Examining the Determinants of Financial Performance of Mutual Funds

A Comparative Study of Conventional and Islamic Mutual Funds in Egypt

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Abstract

Background The nowadays trend towards investing in mutual funds and the growing demand for Sharia-complaint investment alternatives has raised concerns about the factors driving the financial performance of this investment vehicle and whether there is a difference between the financial performance of Islamic mutual funds and its conventional counterparts.

Aim The purpose of this research is to identify the determinants of the financial performance of open-end equity Islamic and conventional mutual funds operating in the Egyptian financial market including fund age, fund size, fund objective, interest rate, inflation rate and exchange rate besides evaluating the

financial performance of Islamic mutual funds against its conventional peers.

Methodology The study used a quantitative approach where panel data analysis was performed through employing descriptive statistics and dynamic panel data regression models. A sample of 33 mutual funds was chosen representing 24 conventional funds and 9 Islamic during 2016-2023.

Results The results has revealed that the fund objective appeared to be a poor indicator in contributing the financial performance of mutual funds. Both fund size and interest correlates positively and significantly with Growth of Hundred, Sharpe ratio and Treynor ratio; however, they correlate negatively and significantly with Jensen Alpha. Fund age has demonstrated a positive significant relationship with Growth of Hundred and a negative significant relationship with the risk-adjusted performance measures. The exchange rate has exhibited a positive and significant relationship with Growth the Hundred and Jensen Alpha; in contrast, it showed a negative and significant relationship with Sharpe ratio and Treynor ratio.

Keywords: Fund attributes, Macroeconomic variables, Risk-adjusted Performance, Fund performance, Islamic Finance

1. Introduction

A mutual fund is simply an investment vehicle that pools money from individual and institutional investors sharing the

same investment objective through selling shares to them and then utilize the collected capital to build diversified portfolios of stocks, bonds and other securities that is managed by professional fund managers.

Mutual funds enables investors to participate in larger and well-diversified portfolios than they otherwise would (Russell, 2007) besides providing them with a number of unique benefits including but not limited to diversification, liquidity, convenience and access to professional financial expertise with just a minimum investment requirement and thus absorbing domestic savings and allocating them efficiently contributing to market maturity, financial inclusion and economic growth.

The rising interest and growing demand for investments that operate in accordance with the Islamic Law (Sharia) principles has increased over the past few decades. The key difference between Islamic and conventional mutual funds is that unlike conventional funds, Islamic funds must comply with Sharia guidelines and principles concerning asset allocation, security selection, management structure, governance, trading activities, investment practices and income distribution and, specifically, the purification process. (Elfakhani et al., 2005).

Moreover, the Sharia Supervisory Board is responsible for setting certain qualitative and quantitative criteria required in the screening process, ensuring that all the funds' activities are in line with the Sharia guidelines and principles, overseeing the

purification process and providing consultations on issues related to Muslim community (Elfakhani et al., 2005). Consequently, Islamic mutual funds has limited investment opportunities as compared to its conventional counterparts.

2. Literature Review

This chapter begins with a theoretical framework built upon three main theories that are closely related to how mutual funds are constructed, managed and evaluated which are the Modern Portfolio Theory (MPT), Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (APT).

Markowitz (1952), who pioneered the Modern Portfolio theory, suggested that investors could achieve the highest possible return given a minimum and acceptable level of collective risk through adopting the diversification investment strategy by combining both high risk and low risk assets into one portfolio and thereby achieving the optimal mix of both and constructing an efficient portfolio taking into consideration the risk tolerance of individuals.

Subsequently, the Capital Asset Pricing Model (CAPM) was founded by William Sharpe (1964) and later on developed by John Lintner (1965) and Jan Mossin (1966).The Capital Asset Pricing Model (CAPM) is a mathematical model that incorporates only one macroeconomic factor into its model accounting for systematic risk and reflecting the sensitivity of an asset's return relative to the market return known as Beta (β) and this model exhibits the

relationship between the expected return on an investment and asset systematic risk in relation to the market.

