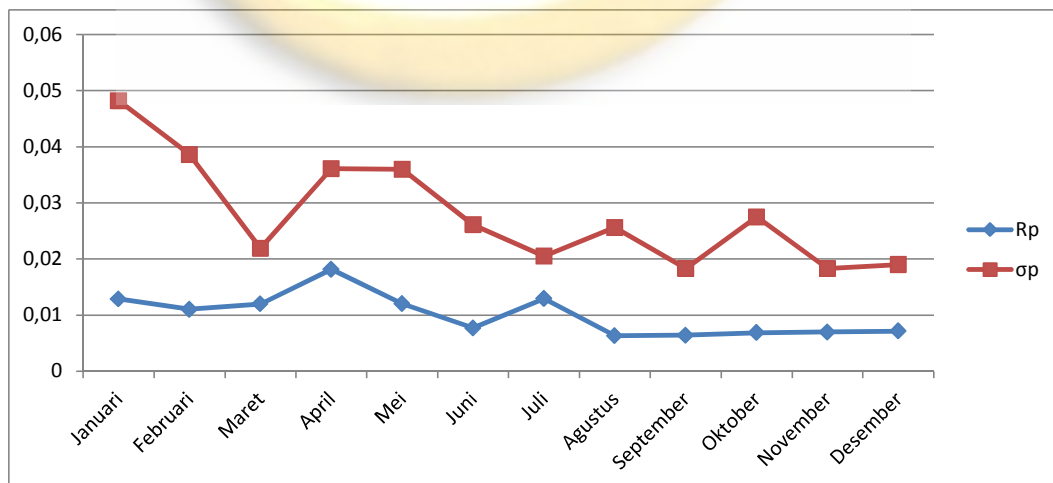
### Descriptive Analysis Result

The establishment of the portfolio is performed by using two strategies, namely active strategy and passive strategy, wherein the establishment of the portfolio by using these two strategies performed by compiling the portfolio on monthly basis for two years, i.e. 2009-2010. From the drafting process, only obtained 23 portfolio because the establishment through active strategies in May 2010 only consisted of one stock, that is UNVR, so it can not be included in the study sample.

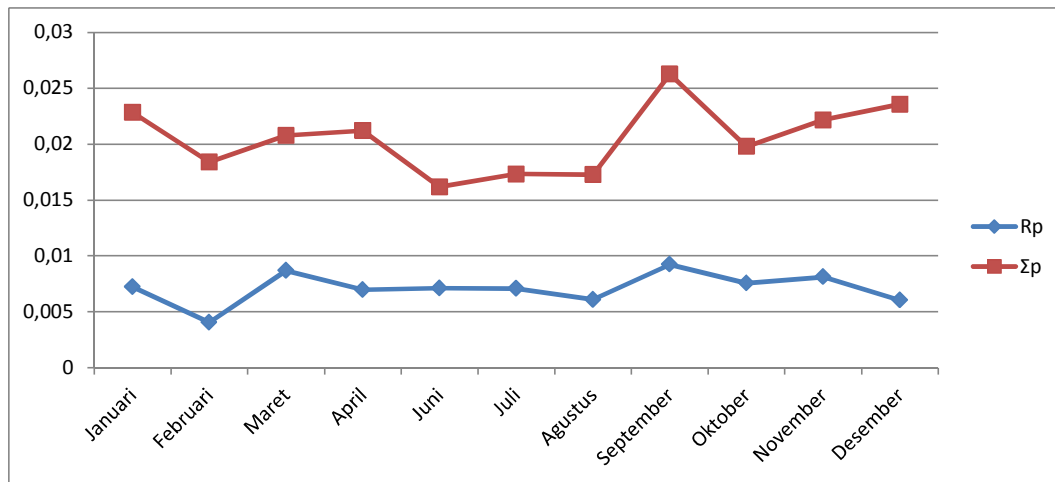
After the portfolio establishment, the next step is to evaluate the performance of the portfolio to compare the two strategies, which are calculated with risk adjusted return method (Sharpe Ratio, Treynor Ratio, and Jensen Alpha) which based on the combination of risk and return. In addition to the these measurements, another performance measurement that also include the risk and return factors in its calculation carried out, that is coefficient of variation. The coefficient of variation can be used to consider two factors simultaneously, where these factors are return expectations and risk assets.

