# OPTIMUM TURNOVER OF EQUITY INVESTMENTS: THE BEST PERFORMANCE IN MUTUAL FUNDS

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Measurement of equity funds committed so far, that was done several previous studies have only done manually, so the process is more vulnerable to errors, the result is a slower, less accurate, less rapidly. The findings of this study with previous differentiate is in the measurement of equity funds used all approaches methods Sharpe, Mayer, Treynor and Jensens models, and information sharpe ratio, also financial information system applications as media performance measurement system in mutual fund shares. Knowing how to interpret this information correctly will make it easier for investor to make responsible and informed investment recommendations to their investors. Based on the calculation results in mutual and stock, mix and fixed income using the Sharpe model of it, it can be concluded that the fund Batavia Shares Fund Optimal who had the best performance, this is caused because Batavia mutual funds equity fund Optimal has a return value of the highest in comparison with other funds. Based on the calculation results in mutual and stock, mix and fixed income using methods Sharpe, Mayer, Treynor and Jensens models then, it can be concluded that the fund Shares Fund Optimal who had the best performance, this is caused because Batavia mutual funds equity fund Optimal has a return value of the highest in comparison with other funds.

*Key Word:* Risk, Turnover, Mutual Fund Performance

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## INTRODUCTION

A portfolio manager's selection of securities should be consistent with the mutual fund's investment objective, which is stated in the fund's prospectus. In the mutual fund literature, several studies documented that mutual funds tend to be misclassified. For example, Kim *et al.* (2000) shows that, on average, only 46% of the mutual funds in the sample land on the same groups as the stated objectives. Bartolomeo and Witkowski (1997) document that around 40% of the equity funds are misclassified. Brown and Goetzmann (1997) find about 50% of the growth fund were misclassified. This misclassification has resulted in increased risk exposure for fund shareholder without the appropriate risk adjusted returns.

Few of the studies of mutual funds have taken advantage of the substantial backlog of theoretical and empirical material made available by recent studies in these related areas. However, one paper pointing the direction for future studies of mutual fund performance has appeared. Drawing on results obtained in the field of portfolio analysis, Jack L. Treynor has suggested a new predictor of mutual fund performance one that differs from virtually all those used previously by incorporating the volatility of a fund's return in a simple yet meaningful manner.

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This paper attempts to extend Trey nor's work by subjecting his proposed measure to empirical test in order to evaluate its predictive ability. But we will also attempt to do something more-to make explicit the relationships between recent developments in capital theory and alternative models of mutual fund performance and to subject these alternative models to empirical test.

Many investors believe that the Indonesia is in a period of great uncertainty in its investment markets. This is a conclusion that applies during all market conditions—except in hindsight. The risk an investor takes is what provides the opportunity for higher returns. Recognizing this makes it clear that more emphasis should be placed on risk analysis when investors and their manager in make investment their decisions. Risk and return analysis must be most interest to mutual fund.

Focusing on the long-term relationship between risk and return will enable investors to establish realistic expectations as to expected performance under various market conditions. Investors need objective criteria concisely communicated to enable them to understand the risks and turnover that accompany these return so they can make rational mutual fund selections. Unfortunately, the financial press often treats mutual fund investors as though they are incapable of understanding basic risk statistics and the fundamental relationship between risk and return that should drive all investment decisions.

Mutual funds can be distinguished from one another by selecting the type and composition of the securities in the investment portfolio and according to the investment strategy selected by the investment manager, the money market funds, fixed income funds, (without the element of stock), equity funds and mutual funds mix. Some of the analysis showed that although the fund still contains risk, but remain attractive to investors as an investment product that provides a relatively large return after deducting operational cost and management fees.

When there is uncertainty about whether future returns mutual funds will differ from the expected returns. Turnover and Risk is an attribute that without context is neither good nor bad. Accordingly, the investors role is not to eliminate risk (few clients would be successful in funding their long-term goals with predictable Treasury bill returns) but, rather, to control risk and to make sure that investors are adequately compensated for the risks they take. The difference between the required rate of return on a mutual fund given its risk and the risk-free rate is the risk premium.

There are many sources of uncertainty that determine the mutual fund performance, including turnover, market risk, business risk, liquidity risk, financial risk (leverage), duration and credit risk for bonds and political and currency risk for international assets. Investment portfolio risk generally is classified as either systematic or unsystematic.

