

# COMPARING THE DETERMINANTS OF FUND FLOWS IN DOMESTICALLY MANAGED MALAYSIAN ISLAMIC AND CONVENTIONAL EQUITY FUNDS

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## Abstract

**Purpose:** This paper aims to provide an empirical evidence on the fund flows-past return performance relationship by also considering the management expense ratio, the portfolio turnover, the fund size and the fund age of Islamic equity funds (IEF) investors in comparison with conventional equity funds (CEF) investors.

**Design/methodology/approach:** By using panel data, the sample of Malaysian domestic managed equity funds are considered comprised of 20 individual funds from IEF and CEF respectively from 2011 to 2013.

**Findings:** The results provide evidence that IEF investors have different factors when choosing funds in comparison with CEF investors. The study finds that the key factor influencing the fund flows of IEF is the management expense ratio, compared to the CEF which is fund size. This study also shows that all the fund characteristics of IEF and CEF are positively or negatively related to the fund flows.

**Research limitations/implications:** The present study may be extended by considering other fund categories such as the money market fund, the balanced fund, the bond fund and the fixed income fund.

**Practical implication:** The empirical findings of this paper clearly call for fund managers and investors to review their investment policy. The results could also provide better information and guidance for investors as well policy-makers on the factors that affect the fund flow for Malaysian Islamic and conventional equity funds.

**Originality/value:** This paper is among the earliest empirical evidence studies on the fund flows-past return performance relationship by focusing in a comparative manner on IEF investors and CEF investors in Malaysia.

**Keyword(s):** Conventional and Islamic Equity Funds; fund flows; past return performance; management expense ratio; portfolio turnover; fund size; fund age.

**Paper type:** Research paper

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## 1. Introduction

Islamic fund and wealth management in Malaysia emerged in the 1960s when Muslim investors searched for funds that complied with *Shari'ah* or Islamic law principles in relation to economics and financial transactions. Today the global Islamic fund and wealth management sector is on the rise, which is supported by strong demand from Muslim and non-Muslim investors. The funds by definition can be limited by certain asset classes such as equities, real estate, commodities, or leasing and this restriction is due to the *Shari'ah* principles as well as market condition. Among these types of asset class, equity funds are found to dominate the market. As at 9th December 2013, it was found that equities constituted 34% of the total asset under management of Islamic funds, followed by money market instruments at 19% and then commodities at 15% as the second and third largest Islamic funds' assets by asset class (Bloomberg, EurekaHedge, KFH Research Limited, 2013).

Lipper and Thomson Reuters (2015) reported that Islamic asset management has been growing since 2008 and in 2014 the industry reached a high of US\$60.65 billion in Assets Under Management (AUM). Furthermore, 2014 registered highest number of funds launched with an increase of 49% from 2013 and lowest level of liquidation. The year registered the fewest number of liquidated funds indicating a healthy environment. Despite the continuous growth of the global Islamic asset management industry it still remains a very small portion of the Islamic finance industry with approximately 3.5%. Breaking down the AUM balance of funds outstanding by the end of 2014, equity is the biggest slice, boasting an AUM of US\$24 billion. Equity funds are heavily domiciled in Malaysia (42%) and Saudi Arabia (33%). About 75% of the AUM outstanding for the money market asset class is domiciled in Saudi Arabia while Malaysia takes the biggest portion for sukuk funds (58%). Real Estate Islamic Funds are spread between Singapore (39%), Kuwait (28%), Malaysia (26%) and Saudi Arabia (7%) (Lipper and Thomson Reuters, 2015).

Unlike conventional equity funds (CEFs), the IEFs have to pass through a *Shari'ah* screening process in an attempt to ensure *Shari'ah* compliancy first before they proceed to the market. "The concept of market to trade equities is fully harmonious with the *Shari'ah*;

but the operations and trading rules and practices should also be compliant" (Iqbal and Mirakhor, 2011). In order for the stock of a company to be included in an IEF, some guidelines in relation to screening and filtering must be observed to ensure it compliancy. First, *Shari'ah* compliance necessitates that the company's business must ne in line with *Shari'ah* requirements and the stocks of companies should be eliminated if they rely heavily on debt financing. In addition, *Sharia'ah* compliancy requires that companies with income derived from interest bearing securities should also be excluded. Some flexibility is considered when the company owns some illiquid assets. The practice in the industry indicates that a number of stock screening and filtering guidelines have been developed. A review of literature indicates that mutual fund flows and performance has been subject of a number of empirical studies, which among others include Berk and Green (2004), Baoling (2008) and Choi *et al.*, (2013). However, previous studies have not considered the case for Islamic funds nor is there a comparative study between these two types of funds, which may be due to a lack of exposure to Islamic funds or data limitations.

