

**FUND CHARACTERISTICS AND FUND PERFORMANCE:
Evidence of Malaysian Mutual Funds**

Yong Pui See¹, Ruzita Jusoh^{*2}

¹ Faculty of Business and Accountancy, University of Malaya, 50603 Kuala Lumpur Malaysia.

E-mail: pui_seey@hotmail.com

^{*2} Corresponding author: Faculty of Business and Accountancy, University of Malaya, 50603 Kuala Lumpur Malaysia.

E-mail: geee@um.edu.my

ABSTRACT

This paper examines the fund characteristics that affect fund performance by studying 69 Malaysian equity mutual funds representing 44 conventional funds and 25 Islamic funds over the period of five years. The characteristics examined include Risk, Fund Size, Management Expense Ratio, Turnover Ratio and Fund Age. The hypotheses were tested using several regression analyses to see whether Risk, Fund Size, Management Expense Ratio, Turnover Ratio and Fund Age have significant relationships with Fund Performance. The results show that higher risk fund provides higher return. Those funds which spent more on research expenses give superior return compared to those that spent less. The findings also show that young funds performed better than old ones. However, Fund Size and Turnover Ratios were found to have no significant relationship with Fund Performance. Overall, the results indicate that investors should focus on young funds and select fund based on his/her preferred risk level. Fund managers should understand the characteristics that will affect fund performance and develop strategies on how to increase their funds performance.

Keywords: *Fund Performance, Fund Size, Risk, Expense Ratio, Turnover Ratio, Fund Age*

1. INTRODUCTION

According to Reilly & Brown (2003), a mutual fund is an investment vehicle that pools capital from clients purchasing their shares to invest in a portfolio of securities, with purchasing and selling securities being decided by a fund manager. Mutual funds or unit trust funds, also known as managed investments, allow you to buy a wide range of investments which may not ordinarily be available to you through direct investment such as large commercial properties and corporate bonds (CIMB Principal Asset Management). Over the past decade, mutual funds have been the fastest growing institutions in the world as they manage the risk management tools through diversification. For the Malaysian economy alone, the industry plays an increasingly important role. As of 30 November 2011, the total net asset value (NAV) of mutual funds, or more popularly known as unit trust, has grown to RM248.68 billion with conventional amounting to RM221.95 billion and Islamic-based RM26.73 billion (Federation of Investment Managers Malaysia). The growing number of mutual funds' shares sold and their NAV indicate that mutual funds are becoming a popular alternative for investment. The question is 'how do we choose the right mutual funds?' Wermers (2000, p. 1656) noted that "investors continue to pour money into actively managed funds in pursuit of performance" although the majority of studies conclude the actively managed funds, on average, underperformed those passively managed funds. The explosion of newsletters, magazines and rating services such as Rating Agencies of Malaysia (RAM) and Morningstar (a financial information resource) do help investors identifying managers with stock-picking talents. Several studies have concluded that active mutual funds managers have significant ability to choose stocks that outperform their benchmarks, before any expenses are deducted (e.g. Wermers, 2000, 1997; Grinblatt and Titman, 1989).

There are two main categories of mutual funds in Malaysia, namely, government operated funds and private operated funds. Among the popular government operated funds are Amanah Saham Bumiputra (ASB) and Amanah Saham Nasional (ASN) while Public Mutual Bhd (PM) and OSK-OUB Unit Trust Management are

among private operated funds. All the mutual funds in Malaysia are governed by the Securities Commission, which is responsible in ensuring that funds are managed appropriately by their investment advisors and other service organizations and vendors, all in the best interests of the investors (Securities Commission).

According to Peterson *et al.* (2001), one area of research in mutual fund performance is whether it is possible to find predictive characteristics explaining fund performance. Finance professional and journalists frequently claim that different mutual fund characteristics are useful tools in either selecting the top-performing funds or rejecting the worst performers (Peterson *et al.*, 2001). There is not much research attempt to identify the predictive power of fund characteristics in Malaysia. The conventional wisdom among researches is that fund performance is negatively correlated with fund wealth, expense ratio and turnover (Droms and Walker, 1996). Choosing the correct mutual funds has considerable effects. The choice is more relevant than ever for individual investors since more and more rely on funds to accumulate wealth. In a rational market, all investors desire for investments that have the highest probability of maximizing return for a given level of risk. Some researchers also claim that mutual funds having some unique characteristics perform better than others (e.g Lichtenstein *et al.*, 1999).

This study concerns with fund characteristics that influence mutual fund performance, which is an area of interest to investors and fund managers. Thus, the purpose of this study is to examine whether risk, fund size, management expenses, turnover, and fund age influence mutual fund performance.

The remainder of this paper is structured as follows: Section 2 outlines the literature review relating to the conceptual basis for fund characteristics, which are believed to influence the fund performance, and followed by hypotheses. Section 3 presents the research framework. Section 4 explains the research methods, whilst Section 5 summarizes the results obtained. Discussion of findings is presented in Section 6. The final section presents the conclusions on the research findings and suggestions further research areas.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Literature has shown that the determinants of mutual fund performance are classified by fund types. For example, Anderson *et al.* (2001) reported that for close-ended fund (funds differing from the ordinary mutual funds in that their shares trade in the secondary market at discounted prices), returns were related to targeted country's market index, discount in fund's selling price, exchange rates and returns in targeted market. For the purpose of this study however, these factors from Anderson *et al.* (2001) were not used in this study as Jones 2003 argued that close-ended funds constitute a minority of the fund management industry. Meanwhile, Peterson *et al.* (2001) classified fund performance determinants into two types: (1) Factors affecting funds' pre-tax and (2) Factors affecting funds' post-tax. Factors affecting pre-tax performance include: (1) fund expense, (2) risk, and (3) turnover. Peterson *et al.* (2001) argued that post-tax factors are important as after-tax fund returns are much less than before-tax returns for investors in high-tax brackets. Determinants of post-tax fund performance include past pre-tax performance, expenses, risk, style, past tax efficiency and recent occurrence of large net redemption (Peterson *et al.*, 2001).

From Peterson *et al.* (2001), it can be concluded that risk and expenses affecting performance both before and after tax considerations. However, fund performance studies seem to focus mainly on pre-tax factors. Therefore, this study focuses on pre-tax determinants, namely, risk, expenses, and turnover. Besides risk, expenses, and turnover factors, literature has shown that fund size and fund age may also influence fund performance.

