

Determinants of Expense Ratio in Open End Mutual Funds of Pakistan

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Abstract

Mutual funds are one of the most studied and interesting areas of research in developed countries due to efficient risk management and higher returns through professional asset managers. These funds increase the return of small investors as well as reduce the unsystematic risks in the financial decisions. Previous literatures of Mutual funds primarily discussed performance and expense ratio of the different categories of the funds. However, the determinants of expense ratio analyzed in the current study have not been previously examined in the context of Pakistan. One of the major factor which contributes in order to improve performance of mutual funds have been ignored, is expense ratios specially related to age, size and nature of fund category. The study revealed that all variables including age, size, nature and sponsors of the fund have significant impact on the expense ratio of fund. Further, except size of fund, positive relation was observed with the age, nature and sponsors of fund with expense ratio. The study revealed that expense ratio of mutual fund industry is ranging between three to four percent which is comparably high from the regional market. The regulator needs to cap the expense ratio at certain level to avoid any additional cost paid by the investors. Further, the investor should pay special attention towards expense ratio with reference to their sponsors, its maturity level and quality of management to earn better returns.

Keywords: Mutual Fund, Expense Ratio, fund performance

Introduction

Mutual funds are investment vehicles which pool extra money and savings from different investors like individual or retail (institutional or corporate investors). These vehicles as a form of institution collect money by issuing either units or certificates to investors (source SECP). These investors purchase the units or certificates from mutual funds and allow them to invest their money on their behalf with pre-determined investment objective and to manage them for a fee. The mutual funds invest the amount into different financial instruments primarily into two main categories, i.e. equity and debt. These investors (individual and corporate) do have the opportunity and choices to invest in different kinds of financial instruments however; they are constraint of time and skills to make any decision in this regard. Therefore, Mutual Funds come forward as a financial intermediary to cover the gap of time and skill constraints. Mutual funds operate with a team of highly skilled human resources who make the decision for investment in debt or equity instruments and manage a diversified portfolio keeping in view the risk and return profile of the instruments. These people charge fee for their professional skills and termed as asset management or investment advisors of mutual funds. (Source SECP)

Asset Manager or Investment advisors are considered to be highly skilled people and they know about the investment portfolio and can monitor the same on regular basis. Therefore,

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the investors can benefit more if they make their investment through mutual funds and reduce the risk inherent in the same.

In Pakistan, mutual funds are registered by Securities and Exchange Commission of Pakistan (SECP) under regulatory framework of Non-banking Finance Companies and New Entities (NBFC & NE) Regulation 2008.

The SECP regulations lay down a three tier structure for the establishment of a collective investment scheme. The constituents of a mutual fund include an Asset Management Company (AMC) or Investment Advisor (IA), the Trustees and the Mutual fund.

The history of Mutual fund industry in Pakistan started with enactment of first open end mutual fund i.e. National Investment Trust (NIT) in 1962. The objective for this fund was to provide a channel for investment to middle and lower income groups in the equity market. Later on, series of initiatives and development were happened in mutual fund industry of Pakistan with the introduction of regulatory framework i.e. Introduction of investment advisor rules and NBFC and NE Regulations and establishment of private sector open end and closed end funds. The SECP took various initiatives for the development of the industry along with representative body industry i.e. Mutual fund Association of Pakistan (MUFAP) which also played a key role in the development of the industry.

A brief history of the industry and updates can be reviewed in table 1.

Table 1 Brief History of Events in Mutual Fund Industry in Pakistan

Year	History and updates on Asset Management and Mutual Fund Industry
1962	Establishment of NIT.i.e First open end fund
1966	Establishment of ICP which offered to the public for the first time , a series of closed end mutual funds which were later privatized during the years 2002-2004
1971	Introduction of Investment Company and Investment Advisors Rules
1983	Establishment of First Closed end scheme (Golden Arrow selected Fund)
1995	Introduction of Asset Management Company Rules
1997	Launch of first private sector open end fund (Unit Trust of Pakistan)
2003	Introduction of NBFC Concept and regime for mutual funds
2007	NBFC and NE Regulations were notified
2008	introduction of separate set of NBFC Regulation for mutual funds
2009	development of TFC pricing model and introduction of money market funds
2010	development of Bonds Automated Traded System
2011	Addition of Registered Service providers
2012	Issuance of Code of Conduct, Debt Trustee Regulations, Exchange Traded Funds