Simply stated, systematic risk is the portion of a portfolios risk that is market related or influenced. Unsystematic risk is the part that is unrelated to the market

and is, instead, attributable to unique factors within the particular mutual funds portfolio. For example, a portfolio that is heavily weighted toward auto stocks would be subject to the risks associated with negotiating a new union contract (unsystematic risk) as well as those from the overall market (systematic risk).

Measurement of equity funds committed so far, as well that was done several previous studies have only done manually, so the process is more vulnerable to errors, the result is a slower, less accurate, less rapidly. It takes a computer-based information system support so the results will be better, faster and accurate. In this study will be designed application-based performance measurement of mutual fund shares financial information systems so that the results are more comprehensively. The data sample used in series more variations and updates. In this study will be continued with the creation of application systems supporting performance measurement of mutual funds to continue the model design data base that has been done in previous studies.

## LITERATURE REVIEW

### Portfolio

Portfolio analysis theory per se makes no assumptions about the pattern of security prices or the skill of investment managers. Thus few implications can be drawn concerning the results obtained by different mutual funds. Performance ex post might vary in two respects. First, different funds could exhibit different degrees of variability in return, due either to conscious selection of different degrees of risk or to erroneous predictions of the risk inherent in particular portfo- lios. Second, funds holding portfolios with similar variability in return might exhibit major differences in average re- turn, due to the inability of some manag- ers to select incorrectly priced securities and/or to diversify their holdings prop- erly. In short, if sound mutual fund man- agement requires the selection of incor- rectly priced securities, effective diversi- fication, and the selection of a portfolio in the chosen risk class, there is ample room for major and persisting difference.

Under these conditions, what are the tasks of the mutual fund? Broadly defined, they still include security analysis, portfolio analysis, and the selection of a portfolio in the desired risk class. But the emphasis is changed. Security analy- sis is directed more toward evaluating the interrelationships among securities- the extent to which returns are correlat- ed. And portfolio analysis is concerned primarily with diversification and the selection of a portfolio of the desired risk. In a perfect capital market, any properly diversified portfolio will be efficient; the mutual fund manager must select from among alternative diversified portfolios the one with the appropriate degree of risk. Strictly speaking, the implications of this view of the world for mutual fund performance do not differ from those of the theory of portfolio analysis. Ex post, funds can be expected to exhibit differ- ences in

variability of return, due to in- tentional or unintentional selection of different risk classes. And the portfolios of some funds may be more efficient than others (i.e., give greater average return at the same level of variability) if manag- ers differ in their ability to diversify effectively. However, the likelihood that persistent differences in efficiency will occur is greatly reduced. Recent work has shown that the task of diversification may be much simpler than- formerly sup- posed, requiring only the spreading of holdings among standard industrial classes. 7 If so, most funds are likely to hold portfolios that are efficient ex ante. Any differences in efficiency ex post are thus probably transitory. The only basis for persistently inferior performance would be, the continued expenditure of large amounts of a fund's assets on the relatively fruitless search for incorrectly valued securities. Sharpe, William F (1966).

Portfolio selection theory defines the roles of three market participants: the portfolio analyst, the security analyst, and the investor . Works by Markowitz (1955), Sharpe (1963), and Fama (1965) outline market taxonomy. The portfolio analyst estimates anticipated results through expected portfolio performance and its underlying risk – and selects the most efficient portfolio. The security analyst predicts the performance of individual securities (within the portfolio) including the relationships between different securities. The investor, presented with an array of efficient portfolios must then factor in his risk profile in selecting the portfolio that optimizes the combination of risk and expected returns. Sharpe maintains that the performance of mutual funds can vary because of risk. This risk can either be a high-risk strategy that did not succeed; or, just poor execution by the manager (who is both portfolio and security analyst.) (Bacon, Frank, 2009).

Harry Markowitz (1952) provides a theory about how investors should sele, t securities for their investment portfolio given beliefs about future performance. He claims that rational investors consider higher expected return as good and high variability of those returns as bad. From this simple construct, he says that the decision rule should be to diversify among all securities, securities which give the maximum expected returns. His rule recommends that the portfolio with the highest return is not the one with the lowest variance of returns and that there is a rate at which an investor can increase return by increasing variance. This is the cornerstone of portfolio theory as we know it.

