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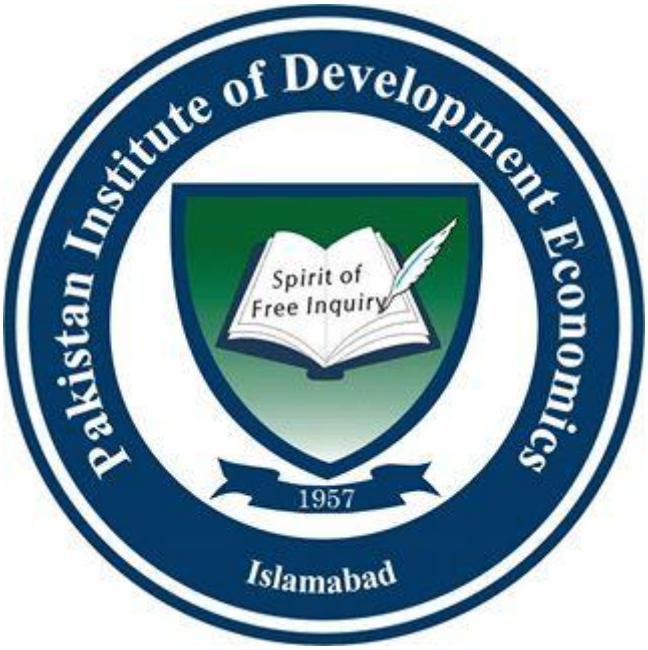

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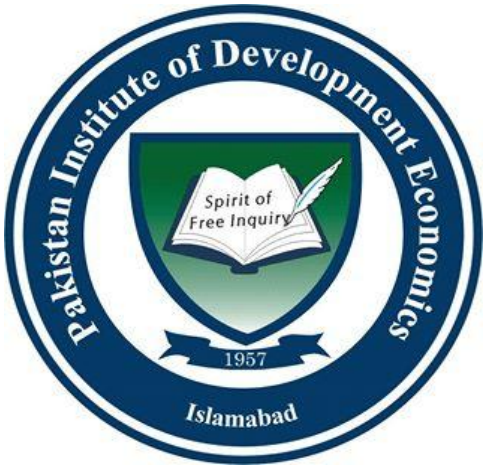
Evaluating Performance of Mutual Funds



A Thesis Presented to

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In Fulfillment of the Requirement for the Degree of

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Evaluating Performance of Mutual Funds

A post graduate thesis submitted to the department of business studies as fulfillment of the requirement for the award of degree of

Master in Business Administration

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DEDICATION

I dedicate this work to my respected and loving parents without their unconditional love and support I would never accomplished this task. Their prayers are the real force behind me to complete my thesis.

ACKNOWLEDGEMENT

I have no words at my command to express my deepest sense of gratitude to **Almighty ALLAH**, the Most Merciful and the Most Beneficent, Who blessed upon me, in the potential to successfully complete my thesis.

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LIST OF TABLES

LIST OF ABBREVATIONS

MF = Mutual funds

S.D = Standard deviation

AV.Rt = Average return

β = beta (systematic risk)

AMCs = Assets Management Companies

NIT = National Investment Trust

MUFAP = Mutual Funds Association of Pakistan

ICP = Investment Corporation of Pakistan

SECP = Securities and Exchange Commission of Pakistan

BATS = Bond Automated Trading System

SBP = State Bank of Pakistan

CAPM = Capital assets price model

NAV = Net asset value

KSE = Karachi stock exchange

Rp = Portfolio returns

Rm = Market returns

βp = Portfolio beta

Rf = Risk-free returns

α = Alpha

Mf = Mutual funds

Abstract

This paper examined the performance of total 48 mutual funds, in which 30 were conventional and 18 were Islamic funds. The study applied three worldwide performance measures which are Sharpe, Treynor and Jensen model for the analysis period 2009-16. The study implied that in Islamic funds, JS Islamic fund and Meezan Islamic fund performed relatively better, however Pak Oman advantage asset allocation remained poor performer over the analysis period. For the conventional funds AKD opportunity fund remained relatively better performer. It is also inferred that Pakistan income enhancement fund and First Dawood mutual fund performed poor over the entire analysis period. Overall results suggest that Islamic mutual fund was founded to be less risky as compared to conventional funds, and average returns of the Islamic funds were higher than its counterpart. However on the basis of Treynor model Conventional funds were performing better. It can also be inferred that both funds manager on average were not able to earn abnormal returns.

Key Words: performance of mutual funds, mutual funds, Islamic mutual funds, conventional mutual funds, Sharpe, Treynor, Jensen alpha, manager's ability, Diversification, Standard deviation

Chapter 1

1. Introduction

Mutual fund is an investment that pools funds from different people and invests it in financial securities. Mutual fund invests the pool of funds in securities like bonds, stocks, fixed income securities, Shariah compliance income securities and etc. Mutual fund is the best way to diversify investment, as it makes different portfolio according to the stated objectives of fund. Mutual fund perform a vital role in mobilizing the idle funds in the economy, specifically in developing and emerging economic countries like Pakistan, India, Bangladesh and other countries where the investors possess very little or no knowledge about investment, financial market and risk pattern of market. Mutual fund grew in all over the world, primarily in the well developed countries is now significant that investors prefer indirect investment with minimum risk (Huhmann, 2005).