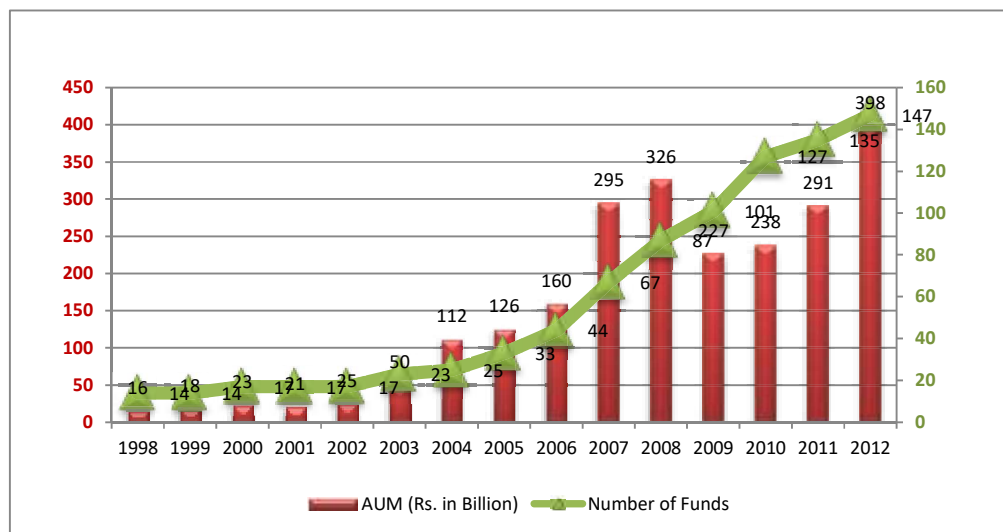
The mutual fund industry showed a hefty growth during the last decade. The industrial statistics (source: MUFAP year book 2012) depicted that the net assets of the fund has been increased from Rs. 51 billion as on June 2003 to Rs. 398 billion as on June 2012 which resulted a growth of Rs. 347 billion or 647% during this decade. Since 1998, the industry showed a growth of 2388% during span of last 15 years.

The growth was witnessed specially during the period of year 2005-2008 where the industry touched its new peak by growth of 168% during the above said era. Though the industry face liquidity and other issues during financial crises of year 2008-2009, however the mutual funds rebound in year 2012 and once again reached to the level of Rs. 377 billion at the end of FY 2012. The overall growth from 2005 to 2012 recorded to the tune of 226%. The

number of funds also increases remarkably and reached to 147 at the end of FY 2012 which indicates the potential for growth in the industry.

The growth in the industry further attributed to investment avenues available for corporate and retail investors in terms of tax credit. The Government of Pakistan vide Finance Bill 2012 amended the Income Tax Ordinance 2001 and provided the relaxation to investors for tax credit by making investment in mutual fund as well as pension fund from 10% to 15% of their taxable income. This motivated the fund manager to attract more investment through retail and corporate investors in the mutual fund industry.

The growth can be witnessed by following Table 2.



As depicted by above table 2, the significant growth and potential was observed in the industry during last seven years.

Despite the attractiveness and significance of mutual fund, the major studies are concerned with risk and return of the fund. Further studies on mutual fund explored the performance measurement and detailed investigations of the risk and returns methods. There are some work conducted on finding the expense ratio and its relation with performance was carried out. In these studies, the research was conducted in finding the significance of relation of expense of mutual funds with performance while others explored that the components of expenses which could have impact on the performance of the fund. More recently, there has been extensive research on expense ratio and performance of the fund with different number of mutual funds exists in different years.

In developed market, the study was emphasized on finding the impact of expense ratio on performance of the fund. In some of the researches, the determinants of expense ratio was also examined and subsequently their impact on the performance of funds. However no significant study was conducted in Pakistan with respect to determinants of expense ratio. In addition, studies in Pakistan mostly related with the performance of mutual fund industry including Shah and Nazir (2005), Afza (2009), and Bushra et al (2010). These studies primarily highlighted the performance of open end and closed fund operating in Pakistan during certain time periods. Therefore, we are unable to find key parameters of mutual fund expense and its impact on the development of this industry.