The literature in the area of performance of managed funds is already very comprehensive and well developed (Lehmann and Modest, 1987; Daniel *et al.*, 1997; Kothari and Warner, 2001). With existing research only focusing the developed markets such as the US and the UK with less focusing on the emerging markets, other areas such as governance and flow management has not received the due empirical attention (Marzuki and Worthington, 2011). Being as one of the largest Islamic mutual fund markets in the world as well as one of the fastest development of Islamic finance in the region, academic research on the performance of managed funds still lacking in Malaysia. This study, therefore, aims at filling the gap in the literature, which aim to identify the determining factors that can impact the fund flows for Malaysian Islamic and conventional domestic equity funds, and the most important fund characteristics that investors consider when putting money into these funds. Therefore, it is primarily interested in exploring investor considerations when undertaking fund investment decisions, other than considering the past return performance only. Furthermore, this study also highlights the difference between Islamic funds flow and conventional funds flow on equity funds. Finally, this study also aims to determine whether the IEF investors show the same investment behaviour as CEF investors in terms of

investing in the same funds. For empirically testing the identified aims, this study used a sample of 20 individual funds from Islamic and conventional unit trust funds respectively.

The rest of the study is organised as follows: Section 2 presents a survey on the empirical findings related to the fund flows-past return performance relationship, the management expense ratio, the portfolio turnover, the fund size and the fund age of equity funds. Section 3 presents the research methodology and the model specification in relation to the empirical study in this paper. Section 4 depicts the results of the analyses, while section 5 discusses the results and concludes appropriately with some recommendations.

## **2. Literature Review**

Previous research shows that reacting strongly and asymmetrically to historical returns has been the main behaviours of investors. The bulk of these investigations mainly concentrate on the US market (Edelen and Warner, 2001), Korea (Oh and Parwada, 2007), Turkey (Burucu and Contuk, 2011), and Greece (Alexakis *et al.*, 2005). However, studies devoted to Islamic mutual fund flows are rather scarce, such as Nathie (2009) and Peifer (2009).

Recent studies have evidenced an asymmetric relationship between fund flow and performance relationship (*see*: Baoling, 2008; Edelen and Warner, 2001; Oh and Parwada, 2007). This advocates that top performing funds have a great impact on the fund inflows. Using a sample of 2,065 funds in Singapore, from January 1975 up to December 2006, Baoling (2008)'s study evidences an asymmetric relationship between fund flows and past return performance.

In another work, Edelen and Warner (2001) employed a regression analysis and a sample of US equity mutual funds by using high frequency daily data for the period from 2 February 1998 to 30 June 1999. They found that aggregate mutual fund flow is correlated with concurrent market returns at a daily frequency, which proves that returns are affected by fund flows and institutional trading. Second, this study also finds a robust relationship between fund flows and the previous day's return. The relationship indicates that the fund flow reacts to the information returns with one day lag; however, eventually the investors' reaction to such situations usually need an overnight period.

Similarly, Oh and Parwada (2007) examined the stock market returns and mutual fund flows interaction in Korea. The period of study covered the eight years from 1996 to 2003. The mutual fund flow is measured as stock purchases, sales, and net (total purchase-total sales). In the empirical analysis, the standard causality test is used to determine the direction of the impact as to whether the market index determines the mutual fund flow or *vice versa*. This study found a significant positive correlation between stock market returns and mutual fund flows. However, the correlation is found to be negative between stock market returns and the case of net flows.

Burucu and Contuk (2011) used the Phillips-Berron, the Johansen-Juselius, and the Granger causality tests to examine the relationships between investment fund flows and stock market returns in Turkey from 2001 to 2011. The first and second techniques are used to specify the stability of the time series and to identify the presence of a long relation among the variables, respectively. Then, the Granger causality test was performed after the results of the Johansen-Juselius, showing that the variances are integrated. The study indicates that even though there is a long term relationship between the investment fund flows and the stock returns, there is no causality between investment fund flows and stock returns in Turkey.

Alexakis *et al.* (2005) investigated the interaction between mutual fund flows and stock returns by specifically examining the possibility of a causality mechanism in which mutual fund flows may affect stock returns and *vice versa* in the Greek market. The period of investigations covered ten years, the period from 1994 up to 2003. Besides this, the study employed daily closing prices in the Athens stock exchange, which includes 2,396 observations for each series. The results indicates that there is bidirectional causality between mutual fund flows and stock returns in the Greek market, which means the lagged stock returns cause the mutual fund flows and *vice versa*. The results of the study are dissimilar to those of the study by Oh and Parwada (2007), which show that returns drive flows. The study also explained that the investor's psychology is one of the factors influencing investment behaviour in emerging stock markets. For example, the extrapolating trends in stock price changes by the investors may cause stock price increase and then the investors will purchase the shares.