2.1 Risk and Performance

It is impossible to avoid risk when investing in mutual funds. Researchers believe that equity investors are rewarded for taking on risk in the long run (Peterson *et al.*, 2001). The most common ways of measuring risk in a mutual fund is to calculate its beta or standard deviations. Beta is a measure of the systematic risk of a company or a portfolio where the individual assets or portfolio is compared to market. A higher beta than 1 implies a higher level of risk than the market. The formula is as follows:

$$\beta_i = \frac{COV(R_i, R_m)}{VAR(R_m)}$$

Where: COV(R_i, R_m) = the covariance between the return of asset i and the market m

VAR(R_m) = the market variance

β_i = the estimated systematic risk of asset i

The standard deviation of a fund measures the risk by measuring the degree to which the fund fluctuates in relation to its mean return; the average return of a fund over a period of time and includes both systematic and unsystematic risk. The formula is as follows:

$$\sigma \text{ per annum} = \sigma \sqrt{T}$$

Where: σ = the daily standard deviation

T = the number of trading per annum

The appropriate measure depends on the investment assumption. If the mutual fund represents the entire investment for an individual investor, the standard deviation is a more complete measure. On the contrary, if the investor invests in many different funds, the beta measure is preferable. In theory, nonsystematic risk can be diversified away. If an investor only invests in one mutual fund, it can imply that the investor is not fully diversified, and therefore, is exposed to both systematic and unsystematic risk.

Treynor (1965), Sharpe (1966) and Jensen (1968) were the first to evaluate fund performance in relation to risk and developed standards to measure risk-adjusted return. Sharpe (1966) studied the performance of 34 mutual funds during the years 1954 – 1963 to test why some of them performed better than others, and if they could beat the market. He concluded that there are differences among funds, and to a major extent, could be explained by differences in expense ratio, skill and past performance. Jensen (1968) performed a similar study during the years 1955 – 1964, but included more mutual funds, 115. His study revealed that the beta value of funds on average were below 1, which implies that on average, they took on a lower risk compared to the market. The study also shows the funds returned worse when adjusted for systematic risk. Further, Chang (2004) used a model consisting of three variables; beta, standard deviation and size to find out which of these create high return. The conclusion in his study is that small funds with low beta and low standard deviation provide investors with higher return. Accordingly, funds with low risk were shown to give higher returns. However, according to Markowitz portfolio theory developed in 1952, “the portfolio with maximum expected return is not necessarily the one with minimum variance (or risk). There is a rate at which the investor can gain expected return by taking on variance, or reduce variance by giving up expected return (Markowitz, 1952, p. 79). Hence, the foregoing arguments lead to the following hypothesis:

H₁: Equity fund risk influences fund performance.

2.2 Fund Size and Performance

The conventional wisdom about the effect of asset size on investment performance is that investment performance decreases with increases in asset size (Droms and Walker, 1994). However, small funds may be more susceptible to survivorship bias and may experience higher transaction costs than larger funds because they cannot take advantage of certain economies of scale (Grinblatt and Titman, 1989, p. 407). Grinblatt and Titman (1989) studied fund performance over the period 1975 – 1984 where fund performance was ranked by asset size and divided into quintiles. Some evidence for superior performance was discovered in the smallest quintile, however, the returns were not significantly different from the return of funds in larger quintiles. Indro *et al* (1999) considered the question whether size matters by studying if fund wealth erodes performance. They argued that mutual funds must attain a minimum fund size in order to achieve sufficient returns and the marginal returns become negative when the mutual fund exceeds its optimal fund size due to costs of acquiring and trading on information. Besides, their work highlights the fact that larger managers capture an increased level of attention, and their relative ability to trade without signaling to the market becomes increasingly constrained as assets size increases. They argue that as mutual funds grow, they must invest in more stocks, which inevitably become less consistent with the investment style.

Furthermore, Chen *et al* (2003) also investigated whether performance depends on size. Their study covers the period 1962 – 1999. They found strong evidence that fund size erodes performance, and that this relationship was not driven by heterogeneity in fund style. Instead, they found that the impact of fund size is most pronounced for funds buying small cap stocks, suggesting that liquidity is an important reason why size erodes performance. They also found evidence arguing that organizational diseconomies related to hierarchy costs could play a role in addition to liquidity. Moreover, findings revealed that mutual funds belonging to large fund companies performed better than others.

Moreover, Gallagher and Martin (2005) performed a study on Australian market. They examined the performance of actively managed mutual funds during 1991 – 2000 and to what extent fund size and manager size are related to risk-adjusted return. Their study did not find any significant difference in performance between big and small funds. Furthermore, Droms and Walker (1994, 1996) found that fund performance is not affected by fund size which was measured by asset size. Droms and Walker (1994, p. 9) reported that their

results for asset size are contrary to the conventional wisdom that performance declines with an increase in asset size. Measuring fund size based on net asset value, Grinblatt and Titman (1989) find evidence that portfolio of mutual funds with the smallest net asset value shows the highest transaction costs, largest survivorship, and the largest performance. However, because of the high transaction costs of these funds, their actual returns did not actually achieve abnormal performance (Grinblatt and Titman, 1989). In contrast, Otten and Bams (2001) reported that the larger fund assets are associated with higher returns. Similarly, Ferreira *et al* (2006), in their study on international mutual fund from 19 countries between 1999 and 2005, found that good performance occurs among large funds. Evidence of positive influence of fund size on fund performance may suggest that larger funds take advantage of economies of scale by spreading higher transaction costs over a larger asset base which in turn leads to better fund performance.

Meanwhile, Chen *et al.* (2003) in their cross-sectional analysis of performance components revealed that fund size is negatively related to fund performance. They argued that after funds reach a certain size, they no longer care about maximizing returns. They suggested that liquidity and diseconomies of scale related to hierarchy costs cause size to erode performance. In a sample of 683 non-indexed U.S. equity funds over the 1993-95 period, Indro *et al.* (1999, p 85) found that actively managed mutual funds have to attain a minimum fund size before they achieve returns sufficient to cover their costs for acquiring and trading on information. They also found that there are diminishing marginal returns to information activities and that the marginal returns become negative when a mutual fund exceeds its optimal size.

In terms of fund size related to investments made by funds across smaller capitalization, equity research is limited. Using a sample of 219 small-cap mutual funds, a study in U.S. by Christopherson *et al* (2002) revealed an inverse relationship between fund size and performance. Although the results of previous researches are mixed, it is believed that domestic equity fund size influences fund performance as stated in the following hypothesis.