Lastly, the Arbitrage Pricing Theory (APT), which was established by Stephen Ross (1976) as a more flexible yet complex alternative to the Capital Asset Pricing Model (CAPM), is a multi-factor model that integrates several macro-economic factors into one model such interest rate, exchange rate Gross Domestic Product (GDP) and market indices based upon the investors' subjective perspectives concerning the factors that are deemed to affect an asset price.

Empirical evidence from the literature was addressed afterwards on how various fund-specific characteristics as well as key macro-economic indicators affect the financial performance of mutual funds and on the performance evaluation of Islamic and conventional funds compared to each other and relative to their relevant benchmarks.

(BADR, 2016) in this research, the author aim was to examine the impact of fund age, fund size, fund objective, systematic risk and total risk on the financial performance of all open-end equity Islamic and conventional in Egypt for the period from January 2006 to December 2011 that covered the pre-financial crisis, during-financial crisis and the post-financial crisis phases. It was found that age, growth objective, systematic risk and total risk significantly affected the mutual funds'

performance. In addition, the income and growth objective had contributed to the increase in the mutual fund performance.

A study conducted by (Farid, 2022) was to determine the relationship between fund-specific characteristics including fund size, fund age, fund type and total fund expense and the financial performance of Egyptian mutual funds. A sample of 348 banks was considered representing seven different categories of mutual funds for the 2012 -2017 period. The results has shown that Log NAV (Log fund size) and age have a significant negative impact on the financial performance of mutual funds while, Log total fund expense has demonstrated a positive significant impact on it. Also, the fund type has significantly affected the performance of mutual funds.

(Kariuki, 2014) this paper investigated the effect of major macroeconomic variables on the financial performance of mutual funds operating in Kenya. The five macroeconomic variables addressed are interest rate, exchange rate, inflation rate, GDP and money supply. The author considered a sample size of all the mutual fund companies listed in Nairobi stock exchange including both bank and non-bank companies during 2009-2013. The findings revealed that 70.9% of the financial performance of mutual funds were explained by those macroeconomic variable. In other words, interest rate, inflation rate, money supply and GDP had a positive and significant effect on the mutual funds' performance, but exchange rate had negative and significant one.

As for the performance analysis of Islamic mutual funds as compared to its conventional counterparts, (BADR, 2016) concluded that there is no significant difference in the financial performance between Islamic and conventional mutual funds throughout the whole research period; in contrast, a variation in the financial performance between both fund types was found by (Mansor and Bhatti, 2011), (Ashraf, 2013), (El-Ansary and Elrashidy, 2019), (Arif et al., 2019), (Abdul-Rahim, Abdul-Rahman and Ling, 2019) and (Elmanizar and Aveliasari, 2023).

Ultimately, most of the studies were executed in developed countries and few were done in emerging ones where mutual funds differ in their operations, regulatory framework and growth potential. Additionally, the literature review yielded different results on how the financial performance of mutual funds is influenced by various micro and macro-economic factors and on the analysis of the Islamic mutual funds' performance when compared to that of its conventional peers.

Consequently, this research aim is to examine the determinants of the financial performance of open-end equity Islamic and conventional mutual funds in Egypt as an emerging financial market as well as conducting a comparative analysis on the financial performance of Islamic and conventional funds in an attempt to bridge this gap.

3. Research Methodology

3.1 Data collection

The research is based upon secondary data and panel data that were extracted from performance reports, prospectuses, documents and factsheets and obtained from the Egyptian Investment Management association (EIMA), Financial Regulatory Authority (FRA), different asset management companies and Central Bank of Egypt (CBE) websites.

3.2 Data Selection

The study considered a sample size of 33 open-end equity Islamic and conventional mutual funds operating in the Egyptian financial market, consisting of 24 Conventional funds and 9 Islamic funds according to the available data for a period from 2016 to 2023. Islamic mutual funds were grouped together in one portfolio given equal weights and the same is done for conventional funds for the sake of the comparison. The 91-day T-bill rate and EGX-30 index were used as proxies to reflect the risk-free rate and market return respectively.

