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Research paper



A Study of Fund Characteristics and Fund Performance in Malaysia

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Abstract

This study examines the relationship between fund characteristics and fund performance in Malaysia mutual fund from January 2001 to December 2014. A total of 543 sample funds are employed. Systematic risk (beta), turnover ratio, expense ratio, fund size, fund objective, fund age and fund type served as the fund characteristics. Jensen's alpha on capital assets pricing model (CAPM) was the indicator of the fund performance. The results indicated that conventional funds tend to have higher trading activities than Islamic funds. The ordinary least squares regression results indicated that turnover ratio, fund age, lagged expense, lagged fund size has significant relationship with fund performance. However, risk, expense ratio, size, fund objective, fund types showed no relationship with Jensen's alpha performance. Overall, the results suggested that there are several specific fund characteristics lead to differences in fund performance. The results provided significant implications for the fund investors and fund management companies on their investment decisions.

Keywords: *mutual funds, fund characteristics, fund performance*

1. Introduction

Since past decades, mutual fund investments grow to be one of the most excellent choices for the investors who are interesting to maintain and build up their own wealth. In recent years, the total worldwide assets which is investing in mutual fund has achieved USD$37.2 trillion at the end of 2015. About 76 percent of investors investing fund for retirement purpose (ICT Fact Book, 2016). The recent global financial crisis continues to shock global economy leading investors to seek long-term and sustainable profitability against speculating for short-term gains. Hence mutual funds grow to be the excellent choices for the investors who are interested in the long term and steady growth investment (FIMM, 2013).

Unit Trust Fund Industry in Malaysia

Based on FIMM, Net Asset Value (NAV) for unit trust industry in Malaysia had growth from RM43 billion to RM358.471 billion from the year 2000 to year 2016, with the 636 funds approved at the end of 2016. Nonetheless, this growth figures was rather low if matched up to other developed countries, such as United States, United Kingdom, and Japan.

Fund performance has well documented in finance literature in developed markets. However, the studies in Asian emerging market especially Malaysia is extremely inadequate. The previous research results in those mature funds's market might not be fully applicable to emerging market (Gottesman & Morey, 2006). Although Malaysian investors rank highest in ASEAN for their strong relation towards funds investment (The Edge Malaysia, 2013), nonetheless, the current economic and liquidity issue of Malaysia unable attract the foreign fund managers to invest compared to Indonesia market (Business Times, 2012). This indicates that, unit trust industry still at the infant stage in Malaysia, and has a great deal opportunity to growth in future prospect.

2. Litarature Review

Numerous studies on the mutual fund performance has been widely examined in developed and mature markets. Nevertheless, little research has been conducted for emerging market; especially in Malaysian fund market. There is lack of empirical studies determined the specific fund characteristics as potential determinants of mutual performance based on the Jensen's alpha single factor measurement. Most of the investors seeking the mutual funds that can persistently deliver excess returns (Brown, 2008).

Systematic risk (beta)

Generally, most of the investors desire for investments that provide superior returns for a given level of risk. Past researchers suggested that mutual funds with some specific characteristics performed better than others (Lichtenstein et. al., 1999). Mutual funds investments hardly stay away from risk. Low (2010) indicated that systematic risk was significantly impact on the fund performance in Malaysia mutual fund market.

Expense ratio & Turnover ratio

Gottesman and Morey (2006) indicated that expense ratio was the only one factor that had ability to significantly predicted future fund performance. The evidence found that there was negative of lagged expense ratio, which is suggested that lower fees charged on the investment fund still preferable by the investors (Atkinson, Baird & Frye, 2003).

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Low (2008) concluded that expense ratio of the mutual fund was a significant determinant of the fund returns and influenced the fund performance. This has implied that, due to the economies of scale, smaller funds were usually had higher expense ratios compared to larger funds family. The results shown fund age and fund objective were no significant to fund expense ratio. The sample funds also proved those funds with greater volatility of return were related with lower expense ratio, however, the funds with greater portfolio turnover had bring about the high expense ratio.