It should be noted that there are micro and macro approaches used in examining the mutual fund flows and stock returns nexus (Alexakis *et al.*, 2005). The first approach is that the mutual fund flows are analysed on an individual basis, while the second approach considers the aggregate money inflows and outflows of the mutual funds industry. As an example, Sirri and Tufano (1998) used annual data from December 1971 until December 1990 to investigate the fund flow and past performance nexus, which found a strong relationship between them. Studies by Ippolito (1992) and Chevalier and Ellison (1997) also reported that the performance flow relationship is positive and convex. Furthermore, Alexakis *et al.* (2005) found that during good performance quintile, money flows were stronger as compared to the poor performance quintile. The result of the study is explained by using the price pressure theory and the information revelation approach. For instance, there is a larger demand by the individual investors to hold stock when there are increased inflows into equity mutual funds, which will cause an increase in share prices. On the other hand, for the information revelation approach, the increase in stocks purchased by the mutual fund investors who are well informed, may act as a signal to the other individual investors who are less well informed, which will cause the stock price to increase.

Furthermore, among others, Geczy *et al.* (2003), Bauer *et al.* (2005), Bollen (2006) and Renneboog *et al.* (2011) studied SRI oriented mutual funds. The study by Geczy *et al.* (2003) examined the perspective of an investor who seeks to create a portfolio of US domestic equity mutual funds, which assumed that investors are very certain about the historical returns information, the potential stock-picking possessed by fund managers, and the asset pricing model in selecting their portfolio of US domestic equity mutual funds. Additionally, they also found the performance of socially responsible and conventional funds to be comparable. In general, the study indicates that the performance of socially responsible mutual funds is not significantly different from the performance of conventional funds. Moreover, Geczy *et al.* (2003) also proposed that socially responsible investors are more loyal, since they withdrew the capital at a slower rate than conventional fund investors in the years 1999 up to 2001.

Similarly, Bauer *et al.* (2005) conducted a comparison of the risk-adjusted returns of ethical mutual funds *versus* matched conventional funds. Based on an international sample of 103

US, UK and German ethical mutual funds and also 4,384 conventional mutual funds for the period of 1990-2001. Their results show that there is no significant difference between these two types of funds. The study also suggests that ethical mutual funds were in a learning phase during the period 1990 to 1993, during which period the ethical mutual funds underperformed their conventional counterparts.

In examining the behaviour of ethical investors in the US, Bollen (2006) studied flow-performance relation and fund flow volatility for mutual funds using annual data from 1980 to 2002. The results show that the past good performance seems to be an important determining factor to SRI investors, which also shows that in comparison to the unscreened investors, they are less sensitive to past poor performance. They located a few reasons underlying this issue. Firstly, conventional funds may have many types of funds compared to ethical funds. Therefore, conventional investors have more choices when switching to other funds than SRI investors. In addition, Bollen (2006) found that SRI investors are more loyal compared to conventional investors. In addition, to examine the fund flow volatility, the study has used monthly observations of fund flow. The results of this analysis show that the movement of money in and out of mutual funds of SRI investors is significantly at slower rate as compared to the conventional investors in other funds.

Renneboog *et al.* (2011) also analyzed money flows into and out of SRIs, shows that ethical and social issues play a more determinative role in investors' decision than the fund performance. When comparing with conventional fund flows, the study found that when ethical screening used primarily for SRI funds, past negative returns is less important for ethical investors than conventional fund flows. The social attributes of such funds seem to have resulted in weaker money inflow-past performance relationship. Furthermore, they established that funds with environmental screens are more sensitive to past positive returns in terms of money flows as compared to conventional fund flows.

The existing literature identifies the factors that are found to have a determining impact on fund flows, which are discussed briefly as follows:

It should be noted that ‘fund risk’ may also influence fund flows (among others *see*: Ippolito, 1992; Sirri and Tufano, 1998; Barber *et al.*, 2005; Benson and Humphrey, 2008). A study on Korean mutual funds by Oh (2005)

According to Oh (2005), a study on Korean mutual funds, investors see total risk or volatility in return as an opportunity thus will increase their investment with those mutual funds. A study by Marzuki and Worthington (2011) demonstrates that there is a significant and positive relationship between fund risk and fund flows which is in line with the findings established by Oh (2005) and Renneboog *et al.* (2006).