William Sharpe (1964) and John Lintner (1965) separately extend the work of Markowitz. They show that the theory implies that the rates of return from efficient combinations of risky assets move together perfectly (will be perfectly correlated). This could result from their common dependence on general economic activity. If this is so, diversification among risky assets enables investors to escape from all risks, except the risk resulting from changes in economic activity. Therefore, only the responsiveness of an asset return to changes in economic activity is relevant in

assessing its risk. Investors only need to be concerned with systematic risk [beta], not the total risk proposed by Markowitz.

Veit and Cheney (1982) investigated the ability of mutual funds managers to adjust the risk level of funds to leverage the ability to time the market. They test the null hypothesis that alphas and betas are the same in bull and bear market using annual data for 74 funds over the 1944-78 periods. The sample was sub-divided into balanced funds, income and growth to examine differential effects by investment objective. The Financial Express Investment Magazine (1997) conducted a study jointly with Value Research, a pioneer in tracking mutual funds in India, which shows that the bond funds have emerged as winners, while equity funds plunged deeper into red.

**Turnover**

Sharpe (1995) states that the return and risk are two characteristics of the investment, because it is very important to know its origin that cause must be identified and evaluated. This is the main task of the security analysis and the results are crucial elements to form a portfolio, make revisions, evaluate and establish a long-term investment strategy.

Yield is the return that reflects the components of cash flow or income derived from an investment periodically. While the capital gain is the rise in prices of securities (equity or long-term debt), which can provide keuntun gan for investors. Summation yield and capital gain is referred to as total return of an investment (Tandellin, 2001). Return is a reward for the courage of investors bear the investment risk undertaken. Sources of investment return consisting of two main components, namely yield and capital gain. Risk is the possibility of differences between the actual return earned by the expected return. The risk of a portfolio of stocks depends on the proportion of individual stocks, variance, and covarians of these stocks. The changes in these variables will change the risk of the portfolio. Related to that, it is a general truth that when stocks are randomly selected and combined into a portfolio, then the risk of the portfolio will decrease according to the number of different stocks added (Statman, 1987).

**Risk**

The preponderance of research on mutual fund performance focuses on the relationship between mutual fund returns and historical risk (e.g., Fama & Macbeth, 1973; Fama & French, 1992). As one might expect, the reported relationship between returns and risk is positive. According to Markese (1999), "higher returns come with higher risk" (p. 7). The most common measure of risk is standard deviation (Barber, 1994; Cloonan, 2002). Droms and Walker (1995), using standard deviation as a measure of risk, determined that equity mutual fund performance was most highly correlated with variation in annual fund returns, that is, risk.

*Measuring Risk*

Since assuming risk is inherent to the investment process, mutual fund investors must be adequately and consistently rewarded for the risks they assume. Prudent research means searching for fund managers who consistently produce returns justifying the risks they have taken.

Modern portfolio theory research developed a number of statistics that make it possible to more precisely quantify the relationship between risk and return. These measurements help determine, a funds volatility (standard deviation).

- How closely a fund mirrors a particular market index ($R^2$).
- How volatile a fund is compared with that market index (Beta).
- How much of a funds risk-adjusted return is created by a talented manager (Alpha).

*Standard deviation*

Standard deviation is a measure of dispersion. As it relates to investing, it is a measure of how much individual returns vary from the average expected return over a certain period of time. Since the performance history of mutual funds often is reported on the basis of 1-, 3-, 5- or 10-year average annual returns, it is important for CPAs to understand how consistent those returns have been. A high 10-year average annual return may have been achieved by a few outstanding years combined with several mediocre ones. While the average may seem acceptable, the year-to-year swings in performance may not be acceptable to a clients risk tolerance.

*R-squared ($R^2$)*

The coefficient of determination (known as R-squared) measures the percentage of a mutual funds movement that corresponds to its benchmark index. That is, the $R^2$ shows how much of a funds performance—expressed as a percentage—is explained by the market (systematic risk). Conversely, the difference between a funds $R^2$ and 100% indicates how much of that performance is unique to the fund (unsystematic risk) rather than to the market. $R^2$ often is referred to as the "goodness of fit" between a fund and the market index it is benchmarked against.

**Portfolio Performance Measure**

To give a better understanding of these numbers mentioned above, a brief definition of mutual funds will be useful. A mutual fund can be defined as a pooled investment from many investors. It collects resources from individuals to subsequently invest these in bonds, stocks and other securities. Through this way investors are able to distribute their money over more securities than one person could generally put in a portfolio. The proportionate ownership of each investor is represented in the number of shares. Investors can buy shares in funds,

but the number of shares being issued varies according to demand (Cuthbertson, Nitzsche, O Sullivan, 2008).