Mutual fund is managed by "Asset Management Company"; An Asset Management Company offers different funds, and a fund are having different objectives that invests according to the stated objectives, these funds are managed by an expert manager known as "Fund manager" who is responsible to manage the fund activities. Mutual funds can be categorized in many ways but broadly mutual funds can be categorized as; "open end mutual fund and closed end mutual fund." open end mutual funds are those fund which on continuous basis issue and redeem stocks,. While on the other hand closed ended mutual fund are those fund which is subscribed only once of its lifetime at the commencement of fund, and then the units of funds are traded in the secondary market. The stocks that are issued are known as units and the person who owns the unit is known as unit holder.

Throughout the world "mutual fund" has recorded $ 11.7 Trillion of assets. USA possessed largest share in investment i.e. 60%, while other countries including; "Luxembourg possessed 6.5%, France 6.1%, Italy 3.1%,and Japan 2.9% share of

investment.” These countries hold very small investment including Bangladesh, Romania and Sri Lanka (Khorana et al, 2005).

In the same way Islamic mutual fund is managed by fund managers who raise funds from general public, those who own mutual fund becomes unit holder. However fund manager is bound to invest those funds in Shariah compliance assets, it should not be invested in those assets which do not confirm to Shariah principles or prohibited by Islam. The funds that is raised by issuing units are used to buy diversified portfolios of financial assets or other form of products that confirm Shariah principles, it would not be invested in non-Shariah compliant assets., these funds should be kept away from investing in activities that is not Shariah compliance such as conventional banking,, gharar, gambling, alcoholic products and services, conventional financial and insurance activities. These kinds of characteristics make Islamic mutual funds different from conventional mutual fund.

Islamic mutual fund is emerging and good option for investment, where specifically investors who want to invest his finance in mutual fund, but looking for Shariah compliance based securities. Globally Islamic mutual fund attracted investors and it received higher attention due to its performance and growth which leads to consistent growth in Islamic finance. Islamic mutual fund performance seems to be improving with the passage of time; this is because it functions differently during bearish market trend (Elfakhani and Hassan 2007).

1.1.Structural Changes in Pakistan mutual fund industry

History of mutual fund can be traced as, when National Investment Trust (NIT) issued first mutual fund on 12 November, 1962. Few years later Investment Corporation of Pakistan (ICP) was formed, which issued twenty six closed-end mutual funds. These funds were initially sold to general public but however later on the funds were privatized. In 1971 “Investment companies and Investment advisory rules” were circulated, which enables private sector to offer closed-end funds under this rule. In 1983 Private sector issued closed-end fund (Golden Arrow Selected Stock Fund) for the first time in Pakistan. In 1995 another rule was circulated known as “Asset Management Companies Rules”, which permit private sector to issue “Open-end fund” in the market.

In 1996 first meeting was held by Investment advisors and Asset management companies to form "Mutual Funds Association of Pakistan (MUFAP)". JS Investment Limited launched first private open-end mutual fund on 27 October, 1997. Onwards 2000 there are several structural changes in mutual fund industry of Pakistan. In 2001 "Mutual Fund Association of Pakistan" was officially registered which aimed to act as a functional regulatory body of mutual fund. In 2002 management rights of Investment Corporation of Pakistan (ICP), Closed-end mutual fund was sold to Asset Management Company of private sector. ICP had two lots i.e.: Lot-A comprised 12 funds while Lot-B had 13 funds. JSIL (Formerly known as ABAMCO) acquire 12 funds of Lot-A, while PICIC acquired 13 funds of Lot-B. In the same year several structural changes occurred in mutual fund industry. In March, 2002 Pakistan first "Fixed Income Securities fund (Pakistan Income Fund) was floated to the market. In the month of December "JS Islamic Fund" (Formerly: UTP Islamic Fund) the first Shariah Compliant Fund was launched.

In 2003 "Non-Banking Finance Company" rule was passed and circulated which put an end to the previous "Asset Management Rules,1995" and Investment Advisor and Investment companies rules,1971. NBFC rule allowed both open-end and closed-end fund to be regulated under the same rule. In addition to launch fund under company structure, NBFC rule enabled closed-end mutual fund to be formed under trust as well. In 2004 "Mutual Fund of Pakistan" became a member of "International Investment Fund Association (IIFA)". In 2005 another rule was circulated named as "Voluntary Pension System rules, 2005". After two year of the rule formed "SECP" permitted four pension fund manager to launch pension schemes under SECP license. The number of fund manager increased as more licenses were issued to fund managers.

In 2009 SECP approved "TFC Pricing" model established by MUFAP which was based on different factors like profits rate, rating and maturity. Subsequently "Money Market Funds" were launched, which was less risky funds amongst other types of mutual fund. In 2010 MUFAP took initiative with the collaboration of Karachi Stock exchange to launch Bond Automated Trading System (BATS) which enabled trading of corporate debt securities. In 2012 Exchange Traded Funds regulation was approved by SECP. In 2013 "Commodity Scheme" was added as a separate and new asset class for Collective investment Schemes. In the same year a new fund "Gold Sub-fund" was added to

voluntary pension schemes. Four funds were transformed from closed-end to open-end funds and some were terminated as per rules 65. In 2015 Non-Banking Finance Companies rules and regulations were amended by SECP. With the effect of amendments MUFAP were to provide recommendations and comments after detailed review. In the following year first "Real Estate Investment Fund" was launched.

