

THE DETERMINANTS OF ISLAMIC MUTUAL FUND FLOWS: EVIDENCE FROM MALAYSIA

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Abstract: *Islamic mutual funds (IMF) are growing as a substitutional investment vehicle for investors who want to combine value and financial objectives in their investment. A group of the funds is managed by one Investment Company called the family of funds, different families follow different strategies that distinguish them from each other. This study investigates the flow-performance relationship in IMF, in addition to the extent to which family and fund characteristics contribute to explaining fund flows in Malaysia for the period from 2009 to 2017. The study uses raw returns to calculate the fund performance and use the percentage money flow (FLOW), defined as money flow scaled by the total net asset of the fund. The study use panel regression models to estimate the relationship between fund flow and performance, fund, and family variables. The results show there are positive relationship between past performance and fund flow that mean IMF investors make rational financial decisions by directing fund flows to better performing funds. The results also indicate there are negative relationship between fund flows and fund risk may be due to IMF performing better during the bearish market since the risk is high. Finally, the results indicate there are negative relationship between fund flows and fund size, family size, number of funds in the family, this may be because when family or fund become larger and included more funds can't preserve the same high growth rate.*

Keywords: Islamic mutual fund, fund flows, fund family size, fund family age, past performance

1. Introduction

Islamic finance has rapidly developed throughout the past decade and still continues to expand. (Dubai Islamic Bank, 2016)The Global Islamic Finance Report (GIFR) (2016) reported that the total value of global Islamic financial services reached US\$2.293 trillion at the end of 2016, compared to US\$2.143 trillion in 2015. Moreover, the size of the industry potentially grows by at least 10 percent annually. The report forecast that by 2020, the industry would grow between US\$3.151 trillion and US\$4.57 trillion. In addition, today Islamic finance comprises many types of financial services, such as funds management (mutual funds), Islamic banking, Islamic insurance (takaful), and Islamic bond (Sukuk) (Kammer et al., 2015).

The mutual fund is an investment company that collects money from shareholders and invest it in assorted securities, including money market instruments, stocks, and bonds. Moreover, mutual funds offer attractive advantages such as the ability to invest in an equity fund without incurring transaction costs or cost of collecting information, thus mutual funds allow

diversification and provide administration in dealing with investments to reduce the workload of individual investors (Ahmad et al., 2017). Mutual funds can influence the real economy via two channels, that is, the primary and secondary markets. Where the fund flows are positively correlated with subsequent economic growth, it leads to the fact that these flows incorporate additional information related to real economic activities that are not perceived by forecasters (Hoepner et al., 2013). Islamic funds are one of the most important types of mutual funds at the moment.

The purpose of Islamic mutual fund (IMF) is to achieve religious and ethical objectives without infringing the traditional needs of diversification, liquidity, and performance (El Khamlichi et al., 2014; Azmi et al., 2018). Moreover, as Sharia law prevents many high-risk activities, Islamic financial services have been much less affected by financial crises relative to their respective benchmarks (Hoepner et al. 2013; Makni et al., 2015; Boo et al., 2016). Sharia law prohibits mutual funds from *riba al nasiah*, *maysir*, *gharar* and *haram* products or services and it requires *haram* purification, *riba al nasiah* represents the receipt of interest on capital. Hence, IMF cannot invest in conventional bonds, warrants, preferred stock, certificates of deposit and some derivatives. The IMF industry has recently seen a dramatic increase in the amount of wealth held by mutual fund managers. Malaysia. World's Islamic Finance Marketplace MIFC, (2017) stated that the total Islamic assets under management (AUM) in 2017 were USD70.8 billion, and the number of Islamic funds was 1,535. This is a significant increase compared to 2008 when there were only 802 funds with total AUM of USD47 billion. The largest type of IMF is equity funds, representing 40 percent of total Islamic funds. They are followed by fixed income at 17 percent, and real estate and private equity at 12 percent.

The motivation for testing the flow-performance relationship of IMFs is that investors of these funds, besides the expected financial gains, have certain non-financial motives that inclining toward religion (Sharia-compliance). This proclivity effects the behavior of investors in the IMF's investment decision. In addition, the idea of investing in IMF is to prohibit speculative activities, and so Islamic mutual funds will have a lower risk compared to those that include speculative activities, and this feature may turn IMF into a hedging tool in the shadow of market declines periods (Merdad et al., 2010; Hoepner et al., 2013). Many studies suggest that investors select funds based on their past performance and characteristics, according to the feedback trading hypothesis, investors react to lagged returns, with positive (negative) returns leading to positive (negative) flows (Marzuki & Worthington, 2015; Azmi et al., 2018). Many previous studies examined the flows of IMF at the funds level (such as Renneboog et al., 2006; Marzuki and Worthington 2015; Azmi et al. 2018). This study contributes by takes into considering fund family variables because the different families follow different strategies that distinguish them from each other. fund family may utilize strategies that depend on the heterogeneity of the investors in terms of investment horizon, such as showing the possibility for investors to switch to different funds from the same family at no cost and increasing the number of fund in the family, adding more options for the investors to select from (Brown & Wu, 2012; Clare et al., 2014). In addition to the characteristics of fund families, including size, age, and the number of funds in the family, therefore influence the flows of funds in these families.