3.3 Analytical model

Table 1. Research variables: Overview and Measurement Scope

Dependent Variable	Measurement
	1.Non-Risk Adjusted Performance Measure: Growth of Hundred (GOH) **It is calculated by adding up capital gains to dividends of a mutual fund representing the total percentage change in**

The Financial Performance of Mutual Fund	**the fund's value during a specific time period.** $$(Rp) = \frac{(NAVt - NAVt - 1 + Dt)}{NAVt - 1}$$ **where,** $Rp = Total\ rate\ of\ return\ of\ portfolio\ p.$ $NAVt = Net\ asset\ value\ at\ time\ t.$ $NAVt - 1 = Net\ asset\ value\ at\ time\ t - 1.$ $Dt = Dividends\ at\ time\ t.$ **2.Risk-Adjusted Performance Measures:** **a. The Sharpe model reveals the excess return received for each additional unit of total risk undertaken. (Sharpe, 1966).** $$(Sp) = \frac{Rp - Rf}{\sigma p}$$ **where,** $Sp =$ **The Sharpe ratio of portfolio p;** $Rp = The\ average\ rate\ of\ return\ of\ portfolio\ p;$ $Rf = The\ average\ risk\ free\ rate\ of\ return;$ $\sigma p =$ $The\ Standard\ deviation\ of\ portfolio\ returns.$ **b.The Treynor model shows the excess return received for each incremental unit of risk incurred. (Treynor, 1965).** $$Treynor\ Ratio\ (Tp) = \frac{Rp - Rf}{\beta p}$$ **where,** $Tp = The\ Treynor\ ratio\ of\ portfolio\ p;$ $Rp = The\ average\ rate\ of\ return\ of\ portfolio\ p;$ $Rf = The\ average\ risk\ free\ rate\ of\ return;$ $\beta p = Beta\ of\ portfolio\ p.$ **c.The Jensen model determines the excess return through displaying the difference between a portfolio's actual return and it's expected one that is inferred from the**

	Capital Asset Pricing Model (CAPM) in an attempt to find out whether a portfolio is underperforming, outperforming or performing normally compared to its relevant benchmark. (Jensen, 1968). $\boldsymbol{Jensen\ Alpha\ (\alpha p) = (Rp - Rf) - \beta p\ (Rm - Rf)}$**.** **where,** $\boldsymbol{\alpha p = Jensen\ Alpha\ of\ portfolio\ p}$**;** $\boldsymbol{Rp = Total\ rate\ of\ return\ of\ portfolio\ p}$**;** $\boldsymbol{Rf = Risk - free\ rate\ of\ return}$**;** $\boldsymbol{\beta p = Beta\ of\ portfolio\ p}$**;** $\boldsymbol{Rm = Market\ rate\ of\ return.}$
Independent Variables	**Measurement**
Fund Age	**The fund age reflects the length of time in which a mutual fund has been operating. In this research, the fund age is analyzed on a monthly basis starting from the inception date to the end of the study period.**
Fund Size	**<u>Assets Under Management (AUMs):</u>** **The fund size is evaluated through Assets Under Management (AUMs) that is computed as the total market value of all the underlying assets (i.e., cash and cash equivalents, stocks, bonds, Treasury-bills, commodities, or other securities based upon the fund's investment strategy) held within a mutual fund's portfolio at a certain time.**
Fund Objective	**Since there are 3 categories (i.e., Growth, Income and Income & Growth), therefore only 2 Dummy variables (i.e., Income objective and Growth objective) will be introduced to prevent the dummy variable trap (i.e., perfect collinearity or multicollinearity) and the Income and Growth objective will represent the benchmark category.** **Income dummy variable- takes the value of (1) if the objective is Income and the value of (0), otherwise.** **The coefficient of the variable will indicate the difference**

	between Income objective and Income and Growth objective. **Growth dummy variable- takes the value of (1) if the objective is Growth and the value of (0), otherwise.** **The coefficient of the variable will indicate the difference between Growth objective and Income and Growth objective.**
Interest Rate	**Monthly data obtained from the Central Bank of Egypt (CBE) website.**
Exchange Rate	
Inflation Rate	

4. Statistical Analysis, Results and Discussion

4.1 Descriptive Statistics

To summarize the characteristics of the analysis variables, key descriptive statistics measures such as mean, standard deviation, minimum and maximum values were computed for all the study variables overtime and among different funds.

