Research

THE IMPACT OF MUTUAL FUND'S CHARACTERISTICS ON MANAGEMENT EXPENSES – EVIDENCE FROM PAKISTANI MUTUAL FUND INDUSTRY

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Abstract

Mutual funds were investigated and studied with primary focus on the performance of funds in Pakistan. However, a key feature i.e. management expense ratio of mutual funds has not been analyzed in detail in Pakistan. The study reviewed various factors/elements which impact on the management expense ratio(MER) of mutual funds including the life of the fund, asset size, objective of the fund and the fund family. The study examines the impact of these factors along with their relationship on the cost associated with the funds. The conclusion is that all stated factors except fund family have a significant impact on the MER.

Keywords: Management expense ratio, Performance of fund, Mutual funds

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Introduction

The financial market developed various products in the wake of sophistication of institutional investors. The development has been evolved in the investment avenues and the availability of multiple financial products to various kinds of investors. These investment opportunities range from the availability of equity shares, corporate bonds, financial derivatives, and mutual funds. The mutual funds are financial vehicle through which additional money/funds available with investors (include both kind of investors i.e. individual and corporate) are invested into different financial products available in the market in line with predefined objectives and investment policy of the fund.

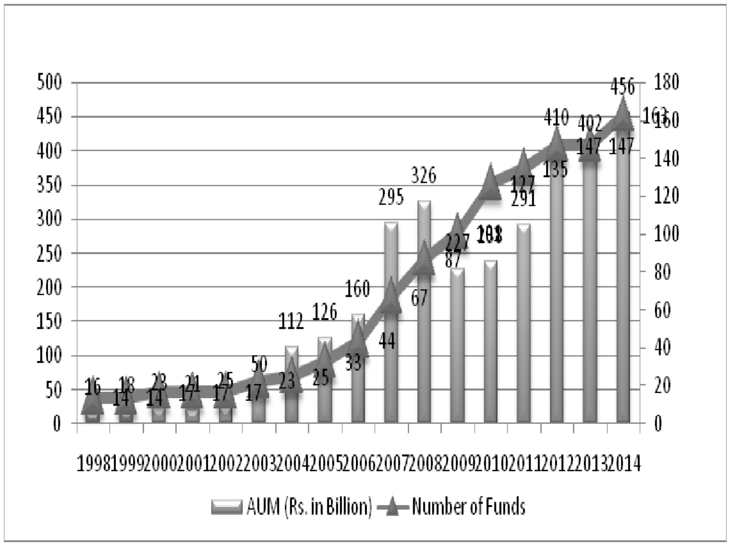
In the Pakistani context, the mutual funds exist in three a tier structure and are beingregulated by Securities and Exchange Commission of Pakistan (SECP). Since the launch of NIT in 1962, significant events have been occurred in Pakistan's mutual fund industry. These events include the promulgation of regulatory structureformutual fund industry and the authorization to start open end fund in private sector. The initiatives taken by the regulator include segregation of fund management from asset management services, valuation of debt securities, product development and code of conduct for the asset management industry.

The mutual fund industry in Pakistan depicted significant growth over thelast 10 years. The industry figuresrevealedthat asset under management(AUM)stood at Rs. 456billion as on June 2014as compared to Rs. 51billion as on June 2003. The said growth calculated to be Rs. 406 billion or 794% during this decade.In post 2008 crisis, the liquidity crises and other financial crisis hit the industryadversely,however the industry bounced back in FY year 2012 and attained the level of Rs. 456 billion at the end of FY 2014.

An interesting thing pertinent to mention here that growth does not exhibit in AUM but also in the number of funds, where the total funds stood at 163 as on June 2014 as compared to 53 as on June 2005.The growth can be witnessed by following figure.

Figure 1:

Growth of Mutual Funds Industry



(Source: SECP)

Up to the availableliterature in this context, no contribution has been made to review the expense side of the mutual fund. While studying international research, it has been observed that some of the studieswere conducted on finding the determinants of Management Expense Ratio (MER) and then relate it to the performance of the fund.In local jurisdiction, mutual fund industry was reviewed in detail with the prospective of the performance of the fund. Studies conducted by Afza and Rauf (2009) and Zulfiqar, Rehman, Sohail, and Nasr (2011)are beneficial to understand the mutual fund performance in Pakistan. These studies emphasized the overall performance of mutual fund industry in Pakistan in different eras. However, no independent study has been carried out on an important aspect of mutual fund industry i.e.MER and its components.