1.2.Mutual Fund Industry Statistics

Mutual fund industry grew with the passage of time. As time passes on MUFAP launched several new funds and schemes which added value to the mutual fund industry. We present mutual fund statistics here which will help to understand how mutual fund industry experience ups and downs. We list no of AMCs, Investment advisors and Funds chronologically.

Table 1 No of open-end, closed-end, and total mutual funds

Years	**Closed-end funds**	**Open-end funds**	**Pension-funds**	**Total no of AMCs**	**Total no of funds**
2006	19	29	_	20	48
2007	23	49	4	29	76
2008	23	67	7	26	97
2009	21	81	9	27	109
2010	21	105	9	28	135
2011	16	118	9	26	144
2012	15	133	11	27	159
2013	9	138	11	26	158
2014	5	152	13	21	170
2015	3	164	17	21	184

Source: "Mutual Funds Association of Pakistan"

These are the statistics of mutual fund industry of Pakistan which shows clear picture how funds grew over time. If we look to developed economies, they focused on other

forms of financial market but mutual funds also received higher attention of the researcher and many researchers have conducted studies on mutual funds. But as we move towards developing economies or emerging economies so there is limited research on mutual funds. Specifically in Pakistan it could not attract large number of researcher resulting very limited research on the mutual fund industry. It is very important to assess the performance of mutual fund, as investors are interested in returns. Historical performance assessment enables investors to compare the returns that are generated by assuming different level of risk. In this way investor can also evaluate funds' manager performance.

1.3. Problem statement

There are various investment classes and forms in mutual fund where investor can invest according to their objectives, but on the basis of funds functions and nature, two main types of mutual can be identified which are Islamic and conventional mutual funds. Investors are interested to seek investment which offers good amount of returns with minimum risk. So it is important to calculate returns and risk over the time by applying different techniques so that the investors can measure the funds' performance as well as portfolio manager performance. The current study focuses to figure out managerial performance and diversification ability of fund's manager for both Islamic and conventional funds

1.4. Purpose of the study

Mutual fund is an emerging industry not only in Pakistan but across the world it received attention of many local and foreigner investors because of its different characteristics. It provides diversification as well as it starts with minimum investment which allows small investor to invest in financial markets. Performance evaluation is the paramount important to the investors as well as to the fund's managers, as it helps the investors to measure that how much return is generated at the given level of risk. Now a day's Islamic finance is an emerging area and many Asset Management Companies have launched several Shariah Compliance mutual funds which invest primarily in Shariah complaint assets. It is necessary to find out performance of Islamic mutual funds, many studies have been conducted to analyze performance of conventional mutual fund but there are few

studies on Islamic funds' performance, specifically in Pakistan there is very limited study on Islamic fund as it is an emerging and many funds are issued in the recent years. For this purpose the researcher wants to conduct a comparative study of both funds. This study will investigate comparative performance of both Conventional and Islamic funds to guide the investors (small and wealthy) which fund is offering reasonable return at the given level of risk.

1.5. Objectives of the study

1) To find out returns of Conventional and Islamic funds
2) To calculate the risk level of Conventional and Islamic funds
3) To compare the risk and average returns of Conventional and Islamic funds
4) To highlight the top performers in Conventional and Islamic funds by ranking
5) To guide the investors whether Islamic or Conventional fund is least risky in terms of risk and return

1.6. Research Questions

1) Whether Islamic mutual fund performs better than conventional, if yes then what is possible reason?
2) How Islamic and Conventional funds perform overtime?

1.7. Scope of the study

The study will cover only Pakistan mutual funds industry. It will deal with conventional and Islamic mutual funds of Pakistan. Both funds consists different categories of funds such as money market funds, stock funds, income, growth, balanced , asset allocation and capital market fund which are managed by different Asset management companies of Pakistan. The study also reveals risk and return of both funds which will be helpful to investors as well as funds manager.

1.8. Limitations

Although mutual fund is operating since 1962 but it is still an emerging area which still can be improved. In the last few years SECP and SBP took many initiatives to improve mutual fund industry. As Islamic funds are newly launched as compared to conventional and many funds are just launched in the last few years which create a hurdle to analyze

the long term persistence in performance of both funds. The main limitation of the study is shortages of time and data availability, as many funds are merged, ceases its operation, delisted and some are converted to Islamic funds. This limitation restricted the researcher to take the sample size and sample period for which the data is easily available for analysis.

Chapter 2

2. Literature Review

Performance evaluation of mutual fund is the most studied across the globe; however there are limited number of studies on mutual fund performance in Pakistan. There are many techniques and methodology use for evaluating mutual fund performance, the most important and traditional methods are Sharpe, Treynor, and Fama and French. Performance persistence, determinants of mutual fund performance and risk has been examined in various studies in different countries using different tools and techniques. Micheal (1968) analyzed performance of mutual funds during the period of 1945-1964 by applying Sharpe-Linter model. The results suggested that funds on average could not anticipate the stock prices sufficiently well to perform well. The results show no significant evidence that an individual fund was capable to perform efficiently than those which were expected from a random chance.