Table 1. Descriptive Statistics of the key Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Growth of Hundred	**3,168**	**34.465**	**16705.820**	**1409.806**	**1717.853**
Sharpe Ratio	**3,168**	**-83.533**	**-1.518**	**-45.713**	**14.812**
Treynor Ratio	**3,168**	**-74.752**	**-1.358**	**-40.908**	**13.255**
Jensen Alpha	**3,168**	**-0.052**	**0.484**	**0.221**	**0.074**
Fund Age	**3,168**	**10.000**	**29.000**	**19.212**	**6.420**
Fund Size	**3,168**	**1.33E+07**	**1.49E+08**	**5.64E+07**	**3.44E+07**
Interest Rate	**3,168**	**6.900**	**14.400**	**9.935**	**2.312**
Inflation Rate	**3,168**	**3.146**	**38.000**	**15.621**	**10.393**
Exchange Rate	**3,168**	**7.730**	**30.898**	**17.982**	**5.674**

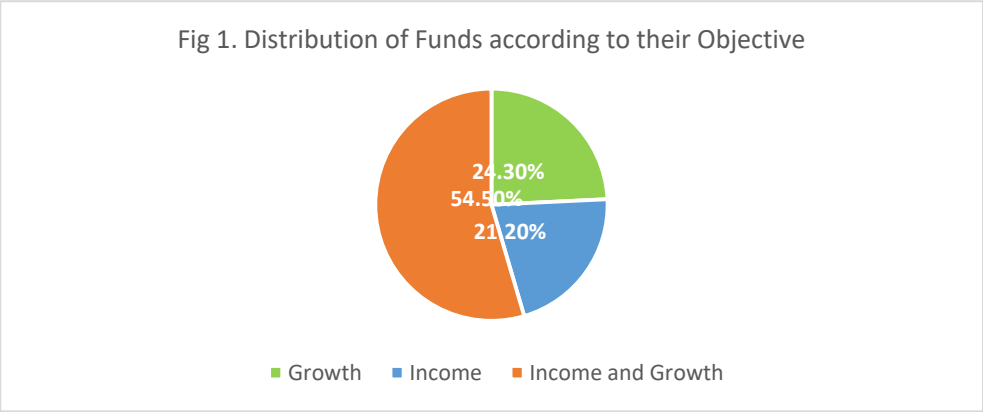
According to Table 1, it can be observed that:

- Growth of Hundred has a mean of 1409.81 and a standard deviation of 1717.85 with values ranging from 34.47 to 16705.82.
- Sharpe ratio has a mean of -45.71 and a standard deviation of 14.81 with values ranging from -83.53 to -1.52.
- Treynor ratio has a mean of -40.91 and a standard deviation of 13.26 with values ranging from -74.75 to -1.36.
- Jensen's alpha has a mean of 0.22 and a standard deviation of 0.07 with values ranging from -0.05 to 0.48.
- Fund age has a mean of 19.21 years and a standard deviation of 6.42 years with values ranging from 10 to 29 years.
- Fund size has a mean of 56.4 million and a standard deviation of 34.4 million with values ranging from 13.3 to 149 million.
- The interest rate has a mean of 9.94 and a standard deviation of 2.31 with values ranging from 6.90 to 14.40.
- The inflation rate has a mean of 15.62 and a standard deviation of 10.39 with values ranging from 3.15 to 38.
- The exchange rate has a mean of 17.98 and a standard deviation of 5.67 with values ranging from 7.73 to 30.90.

Fund Objective: Breakdown

Figure1 illustrates that out of 33 open-end equity conventional and Islamic mutual funds, 54.5% of funds, representing the vast majority, pursue an income and growth

objective followed by 24.3% adopting a Growth objective and 21.1% focusing on an income-oriented objective.