### Sharpe's Measure

Sharpe ratio reflects the additional return over the Risk-Free return per unit of its variability. It is basically return per unit of risk. The rule states that the higher the Sharpe ratio, the better the fund's performance is in relation to the amount of fluctuation. It can be explained through the formula:

$$R/V = \frac{(Rp - Rf)}{\sigma p} \tag{2.1}$$

where:
S = Sharpe's Index;
Rp = average monthly return of fund;
Rf = risk free return Risk free return (rf) is taken as 3.40% per annum

### Treynor Measure

Jack L. Treynor was the first to provide investors with a composite measure of portfolio performance that also included risk. Treynor's objective was to find a performance measure that could apply to all investors, regardless of their personal risk preferences. He suggested that there were really two components of risk: the risk produced by fluctuations in the market and the risk arising from the fluctuations of individual securities. It can be explained through the formula:

$$R/Vt = \frac{(Rp - Rf)}{\beta p} \tag{2.2}$$

### Jensen Measure

Like the previous performance measures discussed, the Jensen measure is also based on CAPM. Named after its creator, Michael C. Jensen, the Jensen measure calculates the excess return that a portfolio generates over its expected return. This measure of return is also known as alpha. Jensen's Alpha reflects the return that is expected for the scheme given the risk exposure of the scheme and compares that with the return actually realized over the period under study. If the actual return of the fund is more than the return as predicted by its Beta, then it has a positive alpha, and if it returns less than the amount predicted by Beta, the fund has a negative alpha. A fund's return and its risk both contribute to its Alpha value. The higher a funds' risk level, the greater the returns. It must generate in order to produce a high Alpha which becomes more volatile. Systematic risk can be reduced through proper diversification of the portfolio of the fund. It can be explained through the formula:

$$E(Rj) = Rf + \beta j \ [E(Rm) - Rf \qquad (2.3)$$

**Turnover**

For certain categories of funds, it is acceptable that they will have high turnover ratio. Money market mutual funds invest in short-term interest bearing securities, for which it carries a high turnover ratio. Again, growth mutual funds will carry high turnover ratio as the investment objective is to constantly be on the lookout for sectors poised to be the forthcoming leaders.

On the other hand, value mutual funds are said to maintain low turnover ratios as they look to invest in undervalued securities and wait for them to reach the targeted value. Index funds too will carry low turnover ratios. This is because buying and selling is only needed when there is a change in the underlying index. It can be explained through the formula:

$$\text{Turnover} = \frac{Net\ Sales}{Aset\ Average} \qquad (2.4)$$

**Risk**

In the investing world, the dictionary definition of risk is the chance that an investment's actual return will be different than expected. Technically, this is measured in statistics by standard deviation. Risk means you have the possibility of losing some, or even all, of your original investment. coording to the viewpoint of investors, the fact that a particular stock will go up or down is not very important; what is important is the rate of return of the portfolio, and the portfolio. The set of feasible portfolios represents all portfolios can be produced from a given set of assets. An efficient portfolio is a portfolio that offers a lot of returns of a given number of risks or at least the risk of a number of return. Optimal portfolio for portfolio investors is considered the likely highest indifference curve that intersect with the set of efficient portfolio.

**RESEARCH METHOD**

Cooper & Schinder (2005) stated that explanatory research is research that explains the causal relationship and correlation between variables through hypothesis testing. The method used in this study with explanatory research is in aim to explain the relationship between the variables through hypothesis testing based on field data, namely: the turnover rate and the level of risk on the performance of mutual fund shares. To compile financial information system used Control Information System. The main stages of the life cycle financial information system will be developed consisting of 6 (six) phases as follows: 1). Planning Systems , 2). Analysis System, 3). System Design, 5). System Design, 6). Implementation and Maintenance System.

Variable Operational Research

Dependent Variable, Mutual Fund Performance (MFP).

Mutual Fund Performance measurement is done to show the manager's success in achieving the investment objectives that have been set. In this study, the method of calculation of return on funds used is Treynor Model. The equation for calculating Treynor Model is:

$$R/Vt = \frac{(Rp - Rf)}{\beta p} \quad (3.1)$$

Independent Variable (To), Risk Rate (RR).