Even though fund performance is considered as the main determinant in facilitating money flow into funds, there are some other factors to consider in terms of their impact on fund flows. According to Baoling (2008), the relationship between fund flows and past return performance varies and does not depend on economic activity only, as another fund attribute may also influence fund flows. The study has found that ‘fund age’ is one of the fund attributes that could have an impact on flows from investors, which is found to have significantly positive impact on the fund flow performance relationship. In other words, the degree of convexity of the relationship between fund flows and past return performance increased with fund age. The study concludes that younger funds attract more fund flows compared to older funds, which is supported by the studies of Barber *et al.* (2005) and Sirri and Tufano (1998). The greater attraction of younger funds for fund flows can be explained by the higher marketing expenses of the younger funds which can be explained by the fact that recent fund performance would provide more efficient information on younger funds in order to gain market recognition and build the fund’s reputation. However, Baoling (2008) reported that there is no distinct difference between older funds and younger funds in terms of their performance and fund inflows. Further studies, such as Chevallier and Ellison (1997), Nanda *et al.* (2004) and Ruenzi (2005), demonstrate that older funds are less sensitive to past performance in relation to money flows. Further studies by Belgacem and Hellara (2011) and Gench (2011) also examined the mutual fund characteristics in terms of fund age. Both studies found that fund age and future fund flows have a positive relationship.

Other than fund age, the other fund attribute that could influence the fund flows of mutual funds is 'fund size'. Generally, investors' asset allocation decision is based on higher visibility of funds (Marzuki and Worthington, 2011). Most of the visible funds are those that have a large market tenure and an established reputation. This is because it is believed that funds of a larger size have a greater ability to advertise themselves; as they can attract more media attention which leads to better market exposure. Benson and Humphrey (2008) investigated and compared the determinants of fund flows for SRI funds and conventional funds, who also examined fund size as one of the fund characteristics that is considered by investors when making investment decisions. However, the study could not locate any evidence for an association between flows and conventional funds implying that investors do not focus on this factor in their fund choices. The coefficients on fund size also show that there is no difference between SRI and conventional funds. On the other hand, some studies, among others, Huang *et al.* (2007), Ferreira *et al.* (2012) found that fund size does impact fund flow.

The 'expense ratio' may also influence fund flows, as evidenced by Baoling (2008), Marzuki and Worthington (2011), Barber *et al.*, 2005 and Sirri and Tufano (1998). According to Baoling (2008), in terms of the expense ratio, the total fees are used as a measure of marketing expenses. Baoling (2008) found that money flows are sensitive to the level of fees implying that lower fees may result in higher flows. In contrast, according to Marzuki and Worthington (2011), a higher expense ratio attracts more money into a fund. Higher marketing expenses, as depicted by higher expenses ratio, have been allocated for the marketing of the funds to increase the visibility of the funds and flows. By separating front end loads and expense ratios, Barber *et al.* (2005) found that investors treat these two things differently, as they showed a negative relation between fund flows and front end load fees. However, there is no relation between operating expenses and fund flows. On the other hand, Sirri and Tufano (1998) estimated the total fees as an expense ratio; and they showed a negative relationship between flows to funds and the total costs they charged (expense ratio plus load fees). The study also showed that funds, which charge higher fees grow at a slower pace compared to funds that charge lower fees.

Lastly, Marzuki and Worthington (2011) conducted a study on the relationship between the fund characteristics (such as portfolio turnover) and the fund flows of equity funds. The study has shown that the ‘portfolio turnover’ has a positive relationship between the fund flows of IEFs and CEFs. This indicates that Muslim and non-Muslim investors put more money into funds that have greater turnover. The study by Baoling (2008) also shows a positive nexus between turnover and fund flows of equity funds.

### 3. Methodology

In lined with the variables mentioned in the previous section, the past return performance and fund characteristics are expected to influence the fund flows of IEFs and CEFs in Malaysia. The previous literature has shown that the past return performance, the management expense ratio, the portfolio turnover, the fund size and the fund age could have either a positive or negative relationship with fund flows. This section aims to explore variables and their measurement as well as presenting the empirical process.