Investors in Pakistan usually pay attention to past performance and historic return provided by the fund to them. They pay less attention towards different expenses charged by the fund manager which can influence their return. It is more pertinent for the investors to identify

those factors which influence the expense ratio rather than the performance of the fund. Therefore, in order to explore the new dimensions for investors to understand the mutual funds return and their expenses, this study would help the potential investors to understand various kinds of fees including management fee, audit fee, trustee fee and other operating cost which has never been considered thoroughly by them before making decision of investment in a particular fund. So as a common investor or potential investor, it is important to know what kind of expenses being charged by the fund manager may reduce the expected return of the fund. Therefore, it is imperative to study expense ratio of mutual funds in Pakistan especially for those investors who required full understanding of their investment plans and want rational decision in this regard. In addition, this would allow for the new researchers to look the fund performance with different attributes having impact on the fund. The main purpose of this paper is to explore detailed expense ratio of open end mutual funds in Pakistan. This study would cover the deficiency due in mutual fund literature with respect to examination of expense ratio of mutual funds in Pakistan as the same has not been conducted by any researchers. Therefore, this study would un-earth those areas of fund's operation which has significant impact on the decision of a prospective investor. Since expense side of funds had never been studied and analyzed by researchers in Pakistan, so this study will not only analyze the current practices of funds expense ratio but also give a direction to the investor for making a decision for investment in mutual fund industry. Further this study would also help to identify and compare the quality of management involved in the affairs of fund. The quality of management may also be assessed with low expense ratio of the fund. In addition, this study would also explore the new dimension for Securities and Exchange Commission of Pakistan which is apex regulator of mutual fund industry. The study would initiate the regulatory framework for introduction of expense ratio of mutual fund industry in line with international jurisdictions, and enhance the regulator's capacity to supervise the funds in a more efficient manner and safeguard the interest of unit holders. This study would focus on finding the determinants of expense ratio of open end mutual funds of Pakistan and their impact on the expenses of the funds.

Review of Literature

Over a decade, the investors in Pakistan become aware of performance of the fund and hence make some rational decision based on previous performance of mutual funds. However, there are some significant factors which influence the decision of investor while making the investment in funds. Some of these factors are noticeable while other factors remain behind the cartons specially the expenses and risks of the funds. Given the importance of performance of the fund, another decisive factor which may attract investor's attention for comparing the performance of the fund's return is fund's expense ratio. Therefore to study the factors which determine the expense ratio of fund is more relevant in today's investment environment for selecting the fund.

This study seeks to find the determinants of expense ratio of mutual funds in Pakistan and investigate various empirical findings which indicate important determinants of expense ratio worldwide.

One of the major study conducted by Khorana, et al.(2008), who observed that age, size, investment objective (nature of fund) and sponsors of fund family, and minimum initial investment required for each fund and number of countries fund in sold were significant determinants of expense ratio of mutual funds. Negative impact has been observed on large funds in terms of expense ratio. Further the fund family also has significant impact on the fund's expense ratio.

Positive impact of age and size was observed by Korpela and Puttonen (2006) on the expense ratio of Finnish industry however they are not significant. Some additional variables were

also used in the study like turnover ratio and tracking error which found to be significant in the study.

Ruckman (2003) observed while studying Canadian fund negative but non-significant impact of age, on the expense ratio. However significant impact was observed in terms of fund family on ER due to economics of scale. In similar kind of investigation conducted by Anolli and Giudice (2008) who analyzed the cost of Italian Funds observed that there was a size, age, turnover, management style affect mutual fund costs. Other than the said variables, they also observed that transaction cost also impact the ER.

Malhotra, et al. (2003) concluded that open end bond fund enjoyed the advantage of lower expense ratio over closed end fund of same nature. However the advantage began to disappear for those funds with a threshold of more than USD 300 million. They recommended that investor should give due weight to expense ratio while selecting the closed end fund.

The most important study in determining the factors affecting ER was done in Malaysia by Soo-Wah Low (2008) who worked on Malaysian mutual funds to identify the factors effecting expense ratio and its impact on the performance of the fund. He observed that funds size, and fund family has impact on the expense ratio in and has negatively impact. Similar kinds of observations were also made by Babalosy et al. (2009) in their research on Greek equity funds. The findings remains consistent in the study made by Geranio and Zanotti (2005) who determine the characteristics of Italian fund expense ratio with the objective to develop an understanding of expense ratio of mutual funds in investors.