### 1. Description of Portfolio Performance Based on Active Strategy

The establishment of the portfolio based on the active strategy provide a positive return value. In addition, it can be seen generally that the movement of the risk in line with the movement of return. In other words, higher return will be accompanied by higher risk, and vice versa. This indicates that the higher the return earned, the higher the risk that must be accepted.



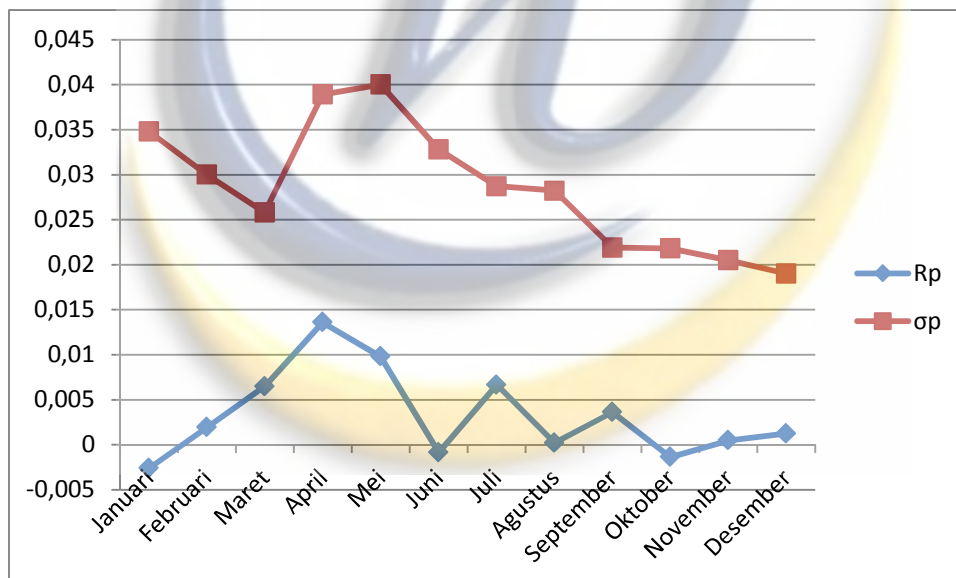
Picture 1.1 Return and Risk Active Portfolio 2009



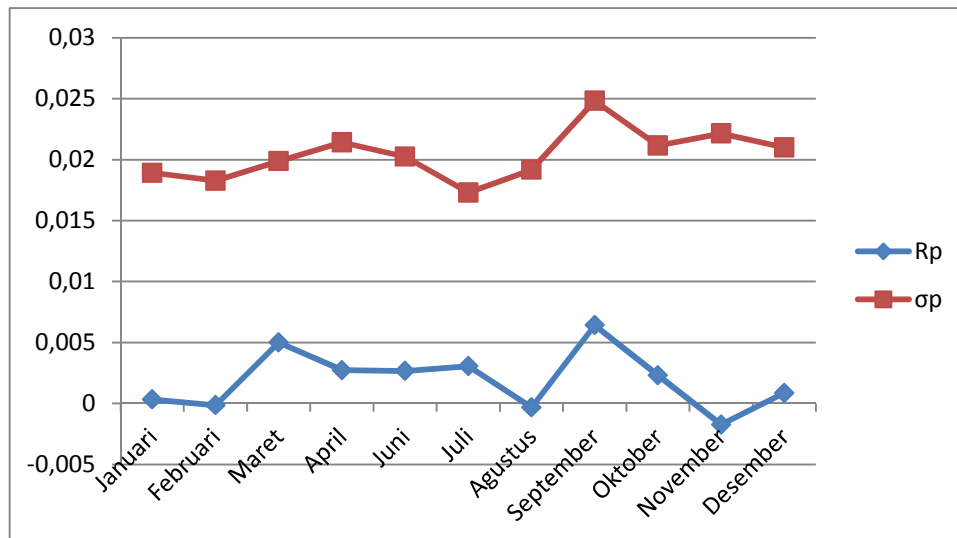
**Picture 1.2 Return and Risk Active Portfolio 2010**

## 2. Description of Portfolio Performance Based on Passive Strategy

The establishment of portfolio based on passive strategy provide an average positive return value. However, there are few months provide a negative return. This is due to the sub-optimal establishment of the portfolio, simply following the market index without attempting to earn abnormal returns. Unlike the active strategy, generally the risk moving to the opposite direction of the return. In other words, higher return accompanied with lower risk, and vice versa. This refutes the theory that states the higher the return, the higher the risk generated.