Turnover (To)

Turnover (Turnover) is the ratio between the sale or purchase of a lesser extent with the total assets of mutual funds. Formula for measuring the rate of turnover is:

$$Turnover = \frac{penjualan}{rata - rata\, aktiva} \times 1 kali \quad (3.2)$$

Risk Rate (Risk) (RR)

Risk (risk) is the shape of the state of uncertainty about a situation that will happen later with a decision taken by a consideration. Formula for measuring risk is:\

$$Varian(\sigma^2) = \frac{(R_i - \bar{R_i})^2}{n - 1} \quad (3.3)$$

Standar deviation:

$$Std\, Deviasi = \sigma = \sqrt{\sigma^2} \quad (3.4)$$

## Data analysis

Multiple regression analysis was used to test the effect of two or more independent variables on the dependent variable. The independent variables in this study is the turnover and the level of risk. Independent variable is the performance of mutual fund shares. The equation to test the overall hypothesis in this study is as follows:

$$Y = \alpha + \beta_1 To_1 + \alpha_2 Rs + \mu \quad (3.5)$$

## RESEARCH RESULT

## Mutual Fund Performance Shares

Once done it ranking mutual funds using the method of stock selection can then equity funds are the most superior by each method. In the method of Treynor Batavia stock funds that have performed well, the method of Jansen mutual funds Batavia equity funds optimally as well as a mutual fund that is the most superior,

the method of Sharpe mutual funds Batavia equity funds optimally also has the highest score and on methods Information ratio is mutual prospect funds wisely. Fourth equity fund is an equity fund that is experiencing significant growth compared to other mutual funds. Total fourth-risk mutual funds are relatively small with non-systematic risk mutual fund products is smaller than the risk of non - systematic other mutual fund products. It is caused by an equity fund consisting of 80% stocks, so mutual funds diversified in different types of stocks and maximum 20% in money market instruments.

The country characteristics can explain mutual fund performance beyond fund attributes. There is a positive relation between mutual fund performance and the country's level of fi nancial development. In particular, mutual funds have better performance in countries with 3 high trading activity and low transaction costs. The level of economic development is of particular importance for domestic funds. Funds located in countries with strong legal institutions and investor protection tend to perform better. The positive link between the overall level of a country's development and fund performance support that the home trading, legal, and knowledge environment are important in explaining performance worldwide. Finally, familiarity arguments explain the performance of mutual funds, especially foreign funds, as they obtain better performance when investing in countries that are geographically close and countries that share a common language.

Should a mutual fund investor pay for active fund management? Generally, the answer is no. A number of studies have concluded that the average actively managed fund loses to a low cost index fund, net of all fees and expenses.1 However, active managers are not all equal: They differ in how active they are and what type of active management they practice. These distinctions allow us to distinguish different types of active managers, which turns out to matter a great deal for investment performance. How should active management be measured? For example, consider the Growth Fund of America, currently the largest equity mutual fund in the United States.

The fund's portfolio can be broken down into two components: the S&P 500 Index, which is the passive component, and all the deviations from the index, which constitute the active component. If the fund is overweight in a particular stock relative to the index, it effectively has an active long position in that stock; if the fund is underweight in a particular stock relative to the index, it has an active short position in that stock. At the end of 2009, investing $100 in the fund was equivalent to investing $100 in the S&P 500, together with $54 in the fund's active long positions and $54 in the fund's active short positions. The size of these active positions as a fraction of the portfolio54% in this case is what I call the Active Share of the fund. Intuitively, it tells us the percentage of the portfolio that differs from the passive benchmark index. A common alternative metric is tracking error, which measures the time-series standard deviation of the return on the active

positions. In my study, following Cremers and Petajisto (2009), I divided active managers into several categories on the basis of both Active Share, which measures mostly stock selection, and tracking error, which measures mostly exposure to systematic risk.

Active stock pickers take large but diversified positions away from the index. Funds that focus on factor bets generate large volatility with respect to the index even with relatively small active positions. Concentrated funds combine very active stock selection with exposure to systematic risk. Closet indexers do not engage much in any type of active management. A large number of funds in the middle are moderately active without a clearly distinctive style. Petajisto, Antti, 2013).

Samsul Mohamad (2009: 301) states that an investment portfolio in various financial instruments or also called diversification. The portfolio is intended to reduce investment risk by spreading funds to different assets so that the assets suffered a temporary loss of other assets not suffered a loss, then the value investation not lost all.