H₂: Equity fund size influences fund performance.

2.3 Expenses, Turnover and Performance

Bogle (1998) argued that passively managed funds incur lower costs and outperform actively managed funds, while actively managed funds incur various costs, such as operating and research expense, which are measured by expense ratio. Indro *et al.* (1999) discovered that mutual fund returns, which is net of expense, are negatively correlated with expense ratios, suggesting that mutual funds, on average, overinvest in information. They also revealed that turnover had a negative impact on return. These results are consistent with the findings of Elton *et al.* (1993) but contradict the findings of Ippolito (1989). Elton *et al.* (1993) discovered that risk-adjusted returns are negatively related to expense ratio and turnover after taking into account the difference in performance between small capitalization non-S&P 500 stocks and S&P 500 stocks.

In Malaysia, management expenses that mirror all the cost associated within a mutual fund are measured via Management Expense Ratio (MER). The MER formula is as follows (CIMB Principal Asset Management):

$$\text{MER} = \frac{\text{A} + \text{B} + \text{C} + \text{D} + \text{E}}{\text{F}} \times 100$$

Where: A = Management fee
 B = Trustee's and custodian fee
 C = Auditors' remuneration
 D = Tax agent's fee
 E = Administration expenses
 F = Average net asset value of the Fund calculated on daily basis

These costs are included in the price of the mutual fund where investors never notice them directly. A high management expense does not necessarily imply a poorer performance. However, literature asserts that expense differences between mutual funds seem to be associated with performance differences (Chevalier and Ellison, 1999). This is because the systematic differences in the jobs held by different managers may result in different expense ratios (Chevalier and Ellison, 1999). As a result, high management fees could imply that investors are paying a lot for investment research. As highlighted by Sing Tng (2006), fund managers efficiently incurring research expenses may earn positive risk-adjusted returns net of expenses when active management that incurs research expenses can be compensated by better returns from trading based on research information (Grossman and Stiglitz, 1980). However, those inefficient managers who incur excessive expenses and manage underperforming funds will be penalized through investors' withdrawal.

Dahlquist *et al* (2000) performed a study on Swedish mutual funds invested in Swedish securities in the year 1993 – 1997. The study was focused on whether fund size, management fees, turnover ratio and past performance were related to current performance. According to the study, bigger mutual funds on average tend to perform worse than smaller funds. Besides, the study showed that funds with higher turnover ratio performed better than those with lower turnover. Furthermore, there is no correlation between high fees and high return, rather it is the opposite. A study made by Carhart (1997) showed that expense ratios, portfolio turnover, and load fees are significantly and negatively related to performance.

The turnover ratio is a measure of how active a fund manager is. It represents the average of total acquisitions and disposals of investments in the fund annually over the fund's average net asset value calculated on daily basis; a proxy of how often a manager trades. Fund managers who trade frequently are sometimes believed to be more successful, meaning that adjusting the fund to follow ups and downs on the market would give superior returns. On the other hand, turnover is costly because of brokerage fees and bid-ask spreads, although trading profits may offset these costs (Elton *et al*, 1993). There also exists strong relationship between turnover and fund wealth. When a fund is small managers tend to invest more aggressively since they have less to lose. However, over the time risk aversion appears to increase (Christopherson *et al*, 2002).

A study on all American registered mutual funds invested in America securities during the period 1975 – 1994 was made in 2000 by Wermers. He found that, if without regard to fund size, funds in U.S. with higher turnover ratio earned superior risk-adjusted returns compared to lower turnover funds. He found that this relationship holds, and that superior managers have a high propensity to turnover their portfolio. Moreover, Early study by Sharpe (1966) discovered that funds with lower expenses are likely to have better performance. However, later Friend and Blume (1970) found that performance is not significantly associated with expense ratio, and turnover ratio has only a slight positive relationship with performance. Ippolito (1989) performed a study to test whether investors investing in funds with high expense ratio and turnover were compensated with a higher rate of return. In his test, he included 143 mutual funds during the period 1965 – 1984 and found a significantly positive relationship between management expense, turnover ratio and returns. Mutual fund with higher management expenses and turnover ratios were shown to perform better. Therefore, he concluded that it paid off for uninformed investors to pay managers to invest their monies. However, Grinblatt and Titman (1989) reported that mutual funds that have the highest expenses do not exhibit abnormal performance suggesting that investors cannot take advantage of the superior abilities of portfolio managers when purchasing shares in their mutual funds.

From the above literature, prior studies have produced mixed findings about the impact of turnover and expenses on fund performance. However, there are also studies that reveal expenses ratios and turnover rates are not related to investment performance (e.g. Ippolito, 1989, Droms and Walker, 1994). Overall, the above literature evidence leads to the following hypotheses:

H₃: Expenses impact fund performance.

H₄: Equity fund turnover impacts funds performance.

2.4 Fund Age and Performance

Age of a mutual fund could play a role in deciding performance since younger funds may face significant higher costs in their start-up period. This is due not only to marketing costs but also the initial cash flows as it will place a greater burden on the fund's transaction costs. There is also evidence showing return of new mutual funds may be affected by a learning period (Gregory *et al*, 1997). Gregory *et al* (1997) provided evidence that mature funds perform better than younger ones. One of the reasons of underperformance of younger funds, according to Bauer *et al* (2002), is their exposure to higher market risk since they are invested in fewer stocks.

A study made by Otten and Bams in 2001 showed a conversed relationship between fund age and performance; younger funds did better than mature ones. However, in a study made by Peterson *et al* (2001), no relationship was found between performance and fund age. There is a relationship between fund age and fund size; young funds tend to be smaller than older ones, which makes the young funds' return and rating more vulnerable for manipulation. The smaller the fund, the more a handful of fortunate stock picks could buoy the performance of the entire funds. Moreover, because young mutual funds are typically smaller, fund families may be able to afford to waive some of the expenses (Adkisson and Fraser, 2003).

Although the results are mixed, it is believed that the fund age of Malaysian funds has some impacts on fund performance. Hence, the following hypothesis is developed:

H₅: Equity fund age has impact on fund performance.