A group of the funds is managed by one Investment Company called the family of funds, these fund families act as financial intermediaries offering a variety of mutual funds under a common brand name and via common marketing and distribution channels. Like any other typical goods market, interactions between investors (on the demand side) and the mutual

fund families (on the supply side) determine the equilibrium, resulting in an equilibrium level of diversification as well. In addition to the differing characteristics of these families, and therefore, this difference influence the investor's behavior of the fund (Bhattacharya et al., 2013). Investing in many funds within a family of funds may present for many advantages, a fund family may provide for investors “one-stop” shopping, by providing more investment opportunities (Bhojraj et al., 2011). Inflows would not only depend on the rank of a fund or family within the market, but also on the families and funds characteristics such as a number of the fund in the family, family size, and family age, this evaluation is important as some investors only consider one fund family when invest.

Family size is calculated as the all equity funds under management by a company. The larger fund families can share expenses among a large number of funds, also can use the same economic data and experts to explain data across funds, in addition to large fund families can benefit from economies of scale from trading commissions and lending fees (Chen et al., 2004). These options act as externalities for all funds belonging to the same family, affecting the purpose level of flows the family needs to achieve and the number of funds it wants. In addition, the number of funds within the same family can increase the investors’ selection options and thus increase the diversity that leads to increased flows. As there some studies indicate the IMF has the ability to achieve profit and preserve positive returns through the bear market (Abdullah et al., 2007; Abderrezak, 2008). Therefore, IMF considered an alternative in portfolio selection for investors, especially during bear markets, then can consider IMFs a good hedging investment, especially against market downturns that could increase the fund flows (Elfakhani et al., 2005).

The growth of the IMFs in Malaysia is foreseeable to increase from higher demand from other different markets, also from a raised degree of awareness and confidence between investors. Malaysia is one of the key domiciles contributing to the largest market share of the global Islamic fund's industry. The IMFs industry in Malaysia started in the 1990s with 2 funds in 1993. In 2009 the number of funds is 150 funds managing total AUM of USD 12.0. In the first quarter of 2017, the number of funds in Malaysia is 388 funds managing total AUM USD 22.6. The steadily increasing importance of IMF as an investment choice in portfolio management and its role in the development of the Islamic financial system motive us to focus on study IMF’s industry (Agussalim et al., 2017). As a high percentage of IMFs belong to Malaysia, then investigating the IMF industry in Malaysia, it will transfer the orientations and movement of the IMF globally. So, the objective of this study is to investigate the flow-performance relationship in IMF, in addition to the extent to which family and fund characteristics contribute to explaining fund flows in Malaysia for the period from 2009 to 2017. The studying fund flows is very important to understanding the behavior of investors in Islamic mutual funds by knowing how the investors in IMF will respond to past performance and other fund characteristics, fund family variables. The significance of studying flow-performance relationship lies in three aspects. The first is for fund families to determine, via fund flows, the AUM of fund management companies. Second, for the fund managers, by the convex flow-performance relationship that may encourage fund manager risk-taking to increase the likelihood that they are winners. Finally, the way flows respond to past performance also matters as it has implications for fund persistence. This is because the flow-performance relationship will determine the degree to which fund size is affected by a past performance which conditions how a fund performs in the future.

This paper will address the following three questions:

- Q1. Do Islamic mutual fund (IMF) investors consider past performance in their fund selection process?
- Q2. Do IMF investors consider fund characteristics other than performance when undertaking an investment decision?
- Q3. Do IMF investors consider family characteristics other than performance when undertaking an investment decision?

This study use data on Malaysian IMF, to explore the above questions over the period from 2009 to 2017. The remains of the paper are organized as the following. Section 2 reviews the previous literature, Section 3 describes the data and models are used to evaluate the fund flows and test the fund and family characteristics, then section 4 provides the empirical results and discussion. Finally, section 5 will provide the conclusions.