In relation to fund's objective, Rompotis (2008) examined the different category of mutual fund like money market, bond, equity and balanced fund of the Greek mutual fund industry. He observed that the nature had also impact on the expense ratio as equity funds had more ER as compared to bond or income funds. While explaining the major factors which impact the expense ratio, it was observed that fund size has negative impact on the expense due to economics of sale. However the bank owned funds charge high expense as compared to non-bank owned companies.

Different studies like Molson (2003), Tng Cheong (2007) and Zera et. al., 2007 investigated that the size of fund has significant impact on the expense ratio of fund. In their research, they observed that larger the fund size, the lower the expense ratio due to economies of scale and reduction in marginal cost. Further the impact of assets under management of a particular family also impacts the overall expense ratio of the fund. Zera et. al., 2007 also found that the impact of corporate governance on the expense ratio and highlighted it as significant factor for determining the expense ratio.

Some of the studies were also conducted from the qualitative aspects of the funds i.e. the investment strategy, management style, investor preferences and distribution network which also impact the expense ratio. It was observed by Laplante (2001) that these variables also impact the expense ratio. In addition the consistent results were observed in terms of age, size and nature of fund with expense ratio as described above.

On the basis of above research it may be concluded that the fund expenses are important attribute for selecting a fund for investment. The investor should be educated enough by understanding the expense ratio of different fund category so that he can make decision with rational judgment basis. Further it also indicated that the attributes studied in the research have significant impact on the expense ratio.

From the prospective of national industry, the research was also made on mutual funds. However the emphasis was given on performance of mutual funds. No isolated study or independent examination was made on expense ratio. Only one major study which highlighted the determinants of growth of mutual fund industry used expense ratio for

measuring the performance of the fund. Other than that no significant work was done on the same.

Two major contributing studies towards performance of mutual funds, Nazir and Nawaz (2010) Shah and Hijazi (2004) who determine the factors affecting the growth and performance of mutual funds in Pakistan respectively. The study conducted by Nazir and Nawaz (2010) identify factors including management, turnover ratio, and size of fund and expense ratio which affect growth of funds. The research revealed that all above factors had significant impact on growth of fund and expense ratio has negative impact on growth while evaluating the performance of open end and closed end funds for the year 2004 Shah and Hijazi (2004) commented that Mutual fund industry in Pakistan is still in a growing phase. Their research result indicated that funds industry outperform the market not significantly due to their defensive strategies.

Based on above review of literature, especially with reference to Pakistan as a case study, it is imperative to identify those factors which impact the overall behavior of mutual fund with respect to expense ratio. Since the study has never been conducted in isolation and no major work was done to identify the determinants. So the gap would be covered by examining new areas of mutual funds in the area of its expense ratio.

Research Methodology and Empirical Results

The research framework will include the mutual funds of Pakistan. Selection of the funds will depend upon the availability of complete data from year 2005 to 2012. Around 145 mutual funds are operating in Pakistan comprising 14 closed end fund while 131 are open end funds as on June 30, 2012. Those data sets of mutual funds will be used for research which has been operating for an older period for consistency of result. The source of data will be financial statements of mutual funds as well as Mutual Funds Association of Pakistan website (www.mufap.org.pk). We would divide the sample into two tiers. Tier one would be equity based fund while tier 2 would those funds which are non-equity base. In order to establish the relationship between expense ratio and sponsors, we have created dummy variables of bank owned AMC's and non-bank owned AMC's. Further we would consider those funds whose data is consistent for test of hypothesis. For this purpose the data set is divided into two sets. One data set is comprised of all funds since 2005 while the other data set comprise of funds from year 2007 to year 2012. The reason for segregating mutual fund into two data sets is to review the impact of independent variables on expense ratio on all mutual funds irrespective of date of their launch since 2005. Since number of funds in year 2005 were very less (only 21 including closed end funds), therefore the findings of the analysis may not give true representation of research by selecting those funds only which exist since 2005. While the second data set was used on finding the results on those mutual funds which exist since 2007 as the number of funds in year 2007 were 56 which were used for regression analysis in the study

Following are the hypotheses that are being developed in order to analyze the impact of size, nature age and sponsors of fund on the expense ratio of the fund.