## Turnover Effect of Financial Performance Against With Sharpe Approach

The independent variables in this study were Turnover and Risk, while the dependent variable is the performance equity fund with sharp approach models. The test results of multiple linear regression in this research can be seen as follows:

TABLE 4.1: HASIL UJI REGRESI LINIER BERGANDA

| Model | B |
|---|---|
| Constant | -8,073 |
| Turnover | 11,909 |
| Risk | 37,878 |

From table 4.1 above can be formulated a regression equation to determine the effect on the Performance and Risk Turnover Equity funds with Sharpe approach models are as follows:

$$MFPs = \beta_0 + \beta_1 To + \beta_2 RR + \varepsilon$$
$$MFPs = -8,073 + 11,909 To + 37,878 RR + \varepsilon$$

The constant of -8.073, indicating that if there is a change in the independent variable (Turnover and Risk), the mutual fund performance will be decreased by -8073. The regression coefficient for TRT = 11.909, states that any increments of one unit TRs (Turnover) it will raise the performance Mutual funds amounting to 11.909. The regression coefficient for Rs = 37.878, states that any increments of one unit of Rs (Risk) will increase Mutual funds performance amounted to 37.878.

The hypothesis that "there Turnover influence on the performance of equity funds with Sharpe approach" in decline. These test results demonstrate empirically that for the case of mutual fund performance, turnover did not affect the performance

of mutual funds. The results indicate that the effect does not decrease or increase in turnover will not affect the increase or decrease in the performance of mutual funds. This has an impact on investors' decision to invest in mutual funds.

The relationship between turnover and performance of mutual funds Grinblatt and Titman (1994) ie the higher the portfolio turnover rate, the greater the return that may be in the can. The influence coefficient of turnover showed a superior performance indirectly shows that the manager is better to trade more to take advantage of superior information they had. Sharpe equity fund has a coefficient of 0,470 by 0,470 t count < t table 2.77645 and 0.720 significance value> 0.05 at 95% confidence level ($\alpha$ = 0.05 %), which explains that Ha1 rejected and H1 accepted, meaning Turnover assets (turnover) has no effect on the performance of equity funds with Sharpe approach models.

**Turnover Influence on Performance of Mutual Funds Stocks with Treynor**

TABLE 4.2: HASIL UJI REGRESI LINIER BERGANDA

| Model | B |
|-------|------|
| Constant | -0,365 |
| Turnover (To) | 6,280 |
| Rate Risk (RR) | 1,328 |

From table 4.2 above can be formulated a regression equation to determine the effect on the Performance and Risk Turnover Equity funds with Sharpe approach models are as follows:

$$\text{MFPt} = \beta_0 + \beta_1 \text{ To} + \beta_2 \text{ RR} + \varepsilon$$
$$\text{MFPt} = -0,365 + 6,280\text{To} + 1,328 \text{ RR} + \varepsilon$$

Constants of -0,365 indicates that if there is a change in the independent variable (Turnover and Risk), the mutual fund performance will be decreased by -0,365. The regression coefficient for TRT = 6,280 , stating that any increments of one unit of TRT (turnover) will increase by 6,280 Mutual funds performance. The regression coefficient for Rt = 1,328, stating that any increments of one unit Rt (Risk) will increase Mutual funds performance amounting to 1,328.

Models approach The hypothesis that "there Turnover influence the performance of mutual fund shares by Treynor approach model" in decline. These test results demonstrate empirically that for the case of mutual fund performance, turnover did not affect the performance of mutual funds. The results indicate that the effect does not decrease or increase in turnover will not affect the increase or decrease in financial performance. This has an impact on investors' decision to invest in mutual funds. The relationship between turnover and performance of mutual funds Grinblatt and Titman (1994) ie the higher the portfolio turnover rate, the greater the return that may be in the can. The influence coefficient of turnover showed a superior performance indirectly shows that the manager is better to trade

more to take advantage of superior information they had. Treynor equity fund has a coefficient of 0.178 Based tcount 0.178 <ttabel 2.77645 and 0.888 significance value> 0.05 at 95% confidence level ($\alpha = 0.05\%$), which explains that the $H_2$ $Ha_2$ accepted and rejected, meaning Turnover assets (turnover) has no effect on the performance of mutual fund shares by Treynor approach models.