John (1973) examined eight of the oldest French mutual fund performance as an example of internationally diversified portfolio during the analysis period 1964-1969 by employing "Sharpe-Linter capital asset pricing model". The results confirmed that the fund generated higher risk adjusted returns; however the results did not demonstrate any evidence on manager's ability to anticipate the general market trend so as to precipitate the size of portfolio invested in each country. John (1974) assesses objectives, risk and return of 123 American funds for the analysis period of 1960-1969 by using Sharpe-Linter model. The results suggested that the fund stated objectives are positively related to beta, mean return and total variability. The result also indicates that funds with higher risk perform better than those with lower risk. However the results did not expose any significance "superior" or "inferior" performance in terms of returns.

Musa and Wu (1988) evaluate the performance of US International mutual funds by using different techniques such as Sharpe, Treynor, McDonald-Sharpe and McDonald-Treynor during the analysis period Jan 1977- June 1984. The findings of study suggest that international mutual fund being as groups perform effectively in the US market. The study also found that internationally diversified funds are having potential benefits in risk

minimization. Richard (1989) analyzed efficiency of costly information to inspect the performance of mutual funds for two decades during the period of 1965-1984 by employing CAPM. The results confirm that net of fee, expenses and risk adjusted returns are related to fund performance. However results also revealed that portfolio turnover and management fee is not comparable to fund performance.

Cheng and Rahman (1990) empirically investigated fund selectivity and market timing performance of mutual funds during the period Jan 1977- Mar 1984. The study employed a method developed by Bhatacharya and pfleiderer (1983) and founded some evidence of forecasting ability of portfolio managers at an individual level. Daniel et al (1992) examined mutual fund performance in relation with past performance; multiple portfolio benchmarks were used to evaluate mutual fund performance on the basis of their characteristics for the analysis period 1975-1994. The results implied that the fund performance persists positively over the time, and that performance persistent is positively correlated with the ability of manager to earn abnormal returns. However the study did not address how to weight information optimally about past performance in selecting mutual fund.

Grinblatt and Titman (1993) appraised performance of mutual funds without any benchmark during the analysis period 1979-1991 by employing Time series regression model. The results inferred that on average performance of mutual fund was positive, specifically abnormal performance of growth fund was significant, which is coherent to the previous studies of Mark et al (1989). However all fund manager could not attain superior performance. Blake et al (1993) examined the performance of " bond mutual funds" by taking two samples of bond funds during the period 1979-1991. The study applied linear and nonlinear model to evaluate the performance of mutual fund. The result indicated that the bond fund and its subcategories underperform. Funds with higher expenses had negative performance. The study also observed that performance cannot be predicted on the basis of past performance for unbiased sample, however by examining larger sample of fund some evidence was found about predictability

Barber (1994) conducted study on mutual fund to test the association between future returns and risk measures during the analysis period from Jan 1969- Dec 1987 by

applying linear and quadratic models. The result of this study suggested that Beta in both linear and quadratic model is not significant factor of monthly mutual fund return. On the other hand the result found beta and residual standard error significant even after adjusting for multicollinearity. Another study conducted by Phelps and Detzel (1997) to check mutual fund persistence, the study took 87 mutual fund and 14 various market indices during the period of 1983 to 1994 by using the Goetzmann and Ibbotson(1994) models to assess mutual fund performance persistence. The results implied that some managers easily beat the market indices but some could not beat the market indices, However on average fund managers could not beat the market indices. The results also conform that positive persistence did not exist.

Daniel et al (1997) analyzed mutual fund performance with characteristics based benchmark by taking 2500 equity fund for two decades i.e.: 1975-1994 by employing different models such as Carhart four factor model and CAPM. The results of this study revealed that on average mutual fund performed better, but the amount by which it beat benchmark is relatively low (fewer than 100 basis points), specifically growth fund and aggressive growth fund has shown some selectivity ability and exhibited higher performance but it also generated higher cost. Dellva and Olson (1998) investigated the association of front end load charges, redemption fee, and deferred sale charges with total fund expenses and risk adjusted performance during the period of 1985-1990 by using market model regression. The result suggests that deferred sale charges, redemption fee, and turnover activity increases expenses while on the other hand fund with front load charges depict lower expenses. The results also indicates that on average deferred sale charges, redemption fee and turnover activity are positively related to risk adjusted performance while fund with front end load charges indicated lower risk adjusted performance.

Daniel et al (1999) researched the impact of fund size on mutual fund performance for 683 non-indexed “US equity funds” during the period of 1993-1995 by using regression. The findings suggest that the funds that are managed actively should gain minimum size to avail adequate fund returns to cope with the cost of acquiring and trading on information. Moreover marginal fund returns are negatively correlated with acquisition and trading on information. The result also conform that there are evidence that 20

percent of the fund sample were below minimum size to achieve efficiencies and 10 percent of largest fund sample excessively invest in research. Madura (2000) conducted a study to check the performance subsistence of closed end mutual funds during the sample period of Jan 1976 to Dec 1996 by employing different models such as "Grinblatt and Titman (1992), Goetzmann and Ibbotson (1994), and Kahn and Rudd (1955)." The results inferred that risk adjusted performance persist for both net asset value and market prices. However the results also revealed that persistence of market prices disappears over a shorter period of time (12 and 24 months) when the period of time was considered for analysis under current portfolio manager.