#### 3.1 Defining Variables

The proxies used for dependent variables and independent variables are taken based on the previous literature and the measures presented in Table 1 below:

**Table 1: Operationalisation of the Independent Variables**

Variables	Indicator	Proxy/Measurement
<i>Dependent Variables</i>		
Fund Flows	FLWS	Net percentage growth of fund assets
<i>Independent Variables</i>		
Return	RET	Fund return
Expense Ratio	MER	The fund annual expenses divided by the average net asset value
Portfolio Turnover	PTR	The frequency of assets bought and sold divided by the average net asset values for the year
Fund Size	SZE	Natural logarithms of the size of the fund of the asset under management
Fund Age	AGE	Natural logarithms of the number of years since the fund began

*Source:* Marzuki and Worthington (2011)

The dependent variable in this study is fund flows, whose definition follows the standard procedure based on the literature (Berk and Tonks, 2007), according to which the net relative flows are defined as a net percentage growth of fund assets.

$$FLOWS_{i,t} = \frac{TNA_{i,t} - TNA_{i,t-1}(1+r_{i,t})}{TNA_{i,t-1}(1+r_{i,t})} \quad (1)$$

where  $TNA_{i,t}$  is fund  $i$ 's total net assets in year  $t$ , and  $r_{i,t}$  is the fund's return over the prior year (Baoling, 2011). According Belgacem and Hellara (2011),  $FLOWS_{i,t}$  indicates the growth of the fund which is due to the new external money. In this, it is assumed that all dividends directly reinvested in the fund, for which flows occur at the end of the period.

As for independent variables, the main independent variable is 'fund return'. According to Sirri and Tufano (1998), historical raw return is used by individual fund investors in making fund selection decisions and as the performance measure. The raw returns data uses the formula (2):

$$RET_{i,t} = \frac{NAV_{i,t} - NAV_{i,t-1}}{NAV_{i,t-1}} \quad (2)$$

By using the net asset value (NAV) and fund distributions, the study calculates a raw monthly return series for each equity fund, by assuming that distributions are reinvested in the fund on the distribution date at the prevailing NAV for that day. The monthly total returns data is obtained from the Fundsupermart.com, Morningstar, the one week free trial database of Eurekahedge and also the annual report of each company.

Expense ratio can be defined as the annual expenses incurred in the course of managing the fund in the year divided by the fund net asset value. This has been studied in previous research, which among others include, Baoling (2008), Marzuki and Worthington (2011) and Sirri and Tufano (1998).

Whereas, the portfolio turnover can be defined as the the frequency of assets bought and sold divided by the average net asset values for the year (Marzuki and Worthington , 2011:13).

Fund size is the size of the fund (in natural logarithms) of the asset under management (AUM) at year  $t-1$  and has been used in past studies, such as Benson and Humphrey (2008), Huang *et al.* (2007) and Ferreira *et al.* (2012).

Fund age is estimated natural logarithms of the years since the fund is in existence, which has also been used in past studies, among others, by Baoling (2008), Barber *et al.* (2005) and Nanda *et al.* (2004).

### 3.2. Sample and Data

This study aims to examine the nexus between the fund characteristics and the fund flows of IEFs and CEFs. Therefore, the unit of analysis in this research is the Islamic Unit Trust Funds Management Company and also the Conventional Unit Trust Funds Management Company. The list of Islamic Unit Trust Funds Management Companies is obtained from the list of Malaysian approved funds as at 30 April 2014 from the Securities Commission webpage. In this study, 20 funds from Islamic Management Funds companies and also 20 funds from Conventional Management Funds companies are used as part of the sample.

### 3.3 Econometric Modelling

In determining the relationship between fund flows and fund characteristics of IEFs and CEFs, the general estimation model is developed based on the characteristics of the data used in this study which is a combination of cross-sectional observations and time series. In this study, a modified version of Marzuki and Worthington (2011) was employed to confirm the determinants affecting fund flows for Malaysian Islamic and conventional equity funds which is expressed in Equation 3 and Equation 4. The model is a simple linear regression function that links the fund flows, the past return performance, the expense ratio, the portfolio turnover, the fund size, and the fund age.

The empirical model for IEF is defined in equation 3:

$$FLOW_{i,t} = \alpha_0 + \beta_1 RET_{i,t-1} + \beta_2 MER_{i,t-1} + \beta_3 PTR_{i,t-1} + \beta_4 SZE_{i,t-1} + \beta_5 AGE_{i,t-1} + \varepsilon_{i,t} \quad (3)$$

where  $FLOW_{i,t}$  is the money flow of fund  $i$  in year  $t$ , while  $RET_{i,t-1}$  is the return of fund  $i$  over the period of  $t-1$ ;  $\alpha$  is the annualised standard deviation of the returns (Marzuki and Worthington, 2011:12); and  $MER_{i,t-1}$  is the annual expenses incurred by the fund divided by the average net asset value of the fund in the year (Marzuki and Worthington, 2011:12);  $PTR_{i,t-1}$  is the frequency of assets bought and sold over the average net asset values for the year (Marzuki and Worthington, 2011:13);  $SZE_{i,t-1}$  is the size of the fund (in natural logarithms) of the AUM at year  $t-1$ ;  $AGE_{i,t-1}$  is the number of years since the fund's start (in natural logarithms), and lastly  $\varepsilon$  is the error term.