3. RESEARCH FRAMEWORK

The relationships between fund characteristics and fund performance are shown in Figure 1. Risk, fund size, management expenses, fund turnover and fund age are expected to influence fund performance. These fund characteristics are important and useful factors for investors to make decisions regarding mutual funds that provide good returns. Literature has shown that risk, fund size, management expenses, fund turnover, and fund age may impact fund performance either positively or negatively.

 Insert Figure 1 about here

4. RESEARCH METHOD

4.1 Sample Selection Process

This study employs a total sample of 69 Malaysian mutual funds between January 2005 and December 2009. The monthly returns of the funds are obtained from Bloomberg database. Other variables are mainly collected from annual reports and the companies' website of the fund companies. The funds included in the sample invest in Malaysian securities, where the most appropriate benchmark is considered to be the KLCI index.

To be included in the sample, a mutual fund has to be invested in Malaysian securities only due to its utmost importance, and that the study is performed on a homogeneous group of mutual funds. Homogeneous group is preferable because the funds are invested in the same market, meaning that they have had the same opportunity to invest in all available securities on that delimited market. Moreover, it is easier to find a suitable benchmark if all funds are invested in the same market, and the funds invested in foreign countries have different risk exposures than those invested solely in Malaysia.

To find the Malaysian mutual funds exclusively invested in domestic securities, list of funds from the Securities Commission has been used. From the list of Securities Commission, only domestic open-ended private equity funds will be selected. Equity funds are selected as the samples of this study are stocks, where at least 75 percents of the funds are invested in the security market. Since the period covered in this study is from 2005 to 2009, those funds launched after January 2005 are excluded; they would make the study biased since their data did not cover the period required.

Figure 2 shows how a selection process was done to arrive at the total data sets used in this study.

 Insert Figure 2 about here

The 69 samples were selected from 19 private-owned fund management companies in Malaysia. In this study, it is entirely based on secondary data supplied by Bloomberg database, annual reports and the mutual fund companies' website.

4.2 Survivorship Bias

An important concern is whether the data sample suffers from survivorship bias. That is, if funds that have ceased to exist are excluded and the data only hold survivors, performance of the sample may be biased upwards, overestimating past return of mutual funds, as non-survivors have been found more likely to perform disappointingly in relation to surviving peers (Brown, 1992). Therefore, there is no reason to believe that the data sets of this study suffer from survivorship bias as the information for funds that have ceased to exist at the same point during the five-year period was successfully obtained.

4.3 Data Analysis

Data in this study is made up of 69 equity funds and the return on each fund is calculated using monthly net asset values (NAV) from January 2005 to December 2009. There are several methods available for calculating risk-adjusted returns, but this study utilised the most widely used Jensen's model (1968) with the following regression specification:

$$R_{jt} - R_{ft} = \alpha_j + \beta_j (R_{mt} - R_{ft}) + \epsilon_{jt}$$

Where

- R_{jt} = rate of return of the fund at time t ;
- R_{ft} = contemporaneous rate of return on a risk free asset;
- R_{mt} = rate of return for the market portfolio at time t .
- β_j = estimate systematic risk level of the of the fund;

- α_j = Jensen's performance coefficient, indicating the risk-adjusted performance of the fund;
 ϵ_{jt} = random error term.

The remaining variables, i.e. fund size, management expense ratio and turnover ratio are reported on yearly basis. These attributes were collected for each of the five years after which an average was calculated, which is used in the regression. For some variables, i.e. fund size, the difference between the minimum and the maximum value can be huge; to enhance the use of these variables, logarithm is used. Betas are calculated using monthly returns. And, the fund age is calculated from the commencement year of the fund until 2009.

4.4 Selection of an Appropriate Benchmark

How much a mutual fund moves in relation to the market is measured by the beta. The market is defined by an index. Hence, an appropriate index must be selected when calculating the beta of a mutual fund. Since this study exclusively includes funds invested in Malaysian securities, therefore, KLCI Index is chosen for both Conventional Funds and Islamic Funds. The use of a benchmark index is of vital importance for fund managers when illustrating performance; such graphical illustration is often the only way for investors to form an opinion of the fund result. This fact could result in an incentive for mutual fund managers to choose a low performance benchmark which is not appropriate from an investor point of view.

Dividend payouts are almost always reinvested into the funds instead of paying out to the investors. Therefore, it is of great importance to include dividends in the index to avoid biased results when comparing mutual funds with the market. Many managers included in this study do compare their performance with an index including dividend payouts, which make their performance look superior to the market.

Plenty of indices are available for evaluation of performance, however, the KLCI index is the most common index used for evaluation of performance. Therefore, this index is found as the most appropriate benchmark for this study, including Islamic funds. This is because it would be easier to use the same benchmark in making comparison between Conventional funds and Islamic funds.

5. Results

5.1 Descriptive Statistics

 Insert Table 1 about here

Some fund attributes might be correlated with each other; for instance, expenses may be measuring whether fund is active or passive, which may be captured by the turnover. To eliminate the occurrence of this, the pair wise correlation between each attribute is calculated. This is done in order to avoid multi-collinearity. The results from these regressions are shown in Table 2.

 Insert Table 2 about here

The Fund Size is positively correlated with Risk, indicating that larger funds tend to be more risky. The fund size variable is negatively correlated with management expense ratio. Such correlations suggest that larger funds tend to have lower expense ratio. The correlation between Fund Size and Fund Age is high as anticipated; large mutual funds tend to be the oldest ones. Fund Turnover and Risk are positively correlated, suggesting that those funds with higher turnover are more risky. However, neither of these correlations exceeded the level set (correlation between variables almost/equals to 1 or -1) for exclusion of variables.

5.2 Multiple Regressions

 Insert Table 3 about here

Table 3 reports the summary of the regression results of fund returns on various fund characteristics variables. As shown, the fund characteristics variables explain 17.25 percent of the variation in the Fund Returns. The Fund Size ($t = 1.3174$, $p = 0.1925$) with the coefficient 0.0155 and Turnover Ratio ($t = -0.8676$, $p = 0.3889$) with the coefficient -0.0108 are not significantly different from zero at 99 percent and 95 percent confidence level. Risk ($t = 2.4223$, $p = 0.0183$), with the highest coefficient, 0.0847 is significantly different from zero at 99 percent confidence level. Management Expense Ratio ($t = 2.2522$, $p = 0.0278$), with the coefficient of 0.0396, is

significantly different from zero at 95 percent confidence level, and Fund Age ($t = -1.978$, $p = 0.0523$), with coefficient of -0.0023 , is also significantly different from zero at 95 percent confidence level.