Kothari and Warner (2001) analyzed standard techniques to assess mutual fund performance, using simulated funds which resemble the characteristics of actual funds for the analysis period Jan 1966- Dec 1994 by employing simulation multifactor benchmark. The results show that standard techniques used to measure mutual fund performance are not reliable measure and can lead to inaccurate interpretations. The results also conform that the previous researches on mutual fund performance cannot determine abnormal performance of mutual funds accurately when it exists, specifically if funds style resembles different style from that of value weighted market portfolio. Power of analyses can be improved by using event study techniques which assess funds trades. These techniques are appropriate by using time series data on portfolio holdings of the mutual funds.

"Davis (2001)" assessed the linkage of equity mutual fund performance with manager style for a sample period of 1965-1998. He used "Fama French three factor models" and found that no investment style has generated abnormal returns; However results also revealed that performance persists over shorter period of time for some best performing growth funds. Massa and Patgiri (2009) hypothesized how mutual fund performance and risk taking is correlated to incentives for a sample period 1996-2003 by applying cox regression model The findings of this study suggests that higher incentives are positively related to higher risk adjusted returns, and show evidence of performance persistent. The results also described that higher incentives lead to higher risk and thus the probability of funds survival is reduced.

Bello (2011) investigated equity fund performance in bullish and bearish market by taking 2978 domestic equity funds for a sample period 1990-2010 by using Jensen, Sharpe, Information ratio and regression analysis. The results confirmed that on average mutual fund has superior performance during the period of 1990-2010. During the period of 2003-2007 performance was remarkable, however from October 2007-2010 the performance sharply declined, as funds excess return were remarkably low than those of 2003-2007. The study show evidence of risk adjusted performance when portfolio performance was compared to market risk, the portfolio performance was significantly better.

2.1. Literature Review of Islamic mutual fund performance

In the last few decades Islamic mutual fund experienced tremendous growth due to its operations which minimize the risk pattern and provide diversification. Many researches have been conducted on Islamic mutual funds; specifically performance of "Islamic unit trust" relative to "conventional unit trust" has been analyzed in various studies. Fikriyah et al (2007) analyzed the relative performance of "Islamic unit trust fund" and "conventional unit trust fund" during various economic time periods. The result implied that performance of Islamic unit trust fund is significantly better as compared to conventional funds in the bearish market trend, while in bullish market trend conventional unit trust funds perform better relatively to its counterpart. Additionally beta of Islamic fund is 0.21 and conventional fund is 0.38, which implied that Islamic fund is comparatively less risky than that of conventional unit trust funds.

Merdad et al (2010) examined performance of "28 mutual funds managed by HSBC Saudi Arabia Ltd" during various economic periods by employing non risk adjusted returns and risk adjusted returns methodology for a sample period 2003-2010. The results of non-risk adjusted returns revealed that performance of both funds were not significantly different from each other. However the result of risk adjusted returns methods indicated superior performance for "conventional funds" than its counterpart during the bull and overall period. But "Islamic funds" performed better as compared to conventional in financial crisis and bearish period. Hoepner et al (2011) measured investment style and relative performance for a sample of "265 Shariah based equity

funds from 20 countries" for the analysis period 1990-2009 by using Fama-French, Carhat and CAPM. The study could not significantly concluded that whether Islamic funds underperform or outperform, instead it showed that Islamic equity funds performed well in the renown six Islamic centers of finance (GCC and Malaysia) and competitive to the international equity fund benchmarks. However the result also indicates significant evidence that Islamic funds underperform its benchmark in the countries where Islamic financial centers are less developed, especially Islamic funds from western economies dominant by Christians.

Mansoor and Bhatti (2011) evaluated performance of Islamic vs. conventional mutual fund in Malaysia for the sample of "128 Islamic and 350 conventional funds" during the period 1996-2009 by using KLCI as a benchmark. The results confirm that both funds perform better than market benchmark. However the results also revealed that on average the returns of Islamic funds were comparatively less than that of conventional funds. Additionally the result inferred that volatility of conventional fund is less than that of its counterpart, thus the study revealed that Islamic fund possessed higher risk than conventional funds. Nassir et al (2012) measured performance of Islamic unit trust of Malaysia for different time periods, the study employed "sign test" to evaluate performance based on consistency in ranking. The study revealed that on average most of the funds behaved in random pattern of ranking. The findings also suggested that only four Islamic unit trusts named as; Public Islamic Equity and CIMB Islamic Sukuk (short term investment) and CIMB Islamic Balance and Public Islamic Balance (medium term investment) shows evidence of non-random behavior in ranking, which revealed that only two unit trusts depict predictability and consistency in ranking.