Christoffersen and Sarkissian (2011) pointed out that several determinants on equity fund turnover in U.S. fund industry, about 2182 number of funds during the time period of January 1992 until December 2002. The portfolios managers in financial centres had provided more precise information which made them to trade more and boost better fund performance than others.

Fund Size & Fund Age

Since years ago, size of the mutual funds has been chosen as an important determinant to examine the mutual fund performance. Several questions have been raised up in the prior studies, such as: does mutual fund size affect the selection ability of the fund investors? When managing small fund, the fund managers' skills more pronounced? Past studies found that size of the funds was not related with unadjusted and risk-adjusted returns (Droms & Walker, 1994).

Otten and Bams (2001) found that younger funds performed superior than older funds. However, the contrast found by Peterson et al (2001) who showed no relationship between the fund age and fund performance.

Fund Objective and Fund Types

Jin and Yang (2004) selected 22 closed-end funds from Chinese market to investigate whether the stated investment objectives accurately similar with the actual fund characteristics. The results found that 50 percent funds had showed inconsistent with their objective groups.

Brown and Harlow (2005) argued that those conventional fund objective categories had no more suitable method to categorize the investment funds, due to the process of classified the funds not always appeared the actual holding of a fund, and it could be somewhat subjective.

3. Data and Methods

The sample of 543 Malaysia mutual funds was employed during the periods from January 2001 to December 2014. The study screened out the real estate investment trusts (REITs), Exchange Traded Funds (ETF), closed-end funds, feeder funds, capital protected funds, and wholesale funds in the sample data. The monthly returns of the funds and FTSE KLCI index are retrieved from the DataStream database. The fund characteristics are examined in terms of their relationship with the fund performance. The seven specific variables namely turnover ratio, expense ratio, fund size, fund age, fund objective, fund types and fund systematic risk. All these fund characteristics data obtained from the respective fund master prospectus and fund management companies annual reports.

In this context, the beta (β) considered as the standardised model to determine the assets' systematic risk relative to the portfolio benchmark for the sample of funds. The most frequently method use to examine the beta is Jensen (1968) model. The Jensen model (1968) is developed based on the capital asset pricing model (CAPM). Based on the assumption of Jensen model, the fund's systematic risk is tended to constant over time. The returns performance used are the annualized return of mutual fund. The Jensen model (1968) regression is express as follows:

$$Rht - RFRt = \alpha h + \beta h\,[Rmt - RFRt] + eht \quad (1)$$

where:

Rht – RFRt= excess return of the portfolio h; Rmt – RFRt = excess return of the market portfolio; αh = Jensen's alpha, indicate risk-adjusted performance of fund h; βh= beta coefficient of the portfolio h;eht = the random error term

4. Results and Discussion

Table 1 reports the descriptive statistics of fund characteristics based on the two fund types over the 14 years periods. Out of the total 543 sample funds, conventional funds consist of 373 and Islamic funds consist of 170. Mutual funds expenses for both of the fund types are relatively in small range. While, turnover ratios of conventional funds seemed to have higher mean than Islamic funds in Malaysian mutual fund industry. Surprisingly, the Islamic funds asset sizes is greater than conventional funds, and the overall average of the chosen sample funds.

Table 1: Descriptive Statistics of Fund Characteristics in Malaysian Fund Industry from 2001 – 2014 based on Fund Types

	N	Expense Ratio	Turnover Ratio	Fund Size
CF	373	1.6631	2.0991	152.9531
IF	170	1.6778	1.6245	165.1816
TF	543	1.6773	1.37	163.363

. **CF = Conventional Funds; IF = Islamic Funds; TF = Total Funds

Table 2 shows the Pearson correlation matrix of the variables: systematic risk (beta), expense ratio, turnover ratio, average fund size, fund age. The result suggested that the systematic risk, beta was positively correlated with all the variables, range from r= 0.01 to r=0.17 although the results were not significant. Expense ratio was positively correlated with the other variables with the ranged from 0.20 to 0.30.