2. Literature Review

One of the more important strands of research in the mutual fund literature is the study of fund flows. Most of this investigates the relationship between cash flows into mutual funds and past performance and other fund characteristics, while this study will contribute by add the family characteristics. Prior studies mainly concentrate on the USA, Australia, the UK and other developed capital markets (Chevalier & Ellison, 1997; Ippolito, 1992; Sirri & Tufano, 1998; Sawicki, 2001). These studies found that the flow-performance relationship of the investigated funds was positive and asymmetric. Funds that have performed well experienced higher money inflow, while funds that perform poorly experienced less money outflow. The implication from this finding is that investors allocate money disproportionately among poor and good performing funds; they would purchase funds with the best past performance, but are reluctant to let go of poor performing ones. Whereas there is some evidence relating to the behavior of socially responsible funds (SRF) or ethical funds (Benson & Humphrey, 2008; Renneboog, Ter Horst., 2011; El Ghouli & Karoui, 2017), studies dedicated to IMF flows are regrettably very limited (Marzuki, 2015; Azmi et al, 2018). The most evidence is that past performance (both raw and risk-adjusted returns) is a significant determinant of money flows into and out of mutual funds.

The beginning evidence indicates a positive relationship between past performance and fund flows, in addition to a positive relation between recent good (worse) performing funds and net money inflows (outflows). That means that investors use past performance to adjust their beliefs on managers' ability to generate superior returns. In addition, this indicates that investors consider recent past performance by rewarding better-performing funds with additional money and removing or not directing money to poorer-performing funds (Chevalier & Ellison, 1997; Del & Tkac, 2008; Sawicki, 2001). Whilst, other studies found evidence of a convex or asymmetric flow-performance relationship. This suggests that better-performing funds enjoy huge money inflows, however, funds with poor performance do not suffer large money outflows (Ippolito, 1992; Sirri & Tufano, 1998). Recently, Leung & Kwong (2018) investigated the flow-performance relationship of mutual funds investing in emerging market economies (EMEs) from January 2000 to December 2016. These funds displayed a convex flow-performance relationship, suggesting that past performance is a significant factor driving fund inflow when the fund return is positive, but its influence vanishes when the return is negative. In addition to performance there are other factors may also influence fund flows, investors may consider non-financial attributes in making fund

allocation decisions. Such as fund expenses, advertising, fund visibility, age, and size (see, Sirri & Tufano, 1998; Jain and Wu, 2000; Nanda et al., 2004).

On SRF case, the evidence about socially responsible funds has not risen to the level of evidence about traditional funds. Bollen, (2007) was the first study to consider the behavior of SRI investors in the USA. He compares the behavior of SRI fund investors and the behavior of CMF investors, this difference due to the investors of SRI buys mutual funds for both financial and social objectives. The results found that while SRI investors are more sensitive to past good performance, they are less sensitive to past poor performance compared to unscreened investors. He suggested conventional investors may have more options to switch to other funds compared to SRI investors. In addition, SRI investors consume non-financial attributes that mitigate the withdrawal of funds associated with negative performance. Consequently, SRI investors are more “loyal”, at least in their reactions to poor fund performance. Renneboog et al., (2011) examine SRI and conventional funds from 21 countries, they found that the sensitivity of SRI funds’ inflow-past good performance relationship was lower than their conventional counterparts. Adversely, flows into environmentally-screened funds were more sensitive to lagged positive performance than conventional flows. These findings suggest that the flow-return relationship of SRI funds for past positive returns are country- and culture-specific, and that the valuation of ethical and social issues differ from an investor to another. Investors base their decision not only from the financial aspect but also non-financial factors, as suggested by the weak sensitivity of SRI funds’ money flows to past negative performance. In contrast, A study of 2,168 equity funds in the US from 2003 to 2011 found that SRI funds showed weaker flow-performance relationship relative to conventional funds (El Ghoul & Karoui, 2017).

On IMF case, the IMFs exhibit different characteristics, which lead to differ the behavior of IMFs investors, however, the behavior of IMF investors remains an outstanding empirical issue. The studies on IMF are very limited. Marzuki and Worthington (2015) studied Islamic and conventional funds in Malaysia for the 2001-2009 period. They found that Islamic fund investors are more responsive towards poor performing funds, thus confirming that these investors are rational decision makers when selecting funds. Moreover, the study confirmed the asymmetric and convexity flow-performance relationship in both Islamic and conventional funds, as well as the best-performance-chasing behavior of the investors. Azmi et al. (2018) also detected the asymmetric flow-performance relationship of Sharia-compliant funds. For the period from January 2002 to December 2013. Their inquiry of the global Islamic funds found evidence that such relationship exists. In addition, non-performance related variables are also important in explaining fund flow and sensitivity. One such variable is fund age; older funds have existed longer, and may have created much awareness among investors due to their longevity. Depending on realized past performance, this awareness may be bad or good for the funds (Marzuki and Worthington, 2015). Some studies argued that younger funds attract more fund flows due to the high marketing costs that they expend (Barber et al., 2005). Still, larger funds are expected to capture more money flow (Gruber, 1996), as they are able to bear higher marketing costs, thus gaining attention from the media.