## Turnover Influence on Performance of Mutual Funds Stocks With Jansen models approach

TABLE 4.3: HASIL UJI REGRESI LINIER BERGANDA

| *Model* | *B* |
|---|---|
| Constant | 1,443 |
| Turnover | 1,758 |
| Risk | 2,121 |

From table 4.3 above can be formulated a regression equation to determine the effect on the Performance and Risk Turnover Equity funds with Sharpe approach models are as follows:

$$MFPt = \beta_0 + \beta_1 \, To + \beta_2 \, RR + \varepsilon$$
$$MFPt = 1,443 + 1,758 \, To + 2,121 RR + \varepsilon$$

The constant of 1.443, indicating that if there is no change in the independent variable (Turnover and Risk), the mutual fund performance will be increased by 1,443. The regression coefficient for TRJ = 1.758, stating that any increments of one unit TRJ (turnover) will increase by 1,758 Mutual funds performance. The regression coefficient for Rj = 2.121, stating that any increments of one unit Rj (Risk) will increase mutual funds performance.

The hypothesis that "there Turnover influence the performance of mutual fund shares by Jansen approach model" in decline. These test results demonstrate empirically that for the case of mutual fund performance, turnover did not affect the performance of mutual funds. The results indicate that the effect does not decrease or increase in turnover will not affect the increase or decrease in financial performance. This has an impact on investors' decision to invest in mutual funds.

The relationship between turnover and performance of mutual funds Grinblatt and Titman (1994) ie the higher the portfolio turnover rate, the greater the return that may be in the can. The influence coefficient of turnover showed a superior performance indirectly shows that the manager is better to trade more to take advantage of superior information they had. Results of the analysis showed that the average Jansen in table 4.7 can be seen that the average sharpe highest in mutual fund shares fund Batavia optimal value -180.4% this was due to the increase and decrease in interest rates Indonesia (SBI) rate increase fuel, and inflation.

**Information Ratio**

TABLE 4.4: MULTIPLE LINEAR REGRESSION TEST RESULTS

| Model | B |
|---|---|
| Constant | 1,00 |
| Turnover | 0,002 |
| Risk | 0,001 |

From table 4.4 above can be formulated a regression equation to determine the effect on the Performance and Risk Turnover Equity funds with Sharpe approach models are as follows:

$$MFPir = \beta_0 + \beta_1 To + \beta_2 RR + \varepsilon$$
$$MFPir = 1,00 + 0,002 To + 0,001 RR + \varepsilon$$

Constants of 1,000, indicating that if there is no change in the independent variable (Turnover and Risk), the mutual fund performance will be increased by 1,000. The regression coefficient for TRir = 0.002, stating that any increments of one unit TRir (turnover) will increase by 0,002 Mutual funds performance. The regression coefficient for RIR = 0.001, stating that any increments of one unit RIR (Risk) will increase Mutual funds performance 0,001.