Since the sample data contain conventional funds and Islamic funds, it is interesting to know if the relationship changes when the multiple regression run separately. Table 4 and Table 5 present the results from these regressions.

 Insert Table 4 about here

Table 4 shows regression results for Conventional Funds only. As shown, the fund characteristics variables explain 23.36 percent of the variation in Fund Return, which is higher compared to full sample data. Fund Size ($t = 0.0277$, $p = 0.9780$), with coefficient 0.0005, Turnover Ratio ($t = -0.7257$, $p = 0.4725$) with coefficient -0.0113 and Fund Age ($t = -0.7048$, $p = 0.4853$), with coefficient -0.0011 , are not significantly different from zero at 1 percent and 5 percent level for sample data containing conventional funds only. Again, the Risk ($t = 2.7694$, $p = 0.0086$), the explanatory variable with highest coefficient, 0.1254 is significantly different from zero at 99 percent confidence level. Management Expense Ratio ($t = 2.0338$, $p = 0.0490$), with coefficient level of 0.0534, are significantly different from zero at 95 percent significant level. These results indicate that Risk of the funds and Management Expense Ratio are the explanatory variables that influencing the return of the Conventional funds.

 Insert Table 5 about here

Table 5 shows Regression Result for Islamic Funds only. R-squared of 0.3778 means 37.78 percent of the variation in Fund Return, which is higher than full sample data, and data with Conventional Funds only. This may due to the independent variable; age has contributed most important variable that explains the variation of fund return. Fund Risk ($t = -0.5768$, $p = 0.5709$), with coefficient -0.0305 , Fund Size ($t = 1.9002$, $p = 0.0727$) with coefficient 0.0343, Management Expense Ratio ($t = 1.4676$, $p = 0.1586$) with coefficient 0.0380, and Turnover Ratio ($t = 0.8391$, $p = 0.4118$) with coefficient -0.0168 are not significantly different from zero at 99 percent and 95 percent confidence level. Fund Age ($t = -3.031$, $p = 0.0069$), with coefficient -0.0067 , is significantly different from zero at 99 percent confidence level. These results show that for sample data that contain only Islamic Funds, Fund Age is the only explanatory variable that influences funds returns.

6. DISCUSSION OF FINDINGS

 Insert Table 6 about here

Table 6 presents a summary of the regressions presented in the previous section. The hypothesis states that risk influencing fund performance is supported by the results, where risk positively and significantly influences fund performance. This is consistent with Markowitz's (1952) theory, indicating those investors exposed to greater risk are rewarded with higher return. However, if the result is based on Islamic funds alone, risk does not affect return, as Islamic equity funds normally have lower risk. The lower risk may likely be due to large cash holdings rather than investment in blue chip companies since the latter are less eligible to pass Islamic investment criteria (Syariah Law). Islamic equity funds seem to invest mainly in growth stocks having lower risk. In addition, Islamic equity funds cannot trade on margin, in other words, they cannot use interest-paying debt to finance investment. Islamic fund managers are not allowed to speculate. An Islamic economic unit is expected to assume risk after making a proper assessment of risk with the help of information (Abdullah *et al*, 2002).

Result of the second hypothesis was somewhat consistent with previous literature relating to the influence of fund size. Although larger funds may enjoy economies of scale and provide higher return compared to smaller funds, the results show insignificant relationship between fund size and fund performance, i.e. fund size does not impact fund performance. This is also in line with the two studies conducted by Drom and Walker in 1994 and 1996 that asset size is not a good predictor of future performance. Similar study performed by Gallanger and Martin (2005) on the Australian market also found that mutual fund performance is a disadvantage in terms of fund size. They could not find any significant difference in performance between big and small funds.

The results from the third and forth hypotheses testing add interesting insight into the nature of fund performance. The results show that management expenses positively influence fund performance, indicating that

high management expense ratio improves fund performance. This is in line with the research results by Ippolito (1989) that higher management expenses influenced fund returns. The results may suggest that mutual funds are able to generate sufficient returns to offset the expenses, such as management fees, that they incurred (Grinblatt and Titman, 1989). Funds are able to generate better returns when fund managers are actively involved in research and be paid for research done.

However, the results show that the turnover ratio is not related to fund performance. This is applicable to full sample data, Conventional funds as well as Islamic funds. The insignificant relationship between turnover rates and fund performance was also reported by Ippolito (1989) and Droms and Walker (1994). Droms and Walker (1994) argued that such result is contrary to the conventional wisdom that high turnover detracts from investment performance. The negative impact of turnover ratio on fund performance, albeit insignificant, is also consistent with the results of Malkiel (1995), Carhart (1997) and Elton *et al.* (1993).

In this study, besides risk and management expenses, fund age is also found significantly related to fund performance. Fund age seems to reduce fund performance, implying that older funds perform worse both for overall sample and for Islamic funds. This is consistent with the results by Otten and Bams (2001) that younger funds did better than mature ones. Based on the regression results generated, it seems that the negative effect of fund age is more apparent to Islamic funds than to Conventional funds. As Islamic funds are relatively younger than Conventional funds, the results indicate that younger funds may perform better than older ones. This may be due to Islamic funds taking advantage of new regulatory framework introduced by the government in 2006, providing numerous incentives and investment friendly policies to spur growth of the Islamic fund management industry. An example is the relaxation of foreign equity ownership rules on Islamic fund management companies, where the new ruling allows 100 percent foreign equity ownership for Islamic fund management companies. Fund management companies will also be given tax exemption on all fees received in respect of Islamic fund management activities until year 2016 (Securities Commission). These initiatives are able to promote the launching of superior Islamic funds in these few years.

7. CONCLUSIONS

The results show that fund size and turnover have no impact on the Malaysian equity fund performance. However, management expenses may affect fund performance. High risk funds perform better than those having a low risk. A major conclusion of this study is that the performance of equity funds investing in Malaysian stock market depends on the risk level of the funds. Therefore, an investor should choose funds based on his/her preferred risk level, and since expenses influence performance, the investor should choose those funds that invest heavily on investment research. Unlike earlier study, this study shows that fund size and turnover do not influence fund performance.