This paper seek to contribute by examine the family variables, the strategies of fund families are different to attract investors and improve their performance. Moreover, the family characteristics different, then this differential lead to different flows between different funds in these families. Benson et al., (2008) examine the relevance of fund specific and family variables in the determination of money flows to Australian investment funds for the period July 1995 to June 2006. The results show that family characteristics are relevant to flows.

Investors in individual funds are sensitive to family size, family age, and product proliferation. Gallaher et al., (2008) examine the relationship between mutual fund families' advertising decisions and flows into mutual funds on three levels: industry, fund families, and individual funds for the period from 1992 to 2001. The results find that advertising has significant effects on investor flows at the industry, family and individual fund level. The results further find that advertising can affect the fund's flow-performance sensitivity, dampening it for poorly performing funds and increasing it for highly performing funds.

3. Data and Methodology

Data and sample

The sample in this study comprises 50 IMFs, distributed to 20 families, the study uses the flows of Islamic mutual funds in Malaysia from 2009 to 2017. The data comprise monthly returns for each fund, total asset, inception date for each fund, and market index prices collected from Bloomberg database, which provides information on mutual funds, it also offers data in the form of media and news, in addition to an Islamic finance platform, presenting comprehensive data on IMF and other Islamic instruments, and provides an Islamic window that provides data on a range of Islamic financial institutions. In addition to the rate of return on a 3-month Malaysian Treasury bill collected from (www.Investing.com). The fund family's variables, such as family age and the number of the fund in each family collected from the annual reports of fund family. Since the family and fund age is an annualized, so the researcher converted to a monthly equivalent, to be consistent with the monthly returns of fund and market return.

The study uses a standard procedure for constructing the flow of funds by using the percentage money flow (FLOW), defined as money flow scaled by the total net asset of the fund as follows:

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

Where, $TNA_{i,t}$ is the total net asset value of fund i at time t , $TNA_{i,t-1}$ is the total net asset value of fund i at time $t-1$, $R_{i,t}$ is the fund i raw return at time t . According to Marzuki & Worthington, (2015) this study uses raw return as a performance measure, where the previous studies indicate that the individual investors generally make fund selection decisions based on relatively basic measures, such as the historical raw return, in addition, the most appropriate measure of return is raw return as the average investor finds it easiest to calculate and understand (Sirri and Tufano 1998; Del Guercio and Tkac 2008).

The Models

The analysis section employs panel of fund month observations from 2009 to 2017. The panel regression technique to estimate the relationship between fund flow and performance, fund characteristics, and family characteristics as follows:

$$FLOW_{i,t} = \beta_0 + \beta_1 Ret_{i,t-1} + \beta_2 FR_{i,t-1} + \beta_3 FS_{i,t-1} + \beta_4 FA_{i,t-1} + \beta_5 FMA_{i,t-1} + \beta_6 FMN_{i,t-1} + \beta_7 FLOW_{i,t-1} + \varepsilon_i \quad (2)$$

Where, $FLOW_{i,t}$ is the fund i flow at time t, $Ret_{i,t-1}$ is the fund i return at time $t - 1$, $FR_{i,t-1}$ is the fund i risk at time $t - 1$ calculated from fund beta, $FS_{i,t-1}$ is the fund i size at time $t - 1$ calculated from log of fund total assets, $FA_{i,t-1}$ is the fund i age at time $t - 1$ calculated from fund inception date, $FMA_{i,t-1}$ is the fund family i age at time $t - 1$ calculated from family inception date, $FMS_{i,t-1}$ is the fund family i size at time $t - 1$ calculated from log family total asset, $FMN_{i,t}$ is the number of fund in the family i at time $t - 1$, $FLOW_{i,t-1}$ is the fund i flow at time $t - 1$ and ϵ_i is the error term.