Ashraf (2013) analyzed relative performance of Islamic and Conventional mutual funds during global financial crisis by taking 159 listed mutual funds on Saudi Arabian Stock exchange for a sample period 2007-2011. The study used CAPM Regression and Treynor and Muzay model to check stock picking abilities and market timing ability of 159 listed mutual funds during the period of 2007-2011. The finding show empirical evidence of better performance of "Islamic mutual funds" relatively to its counterpart "conventional funds". The result also suggests that Islamic mutual fund manager's possess superior ability in stock selection as compared to conventional funds managers. However the

findings implied that on average Islamic mutual funds managers do not exhibit a market timing ability. Mumtaz and Nasir (2014) investigated Islamic mutual fund performance in terms of risk and return; comparatively to Islamic and conventional benchmark by employing panel data during the period of 2007-2012. The findings of the study suggested that there is no statistical significant evidence on differential in return of Islamic funds relatively to its benchmarks. The study also indicated that Islamic mutual fund manager exhibit superior skill in fund selectivity but poor market timing ability during the period of analysis. However there was evidence that the risk of Islamic mutual fund was relatively low in contrast to its benchmark and its return performance could be compare to benchmark.

2.2. Studies conducted on mutual fund performance in Pakistan

Several studies conducted in Pakistan on mutual fund performance due to its importance in risk diversification and its emergence across the world. Shah et al (2005) made an attempt to evaluate mutual fund performance in Pakistan for a sample period 1997-2004 by employing the worldwide used model such as Sharpe, Treynor and Jensen models. The results of the study indicated that mutual fund industry perform superiorly the market proxy based on overall basis, they are diversifying their investment indicated by their beta. Hence the overall results implied that Pakistani mutual funds are able to contribute in value addition. However the study also revealed that some of funds perform poor, these funds could not diversify its portfolio to minimize the risk. Afza and Rauf (2009) investigated mutual fund performance based on funds characteristics such as fund size, expense, age, liquidity, turnover and loads for a sample period 1999-2006 by employing Sharpe ratio. The findings suggest that fund performance is positively correlated to age, turnover and expenses, however statistically they are not material. The results also implied that 12b-1 fees had positive relationship with fund performance.

Nazir and Nawaz (2010) examined mutual funds growth based on various factors by using fixed effect model and random effect model for the period of 2005-2009. The study revealed that both models result shows that the following factors contribute positively to the growth of mutual funds; family proportion, asset turnover and expense ratio, while the cross sectional model implied that management fee and risk adjusted returns

negatively affects mutual funds growth. However the study also suggests that by using fixed effect model it is indicated that management fee contribute to mutual funds growth. Zulfiqar et al (2011) measured performance of 22 closed-end mutual funds listed on KSE Pakistan during different economic periods including recession, normal and boom for a sample period of 1999-2009. The study used four basic measures of mutual fund performance such Sharpe, Treynor, Jensen's alpha and Sortino ratio. The results of this study suggest that the mutual funds performed poor during normal state of market relatively to its benchmark, in boom state of market mutual funds underperform, as many funds were showing negative returns which depict poor performance. While in the state of recession the measures used to analyze mutual fund performance was showing negative results, which indicates that in recession the performance of mutual funds was worst. Overall Pakistani mutual fund underperformed during the analysis period.

Despite the researcher conducted many studies on mutual funds across the world, but Pakistan's mutual fund industry could not attract many researchers resulting in limited research on mutual fund industry. Gul et al (2012) evaluated performance of 9 Islamic mutual funds that were managed by different funds manger in Pakistan for a sample period 2009-2010. The study was conducted by using different measures such as "Sharpe, Treynor, Jensen's alpha and Information ratio." The study shows evidence that the funds perform better as their returns are according to their risk level. The results also implied that Islamic mutual funds growth continues in the previous years which show that Islamic mutual funds are growing and investors are attracted to these funds. The study also suggested that Islamic mutual fund managers are capable to diversify its portfolio.

The current study aims to investigate the performance of "Conventional and Islamic mutual fund". It is necessary to conduct a study to evaluate the comparative performance of both funds to enable the investors to know whether Islamic or conventional fund is performing better in terms of their returns and risk level. There are several reasons to evaluate each fund as both funds function differently from each other, as Islamic funds can only invest in Shariah compliance assets while conventional can invest in non Shariah as well. So it is important to know the performance of both funds in terms of their returns and risk level. The current study focuses on comparative performance of both "Islamic and conventional mutual funds". Although some researchers have

conducted studies on mutual fund performance but there are very limited number of researches on performance of Islamic funds in Pakistan. The study that were conducted in Pakistan are either restricted to only few categories of funds or there were individual performance evaluation of funds. So the current study aims to conduct a study to evaluate performance during the period of June, 2009 to May, 2016, and total sample size chosen for analysis is 48 which consists 30 conventional and 18 Islamic funds. Only those funds are included in the sample which is actively operational during the sample period. The study applied traditional models to evaluate fund performance. These are the models that are widely used to measure portfolio performance; Treynor measure, Sharpe measure, Sortino, Jensen alpha and Fama French model. However the current study applied all the models except Fama and French model. The reason of not applying this model is that, it required data on book to market value which could be made available. These different models are used to rank funds within each fund to find out best performer and poor performer which will help investor to evaluate the funds and it will let him to decide where he/she should invest.

