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# **Effect of Fund Managers' Characteristics on Mutual Funds Performance and Fee in Emerging Market of Paksitan**

Imtiaz Arif and Tehseen Jawaid

Faculty of Management Science, IQRA University

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# **Effect of Fund Managers' Characteristics on Mutual Funds Performance and Fee in Emerging Market of Paksitan**

**Imtiaz Arif<sup>1</sup> and Tehseen Jawaid<sup>2</sup>**

## **Abstract**

This study investigates the relationship between mutual fund performance and fund manager's characteristics by using quarterly data of 14 open end equity mutual funds during 2005(8) to 2008(8). Data were collected from the database of Mutual Funds Association of Pakistan (MUFAP) keeping age, management fee, fund size, team size, and experience as variables. Through the regression analysis, the results indicate that management fee has positive & significant impact on risk and negative & significant impact on return. In addition, certification has also significant & positive impact on return whereas the team management and experience have no effect on the management fee of the EMF managers. It is suggested that mutual funds with high management fee should be avoided and investor should prefer those mutual funds which are administered by professionally certified managers.

**Keywords:** Equity mutual funds, Risk, Return, Management Fee.

## **1 Introduction**

In Pakistan, Mutual Fund investments were introduced in 1962, but could not make remarkable progress. By the end of the 20<sup>th</sup> century, particularly since the fiscal year 2002, Pakistan market witnessed an enormous growth. The cumulative size of the funds industry that was PKR 25 billion in 2002 rose to PKR 216 billion in 2007. The recent years have not only seen the resumption of the mutual fund industry in Pakistan but also the activity shifting from the public sector to the private sector<sup>3</sup>. This remarkable growth, though not comparable to other developed countries market, has motivated investors' in identifying performance-related characteristics of mutual funds.

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<sup>1</sup> Assistant Professor, Iqra University Gulshan Campus, Karachi

<sup>2</sup> Lecturer, Iqra University Gulshan Campus

<sup>3</sup> ICI Statistics, 2007

In earlier research work, numerous factors were identified that influence mutual funds' return hence performance. Some academic literatures have discussed the issue of persistence of performance. Some investigate whether it is possible to find predictive characteristics explaining performance and whether fund managers as a group possess any market-timing or stock-picking skills. Evidence supports the notion that they exhibit such skills and it is observed that personal abilities and knowledge form the basis of investment decisions of fund managers<sup>4</sup>. These personal abilities of Fund Managers are referred as human capital and are measured with the help of age of the fund managers, experience and certification (qualification).

Efficient markets hypothesis (EMH) suggests that after availability of information for everyone and adjustment for risk, mutual funds' returns should be independent of fund manager characteristics. However, human capital theory suggests that age, training, education and experience, all have effects on yield. Thus in this research paper researcher intends to investigate whether personal abilities (human capital) of fund managers result in excess return and consequently affecting performance of individual Equity Mutual Funds (EMF) listed in stock exchanges of Pakistan. Furthermore, the relationship between (EMF) manager characteristics and individual Equity Mutual Fund, risk and fees is investigated

## **2 Literature Review**

Golec (1996) studied the sample of 530 mutual funds having different fund objectives to inspect the relationship between manager characteristics and fund performance. Golec discovers that mutual fund's risk-adjusted performance is directly correlated to manager's age, educational qualification and tenure. In addition, he propounds that high management fee does not reduce return. Now, this result is coherent with the view that managers with superior ability get higher fees from fund investors.

Kallberg (2000) reinforced Golec (1996) on the importance of management. For a sample of 44 Real Estate Mutual Funds (REMF) from 1987-1998, Kallberg established that the sampled funds have positive average abnormal returns. Likewise fund managers outperformed the benchmarks during down markets as compared to rising markets. Baks (2002) studied the performance of the mutual fund managers using the database of 2086 managers of equity mutual funds. He concluded that one can never observe performance of managers and fund in isolation. He further concluded that up to 50 percent of mutual fund performance

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<sup>4</sup> See Golec, 1996 and Switzer & Huang, 2007

is due to the characteristics of fund managers and can be credited to the fund manager.