The model for the determinants of CEFs is as follows:

$$FLOW_{i,t} = \alpha_0 + \beta_1 RET_{i,t-1} + \beta_2 MER_{i,t-1} + \beta_3 PTR_{i,t-1} + \beta_4 SZE_{i,t-1} + \beta_5 AGE_{i,t-1} + \varepsilon_{i,t} \quad (4)$$

where  $FLOW_{i,t}$  is the money flow of fund  $i$  in year  $t$ ,  $RET_{i,t-1}$  is the return of fund  $i$  over the period of  $t-1$ ,  $\alpha$  is the annualised standard deviation of the returns (Marzuki and Worthington, 2011:12);  $MER_{i,t-1}$  is the total annual expenses incurred by the fund divided by the average net asset value of the fund in the year (Marzuki and Worthington, 2011:12);  $PTR_{i,t-1}$  is the frequency of assets bought and sold over the average net asset values for the year (Marzuki and Worthington, 2011:13);  $SZE_{i,t-1}$  is the size of the fund (in natural logarithms) of the AUM at year  $t-1$ ;  $AGE_{i,t-1}$  is the number of years since the fund's start (in natural logarithms), and lastly  $\varepsilon$  is the error term.

To examine the nexus between fund flows and fund characteristics, the tests were run using Eviews software for descriptive statistics, and Stata software for pooled ordinary least square regression analysis, random effects, fixed effects, and the Hausman test.

#### 4. Empirical Results

This section presents and discusses the results of the study based on the model described in the previous section.

Table 2 depicts the summary statistics as part of the initial analysis of the variables with 60 observations from the equity funds of individual funds from Islamic and conventional Unit Trust Funds Management companies.

As demonstrated, the mean annual return (RET) for CEFs is 12.7638, slightly higher than for IEFs at 11.5210. The results show that the range between the highest and lowest returns in the sample for CEFs (-2.97 to 43.62) is larger than IEFs (-4.55 to 31.46). Since both the return series exhibits positive skewness, it is an indication for similarities in the series as kurtosis shows a number of outliers in either end of distribution.

**Table 2: Descriptive Statistics of the Variables**

<b>Islamic Equity Funds (IEFs)</b>						
Stats.	<b>FLWS</b>	<b>RET</b>	<b>MER</b>	<b>PTR</b>	<b>SIZE</b>	<b>AGE</b>
Mean	0.1383	11.5210	1.9492	1.2485	1.5862	0.9345
Median	-0.003	10.195	1.705	0.745	1.680	0.950
Max	2.282	31.460	3.710	5.790	3.490	1.260
Min	-0.526	-4.550	0.900	0.200	0.100	0.480
Std. Dev.	0.4855	8.5176	0.5452	1.2848	0.7962	0.1848
Skewness	2.5319	0.1872	1.5069	2.2389	0.0129	-0.5471
Kurtosis	10.2742	2.1501	5.0825	7.5851	3.0053	2.9419
Obs.	60	60	60	60	60	60
<b>Conventional Equity Funds (CEFs)</b>						
Stats.	<b>FLWS</b>	<b>RET</b>	<b>MER</b>	<b>PTR</b>	<b>SIZE</b>	<b>AGE</b>
Mean	0.0376	12.7638	1.9868	1.1628	1.6960	1.0617
Median	-0.003	12.170	1.695	1.070	1.905	1.040
Max	0.866	43.620	4.950	3.680	2.760	1.340
Min	-0.333	-2.970	0.780	0.200	0.170	0.480
Std. Dev.	0.2253	9.5746	0.7753	0.6689	0.5988	0.1956
Skewness	1.4478	0.4352	2.3133	1.0888	-1.1034	-0.8330
Kurtosis	5.7679	3.1350	8.5526	4.9373	4.1088	3.4534
Obs.	60	60	60	60	60	60

For other fund characteristics, the study shows that on average IEFs are younger than CEFs by less than one year (AGE), while the average of the fund sizes (SZE) of IEFs and CEFs are almost equal at RM1.5862 million and RM1.6960 million respectively. However, the range of fund sizes is much greater with IEFs, with fund sizes range from RM0.100 million to RM3.490 million compared with RM0.170 million to RM2.760 million for CEFs. As also shown in Table 2, the management expense ratio (MER) in IEFs and CEFs are almost the same; the difference between MERs for IEFs and CEFs is only 0.0376. Meanwhile, the results show that portfolio turnover (PTR) for IEFs is higher than for CEFs by 0.0857 per annum. Finally, the average percentages of fund flows for IEFs and CEFs are 0.1383 and 0.0376 percent per year, respectively. From the sample period, it is shown that both IEFs and CEFs recorded positive net flows (net inflows). As for standard deviation of the money flows coming in and out of IEFs and CEFs, they are 0.4850 and 0.2253 respectively, which indicates that IEFs experienced more volatile money flows.