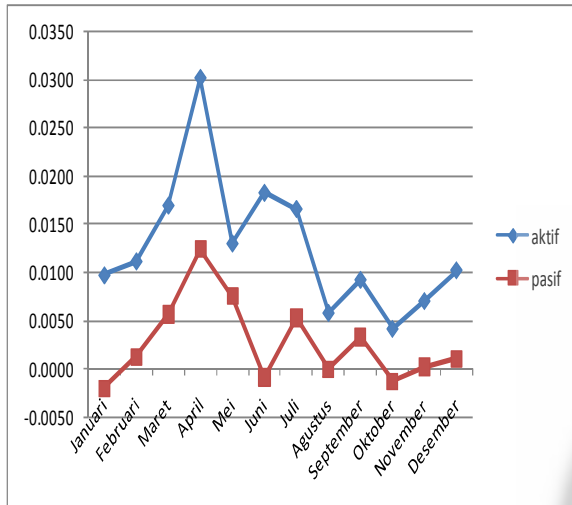
**Picture 1.3 Return and Risk Passive Portfolio 2009**



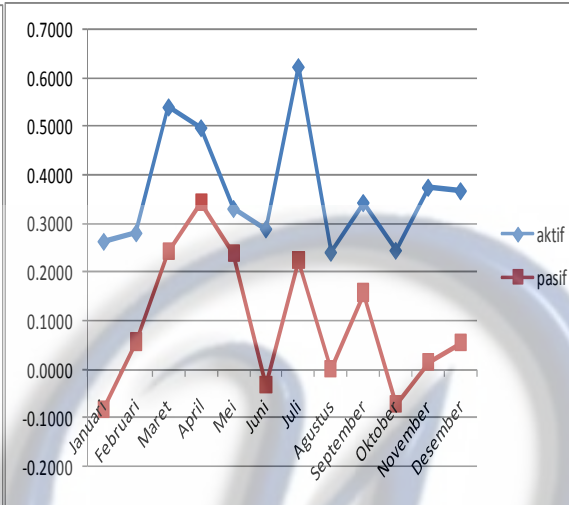
**Picture 1.4 Return and Risk Passive Portfolio 2010**

### **3. Performance Comparison of Active and Passive Period 2009-2010**

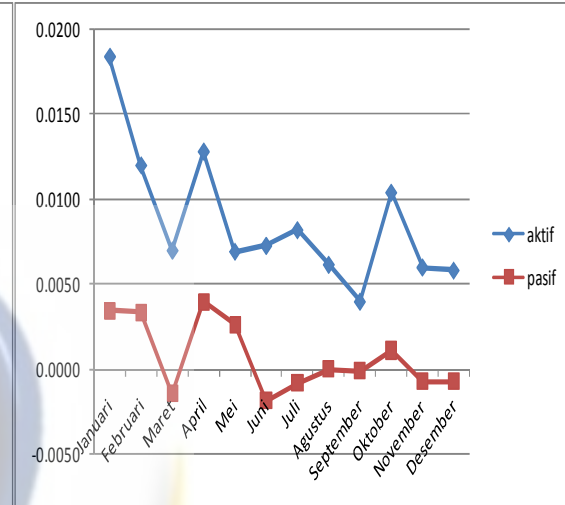
Based on Independent Sample T-test using SPSS 17, the study conducted on the four method (Sharpe, Treynor, Jensen Alpha) using the t test of the one part with a 5% significance level, obtained t-statistic (7,197, 6,939, 9,110) is greater than t-table  $\pm (1,717)$  and Coefficient of Variation method (-3,071) is smaller than -t-tabel ( $\pm 1,717$ ). This lead to the conclusion that the stock portfolio performance that is based on an active strategy is better than the passive strategy on LQ 45 stocks at the Indonesia Stock Exchange period 2009-2010. This is because on the active strategy, the investors is active in the decisions of buying and selling the stocks, with various information, both public and private, and also following the movement of the stock price to gain the best combination of stock that will provide an optimal return and abnormal return. Whereas in the passive strategy, the investor only based their stock movement on the market index movement so that the return generated only as big as the return of market index. The investors activity encourage high return and lowers the risk so that optimal result can be obtained and can exceed the market performance.