Source: Researcher's own analysis of market data

Table 2. Comparison of the average values of the variables based on whether the fund is Conventional or Islamic

Variable	Conventional		Islamic		p-Value
	Mean	Standard Deviation	Mean	Standard Deviation	
Growth of Hundred	1702.606	39.949	629.005	14.352	0.000
Sharpe Ratio	-45.712	0.308	-45.715	0.505	0.996
Treynor Ratio	-40.907	0.276	-40.910	0.452	0.996
Jensen Alpha	0.221	0.002	0.220	0.003	0.945
Fund Age	20.708	0.141	15.222	0.086	0.000
Fund Size (in million)	56.368	0.716	56.446	1.177	0.955

The results demonstrate the outperformance of conventional mutual funds as compared to its Islamic counterparts in the view of Growth of hundred (GOH) and fund age with a (p-value=0.000); in contrast, no significant statistical difference was captured between Islamic and conventional funds concerning the rest of the variables (p-values > 0.05) suggesting no meaningful variations between both fund types with respect to fund size and risk-adjusted performance measures dimensions.

4.2 System GMM and Dynamic Panel Data Estimation Results

The system generalized method of moments (System GMM) was employed for the dynamic panel data regression models on the count of the absence of the normality assumption for all the dependent variables which was tested through the Shapiro-Wilk test for normality where its null hypothesis assumes that the data follows a normal distribution.

Table 3. Shapiro–Wilk W Test for Normality of Dependent Variables

Variable	N	W	V	Z	Prob > z
Growth of Hundred	3168	0.698	542.804	16.279	0.000
Sharpe Ratio	3168	0.963	67.387	10.885	0.000
Treynor Ratio	3168	0.963	67.387	10.885	0.000
Jensen Alpha	3168	0.983	30.712	8.854	0.000

It can be inferred that all the dependent variables were found to deviate from a normal distribution since the p-value is less than 0.05 which means rejecting the null hypothesis.

Table 4. Coeffiecients of the First Model

Variable	Growth of Hundred (GOH)
First Lag of GOH	0.6790*** (0.000596)
Fund Age	50.9087*** (3.069373)
Fund Size (AUM) [in million]	1.1214*** (0.053635)
Fund Objective (=Income)	18.8782 (98.499550)
Fund Objective (=Growth)	-98.1017* (56.386150)
Interest Rate	10.0645*** (0.415608)
Exchange Rate	19.2996*** (0.855548)
Constant	-1035.8690*** (88.098820)
Observations	3135
Number of FundID	33
Standard Error in Parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Based on the results presented in Table 4:

- The fund age has a significant positive effect on the growth of hundred with a coefficient equals to 50.91 at a 95% confidence

level implying that a one year increase in the fund age will be associated with an increase in the growth of hundred by 50.91, holding all else constant.

- The fund size has a significant positive impact on the growth of hundred with a coefficient equals to 1.12 at a 95% confidence level implying that a one million increase in the fund size will be associated with an increase in the growth of hundred by 1.12, holding all else constant.
- On average, funds with an Income objective or a Growth objective do not show a statistically significant difference in the growth of hundred compared to those pursuing an Income & Growth objective (the reference category), holding all else constant.
- The interest rate has a significant positive effect on the growth of hundred with a coefficient equals to 10.06 at a 95% confidence level implying that a one unit increase in the interest rate will be associated with an increase in the growth of hundred by 10.06, holding all else constant.
- The exchange rate has a significant positive effect on the growth of hundred with a coefficient equals to 19.30 at a 95% confidence level implying that a one unit increase in the exchange rate will be associated with an increase in the growth of hundred by 19.30, holding all else constant.

Table 5. Coeffiecients of the Second Model

Variable	Sharpe Ratio (Sp)
First Lag of Sp	0.4031*** (0.001026)
Fund Age	-0.0112*** (0.002309)
Fund Size (AUM) [in million]	0.0632*** (0.000321)
Fund Objective (=Income)	1.2057 (5.963866)
Interest Rate	0.1301*** (0.004375)
Exchange Rate	-1.4416*** (0.003884)
Constant	-6.7610*** (0.313156)
Observations	3135
Number of FundID	33
Standard Error in Parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Based on the results presented in Table 5:

- The fund age has a significant negative impact on the Sharpe ratio with a coefficient equals to -0.01 at a 95% confidence level implying that a one year increase in the fund age will be associated with a decrease in the Sharpe ratio by 0.01, holding all else constant.
- The fund size has a significant positive impact on the Sharpe ratio with a coefficient equals to 0.06 at a 95% confidence level implying that a one million increase in the fund size will be associated with an increase in the Sharpe ratio by 0.06, holding all else constant.
- On average, funds with an Income objective do not show a statistically significant difference in the Sharpe ratio compared to the Income & Growth funds, holding all else constant.