Prather & Middleton (2002) found that mutual funds differential and persistent performance is attributed to superior managerial decision making. Ding & Wermers (2005) show that experienced large-fund managers, outperform their less experienced peers. Chevalier & Ellison, (1999) deduced that the younger managers invest in unadventurous portfolios reducing market risk. They also perform better than their elderly peers. Another finding was that the performance of fund managers is positively related to the quality of the college they attended.

Berkowitz & Kotowitz (2002) examine the relationship between the fees charged by mutual funds and their performance. They found that for high-quality managers, there is a positive relationship between fees and performance. On the contrary, for lower-quality managers, there is a negative relationship between fees and performance.

Philpot & Peterson (2006) used a sample of 63 REMFs from 2001 to 2003 to analyze individual-manager-characteristics' effect on fund performance. Philpot and Peterson (2006) examine the effects of mutual fund manager's characteristics and fund characteristics on funds risk-adjusted returns, market risk and management fees by estimating three equations. The equations were estimated by regressing risk-adjusted return, market risk and management fees on managers' tenure, professional qualification, experience, and whether the fund is team-managed. Modest support is found for the relationship between team-managed funds and risk-adjusted return. It was found that team managed funds have lower risk-adjusted returns than solo-managed funds. Further findings depict that managers with longer tenure tend to trail higher market risk levels and showed no relation between manager's characteristic and management fee.

Switzer and Huang (2007) examine small and mid-cap fund performance in relation to fund manager human capital characteristics including gender, professional training (CFA), education, tenure, and investment experience. The results advocated in merit of fund's performance that can be accredited to differentiation in managerial human capital characteristics.

In contrast to above evidences Treynor and Mazuy (1966) presented market timing model i.e. stock picking ability of fund managers. They assumed that the fund managers can speculate the market and change their portfolios. This suggests characteristic line to be a nonlinear. They studied the sample of 57 mutual funds and found that only one fund in their sample has shown a characteristic line deviating from the linear characteristic line suggesting that no investor, professional or amateur, can outguess the market.

Daniel et al (1997) suggested characteristic-based benchmark performance measure later which divides the gross returns into three factors: CS (Characteristic Select), CT (Characteristic Timing), AS (Average Style). They studied the sample of 2500 equity funds from 1975-1994 and created a characteristic based benchmark which pooled 125 portfolios from the stocks in NYSE, AMEX, NASDAQ. The observed results show that among the mutual funds, the aggressive-growth funds show some selectivity skill, but no characteristic timing skill. Nevertheless, they establish that the mutual funds can outperform the characteristic-based benchmark by about 1%, but it is more or less the management fees.

Shah and Hijazi (2005) provide an overview of the Pakistani mutual fund industry. They used traditional mutual fund performance evaluation models to investigate the mutual funds risk adjusted performance. Survivorship bias controlled data for equity and balanced funds were studied. Results show that mutual funds outperform the market proxy by 0.86 percent. Sharpe ratio for mutual fund industry was found to be 0.47 as compared to market risk premium of 0.27 with one percent of standard deviation. The researcher also found the measures of Jensen to be positive. Hence in general, results suggest that mutual funds in Pakistan are successful in adding value.

Sipra (2006) reported the performance of Pakistani mutual funds by using data of 1995 to 2004. The results show that a small proportion of funds (approximately 30 percent) performed above the market benchmark in a given duration, but the group of these market beaters is different for different period, hence signifying no extraordinary capability on the part of the mutual funds to consistently outperform the market. This evidence is in coherence with the semi-strong form of market efficiency, which asserts that it is not possible to earn abnormal returns consistently with publicly available information.

For all sampled funds to be studied following data was acquired:

RETURNS – the quarterly return for the fund from 2005(8) to 2008(8);

ALPHA – the fund's return minus return of benchmark index for the fund;

TENURE – management tenure (in years) with the fund, at the end of 2008(8);

CFA – a dummy variable (1= CFA designation, 0= No CFA designation);

EXPERIENCE – investment management experience, in years, as of the end of 2008(8): for team managed fund, characteristics of the senior manager's is used;

FUNDSIZE – fund's asset size (in PKR million);

MGMTFEE – the percentage of fund assets spent on operating expenses;

BETA – Market risk

There is a major hindrance in data collection of Open-End funds due to restricted source of data accessibility, i.e. asset management companies from where these funds are actually operating. The open-end equity funds which are launched from early or mid of 2008, are not considered in the studied sample.