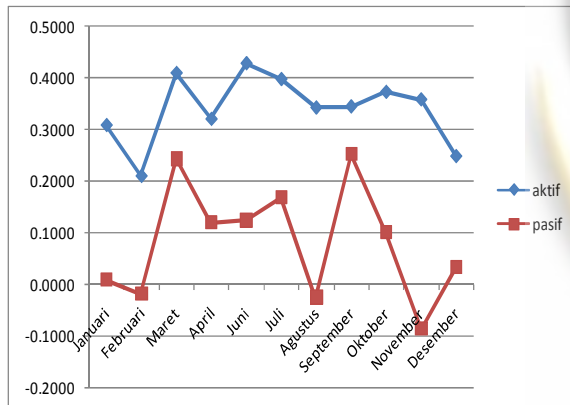
Picture 1.5 Sharpe Ratio 2009



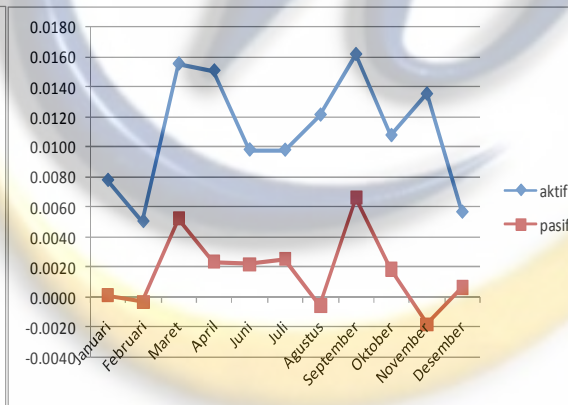
Picture 1.6 Treynor Ratio 2009



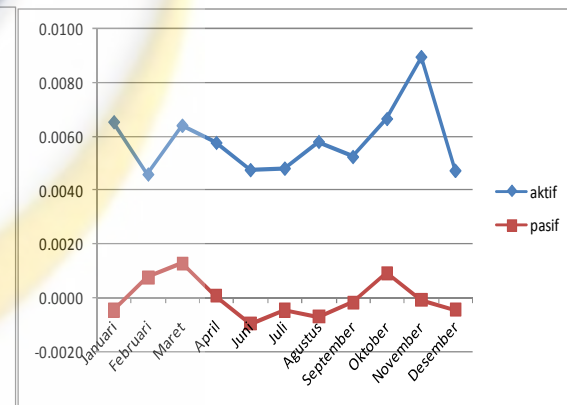
Picture 1.7 Jensen Ratio 2009



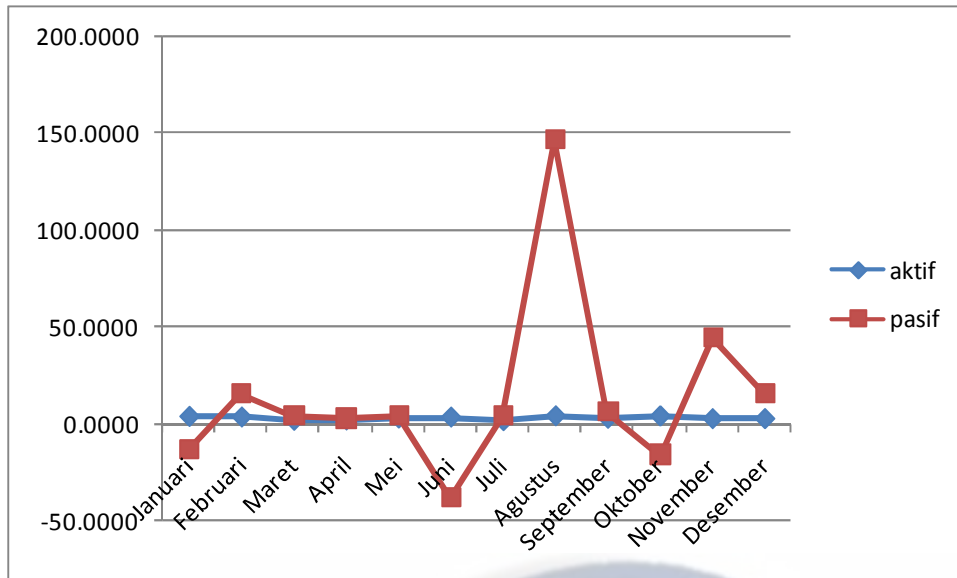
Picture 1.8 Sharpe Ratio 2010



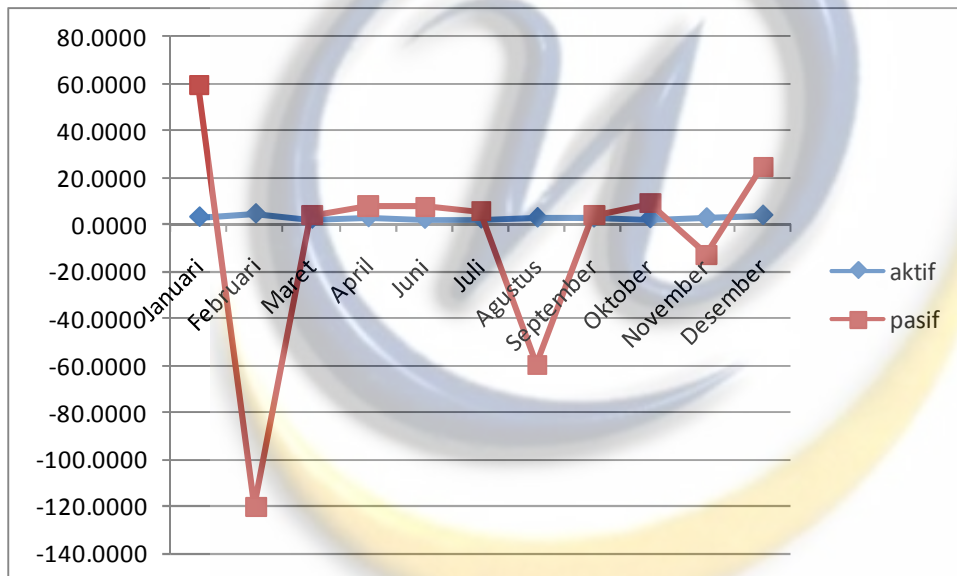
Picture 1.9 Treynor Ratio 2010



Picture 1.10 Jensen Ratio 2010



Picture 1.11 Coefficient of Variation 2009



Picture 1.12 Coefficient of Variation 2010

## CONCLUSIONS AND RECOMMENDATIONS

### Conclutions

Based on the results of research and statistical analysis presented in the previous chapter, it can be concluded as follows:

1. The performance of the stock portfolio using the method of sharp ratio, treynor ratio, Jensen alpha, and coefficient of variation based on the active strategy that is the stock selection by using Single Index Model, period 2009-2010 generate a positive performance. This means that the portfolio is good enough to compensate the total risk and the systematic risk with higher return, as well as the actual return is higher than the theoretical return of the investment and the performance is better than the market index.

2. The performance of the stock portfolio using the method of sharp ratio, treynor ratio, Jensen alpha, and coefficient of variation based on the passive strategy by adhering to LQ 45 index, period 2009-2010 can be summed that the performance of the portfolio are fluctuated, there's a positive performance and negative performance. This negative performance means that the portfolio failed to compensate the total risk and the systematic risk with higher return, as well as the actual return is smaller than the theoretical return of the investment, and the performance is not better than the market index. This is due to the certain months that most of the stocks provide a negative return so that overall the portfolio provide a negative returns. External factors also affecting the stock return of the company which is incorporated in LQ 45 index, i.e. changes in government policy, inflation, interest rates, deposit rates, and political and social stability in Indonesia.
3. Based on the results of the statistical analysis method of Sharpe, Treynor, and Jensen alpha obtained t-statistic (7,197, 6,939, 9,110) is greater than t-table  $\pm$  (1,717) and Coefficient of Variation method (-3,071) is smaller than -t-tabel ( $\pm$  1,717), and these four method has a significance level (0,000, 0,000, 0,000, and 0,004) smaller than alpha value (0,05). This means there is a significant difference between the performance of the active strategy portfolio and the passive strategy. Whereas the performance of the active strategy portfolio is better than the passive strategy. This is a worth the sacrifice for the active strategy in seeking information than the passive strategy that simply following an index.