Investors are more concerned withthe returns on their investment and for this purpose historic returns are the key parameters for selecting the funds. However MER of mutual fund requires much attention by the investors in Pakistan. Given the fund performance, reflect a bottom line criteria for the investor to select a fund, an equal and important factor neglected in this decision ie fund's expenses.Therefore,to give an exposure and to explore the new dimension for the investors, it is high time for the mutual fund investors in Pakistan to understand the different kinds of expenses that are being charged by mutual funds in terms of audit fee, regulatory feemanagement fee or any other transactions cost which greatly impact their return. Further through the understanding of these kinds of expenses, the investors would be in a position to make a judgment about the funds' management along with its quality to manage their investment.

The core objective of this research is to examine the MER of mutual fund industry in Pakistan. The study has been long due with the perspective of mutual funds as well as from the perspective of investors in order to explore the MER of the industry as the same has not been carried out by any researcher in Pakistan.Therefore, it is imperative that an independent study should be conducted to explore the aspects which affect the MER and have the impact on the investors' decisions.

Review of Literature

In developed economies, the studies associated with reference to MER of mutual funds ,include studyconceded by Khorana, Servaes, and Tufano (2008)on the MER and its determinants. In their research, the findings revealed that the life of fund, the assets base of fund, the investment objective and the fund family, have a significant impact on

MER of mutual funds. Further, the relationship found to be negative in terms ofasset base of fund. The study made by Korpela and Puttonen (2006)revealed that the life of fundand asset size has positive impact on the MER of mutual fund industry in Finland, yet they are proved to be not important.However, significant impact was found when the fund family and economies of scale were observed in the context of the MER. For this purpose, the bond funds were reviewed and it has been observed that the size of the fund duly impact the MER of the fund.

While reviewing the Malaysian mutual fund industry,Low (2008)determined thefactors affecting the MER on Malaysian mutual funds. During the study, he observed that the factors including the fundsize and the sponsors group of fund are significantfactors that affect the MER. Further, these factors also impact the performance ofthe funds. However the impact of fund size found to be negative on the MERwhich indicates that as the size of fund increase, the MER of the fund would decrease. Similar study was also done byBabalos, Kostakis, and Philippas (2009)in their research on Greek equity funds.The results of study were found similar to the study earlier made by another important study conducted byRompotis (2008)who discussed the impact and relation of the fund's objective on the mutual funds. While conducting research, it has been observed thatthe investment objective had impact on the expense side of funds. In this regard, thefindings revealed that the stock funds have high MER as comparedto debt funds.In order to understand factors determining the MER, study revealed that the asset size of fund have negative impact on the expenses borne by the fund.

The studies were also conducted forthe size of the fund whereZera and Tsay (2007)found that asset size of fund have substantial impact on the expense of fund.

Few researchers worked on the qualitative aspects of the mutual funds as well. Zera and Tsay (2007)observed that governance had also significant impact on the MER. Other studies conducted on mutual funds in terms of investment plan,organization style, investor inclinations and distribution network revealed that they also had an impact onMER. It was detected by LaPlante (2001)that the above mentioned variables have an impact on the MER of mutual funds.

Primary focus of the study in Pakistan was to review the performance of the funds in different periods. In this context, major studies towards mutual funds were related to its performance and wereconducted byNazir & Nawaz, 2010. In their researches, the main objective was to find the causes of growth and performance of mutual fund industry in Pakistan. Nazir and Nawaz (2010)had drawn attention of investors to identify different factors including management, business ratio, size of fund andMER which affect growth of funds. It has been observed that the above mentioned factors had significant impact on growth of fund and MER has negative impact on growth. The study conducted by Shah et al. (2005)on the performance of open end and closed end fund revealed that the fund outperform the benchmark due to their defensive strategies. However the industry is still in infancy stage and requires a lot to do for potential growth in it.

Keeping in view the research conducted globally and locally, it may be inferred that the investors are prone to losetheir money if they do not pay attention to all the important aspect of the mutual funds. Therefore, it is imperative to study those factors which includeMERas the same has significant influence not only on the investment decision but also on the investment value of the investors.The study would enable an investor to make rational decision keeping in view the risk profile of fund.