4. Empirical Results and Discussion

In the regression model as shown in table 1, the Breusch-Pagan / Cook-Weisberg test for heteroscedasticity show H_0 : constant variance means there is no heteroscedasticity, and $\text{prob} > \chi^2$ is 0.103, more than 0.05 suggesting that the null hypothesis cannot be rejected. Given the potential problems of multicollinearity among the fund attributes variables, a diagnostic check was performed using variance inflation factors (VIFs). As a rule of thumb, a $VIF > 10$ is taken as an indicator of the presence of multicollinearity and the diagnostic results in table 1, show that none of the past performance, family and fund characteristics variables have a value greater than 10.

Table 1: Breusch-Pagan/ Cook-Weisberg and VIF test

Variables	Past perf	Fund size	Fund risk	Fund age	Family size	Family age	Family num	Past flow
VIF	1.00	3.20	1.02	1.08	3.25	2.48	2.16	1.57
H_0: Constant variance $\text{Prob} > \chi^2 = 0.103 > 0.05$								

The Summary of Descriptive Analysis

Table 2 reports the summary statistics of the variables used in the study. Can see all variables have positive mean except fund risk it was -0.0287 and standard deviation equal 0.0417. Fund flow has mean equal 1.9461, which means the IMF received an overall positive net inflow of funds during the sample period, and standard deviation equal 0.8193, that suggests that fund flows into and out of IMF are generally volatile.

Past performance has mean equal 0.0677 that means the IMF performance was positive during study period, and standard deviation equal 0.7013. Fund size was 2.0183, family size was 2.1759, and family age was 1.0353. Table 2 also reports the standard deviation of all variables used in this study, fund risk equals 0.0417, and family size equals 0.7302. Can see also in table 1 maximum, minimum, skewness, and kurtosis of all variables used in this study.

Table 2: Summary statistics for IMF flow and independent variables.

Statistic	Fund flow	Past perfo	Fund size	Fund risk	Fund age	Family size	Family age	Family num	Past flow
Observation	5400	5400	5400	5400	5400	5400	5400	5400	5400
Mean	1.9461	0.0677	2.0183	-0.0287	0.9567	2.1759	1.9427	1.0353	1.9463
Maximum	3.7644	3.8591	3.7203	0.1651	0.0833	3.1517	3.5000	2.4188	3.7644
Minimum	-2.6576	-5.4917	-0.2146	-0.2106	3.8300	-0.0632	0.2500	0.0833	-2.6576
SD	0.8193	0.7013	0.8208	0.0417	0.8048	0.7302	0.8748	0.5762	0.8193
Skewness	-0.1055	-0.4336	0.1707	-1.1728	2.1157	-0.3020	0.3698	0.3038	-0.1059
Kurtosis	3.2094	9.3174	2.3440	9.0512	7.1126	2.3050	1.9210	1.9168	3.2099

The Correlation between IMF Flow and Past Performance, Fund and Family Variables

Table 3 presents pairwise correlations for IMF flows and independent variables. IMF flow is correlated positively with fund size, family size, family age, and the number of fund in the family. That suggest that the fund and family with big size attract more flow due to the more investment alternative provide by this fund and family. However, IMF flow is correlated negatively with past performance, fund risk, and fund age. That suggest that the fund with negative past returns attract more flow due to this fund achieve good return in future. In addition, old fund attract less flow due to this funds are hard to manage.

Table 3: Pairwise correlation coefficients

Variables	Fund flow	Past perfo	Fund size	Fund risk	Fund age	Fam size	Fam age	Fam num	Past flow
Fund flow	1.0000	----	----	----	----	----	----	----	----
Past perfo	-0.0031	1.0000	----	----	----	----	----	----	----
Fund size	0.2512	-0.0514	1.0000	----	----	----	----	----	----
Fund risk	-0.0541	-0.0141	-0.0025	1.0000	----	----	----	----	----
Fund age	-0.2283	0.0267	-0.1264	-0.0151	1.0000	----	----	----	----
Fam size	0.2574	-0.0582	0.8228	-0.0497	-0.1481	1.0000	----	----	----
Fam age	0.5732	0.0012	0.2122	-0.0812	-0.0948	0.3046	1.0000	----	----
Fam num	0.4839	0.0096	0.1635	-0.0272	-0.0827	0.2657	0.7251	1.0000	----
Past flow	0.9303	-0.0081	0.2524	-0.0543	-0.2517	0.2577	0.5481	0.4526	1.0000

Flow-Performance Relationship

Table 4 reports the results for the panel regressions model used to investigate the impact of past performance, fund and family variables on IMF flow. Table 4 indicates the model is significant and has adjusted R-squared of 0.87 suggesting that past performance, fund and family variables explain almost 87 percent of the regression variation in IMF flows. This section focus on the results about the impact of past performance on IMF flows.