Table 2: Correlation coefficients between fund characteristics (2001 to 2014)

	Risk	Expense	Turnover	Fund Size	Fund Age
Risk	1.00				
Expense	0.17	1.00			
Turnover	0.01	0.30	1.00		
Fund Size	0.12	0.20	0.62*	1.00	
Fund Age	0.11	0.25	0.70**	0.94**	1.00

Note: The asterisks ** and * denote significance level at 1% and 5% respectively

Table 3 reports the baseline ordinary least regression based on Jensen's alpha single factor model, as the dependent variable. Risk (beta), turnover ratio, expense ratio, fund size, fund objective, fund age and fund type served as the independent variables. The R-squared of the Jensen's alpha regression model was about 0.9544 implied that the fund characteristics: risk (beta), turnover ratio, expense ratio, fund size, fund objective, fund age and fund type explained 95.44 percent on the Jensen alpha (single factor) fund performance. Fund turnover ratio showed significant and negatively related to the Jensen's alpha metric, with the coefficient value of -0.3234. This result is consistent with Haslema, Bakerb and Smith (2008). The result indicated that fund managers with low trading activity tend to perform superior. Fund age showed positively significant with Jensen alpha, which implied that older funds performed better than young funds in this study. The lagged one-year variables of lagged expense and lagged fund size showed significant relationship with fund performance.

Table 3: Ordinary Least Squares (OLS) Regression Analysis of α, Jensen's alpha (CAPM single factor) Performance with Fund characteristics in Malaysian Fund Industry from January 2001 to December 2014.

	Coef	SD	t-statistic
Risk	0.4089	0.9898	0.4100
Expense	-0.3234	0.5471	-0.5900
Turnover	-4.0147	0.7891	-5.0900**
Fund Size	0.0100	0.0079	1.2600
Fund Age	0.0021	0.0007	3.2300**
Objective	-1.1141	0.5031	-2.2100
Fund Types	-0.2479	0.8576	-0.2900
Lag Expense	2.3185	0.9412	2.4600*
Lag Turnover	2.3508	1.1011	2.1300
Lag Fund Size	-0.0465	0.0138	-3.3800**
R-square	0.9544		
Adjusted R-square	0.8024		
ANOVA F-value	6.28		

Dependent variable: α, Jensen's Alpha (single factor)
Note: The asterisks ** and * denote significance level at 1% and 5% respectively

Multicollinearity Test

The examination of correlation matrix analysis addressed the potential problems for the degree of multicollinearity among the fund characteristics variables in this study. The result given mean of variance inflation factors (VIF) is 5.3800, which is less than the threshold of 10. Therefore, it can conclude that no multicollinearity problem exists.

In order to examine to what extent the fund characteristics are associated to mutual fund performance, Jensen alpha on single factor model are generated from the equation (2) as follows:

$$\alpha = a1 + a2*Risk + a3*Turnover + a4*Expense + a5*Size + a6*Objective + a7*Fund\ Age + a8*Fund\ Type + a9*Lag\ Expense + a10*Lag\ Turnover + a11*Lag\ Fund\ Size + Ɛ1 \quad (2)$$

On the other hand, fund turnover showed high positive and significant correlation with fund size (r = 0.62) and fund age (r = 0.70). There was strong correlation between fund size and fund age (r = 0.94) at 1 percent significant level.

5. Conclusion

The overall results indicated that different fund characteristics take different channels to influence funds return, which subsequently affect the mutual fund performance. The turnover is negatively impact on fund Jensen's alpha performance. Fund age is positively related on fund performance. The results are consistent with Philpot & Peterson (2006) that in an efficient market, higher trading activities might rise up the costs and reduce the fund returns. Given difference types of fund investors might have their risk preferences and return expectations, this finding could be useful as valuable guidelines for potential or existing investors.

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