Chapter 3

3. Data and Methodology

3.1. Sample and Data Description

The sample set is based on Open end mutual funds. The sample that is chosen for analysis is basically conventional and Islamic funds. Both funds consists of different fund types including income funds, stocks, asset allocation, balanced, money market, fixed income, equity, high yield, growth, fund of funds, capital market fund and so on. Total number of sample is 48 which include 30 conventional and 18 Islamic funds for analysis. Only those funds are included in the sample which existed prior to 30th June 2009 and remained in operation over the whole analysis period. The funds are evaluated during the period of 30th June, 2009 to 31th May, 2016. The sample period is chosen on the basis of data availability for funds, as many funds are just launched after 2007 and 2009, so we had to make a sample period where we could choose relatively large sample of funds. Funds that are dead, merged, delisted, and funds that ceases its operation prior to the analysis period are not included in the sample. The reason behind not considering funds that are merged or delisted or ceases to exist is that, we wanted to evaluate performance for those funds that are still in operation.

3.2. Variables

For the purpose of analysis and evaluating mutual fund performance the study chosen different variables including; NAV of both Islamic and conventional mutual funds, KSE-100 index values and six months Treasury-bills rate are used as a proxy for risk free rate. We also calculate average monthly returns of funds as well as monthly returns of KSE-100 index. Monthly returns of KSE-100 index used as a proxy for market returns. We also calculated standard deviation for both Islamic and conventional funds to know about their risk level.

3.3. Sources of data

The data on variables are collected from different sources. Data for net asset values is collected from "Mutual fund association of Pakistan"; KSE-100 index values are collected from http://www.khistocks.com/ and https://www.psx.com.pk/. Six months Treasury bills rates are collected from http://www.sbp.com.pk and http://www.tradingeconomics.com.

3.4. Methodology

Methodology that is used to assess performance of mutual funds is quantitative in nature. The main purpose of the current study is to investigate the performance of both Islamic and conventional mutual funds. Both funds are based on open end mutual funds. There are various measures worldwide used to assess mutual funds performances that includes; 1) Sharpe measure 2) Treynor measure 3) Jensen alpha and Fama French measure. The study uses the first three models to analyze funds' performance. The study excluded Fama and French model to assess mutual fund performance, as it required data on book to market value for all the funds that are included in the sample while the data could not be made available.

3.5. Specification of model

We first calculate monthly returns of all the funds by applying the formula mentioned below;

Return (%) =

(Closing price of current month – closing price of last month) /closing price of last month

Now we calculated beta for funds by using the following formula that is suggested by Jensen (1967). The formula that is suggested by Jensen for CAPM beta is mentioned below;

$Bp = Cov (Rp, Rm) / V (Rm)$

3.6. Sharpe model

William F.Sharpe (1966) made an attempt to evaluate portfolio performance. Sharpe performance measure is almost similar to Treynor; however he included "Standard deviation" as a measure of total risk of the portfolio rather than "Beta" which was the measure of only systematic risk. In order to decide which fund or managed portfolio is performing better, the ratio computed risk premium return or the excess return per unit of total risk. Higher ratio reflects better performance, so investor would choose the portfolio with higher ratio as it is favorable to them. Sharpe-ratio is also known as "reward to variability" ratio. Following is the formula used to compute the ratio;

Sharpe-ratio = (Rp – RF) / бp

Following are the main components of model which are mentioned as;

Rp = average portfolio returns

RF = average risk-free return

бp = standard-deviation, the measure of total risk

3.7. Criticism on Sharpe

Treynor criticized Sharpe, as Sharpe model uses standard deviation as a measure of risk which reflects the total risk associated with an investment. Treynor proposed two types of risk; Systematic risk and unsystematic risk, he suggested that as systematic risk is unavoidable and common to all investment so we should work with unsystematic risk which is company or investment specific which can be mitigate by means of diversification.

3.8. Treynor model

Treynor (1965) formed first measure to evaluate portfolio performance that included risk in its denominator. Treynor introduced the risk in two categories as; Systematic risk and unsystematic risk. Systematic risk is that type of risk that cannot be avoided by mean of diversification of portfolio as it is market oriented, however it can be measured through beta. The other type of risk that he introduced is unsystematic-risk that is portfolio or company specific and it is manageable as it is diversifiable. Treynor model is used to find the additional return that can be earned on risk- free investment by assuming per unit of

systematic risk. Maximum value of this ratio is preferable as it reflects higher slope and depicts better performance for portfolio, as the numerator is the risk premium return (Rp-RF) that can be earned by assuming per unit of systematic risk. So investor would like to maximize the value.

The formula of this ratio is given as;

Treynor-Ratio = $(Rp – RF) / \beta$

Following are the terms that are explained as;

Rp = portfolio average observed returns

RF = average risk-free returns over a time period

β = measure of systematic risk

3.9. Jensen-alpha model

Jensen (1969) added alpha to the "CAPM model" which captures abnormal returns. Alpha is the dissimilarity between the average returns of the portfolio that is earned and expected returns of the portfolio that could be earned in the given market conditions and level of risk. Positive alpha reflects that portfolio performs better than that of its benchmark. Following is the formula used for Jensen measure;

$\alpha p = Rp – \{RF + \beta p (Rm – RF)\}$

Where;

αp = reflects the excess return of the portfolio

Rp = is the portfolio observed returns

Rf= is the risk-free returns

Rm= shows market returns, and βp = the measure of systematic risk associated with portfolio.