Funds that have larger asset base may have low expense ratio. The work done by McLeod and Malhotra (1994) also revealed that the bigger mutual funds tend to have less expense ratio as compared to small funds. This will lead to hypothesis 1:

H1: It is expected that size of fund has significant negative impact on the expense ratio.

Funds with less investment risk bear low expense ratio while funds with higher investment risk bear high expense ratio (equity funds). (Wongsurawat-2007) and Deli (2002) proposed two economic rationales for this pattern. First, he stated that quality and nature of different

information kept by equity fund manager is more important than the fund managers of debt funds. In view of this statement, the equity fund manager has the benefit of marginal profit and product benefit over the other funds at higher side. Further, the equity funds have higher return due to high return of listed securities than debt securities, equity fund managers were required to implement more frequent and complex maneuvers.

H2: It is expected that nature of fund has significant impact on expense ratio of fund.

The older the fund, the lower the expense ratio of the fund however, the Soo-Wah Low (2008) have observed that age has no impact on the expense ratio of mutual funds, whereas in other studies the author found older the fund it reduces the expense ratio and have significant impact.

This leads to hypothesis 3:

H3: It is expected that older the fund, the lower the expense ratio.

Funds related to larger fund family have lower expense ratio while fund have small fund family is having high expense ratio. Wongsurawat (2007) found that bigger funds have the tendency to charge high management fee, funds from large families charge significantly lower fees and total annual expenses of these funds are lower than funds that belong to small families.

This leads to hypothesis 4:

H4: it is expected that large fund sponsors reduces the expense ratio of the funds under their management.

$$\text{Expense ratio} = \alpha + \beta_1 (\text{size}) + \beta_2 (\text{nature}) + \beta_3 (\text{age}) + \beta_4 (\text{sponsors}) + \mu$$

The panel data model will be applied for testing of various hypothesis and several factors that could influence the expense ratio. The above equation will explain the effect of different factors which impact the expense ratio of mutual funds.

The ER can be calculated using a formula as stated below:

MER = **ME/FUM** and is expressed as a percentage, where: “**AUM**” is the net value of the assets under management “**ME**” is the amount of relevant management expenses charged for the year.

The expense ratio may be defined as percentage of all management expenses and fee which a fund incurred in operation go a fund to its net assets under management. The management expenses in this thesis include, trustee expense, annual expenses, custody fee, fund manager fee, audit fee and other admin expenses in operation a fund. All these expenses and fees are paid out of the fund's assets.

While doing the research, we will consider Fund objective (Nature of fund) a dummy variable has been selected. The variables assumed to be 1 for equity base fund and 0 otherwise. The objective of this classification is to merge all kinds of equity and debt fund in two groups with same classifications. The equity group includes funds with the objectives of growth and high growth. The remaining funds are funds with the objectives of income and less growth. The dummy variables are used in this thesis so that any differences in the fund expense ratio can be captured that might have impact on fund's investment objectives.

It is expected that those funds which have aggressive investment strategies tend to charge a higher degree of fund expenses, due to a more active approach in research and investment activities. Another important variable which influence the expense ratio of the fund is its relation with fund family. In this research, we considered these variables as sponsors of the asset management company and the size of assets under its management. As the fund family

with respect to size increases, there is a possibility that fund expenses can be distributed over more funds as a result the average expense of the fund will decrease. So the fund size in this study is included to identify the existence of economies of scale in the fund due to increase in asset base of fund. The fund age variable is included in the model to control for the effect of fund age on expense ratio.

Results and Discussion

This study identified a new factor while studying the mutual fund industry in Pakistan which showed a remarkable growth during last decade especially after year 2005. The study conducted a panel data analysis of mutual funds expense ratio to identify its determinants having significant impact on the same. The investors are unaware of this dimension of mutual fund industry and have never explored the impact of expense ratio on the performance of the fund. The data under this study were segregated on the basis of their investment strategy and the groups they belonged on the basis of banking and non-banking sponsors in measuring the impact of age, size, nature and sponsors of the fund on expense ratio.