The results in table 4 show that the coefficient of past performance is significantly positive (0.4371), that indicates that for every 1 percent increase (decrease) in returns the IMF flow will increase (decrease) by 0.44 percent. This means that the IMF investors reward (punish) better (worse) performing funds by moving money into (out) these funds.

Table 4: Regression model estimate.

$FLOW_{it} = \beta_0 + \beta_1 Ret_{it-1} + \beta_1 FR_{it-1} + \beta_2 FS_{it-1} + \beta_3 FA_{it-1} + \beta_4 FMZ_{it-1} + \beta_5 FMA_{it-1} + \beta_6 FMN_{it-1} + \beta_7 FLOW_{it-1} + \varepsilon_i$				
Variable	Coefficient	Standard error	t-Statistic	Pr>[T]
Constant	0.0589	0.0166	3.56	0.000
Past performance	0.4371	0.0057	0.77	0.043
Fund Size	-0.0277	0.0087	-3.19	0.001
Fund Risk	0.4234	0.0962	0.24	0.028
Fund Age	-0.0184	0.0051	-0.36	0.621
Family size	-0.0238	0.0011	-2.38	0.000
Family age	0.0584	0.0071	8.15	0.710
Family number	-0.0621	0.0102	-6.11	0.000
Past flow	0.8752	0.0061	10.50	
F value = 46.93 Prob>F = 0.0000 Adjusted R² = 0.872 N = 5400				

IMF Flow and Fund Characteristics

This section focus on results about the impact of the fund characteristics on IMF flows, to explore whether IMF investors use the fund characteristics when selection investments. Can see in table 4 there is negative significant relationship between fund size and IMF flow (-0.028), which suggests that the smaller funds attract more flows than old funds. In the model

can see when fund size increase by 1 percent the fund attract a 2 percent lower fund flow. That due to when funds become larger this funds can't preserve the same high growth rate. Table 4 also show that the fund risk positive significantly with IMF flow (0.4234). This result is consistent with the results of Marzuki & Worthington, (2015), this may be due to IMF performing better during the bearish market since the risk is high, in the model when risk increase by 1 percent the fund flow increase by 0.42 percent. The results also show the fund flow insignificant with fund age, that means the IMF investors don't look at fund age when direct their money. Finally, there is strong evidence that past fund flows (t-1) effects on future fund flows (t) (0.8752), can see that in the model, since increases of 1 percent in lagged fund flow lead to increase future flow by 0.875 percent, this due to the persistence in flows signals investors reinvest in the funds already owned. This result is consistent with Benson & Humphrey (2008) and Marzuki & Worthington, (2015).

IMF Flow and Family Characteristics

This section focus on results about the impact of the family characteristics on IMF flow, to explore whether IMF investors use the family characteristics when selection investment. The studies on family characteristics focus on conventional funds, so this study on of first studies focus on IMF. Table 4 show smeller to fund size the family size and the number of fund in the family have negative significantly relationship with IMF flow, that suggest the family with small size attract more flows (-0.0238) and (-0.0621) this finding is consistent with the results of Benson et al., (2008). In the model can see when family size increase by 1 percent the family attract a 2 percent lower fund flow. That may be because when family become larger and included more funds can't preserve the same high growth rate. The results also show smeller to fund age the fund flow insignificant with family age, that means the IMF investors don't look at family age when direct their money.

5. Conclusion

The objectives of this study is to explore the IMF investors behavior by investigate the response of IMF investors to past performance and reflected in fund flows. The investors of IMF care about religious and ethical matters, then maybe this investors sacrifice some return performance. The results show there is a positive relationship between fund flows and past performance. That suggest the IMF investors make rational financial decisions by directing fund flows to better performing funds.

This study also aim to examine the relationship between fund characteristics and fund flows. One of the outstanding results, a positive relation between funds flows and fund risk. This may be due to IMF performing better during the bearish market since the risk is high. In addition to fund size is the one of determining fund flows. Finally, this study seek to contribute by examine the relationship between fund flow and family characteristics. The invest in many funds within a family of funds may present for many advantages, a fund family may provide for investors "one-stop" shopping, by providing more investment opportunities. Smeller to fund characteristics, the family size and the number of fund in the family negatively impact on fund flows, that may be because when family become larger and included more funds can't preserve the same high growth rate.