In the empirical estimation, method of General Ordinary least Square (GLS) is used to examine the nexus between fund flows and characteristics. Table 3 presents the estimation results of the variables. Based on the *R*-square for IEFs, the results shows a moderate explanatory power (0.4268) in explaining the fund flows for IEF. For CEFs, *R*-square is recorded at 0.7646 indicating a strong explanatory power for the fund flows in the case of CEF. Thus, the model and individual dependent variables perform better for CEF than IEF.

As for the individual independent variables, the results show that the return (RET) for both IEFs and CEFs is insignificant and positively related to fund flows. The results of this study are similar to previous studies, whereby a number of research (Chevalier and Ellison, 1997; Sirri and Tufano, 1998; Edelen and Warner, 2001; Oh and Parwada, 2007; Baoling, 2008) found a positive relationship between past return performance and fund flows. The result for IEFs indicates that every 1% increase in return attracts 0.18% of fund flows. For CEFs, the result shows that every 1% increase in return will produce 0.08% of fund flows. Thus, these results indicate that in the case of IEF past return performance has more stronger deterministic impact on investor behaviour, as they react stronger to past return performance in comparison to CEF investors.

**Table 3: Results on the Flow Determinants of Islamic and Conventional Equity Funds**

	<b>IEF</b>	<b>CEF</b>
	<b>Flows</b>	<b>Flows</b>
<b>Estimation results</b>	<b>Fixed - Effects</b>	<b>Fixed - Effects</b>
	Coefficient t-statistic p-value	Coefficient t-statistic p-value
<b>RET</b>	0.0018 0.36 (0.723)	0.0008 0.33 (0.745)
<b>MER</b>	<b>0.6401</b> <b>3.97</b> <b>(0.000)***</b>	0.0071 0.07 (0.942)
<b>PTR</b>	<b>-0.2346</b> <b>-3.25</b> <b>(0.003)***</b>	-0.0790 -1.37 (0.178)
<b>SZE</b>	0.2779 0.73 (0.471)	<b>2.8114</b> <b>7.77</b> <b>(0.000)***</b>
<b>AGE</b>	-1.1791 -1.50 (0.143)	<b>1.4493</b> <b>2.88</b> <b>(0.007)***</b>
<b>R-squared</b>	0.4268	0.7646
<b>F-Stat</b>	5.21	22.74
<b>Prob (F-stat)</b>	0.0011***	0.0000***

Notes: \*\*\* Significant at 1% level, \*\* Significant at 5% level, \* Significant at 10% level

As can be seen in Table 3, the management expense ratio (MER) of IEFs is significant at the 1% level and there is a positive relationship between MER and fund flows with a significant level as identified by the coefficient of 0.6401. The result of this study is consistent with Barber *et al.* (2005), Huang *et al.* (2007) and Marzuki and Worthington's (2011) results. One of the reasons for this is the greater marketing expenses, which indicate increased advertising, and this could attract investors to invest in the funds. Furthermore, higher MER shows that greater expense has been put into promoting the funds, thus affecting their visibility and fund flows (Marzuki and Worthington, 2011). In addition, according to Ivkovic and Weisbener (2009), the larger MER could contribute towards better managerial talent. However, the MER in the case of CEFs, the result is insignificant but positive.

PTR or portfolio turnover of IEFs is significant at the 1% level and the coefficient indicates an adverse nexus with fund flows of IEFs, which is consistent with the results established

by Carhart (1997) and Wu (2014). Therefore, the result of the PTR for IEFs indicates that a negative relationship with the degree of 0.2346 as identified by the coefficient. On the other hand, the portfolio turnover of CEFs presents as insignificant. However, there is also a negative relationship between PTR and fund flows.