For the purpose of analysis, this study has accounted for all funds operating since 2005 till 2012 in the sample size. The funds were further categorized into two tiers based on their portfolios. The tier one is equity funds which are having more than 60% holding in equity shares while the tier two consist of debt funds which are having investment in fixed income securities and money market instruments. The funds were also segregated on the basis of groups which these funds belonged and are the sponsors of the funds.

The sample is divided on the basis of investment strategy and on such basis; the breakup of debt and equity fund is given below figure.

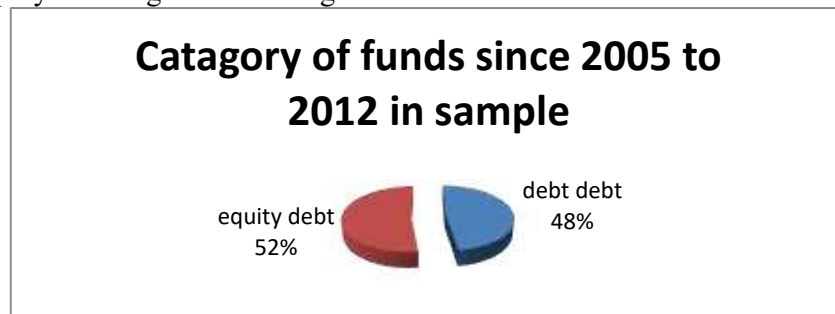


Fig 1: Category of funds in debt and equity structure

The descriptive analysis of mutual fund was conducted for the period from 2005 to 2012 to analyze the variables used in the study. The descriptive study was primarily conducted on three variables which include Expense Ratio, Age, and size of fund. The other two variables which include sponsors and nature were not included in this description as they are dummy used in the study.

<i>ER</i>		<i>AGE</i>	<i>NAV</i>	<i>SPO</i>
Particulars	Results	Results	Results	Results
Mean	0.0382	1,909.1383	2,515.0183	0.2315
Median	0.0355	1,283.0000	697.5870	-
Mode	0.0400	264.0000	958.7660	-
Standard Deviation	0.0235	2,713.5874	7,446.7245	0.4225
Minimum	-	2.0000	54.2001	-
Maximum	0.2253	18,099.0000	64,294.0000	1.0000

The result exhibited in the above table depicted that mean of expense ratio of all open end mutual funds hovering about 3% to 4% with standard deviation of 0.235. The mean age of the funds was found to be more than 5 years. The average size of fund with mean value stood at about Rs. 2 billion with standard deviation of 7446. The reason for this high standard deviation is inclusion of some large size funds included in the sample specially NIT and funds under management of UBL, and Meezan AMC.

As discussed above, the expense ratio is expected to be dependent upon the size of the fund, the age of the fund, the fund family i.e. sponsors, and the peculiar nature of fund. The expense of the fund includes such as management fee, annual SECP fee and other operating expense which include the brokerage charges and marketing and research expense. There is predominantly evidence that size of fund have impact on expense ratio of the fund however, we have observed that other important factor like age, nature and sponsors also have impact on the expense ratio of the fund in this study..

In order to analyze the determinants of expense ratio of mutual funds exist from 2005 till 2012 along with all funds which were launched during the this period, the regression analysis was conducted to determine the impact of all four important independent variables, including age, size, nature of fund on dependent variable on expense ratio. For the purpose of uniformity, we have taken natural log of size of fund as the values are too high and may not represent true result of the analysis.

Empirical Analysis of funds (2005 to 2012)

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		B
(Constant)	0.061	0.005		12.809	0
Age	1.31E-06	0	0.126	3.232	0.001
SPO	0.002	0.002	0.034	0.945	0.345
NOF	0.012	0.002	0.284	7.424	0
NAVNL	-0.006	0.001	-0.346	-8.837	0
R Square	0.254	F statistics	50.41		
Adjusted R square	0.249	significance	0.000		

The regression result is obtained on both natures of coefficients i.e. standardized and unstandardized. The reason for this job is as some of the variables are with high value like NAV while ER is in percentage form and Age is days. So in order to remove discrepancy, the result is produced in both manners. In consistent with findings of Soo-Wah Low (2008), Ruckman (2003), Khorana, at el. 2008, we observed that all the theoretically assumed important variables (except sponsors) have a statistically significant impact on the expense ratio of mutual funds.