To get a better consensus about the findings within the context of Malaysian mutual funds, more studies need to be done to see what fund characteristics, other than covered by this study, can influence fund performance. The future study could be extended to variables such as investment manager characteristics (i. e. qualification level, management tenure, experience, and age) and investment strategies. Besides, a research including international equity funds would be a beneficial area in future research. This can be done by comparing the results of domestic and international funds. Studies including these attributes are far from fully covered in Malaysian studies. The results must be approached with caution due to limitations of this study. The Malaysian mutual fund industry is still young compared to the U.S. market. As such, the Malaysian market still has huge potentials to grow. The sample size of 69 funds in the domestic equity funds all survived during the period of 2005-2009. However, the sample size is still low even though the sample did not suffer from survivorship bias.

REFERENCES

- Abdullah, F., Mohamed, S. and Hassan, T. (2002). A Comparative Performance of Malaysian Islamic and Conventional Mutual Funds, *Pertanika*, Vol 8, p 30-49.
- Adkisson, J.A., Fraser, D.R. (2003). Reading the Stars: Age Biases in Morningstar Ratings. *Financial Analyst Journal*, Vol 59, p 24-28.
- Anderson, S., Coleman, B., Frohlich, C. and Steagall, J. (2001). A Multifactor Analysis of Country Fund Returns. *Journal of Financial Research*, Vol 24, p 331-346.
- Bauer, R., Derwall, J. and Otten, R. (2002). The Ethical Mutual Fund Performance Debate: New Evidence From Canada. *Journal of Business Ethics*. Vol 70, p 111-124.
- Becker, S. and Vaughan, G. (2001). Small is Beautiful. *The Journal of Portfolio Management*, Vol 27, p 9-17.
- Black, F. (1971). Implication of the Random Walk Hypothesis for Portfolio Management. *Financial Analyst Journal*, Vol 27, p 16-22.

- Bogle, J. (1998). The implications of style analysis for mutual fund performance, *Journal of Portfolio Management*, vol. 24, no. 4, pp. 34-42.
- Brown, S.J., Goetzmann, William, I., Roger, G. and Ross, S.A. (1992). Survivorship Bias in Performance Studies. *Review of Financial Studies*, Vol 5, p 553-580.
- Carhart, M.M. (1997). On the Persistence in Mutual Fund Performance. *The Journal of Finance*, Vol 52, p 57-82.
- CIMB Principal Asset Management. Available: [Http://www.cimb-principal.com.my/Unit_Trust_Basics-@-nit_Trust_Basics.aspx](http://www.cimb-principal.com.my/Unit_Trust_Basics-@-nit_Trust_Basics.aspx). Accessed 2 February 2012.
- CIMB Principal Asset Management. Available: [Http://www.cimb-principal.com/download/20110228_IR_CIMB-Principal_Deposit_Fund.pdf](http://www.cimb-principal.com/download/20110228_IR_CIMB-Principal_Deposit_Fund.pdf). Accessed 2 February 2012.
- Chang, K.P. (2004). Evaluating Mutual Fund Performance: An Application of Minimum Convex Input Requirement Set Approach. *Computer and Operation Research*. Vol 31, p 525-533.
- Chen, J., Hong, H., Huang, M. and Kubik, J.D. (2004). Does Fund Size Erode Mutual Fund Performance? The Role of Liquidity and Organization. *American Economic Review*, Vol 94, 5, p. 1276-1302. .
- Chevalier, J. and Ellison, G. (1999). Are Some Mutual Funds Manager Better Than Others? Cross-Sectional Pattern in Behavior and Performance. *The Journal of Finance*, Vol 52, p 875-899.
- Christopherson, J., Ding, Z. and Greenwood, P. (2002). The Perils of Success. *Journal of Portfolio Management*, Vol 28, p 41-54.
- Ciccotello, C.S. and Grant, T.C. (1996). Equity Fund Size and Growth: Implication for Performance and Selection. *Financial Services Review*, Vol 5, p 1-12.
- Dahlquist, M., Engström, S. and Söderlind, P. (2000). Performance and Characteristics of Swedish Mutual Fund. *The Journal of Financial and Quantitative Analysis*, Vol 35, p 409-423.
- Davis, D. (1999). Business Research for Decision Making: U.S. Duxbury.
- Drom, W.G. and Walker, D.A. (1994). Investment Performance of International Mutual Funds. *The Journal of Financial Research*, Vol 17, p 1-14.
- Drom, W.G. and Walker, D.A. (1996). Mutual Fund Investment Performance. *The Quarterly Review of Economics and Finance*, Vol 36, p 347-363.
- Edelen, R. M. (1999). Investor flows and the assessed performance of open-end mutual funds, *Journal of Financial Economics*, Vol 53, p439-466.
- Elton, E.J., Gruber, M.J., Das, S. and Hlavka, M. (1993). Efficiency with Costly Information: A Reinterpretation of Evidence from Managed Portfolios. *Review of Financial Studies*, Vol 6, p 1-22.
- Fama, E.F. and French K.R. (1992). The Cross-Section of Expected Stock Returns. *Journal of Finance*. Vol 47, p 427-465.
- Federation of Investment Managers Malaysia. Available: http://www.fimm.com.my/quick_statistics_details. Accessed 22 January 2012.
- Ferreira, M. and Matos, P. (2006). The Colours of Investor Money: The Role of Institutional Investor Around The World. *Working Paper*.
- Ferson, W and Schadt, R. (1996). Measuring Fund Strategy and Performance in Changing Economic Condition. *Journal of Finance*. Vol 51, p 425-462.
- Friend, I. and Blume, M. (1970). Measurement of Portfolio Performance Under-Uncertainty. *American Economic Review*. Vol 60, p 561-575.
- Gallagher, D. and Martin, K. (2005). Investment Manager Characteristics, Strategy, Top Management Changes and Fund Performance. *Journal of Accounting and Finance*. Vol 43, p 283-309.
- Gloston, L. and Harris, L. (1988). Estimating the Components of the Bid-Ask Spread. *Journal of Financial Economics*. Vol 21, p 123-142.
- Golec, J.H. (1996). The Effects of Mutual Funds Managers' Characteristics on Their Portfolio Performance, Risk and Fees. *Financial Services Review*. Vol 5, p 133-148.
- Gorman, L. (1991). A Study of the Relationship between Mutual Fund Return and Asset Size 1974-1987. *Akron Business and Economic Review*. Vol 22, p 53-61.
- Greene, J.T. and Hodges C.W. (2002). The Dilution Impact of Daily Fund Flows on Open-End Mutual Funds. *Journal of Financial Economics*. Vol 65, p 131-158.
- Gregory, A., Matatko, J. and Luther, R. (1997). Ethical Unit Trust Financial Performance: Small Company Effects and Fund Size Effects. *Journal of Business Finance & Accounting*. Vol 24, p705-725.
- Grinblatt, M. and Titman, S. (1989). Mutual Fund Performance: An Analysis of Quarterly Portfolio Holdings. *Journal of Business*, Vol 62, p 393-416.
- Grossman, S. and Stiglitz, J. (1980). On the Impossibility of the Informationally Efficient Market. *American Economic Review*, Vol 70, p 393-408.
- Indro, D., Jiang, C., Hu, M. and Lee, W. (1999). Mutual Fund Performance. Does Fund Size Matter? *Financial Analyst Journal*, Vol 55, p 74-87.