### 3 Modeling Framework

On the basis of empirical studies, linear regression model is used to examine the effect of fund manager characteristic on risk, return and management fee. The functions used in empirical estimation are as follows:

$$\text{ALPHA} = f(\text{FUND MANAGER AGE, CERTIFICATION, EXPERIENCE, FUND SIZE, MGMTFEE, TEAM SIZE}) \quad 3.1$$

$$\text{BETA(pm)} = f(\text{FUND MANAGER AGE, MGMTFEE (pm), CERTIFICATION, TEAM SIZE}) \quad 3.2$$

$$\text{MGMTFEE} = f(\text{ALPHA, FUND SIZE, CERTIFICATION, TEAM SIZE, EXPERIENCE}) \quad 3.3$$

Different techniques have been used to examine these relationships. Golec (1996) and Switzer and Huang (2007) have used 3SLS estimation procedure. Philpot and Peterson (2006) apply 3SLS and OLS to estimate the results. They found consistent results from both techniques. In this study, OLS has been used to analyze the equations 3.1, 3.2 and 3.3.

In Pakistan May 2008, 84 mutual funds are operating in Pakistan's mutual fund market, of which National Investment Trust (NIT) is the only public owned mutual fund. These funds are mainly categorized as "Open-End" and "Close-End". 65 mutual funds are listed under the shade of open end funds, and rests are categorized as close end funds. The core focus of this research is to study the effect of fund managers human capital on the performance of mutual funds by using all 14 open end equity funds between 2005(8) to 2008(8) identified on the MUFAP database as on May 31, 2008. More required data have been collected from mutual fund companies<sup>5</sup>.

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<sup>5</sup> Researcher searched related information of fund manager profiles from the website of each mutual fund company. Over 50 percent of funds do not provide detailed biographical sketches of their managers on their websites. To obtain the data for these funds, researcher contacted their representatives (investment managers or customer service Staff) directly, with a questionnaire sent via e-mail. Most of the responses were checked against public information such as quarterly financial reports.

## 4 Estimation and Results

### 4.1 Summary Statistics

Table 4.1 illustrates the descriptive statistics for studied sample variables and Table 4.2 presents the correlation matrix for the corresponding variables. It is important to note that the average beta is less than one (0.68), which suggest that these funds are non-aggressive, but still have managed to out-perform their benchmark returns, with an average ALPHA of 8.15 percent. Average investment experience of fund managers is 5.73 years. This experience is one quarter of the experience of developed country fund managers. About 33 percent of the managers hold CFA designation. The average fund has PKR1396.49 million of assets under management, with an average management fee of 2.56 percent.

**Table 4.1** Descriptive Statistics

Variables	Mean	Median	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
<i>Manager Characteristics</i>							
<b>AGE</b>	32.30	33.00	2.92	27	37	-0.13	-1.14
<b>CERTIFICATION</b>	33.00%	0.00%	0.48	NA	NA	NA	NA
<b>INVESTMENT MANAGEMENT EXPERIENCE</b>	5.73	3.00	4.23	1	13	0.47	-1.67
<i>Fund Characteristics</i>							
<b>FUND SIZE (IN MILLION PKR)</b>	1396.49	1254.00	1139.85	131	4545	1.21	0.72
<b>MANAGEMENT FEE</b>	2.65	3.00	0.61	1.25	3	-1.58	1.08
<b>TEAM SIZE</b>	5.27	5.00	1.01	4	7	0.18	-1.04
<b>BETA</b>	0.68	0.70	0.09	0.38	0.81	-1.25	3.30
<i>Fund Returns</i>							
<b>FUNDS RETURN IN %</b>	22.93	28.65	23.14	-31.65	62	-0.76	0.34
<b>ALPHA</b>	8.15	9.30	22.88	-38.66	66	0.23	0.12