The significance of studying flow-performance relationship lies in three aspects. The first is for fund families to determine, via fund flows, the AUM of fund management companies. Second, for the fund managers, by the convex flow-performance relationship that may encourage fund manager risk-taking to increase the likelihood that they are winners. Finally,

the way flows respond to past performance also matters as it has implications for fund persistence. This is because the flow-performance relationship will determine the degree to which fund size is affected by a past performance which conditions how a fund performs in the future. Finally, this study can encourage researchers in the realm of a mutual fund to further extend this subject. First, by expanding the study to other countries to include other countries that have a good number of Islamic funds. Second, by adding other characteristics of fund families to know which of these characteristics could determine the flows of Islamic funds.

References

- Abderrezak, F. (2008). The performance of Islamic equity funds: A comparison to conventional, Islamic and ethical benchmarks. Retrieved April, 1, 2010.
- Abdullah, F., Hassan, T., & Mohamad, S. (2007). Investigation of performance of Malaysian Islamic unit trust funds. *Managerial Finance*, 33(2), 142–153. <https://doi.org/10.1108/03074350710715854>
- Agussalim, M., Limakrisna, N., & Ali, H. (2017). Mutual Funds Performance : Conventional and Sharia Product. *International Journal of Economics and Financial Issues*, 7(4), 150–156. Retrieved from www.econjournals.com
- Ahmad, Y., Sun, G., & Khidmat, W. Bin. (2017). Fund-specific Determinants of Performance: An Empirical Study of Islamic and Conventional Mutual Funds of Pakistan. *International Journal of Economics and Financial Issues*, 7(5), 359–370. Retrieved from <http://www.econjournals.com/index.php/ijefi/article/view/5429/pdf>
- Azmi, W., Mohamad, S., & Shah, M. E. (2018). Nonfinancial traits and financial smartness: International evidence from Shariah-compliant and Socially Responsible funds. *Journal of International Financial Markets, Institutions and Money*. <https://doi.org/10.1016/j.intfin.2018.02.001>
- Barber, B. M., Odean, T., & Zheng, L. (2005). Out of Sight , Out of Mind : The Effects of Expenses on Mutual Fund Flows. *Journal of Business*, 78(6), 2095–2119. <https://doi.org/10.1086/497042>
- Benson, K. L., & Humphrey, J. E. (2008). Socially responsible investment funds: Investor reaction to current and past returns. *Journal of Banking and Finance*, 32(9), 1850–1859. <https://doi.org/10.1016/j.jbankfin.2007.12.013>
- Benson, K. L., Tang, G., & Tuticci, I. (2008). The Relevance of Family Characteristics to Individual Fund Flows. *Australian Journal of Management*, 32(3), 419–443.
- Bhattacharya, U., Lee, J. H., & Pool, V. K. (2013). Conflicting family values in mutual fund families. *Journal of Finance*, 68(1), 173–200.
- Bhojraj, S., Jun Cho, Y., & Yehuda, N. (2011). Mutual Fund Family Size and Mutual Fund Performance: The Role of Regulatory Changes. *Journal of Accounting Research*, 50(3), 647–684. <https://doi.org/10.1111/j.1475-679X.2011.00436.x>
- Bollen, N. P. B. (2007). Mutual Fund Attributes and Investor Behavior. *Journal of Financial and Quantitative Analysis*, 42(03), 683. <https://doi.org/10.1017/S0022109000004142>
- Boo, Y. L., Ee, M. S., Li, B., & Rashid, M. (2016). Islamic or conventional mutual funds: Who has the upper hand? Evidence from Malaysia. *Pacific Basin Finance Journal*, 42, 183–192. <https://doi.org/10.1016/j.pacfin.2016.01.004>
- Brown, D. P., & Wu, Y. (2012). Mutual Fund Families and Performance Evaluation. Working Paper, University of Wisconsin-Madison,.
- Chen, J., Hong, H., Huang, M., Kubik, J. D., American, T., Review, E., & Dec, N. (2004). Does Fund Size Erode Mutual Fund Performance? The Role of Liquidity and