- Ippolito, R. (1989). Efficiency with Costly Information: A Study of Mutual Fund Performance 1965 – 1984. *The Quarterly Journal of Economics*, Vol 104, p 1-24.
- Jensen, M.C. (1968). The Performance of Mutual Funds in the period 1945 – 1965, *Journal of Finance*, Vol 23, p 389-416.
- Jones, C.P., Rendleman, R.J., and Latané, H.A. (1985). *Earnings Announcements: Pre- and Post-Responses*. *Journal of Portfolio Management*, Vol 11, p 28-32.
- Jones, C. (2003). *Your Money, Your Choice.. Mutual Funds: Take Control Now and Build Wealth Wisely*, Financial Times Prentice Hall, New Jersey.
- Koh, S. (1999). A Survey of Unit Trusts in Singapore. *Singapore Management Review*, Vol 21, p 49-78.
- Lichtenstein, D.R., Kaufmann, P.J. and Bhagat, S. (1999). Why Consumers Choose Managed Funds Over Index Funds: Hypothesis from Consumer Behavior. *The Journal of Consumer Affairs*, Vol 33, p 187-205.
- Lorie, J. (1975). Diversification: Old and New. *Journal of Portfolio Management*, Vol 2, p 25-28
- Malkiel, B.G., 1995. Returns from Investing in Equity Mutual Funds 1971 -1991. *Journal of Finance*, Vol 50, p 549-572.
- Markowitz, H., 1952. Portfolio Selection. *Journal of Finance*, Vol 7, p 77-91.
- McQueen, G. and Thorley, S. (1999). Mining Fools Gold. *Financial Analyst Journal*, Vol 55, p 61-72.
- Otten, R., and Bams, D. (2001). European Mutual Fund Performance. *European Financial Management*, Vol 8, p 75-101.
- Peterson, J.D., Pietranico, P.A., Riepe, M. W. and Xu, F. (2001), Explaining the Performance of Domestic Equity Mutual Funds. *Journal of Investing*, Vol 10, p81-92.
- Reilly, F. and Brown, K. (2003). *Investment Analysis and Portfolio Management*, 7 Edition, Canada, South-Western.
- Ross, S. (1976). The Arbitrage Theory of Capital Asset Pricing. *Journal of Economic Theory*, Vol 13, p 341-360.
- SecuritiesCommission. Available: [Http://www.sc.com.my/main.asp?pageid=593&menuid=322&newsid=&linkid=&type=](http://www.sc.com.my/main.asp?pageid=593&menuid=322&newsid=&linkid=&type=). Accessed 24 January 2012.
- Sharpe, W.F. (1966). Mutual Fund Performance. *Journal of Business*, Vol 39, p 119-138.
- Sing Tng, C. (2006). Factors influencing unit trust performance. Southern Cross University, epublications@SCU.
- Treynor, J.L. (1965). How to Use Security Analysis to Improve Portfolio Selection. *Journal of Business*. Vol 46, p 66-86.
- Warther, V.A. (1996). Aggregate Mutual Fund Flows and Security Returns. *Journal of Financial Economics*. Vol 39, p 209-236.
- Wermers, R. (2000). Mutual Fund Performance: An Empirical Decomposition into Stock Picking Talent, Style, Transactions Cost and Expenses. *The Journal of Finance*, Vol 55, p 1655-1703.
- Woolley, P. and Bird, R. (2002). Economic Implications of Passive Investing. *Journal of Asset Management*, Vol 3, p 303-312.