Mutual funds wisely prospects has the greatest value in the variable information ratio of mutual fund shares that is equal to 1.00019 greater than 0 indicating that the Investment Manager at the Mutual Fund shares have the ability to stock selection in accordance with the explanation (Adler, 2009: 42). In the calculation of the return value of mutual funds, stock funds optimal Batavia also has the highest return value that is equal to 0.2414. In the calculation of return and risk, Mutual Fund shares have accumulative return of 0.17036 and also has a high risk relatively small portfolio with a value beta (β) by 1.71. This indicates that the investment manager of Mutual Fund shares have performed quite well in managing its portfolio in accordance with the theory of CAPM (Mohammad Samsul, 2009: 302), which describes the return value of the portfolio would be expected in a portfolio of assets that are at risk, but it reinforced the theory that explains that the higher the expectations of an investment (return) the higher the likelihood of risks (higher return, higher risk) (Pratomo & Ubaidullah, 2009: 24). In the method of information ratio shows positive results this happens because IR mutual funds (1.00019) is greater than the market IR (0) it is also supported by a study done by the halcyon Magdalena and Amelia Apriciajam (2012) which states that if IR mutual funds is greater than the IR market will show a positive result.
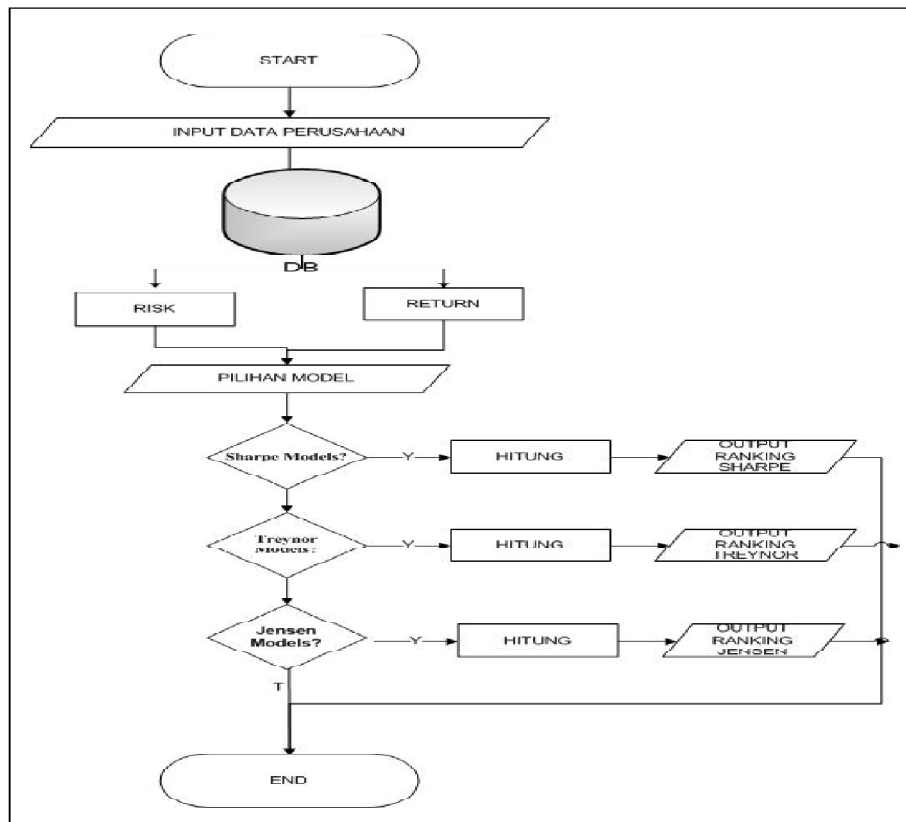
**Financial Information Systems Performance Mutual Fund Shares**

In this study comes with the manufacturing data base and information systems. Application performance of mutual funds information system is used which can be inputted by a data base offline. The users can take advantage of this application

so that it can measure the performance of mutual funds with Sharpe model approach, Jensen and Mayer models. Therefore, it can be easy to count and occurs efficiently. As for stage and implementation is done in the preparation of the Financial Information System application performance Stocks Mutual Funds are as follows:

(1) Systems Planning

(2) System Analysis

(3) Systems Design

(4) System Selection

(5) Systems Design

(6) System Implementation & Maintenance

Analysis of financial information system performance stock mutual funds. Stages in the preparation of financial information systems are presented in the following flowchart:



**Figure 1:** Flowchart financial information system performance stock mutual funds

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

1) Turnover Rate affect the performance of equity funds in which the good performance of mutual funds occurs in mutual funds with high activity trading. The higher the turnover rate, the greater the return that may be obtained.

2) The level of risk affect the performance of stock mutual funds where the highest return on equity funds showed optimal mutual fund, the higher the risk of a mutual fund, the higher the yield (return) is obtained, so that the better performance of a mutual fund.

3) Based on the calculation in mutual and stock, mix and fixed income using the Sharpe model of it, it can be concluded that the fund Batavia Shares Fund Optimal who had the best performance, this is caused because mutual funds *Batavia* stock funds optimal value highest return compared to other mutual funds.

4) Based on calculations in mutual and stock, mix and fixed income using methods Treynor models then, it can be concluded that the fund Batavia Shares Fund Optimal who had the best performance, this is caused because mutual funds Batavia stock funds optimal value highest return compared to other mutual funds.

5) Based on calculations in mutual and stock, mix and fixed income using methods Treynor models then, it can be concluded that the fund Batavia Shares Fund Optimal who had the best performance, this is caused because mutual funds Batavia stock funds optimal value highest return compared to other mutual funds

### Recommendations

1) In selecting mutual fund investors should look carefully and balanced information on the source to be credible. For instance directly contact the office of the investment manager. Activities choosing mutual fund is a reflection of investor's own state of being that is totally different from others because it adapted to the investment objectives, financial situation, level of ability to take risks, and time tolerances are acceptable to invest.

2) The results of this study can be used as a reference for investors who want to invest in Mutual Fund Shares, Mixed and Fixed Income by selecting the Mutual Fund best with investment managers who have good skills, mutual funds are the most optimum is the type of mutual fund shares Batavia Shares Fund Optimal and types of fixed income funds Batavia *ultima* bond funds.

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