On the basis of maximum available literature review related to the variables of the current study; the present study has come up with the followinghypothesis:

H_1: *Fund size (FS)negatively impacts on MER of fund.*

Malhotra and McLeod (2000)study on closed end fund revealed that the large asset base of fund significantly impact the MER of the fund.

The investment objective of fund is significant for the investors. It has been observed that equity funds normally bear high risk as compared to bond funds. As a result, the equity funds may have high MER as compared to debt funds. Wongsurawat (2011)revealedtwo possible reason for such behavior of MER;First, the quality of information contained by the fund manager of an equity fundsecond, Equity funds are more vulnerable to risk of loss, as a result the fund manager keep information up to date leading to high cost of maintaining such information. Whereas in debt fund, the transactions are less costly as compared to equity funds as they do not require complex information set for bond funds. Based on the above study we expect that:

H_2:*The investment objective (IO) of funds positively impacts on the MERoffund.*

Significant impact has been observed on the management MER of fund in terms of the life of fund. However, it has been observed while reviewing theMalaysian fund industry, that the life of fund has no impact on MER. According toLow (2008),life has no impact on the MER of mutual funds in Malaysia, whereas in other studies the authors found that if the fund is alder, it reduces the MER and have significant impact.This leads to the third hypothesis of the study which is stated as:

H_3:*Life of fund (LOF) has positivelyimpacts on MER of fund.*

The sponsors of the funds also have a significant impact on determining the MER of mutual funds. In this regard, it has been observed thatlarge AMCs, which are managing more funds have ability and capacity to reduce the expense of mutual funds due to better inside information and economies of scale. In this context, attention may be drawn to study conducted by Wongsurawat (2011)who observed that big AMCs charge less managementfee,and transaction cost as compared to the funds under the management of small AMCs. Based on the above,the fourth hypothesis of present study is:

H_4:*Fund family (FF)has negative impact on MER of fund.*

Research Methodology

Panel data is used for analysis with time fixed effects given the nature of mutual funds remained the same in data set but time period varies. Therefore, the data sets were selected from year 2005 to 2014. Therewere 163 mutual funds as on June 2014.Thesource of data was financial statements along with trade organization of mutual funds in Pakistan i.e.Mutual Funds Association of Pakistan (MUFAP). For the purpose of research, the data sets have been bifurcated into two sections. One into equity oriented fundwhilethe other is non-equity oriented fund. For the purpose of finding,the impact of fund family on the MER, dummy variables weredefined for those AMCs which are bank owned and non-bank owned. In order to have aconsistent data set, only those funds were considered which remained in the operation since 2005 and those funds which were matured or terminated due to any reason are not considered in the study.

In order to find the consistencyof the result and the impact, the research was conducted on mutual funds based on two data sets i.e.2005 to 2014 and 2007 to 2014. For this purpose, the mutual funds were divided intotwoeras. The rationale for segregating the data set is that after 2007, the numbers of mutual funds increase sharply and could mislead the result. Therefore, it was decided to review the mutual fund industry before growth and after growth period. So in order to check the robustness of previous findings and impact on MER, two time periods were taken for analysis.Furthermore, it is also important to review the effect of independent variables on all mutual funds in two periods of research. One research conducted from Year 2005 to year 2014 while other from 2007 to 2014. Since the number of mutual funds existed in year 2005 were very low in number, while remarkable growth has been observed in year 2007, therefore, it would be more realistic to understand their behavior after year 2007.

The regression model in this analysis can be explained with several factors that could affect theMER of a fund and isgiven in Equation (1):

Y (MER$_{it}$)=â’† - â$_1$(Fund size$_{it}$) + â$_3$(Life of fund$_{it}$) + â$_2$(Investment objective$_{it}$) - â$_4$(Fund Family$_{it}$) + it

In the above equation, the MER is used as dependent variable while other factors which affect the MER, include the asset base of fund, the objective of fund, the life of fund and the fund family as independent variable. TheMER is calculated using a formula as stated below:

MER=ME/AUM

Where MER is the management expense ratio expressed as a percentage of net assets of fund under management.MEis the amount of all those expenses incurred by the AMC for smooth operation of fund.The MER of the fund can be calculated by taking all management expenses divided by its net assets under management.