Figure 1
Research Framework

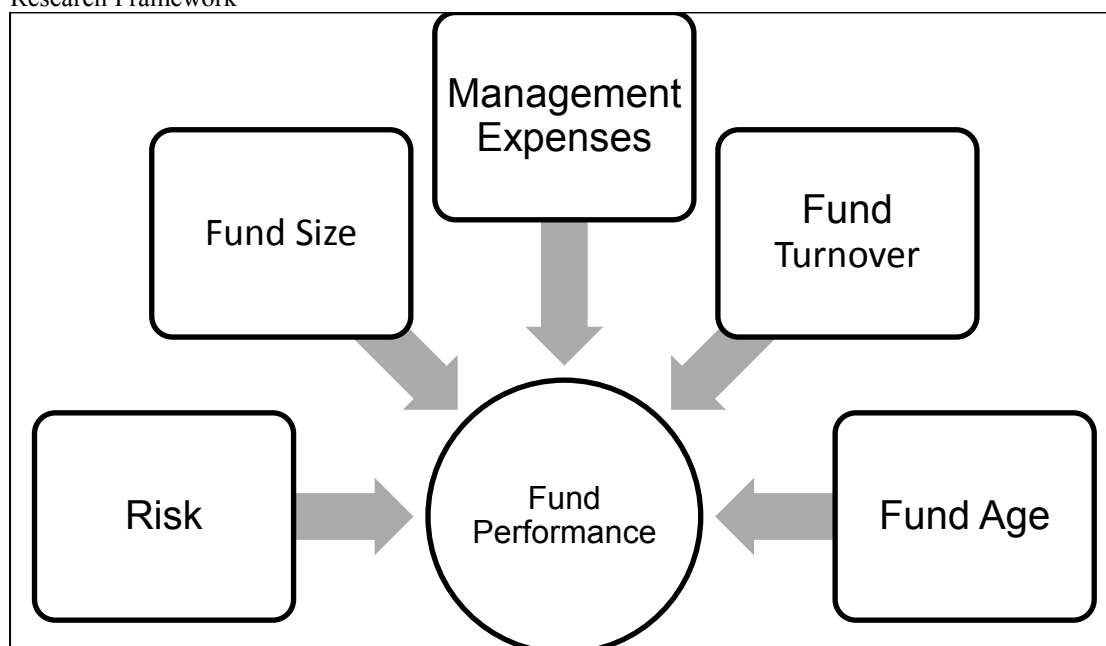


Figure 2
Selection of Equity Funds

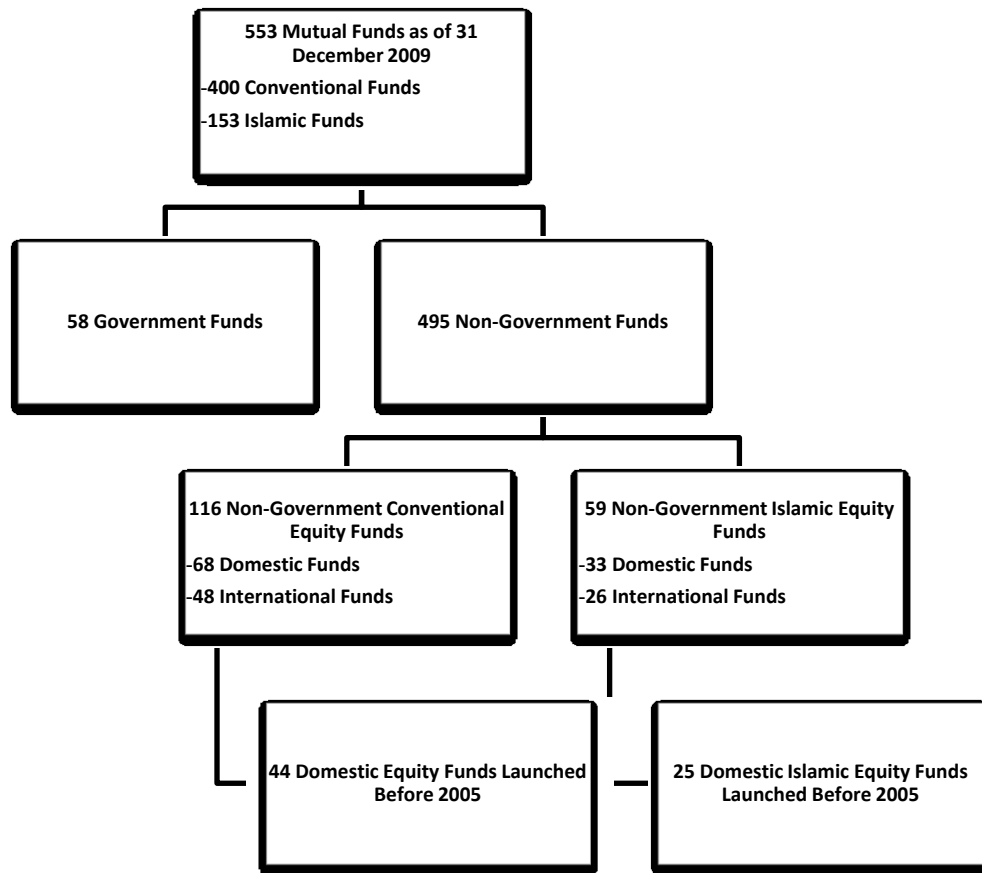


Table 1: Descriptive Statistics: Research period January 2005 – December 2009

	<i>N</i>	<i>Mean</i>	<i>Median</i>	<i>Min. Value</i>	<i>Max. Value</i>
<i>Return</i>	69	-0.03	-0.03	-0.12	0.07
<i>Risk</i>	69	0.90	0.90	0.60	1.30
<i>Fund Size</i>	69	153,792,996	73,993,462	699,963	1,236,330,750
<i>MER</i>	69	1.67	1.62	0.78	3.56
<i>Turnover</i>	69	0.88	0.81	0.31	2.03
<i>Fund Age</i>	69	9.83	9.00	5.00	28.00

Table 2: Correlation between predictor variables

	Risk	Ln(Size)	MER	Turnover	Age
Risk	1				
Ln(Size)	**0.280182	1			
MER	-0.20534	**-.5507	1		
Turnover	**0.246288	-0.03174	0.088654	1	
Age	0.083739	**0.470008	-0.17431	-0.15587	1

** Significant at 95 percent confidence level

Table 3: Multiple Regressions

	Coefficient	t-value	p-value	R²
Risk	**0.0847	2.4223	0.0183	0.1725
Ln(Size)	0.0155	1.3174	0.1925	
MER	***0.0396	2.2522	0.0278	
Turnover	-0.0108	-0.8676	0.3889	
Age	***-0.0023	-1.978	0.0523	

**Significant at the 99 percent confidence level

***Significant at the 95 percent confidence level

Table 4: Multiple Regressions for Conventional Funds only

	Coefficient	t-value	p-value	R²
Risk	**0.1254	2.7694	0.0086	0.2336
Ln(Size)	0.0005	0.0277	0.9780	
MER	***0.0534	2.0338	0.0490	
Turnover	-0.0113	-0.7257	0.4725	
Age	-0.0011	-0.7048	0.4853	

**Significant at 99 percent confidence level

***Significant at 95 percent confidence level

Table 5: Multiple Regressions for Islamic Funds only

	Coefficient	t-value	p-value	R²
Risk	-0.0305	-0.5768	0.5709	0.3778
Ln(Size)	0.0343	1.9002	0.0727	
MER	0.0380	1.4676	0.1586	
Turnover	-0.0168	0.8391	0.4118	
Age	** -0.0067	-3.031	0.0069	

**Significant at 99 percent confidence level

Table 4.6:
Summary of the regressions

	Risk	Size	MER	Turnover	Age	R²
Multiple Regression	**0.0847 (2.4223)	0.0155 (1.3174)	*0.0396 (2.2522)	-0.0108 (-0.8676)	*-0.0023 (-1.9780)	0.1725
Multiple Regression (Conventional Funds)	**0.1254 (2.7694)	0.0005 (0.0277)	*0.0534 (2.0338)	-0.0113 (-0.7257)	-0.0011 (-0.7048)	0.2336
Multiple Regression (Islamic Funds)	-0.0305 (-0.5768)	0.0343 (1.9002)	0.0380 (1.4676)	-0.0168 (0.8391)	*-0.0067 (-3.0310)	0.3778

*Significant at 95 percent confidence level

**Significant at 99 percent confidence level