- The interest rate has a significant positive impact on the Sharpe ratio with a coefficient equals to 0.13 at a 95% confidence level implying that a one unit increase in the interest rate will be associated with an increase in the Sharpe ratio by 0.13, holding all else constant.
- The exchange rate has a significant negative impact on the Sharpe ratio with a coefficient equals to -1.44 at a 95% confidence level implying that a one unit increase in the exchange rate will be associated with a decrease in the Sharpe ratio by 1.44, holding all else constant.

Table 6. Coeffiecients of the Third Model

Variable	**Treynor Ratio (Tp)**
First Lag of Tp	**0.4031*** (0.001026)**
Fund Age	**-0.01002*** (0.052433)**
Fund Size (AUM) [in million]	**0.0565*** (0.000288)**
Fund Objective (=Income)	**1.0789 (5.336982)**
Interest Rate	**0.1164*** (0.003915)**
Exchange Rate	**-1.2901*** (0.003476)**
Constant	**-6.0504*** (0.280239)**
Observations	**3135**
Number of FundID	**33**
Standard Error in Parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Based on the results presented in Table 6:

- The fund age has a significant negative impact on the Treynor ratio with a coefficient equals to -0.01 at a 95% confidence level implying that a one year increase in the fund age is associated with a decrease in the Treynor ratio by 0.01, holding all else constant.
- The fund size has a significant positive impact on the Treynor ratio with a coefficient equals to 0.06 at a 95% confidence level implying that a one million increase in the fund size will be associated with an increase in the Treynor ratio by 0.06, holding all else constant.
- On average, funds with an Income objective do not show a statistically significant difference in the Treynor ratio compared to the Income & Growth funds, holding all else constant.
- The interest rate has a significant positive impact on the Treynor ratio with a coefficient equals to 0.12 at a 95% confidence level implying that a one unit increase in the interest rate will be associated with an increase in the Treynor ratio by 0.12, holding all else constant.
- The exchange rate has a significant negative impact on the Treynor ratio with a coefficient equals to -1.29 at a 95% confidence level implying that a one unit increase in the exchange rate will be associated with a decrease in the Treynor ratio by 1.29, holding all else constant.

Table 7. Coeffiecients of the Fourth Model

Variable	Jensen Alpha (αp)
First Lag of αp	0.3043*** (0.003899)
Fund Age	-0.0001*** (0.000020)
Fund Size (AUM) [in million]	-0.0003*** (0.000011)
Fund Objective (=Income)	0.0171 (0.041457)
Interest Rate	-0.0022*** (0.000106)
Exchange Rate	0.0080*** (0.000069)
Constant	0.0497*** (0.003622)
Observations	3135
Number of FundID	33
Standard Error in Parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Based on the results presented in Table 7:

- The fund age has a significant negative impact on the Jensen alpha with a coefficient equals to -0.0001 at a 95% confidence level implying that a one year increase in the fund age will be associated with a decrease in the Jensen alpha by 0.0001, holding all else constant.
- The fund size has a significant negative impact on the Jensen alpha with a coefficient equals to -0.0003 at a 95% confidence level implying that a one million increase in the fund size will be associated with a decrease in the Jensen alpha by 0.0003, holding all else constant.
- On average, funds with an Income objective do not show a statistically significant difference in the Jensen alpha

compared to the Income & Growth funds, holding all else constant.

- The interest rate has a significant negative impact on the Jensen alpha with a coefficient equals to -0.0022 at a 95% confidence level implying that a one unit increase in the interest rate will be associated with a decrease in the Jensen alpha by 0.0022, holding all else constant.
- The exchange rate has a significant positive impact on the Jensen alpha with a coefficient equals to 0.0080 at a 95% confidence level implying that a one unit increase in the exchange rate will be associated with an increase in the Jensen alpha by 0.0080, holding all else constant.

Diagnostic Tests for Dynamic Panel Data Models

Sargan-Hansen test and and Arellano-Bond test were applied to ensure the validity of the instruments used in the estimation technique and the absence of the second-order serial correlation respectively.