Two dummy variableswere used for investment objective and fund family. The incorporation of a dummy variable for fund investment objective aimed to capture any differences in the fund’s MER which might impact in terms of fund’s investmentpolicies.

Furthermore, there are two main categories of AMCsthat exist in Pakistan in the context of managing mutual funds. One is the bank owned AMCs and the other is non-bank owned AMCs. The sponsors under bank owned AMCs enjoy more number of funds and have large assets under their management. However, to identify the factors with respect to fund family or sponsors, which impact the

MER, the variable has been again assigned a dummy value 1 for bank owned and 0 for non-bank owned AMCs.

Results and Discussion

The descriptive results obtained from the study were taken during the period from 2005 to 2014.

Table 1:
Descriptive Statistics of Variables

	MER	LOF	FS
Mean	0.0793	2,637(Days)	2,463(Rs. In Millions)
No. of Equity Funds No. of Debt funds	264 285 184		

Table 1 illustrates the descriptive resultsi.e. mean of MERcalculated around 7 percent. On the other hand, the life of fund comes to more than five years in mean value. Themean value of fund size moves around Rs. 2.4 billionin our data sample. Total numbers of equity based mutual funds included in both samples were264 and debt based were 184.

Table 2:
Regression Co-efficient, Standard Error in Parentheses, T-value in Bracket and P-value in Italic (2005-2014)

Constant	LOF	FS	FF	IO	R-Square	F-Value
3.108	0.358	-0.403	-0.094	.456	0.553	103.12
(0.488)	(0.090)	(0.021)	(0.134)	(0.044)		
[6.368]	[3.977]	[-19.190]	[-0.7015]	[10.363]		
0.000	*0.001*	*0.000*	*0.173*	*0.000*		*0.000*

Table 2 illustrates the information about the confidence on which we can support our estimates of variables and cause and effect relationship and the individual impact of independent variables on dependent variable.

The regression results obtained indicates that the explanatoryvariables explain55.3 percent of the variations in MER of mutual fund industry in Pakistan in contrast to the finding of Low (2008).

The variation explained in MERis determined by the value of R^2which is 55.3percent. The value indicates that 55.3percent variation in dependent variable is explained due to independent variables in the model. Values for standard error are shown in parenthesis in regression table which indicates that very less or negligible deviation has been observed from the mean in all variables of the study. At 5 percent level of significance, P-values for the variables are 0.001, 0.000, 0.173, and 0.000 for life of fund, fund size, fund family and investment objective, respectively which shows that results of our model are statistically highly significant except the fund family.

In contrast toLow (2008), this study found no statistically significant relation between the fund family and MER.The reason for non-significance of fund family with the dependent variables i.e. MERis attributed to the regulatory framework in Pakistan. In terms of prevalent regulatory framework for mutual funds, AMCsare allowed to charge 3 percent per annummanagement fee on the funds under their management. Given this, the P-value in the result shows that the fund family found to be insignificant while testing the result on MER. The value of F-statistics is 103.12with its probability value 0.000 which is highly significant and shows that overall model of the study is statistically significant.

With respect to fund size, it has been observed that the size of fund found to be significantly and negatively related with the MER. The negative relation in this model is attributed to the economies of scale exists in large asset base of fund. The larger the fund, the lower will be the MER. The result was consistent with(Low, 2008; Rompotis, 2008;)who observed that the size of fund found to be significant in terms of MER and also negatively related.

In terms of investment objective of fund, the result found to be significant positively related. The result on these dummy variables indicates that the equity funds tend to charge high MER as compared to debt fund. The reason for this positive relation may also be attributed to the transaction cost incurred by the equity funds in stock market and other research expenses incurred by AMCs.

The analysis indicates that one of the independent variable, i.e. life of fund found to be significant in the study. Further the relationship between MER and life of fund found to be positive which indicates that as the fund become older, the MER also increase. The result was found to be in line with the findings of(Korpela & Puttonen, 2006). The rationale for this positive relationship is that the AMCs gets experience with the time after managing the funds.Going forward,AMCs become more sophisticated in their marketing and distribution behavior. Therefore, as the time goes on, the sophistication in fund management gives room to the fund manager to charge high operating expense which leads to high MER.