As shown in above table, the size of fund is negatively and significantly related to fund expense ratio, i.e. the bigger the fund size, the lower the expense ratio as compared to small funds. This result suggests the presence of economies of scale in these funds and is consistent with the findings made by Khorana, at el. 2008, Ruckman (2003), and Rompotis (2008) of previous studies mentioned earlier.

On the overall sample size, the coefficients of age, sponsors and nature have unexpected signs in contrast with some of the research findings of the determinants of the expense ratio of mutual funds.

However the same was consistent with Korpela and Puttonen (2006) who stated that age is positively related to expense ratio as the fund becomes older it charges much fee. One of the reason for this positive relation that funds which have much experienced they tend to charge high marketing expenses and hire more professional which tend to raise the expense ratio of the funds. Further, the sponsors irrespective bank or non-bank owned AMC's charge their management fee and impact the overall expenses of the fund offering to different unit holders and proved to be insignificant in the result. However this relationship proved to be positively co-efficient which suggest that sponsors will not pass the benefit of high funds under their management and its expertise to the unit holders.

Another important factor which supports the positive relationship of expense ratio and sponsors is the regulatory limit of charging management by the AMC's. As per NBFC and NE Regulation 2008, the AMC's in Pakistan can charge up to 3% of their net assets as management fee for the first five years of operations and then subsequently up to 2 % of their net assets. Owing to this regulatory limit, the AMC's irrespective of its sponsor's nature, they have the liberty to charge such management fee from the fund on annual basis which ultimately leads to high expense ratio.

On the basis of above result, it is proved that the variables studied in this research i.e. age, size, nature (except sponsors) is significantly related with the expense ratio. Other than size of fund, all other variables are positively related with the expense ratio and having significant value less than .05 which leads that these variables are significantly related with dependent variables. Further the adjusted R square depict that explanatory power is restricted to 25% of total data set which may lead to infer that there are some other variables as well which may influence the expense ratio of fund.

On the basis of above result, we accept H1 and H2 and reject H3 and H4. In addition, we have divided the sample into two tiers i.e. debt fund and equity fund. The result is consistent with age, and size of fund.

Another data set comprising of mutual from year 2007 to 2012 has also been analyzed to review the expense ratio of funds. The regression result of 2007 was consistent with the unbalanced data of 2005 to 2012. However the sponsors of the fund did not significantly related with the expense ratio of the fund. The result exhibit that age, size and nature of fund are significantly related with the expense ratio. Further the negative relation with size of fund also indicated that economies of scale exist in the industry as the size of fund increase, the expense ratio reduce against the same. However, the other variables exhibit same result as mentioned in result of previously mentioned. The results are at appendix 1

In contrast to findings of other research, the age and nature of fund are positively related with the expense ratio. The reason for this insignificance is that after 2007, many funds were launched by bank owned AMC's which charge high expense and does not pass the benefit to investors. Similarly, non-bank AMC's also launched funds during this era and consistently charge fee on the funds. As a result, both the category of sponsors charges the expense on all funds under their management on same pace which leads no impact on overall expense ratio.

Conclusion

Mutual funds have been an interesting and inspiring area for research in the finance and economics. Much emphasis and investigation has been made towards performance of the funds with different prospective including nature of funds, and their behavior in different market conditions. In the context of Pakistan the research on mutual funds are limited to performance and growth of open end and closed end funds. No contribution has been made

with respect to factors affecting the performance of fund in detail. Therefore in order to fill a research gap, it is imperative to study one of the important factors which affect the performance and return of the fund. i.e. the expense ratio.

In order to further study the variable i.e. expense ratio which affect the investor preferences towards investment decision, we explore the determinants of expense ratio of open end mutual funds. In consistent with the previous studies, four important variables including age, size, nature and sponsors (fund family) were selected to review their impact on the overall expense ratio. Therefore this study would be the first attempt to grab the determinants of expense ratio of mutual funds by examining various factors which influence the ER on overall basis.

Results from the study shows that the all variables, age, size, nature except sponsors of fund have a significant impact on the expense ratio of open end mutual funds which is consistent with other studies already carried out in other parts of the world. Perusal of the empirical findings shows that the all-important variables selected in this study have significant impact on the expense ratio except one of the variable i.e. sponsors of the fund. The individual results each variables were also analyzed in view of their impact on the expense ratio.