- Organization. *American Economic Review*, 94(5), 1276–1302.
<https://doi.org/10.1257/0002828043052277>
- Chevalier, J., & Ellison, G. (1997). Risk Taking by Mutual Funds as a Response to Incentives. *Journal of Political Economy*, 105(6), 1167–1200.
<https://doi.org/10.1086/516389>
- Clare, A., O’Sullivan, N., & Sherman, M. (2014). Family status and mutual fund performance. *Journal of Asset Management*, 15(3), 163–175.
<https://doi.org/10.1057/jam.2014.19>
- Del, D., & Tkac, P. A. (2008). Star Power : The Effect of Morningstar Ratings on Mutual Fund Flow All use subject to JSTOR Terms and Conditions Star Power : The Effect of Morningstar Ratings on Mutual Fund Flow, 43(4), 907–936.
- Dubai Islamic Bank. (2016). Overview of the Global Islamic Finance Industry. Retrieved from <http://www.gifr.net/publications/gifr2017/intro.pdf>
- El Ghouli, S., & Karoui, A. (2017). Does corporate social responsibility affect mutual fund performance and flows? *Journal of Banking and Finance*, 77, 53–63.
<https://doi.org/10.1016/j.jbankfin.2016.10.009>
- El Khamlichi, A., Arouri, M., & Teulon, F. (2014). Persistence of performance using the four-factor pricing model: Evidence from dow jones islamic index. *Journal of Applied Business Research*, 30(3), 917–927.
- Elfakhani, S., Hassan, M. K., & Yusuf, S. (2005). Comparative Performance of Islamic Versus Secular Mutual Funds. In 12th Economic Research Forum Conference in Cairo, Egypt, 53, 19–21. <https://doi.org/10.1017/CBO9781107415324.004>
- Gallaher, S., Kaniel, R., Edelen, R., Gillan, S., Hartzell, J., Johnson, W., & Reid, B. (2008). Advertising and Mutual Funds : From Families to Individual Funds by Advertising and Mutual Funds : From Families to Individual Funds.
- Gruber, M. J. (1996). Another Puzzle : The Growth in Actively Managed Mutual Funds. *The Journal of Finance*, 51(3), 783–810. <https://doi.org/10.2307/2329222>
- Hoepner, A. G. F., Rammal, H. G., & Rezek, M. (2013). Islamic mutual funds’ financial performance and international investment style: Evidence from 20 countries. *European Journal of Finance*, 17(9–10), 829–850.
<https://doi.org/10.1080/1351847X.2010.538521>
- Ippolito, R. A. (1992). Consumer Reaction to Measures of Poor Quality: Evidence from the Mutual Fund Industry. *The Journal of Law and Economics*, 35(1), 45–70.
<https://doi.org/10.1086/467244>
- Kammer, M. A., Norat, M. M., Pinon, M. M., Prasad, A., Towe, M. C. M., & Zeidane, M. Z. (2015). Islamic finance: Opportunities, challenges, and policy options. *International Monetary Fund*.
- Leung, D., & Kwong, M. (2018). The Flow - Performance Relationship in Emerging Market Bond Funds., (4).
- Makni, R., Benouda, O., & Delhoumi, E. (2015). Large scale analysis of Islamic equity funds using a meta-frontier approach with data envelopment analysis. *Research in International Business and Finance*, 34, 324–337.
<https://doi.org/10.1016/j.ribaf.2015.02.014>
- Malaysia. World’s Islamic Finance Marketplace (MIFC). (2017). Islamic Funds: Gearing Up. Retrieved from <http://www.mifc.com/index.php?ch=28&pg=72&ac=180&bb=uploadpdf>
- Marzuki, A., & Worthington, A. C. (2015). Comparative performance-related fund flows for Malaysian Islamic and conventional equity funds. *International Journal of Islamic and Middle Eastern Finance and Management*, 8(3), 380–394.

- Marzuki and Worthington. (2015). Comparative performance-related fund flows for Malaysian Islamic and conventional equity funds. *International Journal of Islamic and Middle Eastern Finance and Management*, 8(3), 380–394.
- Merdad, H., Hassan, M. K., & Alhenawi, Y. (2010). Islamic Versus Conventional Mutual Funds Performance in Saudi Arabia: A Case Study. *JKAU: Islamic Economics*, 23(2), 157–193.
- Nanda, V., Wang, Z. J., & Zheng, L. (2004). Family Values and the Star Phenomenon: Strategies of Mutual Fund Families. *The Review of Financial Studies*, 17(3), 667–698.
- Renneboog, L., ter Horst, J., & Zhang, C. (2006). Is Ethical Money Financially Smart? *Journal of Finance*, (January).
- Renneboog, L., Ter Horst, J., & Zhang, C. (2011). Is ethical money financially smart? Nonfinancial attributes and money flows of socially responsible investment funds. *Journal of Financial Intermediation*, 20(4), 562–588. <https://doi.org/10.1016/j.jfi.2010.12.003>
- Sawicki, J. (2001). Investors' differential response to managed fund performance. *Journal of Financial Research*, 24(3), 367–384. <https://doi.org/10.1111/j.1475-6803.2001.tb00775.x>
- Sirri, E., & Tufano, P. (1998). Costly search and mutual fund flows. *The Journal of Finance*, 53(5), 1589–1622. Retrieved from <https://scholar.google.co.uk>