### **Recommendations**

Based on the results of the analysis and conclusion, there are some suggestions that can be put forward, as follows:

1. For the Investors  
For investors and investment managers, the result of the study showing that active strategy is better than passive strategy can be a positive input to the investors. Nevertheless, a wise investors and investment managers need to calculate the cost of the strategy, because active portfolio strategy needs more cost compared to the passive portfolio strategy.
2. For the Subsequent Researcher  
The author suggested to the next researcher to expand the scope of its research, specifically:
  - 1) This study limited only to one index that is LQ 45 index. For scholars who wish to undertake further study, it is expected to be developed further, to change the object of research to all companies listed on the Indonesia Stock Exchange, so that the results obtained could better describe the general conditions and represent the whole.
  - 2) To compare the performance of active and passive portfolios with more objectivity, another method are recommended, e.g. for active portfolio using sector rotation method, or based on stock selection method but using other approaches such as the CAPM or CCM. As for the passive strategy, for example by trying to use a buy and hold strategy.
  - 3) In order to produce better data, it is recommended doing research with a longer period in order to obtain more accurate results.

## REFERENCES

- Bintariyaka, Dyana. 2006. Analisis Pembentukan Portofolio Optimal Untuk Pengambilan Keputusan Investasi.
- Bodie, Z., Kane, A., and Marcus, A. 2006. Investments. Jakarta: Salemba Empat.
- Elton, Edwin & Gruber, Martin. 2007. Modern Portofolio Theory and Investment Analysis. New York: John Wiley & Sons, Inc.
- Haryadi, Yogi. 2011. Analisis Perbandingan Kinerja Portofolio Optimum pada Jakarta Islamic Index dan LQ 45. (Tesis Sarjana yang tidak dipublikasikan, Program Magister Manajemen. Universitas Padjadjaran Bandung)
- Husnan, Suad. 2005. Dasar-dasar Teori Portofolio dan Analisis Sekuritas. Edisi keempat. Yogyakarta: UPP AMP YKPN
- Jogiyanto, H. M. 2008. Teori Portofolio dan Analisis Investasi. Edisi kelima. Yogyakarta: BPFE
- Jones, Charles P. 2002. Investments and Management. Eighth Edition. United State of America: John Wiley & Sons, Inc
- Rezadiansah, Muhammad Taufiq. 2010. Analisis Perbandingan Kinerja Portofolio Optimum Emiten Jakarta Islamic Index (JII) dengan Emiten Bisnis 27 menggunakan Single Index Model. (Tesis Sarjana yang tidak dipublikasikan, Program Magister Manajemen. Universitas Padjadjaran Bandung)
- Rudhiah. 2010. Analisis Perbedaan Kinerja Portofolio Saham Berdasarkan Strategi Aktif dan Pasif pada saham LQ45 di BEI periode 2007-2009.
- Sharpe, William F., Gordon J Aexander and Jeffery V Bailey. 2005. Investasi. Sixth Edition. Jakarta: Indeks.
- Sopyan, Oop. 2010. Analisis Perbandingan Kinerja Portofolio yang Dibentuk Menggunakan Strategi Portofolio Aktif dan Strategi Portofolio Pasif.
- Sugiyono. 2008. Statistika untuk Penelitian. Bandung: Alfabeta.
- Suryantini, Ni putu. 2007. Perbedaan kinerja portofolio berdasarkan strategi portofolio aktif dan pasif pada saham LQ 45 di BEJ. Bulletin studi ekonomi Volume 12 Nomor 3 Tahun 2007.
- Tandelilin, Eduardus. 2010. Portofolio dan Investasi. Yogyakarta: Kanisius
- [www.bi.go.id](http://www.bi.go.id)
- [www.finance.yahoo.com](http://www.finance.yahoo.com)
- [www.google.com](http://www.google.com)
- [www.idx.co.id](http://www.idx.co.id)