As regards to the size of funds or SZE, it is not significant but it has a positive relationship with fund flows. Meanwhile, the funds size for CEFs is significant at the 1% level and the coefficient indicates that the fund size has a positive relationship to the fund flows. This shows that a greater fund size could attract more media attention to advertise the funds and at the same time it could attract investors to put more money into the funds. The results are in line with Huang *et al.* (2007), Ferreira *et al.* (2012) and Marzuki and Worthington (2011). In supporting the finding, the latter study indicates that investors' decision on asset allocation generally make based on the visibility of the funds. Furthermore, most of the funds are those with an established reputation and large market tenure.

The results of the regression model in Table 3 show that there is an insignificant negative relationship between fund age (AGE) and fund flows for IEFs. On the other hand, the results for fund age for CEFs is documented as significant positive relationship to fund flows, which is consistent with various other studies (Sirri and Tufano 1998; Barber *et al.*, 2005; Baoling, 2008), showing that more recently created funds attract more funds compared to the older funds. This can be ascribed to higher marketing costs to make younger funds more visible as the younger funds does not necessarily have the required reputation to increase their performance and therefore recent fund performance is more informative for them.

## **5. Conclusion and Recommendations**

This study explored and examined the relationship between the fund characteristics affecting the fund flows of IEFs and CEFs in Malaysia with the objective of determining the fund characteristics that highly influence the fund flows of IEFs and CEFs.

In evidence, the findings in this study indicate that all the identified fund characteristics including the past return performance (RET), the management expense ratio (MER), the

portfolio turnover (PTR), the fund size (SZE), and the fund age (AGE) have a positive or negative relationship to the fund flows (FLOWS) of IEFs and CEFs.

Based on the results in Table 3, the first research objective of this study has been answered, and it was found that for IEFs, the MER and the PTR have a significantly positive and negative relationship to the fund flows respectively. Besides, the most key factor that can influence the fund flows of IEFs is the management expense ratio (MER) due to the greater percentage of coefficient as compared to the portfolio turnover (PTR). Thus, the second research objective of this study has also been answered through the econometric analysis.

On the other hand, Table 3 also presents the results of CEFs, which demonstrates that all the fund characteristics have a relationship to the fund flows, either positively or negatively. From the results, it is shown that fund size (SZE) and fund age (AGE) have a significantly positive relationship to the fund flows, which indicates that conventional investors place much emphasis on these attributes compared to the other fund characteristics when putting money into the funds. However, the key factors that can influence the fund flows of CEFs is fund size (SZE) rather than fund age (AGE) because the fund size has a higher coefficient as compared to the fund age.

In conclusion, the comparative fund flows analysis shows that IEFs and CEFs are impacted by different fund characteristics. The results of the study show that the key factors that can influence the fund flows of IEFs and CEFs are the management expense ratio (MER) and the fund size (SZE) respectively. The reason for the different fund characteristics that can influence the fund flows of IEFs and CEFs is due to the different behaviour of the Islamic and conventional investors. For the IEF investors, the reason they choose the MER may be because of the greater marketing expenses; increases in advertising could attract those investors to invest in the funds. Furthermore, the greater MER shows that there are greater marketing expenses in marketing or promoting the funds, thus affecting the visibility of the fund and the fund flows (Marzuki and Worthington, 2011). Furthermore, as also identified by Ivkovic and Weisbener (2009), the findings shows that the larger management expense ratio (MER) could contribute towards better managerial talent.

This study found that fund size is the most key factor that can influence the fund flows of CEFs. This is because the larger size of the fund could attract more media attention to advertise the funds and at the same time it could attract investors to put more money into the funds. This is in line with the finding by Marzuki and Worthington (2011) where large market tenure, an established reputation as well as more visible funds do generally influenced investors in making asset allocation decisions.

The main contribution of this study compared to previous studies is that the data comprises individual funds' annual returns, the inception date of the fund, the fund size, the management expense ratio and the portfolio turnover collected from the annual report and the individual fund's prospectus. When comparing previous studies, it was found that most of the research had used monthly and daily data (see; Edelen and Warner, 2001; Oh and Parwada, 2007; Baoling, 2008; Burucu and Contuk, 2011; Marzuki and Worthington, 2011). Furthermore, the contribution of this study has been the examination of the most important fund characteristics that investors consider when putting money into the funds.

In considering the results, it should be noted that by looking into the past return performance only, investors cannot predict that the future fund performance could be the same as the previous fund performance. Therefore, it is suggested that investors can also look into other fund characteristics - such as the expense ratio, the fund size, the portfolio turnover and the age of the fund - when making their investment decisions.

Finally, it is also suggested that future researchers can consider other fund categories, such as the money market fund, the balanced fund, the bond fund and the fixed income fund, in order to extend the studies on the fund flows of Malaysian IEF and CEF.

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