In light of the above review, it is inferred that the important variables studied in this analysis i.e. the life of fund, the fund size and investment objective of fund have significantimpact on MER. Except onevariablei.e. fund family found to be insignificant in the study owing to the facts mentioned above. Further the relationship between MER and Fund Size and Fund Family found to be negative while positive relationship found in respect of LOF, and IO. On the basis of above analysis first three hypothesis of current study are significantly accepted except fourth hypothesis.Further from the review it has also been proved thatthe result of current study, three important variables i.e.life of fund, the asset base of fund and the objective of fund are found to be significant with relation to MER and are in line with the study made by (Khorana et al., 2008; Low, 2008).

Table 3:

Correlation Matrix

	1	**2**	**3**	**4**	**5**
MER	1				
LOF	.384**	1			
FS	-.234**	.618**	1		
FF	-.011	.763*	.238**	1	
IO	.474*	-.435	-.254**	-.452**	1

** = p<0.01 level, * = p<0.05 level, ER = Management Expense Ratio, LOF= Life of fund, FS = Fund size , FF = Fund family, IO= Investment objective

Table 3 represents the pair wise correlation between the variables used in this study. Correlation coefficients are highly significant at 5 percent level of significance. The MER and life of fund has high significant positive correlation of 0.384 while FS is negatively associated with the MER having correlation coefficient of -0.234 and correlation coefficient for IO is 0.474 in association with MER. Onthe contrary, the correlation coefficient found -.011to be insignificant in terms of FF, with MER which indicates that there is no association between them. It has been observed that due to this non relation between the same, our result was insignificant with respect to fund family which leads to the rejection of H_4.

Table 4:

Regression Co-efficient, Standard Error in Parentheses, T-value in Bracket and P-value in Italic (2007-2014)

Constant	LOF	FS	FF	IO	R-Square	F-Value?
0.5211	0.621	-0.437	-0.347	0.418	0.463	435.67
(0.053)	(0.032)	(0.054)	(0.458)	(0.086)		
[9.8320]	[19.406]	[-8.092]	[-0.7576]	[4.860]		
0.000	*0.002*	*.000*	*0.327*	*0.000*		*0.000*

In order to observe the analysis in a consistent manner, the data set from year 2007 to 2014 has also been analyzed to observe the impact of independent variables on dependent variable. For this purpose, the mutual funds which were launched in year 2007 and remain consistent in life till year 2014 were taken and results obtained on same. The results were found to be consistent same as with the data set of 2005 to 2014. At 5 percent level of significance, P-values for the variables are 0.002, 0.000, 0.327, and 0.000 for life of fund, fund size, fund family and investment objective, respectively which shows that results are statistically significant except the fund family.All important variables except fund family are found to be significantly related with the MER. The fund family again found to be insignificant which is consistent with the result produced earlier. The relationship between MER and life of fund found to be positive while the negative relation is observed in terms of asset base and fund family. On the similar assertion our results are consistent in both time periods.

Conclusion

The research conducted in modern world has analyzed the mutual funds from different perspectives including growth and performance of fund. Even in Pakistan, the mutual funds have been under consideration for research purpose with respect the its performance. However no isolated study has been conducted in terms of other important attributes of mutual funds which include the expense side, the behavioral aspects or the turnover ratio of funds. Therefore, in order to fill this gap, there is a dire need to study the mutual funds in Pakistan specially the open end mutual funds with new dimensions. This study examined theMER of mutual funds with an objective to protect the interest of investors and to enhance their understanding towards fund industry with different aspects. This study would also enable the investors to bring their decision in line with the global practices in funds.

The results indicated that the larger fund have lower MER due to economies of scale. Further study found that the big fund family enjoys low MER due to economies of scale. Fund investment objective indicates that aggressive fund charge high expenses as compared to passive fund management.

This study is helpful forthe industry and fund managers to analyze their performance in terms of the overall expense being charged based on certain attributes of the fund under theirmanagement.

Future Directions

The analysis conducted is giving a new food for thought for new researchers to review the mutual fund industry with different aspects of financial products. Further research can be conducted on variables liketurnover ratio, the behavioral aspect of investors towards their investment in mutual funds, the rational decision making by investors, the impact on other categories of fund like money market and capital protected fund and sovereign funds etc.

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