Summary statistics for all variables used in the analysis

**Table 4.2:** Correlations Matrix

	1	2	3	4	5	6	7	8	9	10
FMANAGE	1									
QUALIFICATION	-0.014	1								
CERTIFICATION	0.014	0.4	1							
EXPERIENCE	0.167	0.013	0.494	1						
FUNDSIZE	-0.318	0.197	0.643	0.282	1					
MGT FEE	-0.017	-0.268	0.088	0.179	0.101	1				
TEAM SIZE	-0.516	0.226	-0.064	-0.201	0.062	-0.549	1			
BETA	0.15	-0.293	-0.246	-0.023	-0.207	0.371	-0.287	1		
ALPHA	0.175	0.126	0.559	0.377	0.313	-0.275	-0.015	-0.234	1	
FRETURN	-0.176	0.356*	0.503	0.27	0.265	-0.034	0.152	-0.182	0.416	1

\*\* Significant at 5percent level

\* Significant at 10 percent level

**Source:** Authors' Estimations





The authors examine the effects of Mutual Funds Manager's characteristics on Mutual Funds returns, risk and fees by estimating three regression equations. Through ordinary least square procedure results of equation 3.1 are reported in table 4.3.

**Table 4.3: Long run Determinants of Excess Return (Alpha)**

Variables	Coefficient	t-statistics	Prob.
<b>Constant</b>	73.77	0.88	0.39
<b>AGE</b>	0.25	0.34	0.74
<b>CERTIFICATION</b>	29.69	2.72	0.01
<b>EXPERIENCE</b>	0.66	0.72	0.48
<b>FUND SIZE</b>	0.00	0.01	0.99
<b>MGMTFEE</b>	-18.09	-2.57	0.02
<b>TEAM SIZE</b>	-3.01	-0.61	0.55

Adj. R2 = 0.377, F-statistics = 3.76, Prob. = 0.006

**Source:** Authors' Estimations

Table 4.3 shows that management fee coefficient has negative and significant impact on excess return. It might be because of not much competition among different asset management companies. On the other hand, certification has positive and significant impact on excess return. In contrast, age, experience, fund size and team size have not significant impact on excess return.

Estimated results of equation 3.2 are given below:

**Table 4.4: Long run Determinants of BETA**

Variables	Coefficient	t-statistics	Prob.
<b>Constant</b>	-0.002	-5.08	0.000
<b>AGE</b>	0.00004	3.87	0.000
<b>CERTIFICATION</b>	-0.0001	-1.90	0.068
<b>MGMTFEE</b>	0.243	29.17	0.000
<b>TEAM SIZE</b>	0.0018	5.74	0.000

Adj. R2 = 0.97, F-statistics = 235.0, Prob. = 0.000

**Source:** Authors' Estimations

Table 4.4 shows that age, management fee and team size have positive and significant impact on risk while certification has negative and significant impact on risk.

Table 4.5 report the estimation results of equation 3.3.

**Table 4.5: Long run Determinants of MGMTFEE**

<b>Variables</b>	<b>Coefficient</b>	<b>t-statistics</b>	<b>Prob.</b>
<b>Constant</b>	4.16	8.252	0.000
<b>ALPHA</b>	-0.012	-2.725	0.011
<b>FUND SIZE</b>	0.000	0.761	0.453
<b>CERTIFICATION</b>	0.206	0.724	0.475
<b>TEAM SIZE</b>	-0.322	-3.66	0.101
<b>EXPERIENCE</b>	0.019	0.777	0.444
Adj. R2 = 0.37, F-statistics = 4.86, Prob.= 0.03			

**Source:** Authors' Estimations

From above estimation results it is clear that excess return has significant and negative impact on management fee. All other variable do not have any considerable impact on management fee.

## 5 Conclusion and Policy Recommendations

This study analyzes mutual fund portfolio performance return (alpha), risk (beta) and fees (management fee) as dependent variables in a system of regression equations. Results of this study are summarized in light of their implications for investors choosing among funds and fund managers. The studied sample shows that management fee has significantly negative impact on excess return and considerable and positive impact on risk. One would expect that competition in the EMF market would tend to force management fees increase. Funds that keep management fee low have low risk. This means that investors should avoid funds with large management fees. Same results have been extracted through third model. None of the variables has shown any relationship with management fee except excess return. Excess return has negative and significant impact on management fee.

During the research, the researcher has uncovered areas that were not within the scope of the study. As these are interesting propositions for other researchers they have been included as implications for further research. An analysis of additional factors like turnover, expense, stock picking timing can be performed against human capital of fund manager.

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