The analysis of results revealed that age is positively related which is consistent with findings of Korpela and Puttonen (2006) and Babalasy et al. (2009) however the impact was found to be significant on expense ratio. The result further exhibits that with the passage of time, the expense ratio of mutual funds does not reduce. It may be the reason that the fund managers are not enjoying the benefit with their experience gained in their relation with the fund. Further they are not utilizing their experience they gained in the fund management and reduce the expense ratio. In addition, the regulatory framework may also have impact on the expense ratio of fund as the AMCs are allowed to charge management fee at the rate of 2 percent even after operation of five years.

With respect to size of fund, the empirical result depicted that size of fund has significant impact on expense ratio and is negatively related with the same which is consistent with findings of Khorana et al. (2008), Gemmill and Thomas (2006) and Soo-Wah Low (2008) and Rompotis (2008). The results exhibit that as the fund size increases, the expense ratio reduces. The reason for this negative relation is that fund enjoys economies of scale over a time and they reduce the expenses by managing large asset base.

The other variables, which include nature was also found to be significantly important with expense ratio and is in consistent with the findings made by Soo-Wah Low (2008) and is inconsistent with Korkeamak, and Smythe Jr.(2004) and is consistent with findings of Rompotis (2009). The result indicated that fund charge expense irrespective of their nature on the fund. For example, in Pakistan both equity and debt funds pay brokerage charges and research expenses before investing in some new avenues. This is further substantiated by the fact that equity funds are tend to pay brokerage on equity shares while the debt funds are required to pay similar charges on purchase and sale of government securities.

The other important finding is that sponsors seem to have no impact in reducing costs on any particular fund in both categories of funds which is inconsistent with findings of Khorana, et al. (2008), Ruckman (2003) and Korpela and Puttonen (2006). There is no doubt, that sponsors managing larger asset base of funds, share marketing and selling infrastructure, wages of personnel involved and also sharing the benefits and costs of research which would generated some gains. But in spite of benefiting from these factors, they do not pass to unit holders.

The result obtained from this study will be great significance for both an individual and corporate investors along with the fund managers of the company. For investors, it would benefit them by selecting funds which are bigger size so that it could provide them superior returns as their expense ratio would reduce with the increase in fund size. For fund managers,

this would help them in reducing the operating cost based on experiences (age of fund) and with economics of scale thus attracting new unit holders for the fund. With lower expense ratio, the sponsors would be on edge by making use of their high fund under management and allow investors to choose their AMC's for decision making in mutual funds.

Form the regulatory point of view, this study would enable the regulator to develop a policy with respect to minimum and maximum expense ratio as the same has been implementing in other jurisdictions. Further, it would also enable the regulatory to protect the interest of unit holders in terms of their return on the basis of different attributes of funds. From the AMC's prospective, it would be helpful for the management company to disclose their expense ratio for better investment environment and made the investors to take informed decisions. Future research can also be made to find the impact of expense ratio on the performance of the fund as this study has not yet been made in a separate model.

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Appendix 1

Descriptive Analysis of funds from 2007 to 2012

	<i>ER</i>	<i>Age</i>	<i>NA</i>	<i>SPO</i>	<i>NOF</i>
Mean	0.033385	1987.518	2605.009	0.232143	0.589286
Median	0.030295	1593.5	1031.129	0	1
Mode	0.05	397	153.51	0	1
Standard Dev.	0.021114	2343.282	5475.392	0.422829	0.492697
Minimum	-0.00312	8	37.6285	0	0
Maximum	0.225269	18099	45880.11	1	1
Count	336	336	336	336	336

Regression Result of funds from 2007 to 2012

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	S. E	Beta		
1	(Constant)	0.068	0.007		9.321	0
	Age	1.08E-06	0	0.12	2.103	0.036
	SPO	-0.002	0.003	-0.033	-0.614	0.539
	NOF	0.006	0.002	0.145	2.584	0.01
	NAVLN	-0.006	0.001	-0.338	-5.883	0
R Square	0.155	F statistics		15.214		
Adjusted R square	0.145	significance		0.000		

Result obtained from the analysis of 2007-2012 revealed that sponsors are not significantly related with the expense ratio of fund.