Table 8. Diagnostic Tests for all Models

Model	AR (2) Test (p-value)	Sargan Test (p-value)	Hansen Test (p-value)	Conclusion
Model 1	**0.262**	**0.226**	**0.533**	**no serial correlation, no over-identification**
Model 2	**0.384**	**0.269**	**0.427**	**no serial correlation, no over-identification**
Model 3	**0.384**	**0.269**	**0.427**	**no serial correlation, no over-identification**
Model 4	**0.307**	**0.153**	**0.398**	**no serial correlation, no over-identification**

The Arellano-Bond Test for AR (2) for all models provides no significant evidence on the presence of second-order serial correlation (p-values > 0.05). Moreover, both the Sargan test and Hansen test exhibit p-values greater than 0.05 confirming the validity of the instruments employed. Accordingly, the model is considered to be robust and well-specified.

5. Conclusion

The research aimed to examine the determinants of the financial performance of open-end equity conventional and Islamic mutual funds in addition to analyzing the financial performance of Islamic funds as compared to that of its conventional peers. The study variables addressed include fund age, fund size, fund objective, interest rate, inflation rate and exchange rate. For the sake of analysis, a sample of 24 open-end equity conventional funds and 9 open-end equity Islamic funds were chosen for the 2016-2023 period in Egypt. The financial performance of mutual funds was evaluated on the basis of both non-risk adjusted measure derived from the Growth of hundred (GOH) and risk- adjusted performance measures namely Sharpe ratio, Treynor ratio and Jensen's alpha.

The research concluded that fund age, fund size, interest rate and exchange rate were found to significantly affect the financial performance of mutual funds; in contrast, fund

objective appeared to be inefficient indicator in interpreting such performance.

That is, fund age was found to have a positive significant impact on the growth of hundred which aligns with (Soeharto and Kisti, 2014) and (Damayanti and Cintyawati, 2015); however, it has shown a negative significant one with regard to Sharpe ratio, Treynor ratio and Jensen's Alpha, a finding that conforms to (Farid, 2022).

Also, fund age has demonstrated a positive significant effect on the growth of hundred, Sharpe ratio and Treynor ratio. However, it has shown a significant and negative relationship with the Jensen's measure which is consistent with (Soeharto and Kisti, 2014) and (Farid, 2022).

Moreover, interest rate has positively and significantly affected the growth of hundred, Sharpe ratio and Treynor ratio, supported by the study of (Kariuki, 2014); in contrast, it has revealed a negative and significant influence on the Jensen's model which corresponds to (Panigrahi, Karwa and Joshi, 2019). Additionally, exchange rate has exhibited a negative and significant relationship with both Sharpe and Treynor models, which is aligned with the study of (Kariuki, 2014). On the contrary, a positive significant relationship was observed between the exchange rate and both Growth of Hundred and Jensen differential alpha and this correlates with (Gyamfi Gyimah, Addai and Asamoah, 2021) and (Uddin et al., 2024).

One of the major findings of the study is that no statistical significant difference was found between Islamic and conventional mutual funds with respect to fund size and risk-adjusted performance measures owing to management by same fund managers. This conclusion in line with the results of (BADR, 2016). On the other hand, meaningful variations were observed between both fund types concerning the non-risk adjusted measure (i.e., Growth of Hundred) and fund age.

6. Recommendations

It's highly recommended to invest in both Islamic and conventional mutual funds as they have achieved a comparable performance in the aspect of their size and risk-adjusted returns.

It's also advisable to invest in younger funds rather than older ones as they tend to generate higher returns and thereby offsetting their substantial initial costs as well as being capable of outperforming the market index EGX-30.

As for larger funds, it's suggested to assign multiple teams or asset management companies to manage such funds more efficiently so as to sustain economies of scale. Also, multiple hedging techniques should be employed by fund managers such as international diversification and forward and option agreements in an attempt to alleviate currency risk.

It's noteworthy that it's insufficient to consider only one factor when investing in mutual funds; however, many criteria should be accounted for such as return preference, risk profile,

time horizon, investment objective and the detailed strategy that the fund manager will follow to achieve the stated objective.

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