Chapter 4

Results and Discussions

4.1. Islamic Mutual Funds

Table 2 For the year 2009-10

Islamic MF	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	β	Jensen alpha	Sharp Ranking	Treynor Ranking
AIGIF (G)	0.00	0.01	10	17	-0.89	1.33	-0.01	-0.01	16	3
AIGIF (I)	0.00	0.01	11	18	-1.03	-0.34	0.03	0.00	18	18
ASSF	0.01	0.04	4	10	0.06	0.00	0.58	-0.01	4	10
AGISF	0.00	0.04	12	9	-0.26	-0.03	0.38	-0.02	9	15
AIIF	0.00	0.01	14	14	-0.96	1.51	-0.01	-0.01	17	1
AISF	0.02	0.06	2	5	0.12	0.01	0.87	-0.01	2	8
DIF	-0.01	0.07	17	1	-0.32	-0.05	0.47	-0.03	10	16
JSIF	0.01	0.06	5	3	0.04	0.00	0.92	-0.01	5	11
MBF	0.01	0.04	7	7	-0.03	0.00	0.50	-0.01	7	12
MCF	0.00	0.01	9	15	-0.65	1.47	-0.01	-0.01	12	2
MIF	0.02	0.05	1	6	0.23	0.02	0.79	0.00	1	7
MIIF	0.00	0.01	13	16	-0.87	0.79	-0.01	-0.01	15	4
NAFA_IGIF	-0.03	0.07	18	2	-0.56	0.25	-0.15	-0.03	11	5
NAFA_IAAF	0.01	0.04	6	11	-0.02	0.00	0.38	-0.01	6	13

PAK_IEIAF	0.01	0.04	8	8	-0.12	-0.01	0.55	-0.01	8	14
PAK_OAIIF	-0.01	0.03	15	13	-0.70	0.25	-0.07	-0.02	13	6
PAK_OIIALF	-0.01	0.03	16	12	-0.73	-0.12	0.17	-0.02	14	17
AL_MF	0.01	0.06	3	4	0.06	0.00	0.85	-0.01	3	9
Overall performance	**0.00**	**0.01**			**-0.37**	**0.28**		**-0.01**		

Interpretation

The above mention results states the Islamic mutual funds' performance for the year 2009-10, it is states on the basis of statically techniques Meezan Islamic fund, Atlas Islamic stock fund and Al-Meezan mutual fund having higher average returns as compare to other Islamic funds on the other side ton the basis of stander deviation the Al ameen Islamic aggressive income fund (Income) and Al ameen Islamic aggressive income fund (Growth) recorded lowest standard deviation it means these both funds are relatively less riskier as compare to other funds. Meezan Islamic fund has highest Sharpe ratio .i.e. 0.2251 and the lowest Sharpe ratio is Al ameen Islamic aggressive income fund (Income) i.e. -1.0332 which reveals poor performer of the fund. On the basis of Treynor ratio results Atlas Islamic income fund founded to be best performer among all funds. The results of Jensen alpha represents that Meezan Islamic fund has positive integer while others are having negative values.

The above discussed results states that the Al ameen Islamic aggressive income fund(Income) has the lowest Standard deviation which shows its less riskier as compared to others, however on the basis of Sharpe, Treynor and Jensen alpha it depicts poor performance. Meezan Islamic fund overall having better performance due to higher Average returns, higher Sharpe ratio which predicts superior manager ability of diversification and also it is having positive values of other performance measures. So it can be inferred that on overall basis Meezan Islamic fund performed better as compared to other Islamic mutual funds.

Table 3 Islamic Mutual Funds for the year 2010-11

Islamic MF	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIGIF (G)	0.00	0.02	15	14	-0.59	0.18	-0.07	-0.01	14	3
AIGIF (I)	0.00	0.02	16	13	-0.60	0.17	-0.08	-0.01	15	5
ASSF	-0.01	0.11	17	2	-0.22	-0.22	0.11	-0.02	10	18
AGISF	0.00	0.03	11	10	-0.44	-0.11	0.11	-0.01	13	16
AIIF	0.00	0.01	10	17	-0.96	0.17	-0.06	-0.01	17	4
AISF	-0.02	0.17	18	1	-0.20	0.19	-0.18	-0.03	9	2
DIF	0.02	0.05	1	6	0.20	0.08	0.12	0.01	2	8
JSIF	0.01	0.06	5	5	0.02	0.00	0.48	0.00	5	13
MBF	0.01	0.03	4	12	0.10	0.01	0.31	0.00	3	11
MCF	0.00	0.01	13	16	-0.96	0.14	-0.09	-0.01	16	6
MIF	0.01	0.06	8	4	-0.06	-0.01	0.38	-0.01	8	15
MIIF	0.00	0.01	14	18	-1.26	0.23	-0.06	-0.01	18	1
NAFA_IGIF	0.01	0.08	7	3	-0.03	0.01	-0.19	0.00	7	10
NAFA_IAAF	0.01	0.04	6	9	-0.03	-0.01	0.22	0.00	6	14
PAK_IEIAF	0.00	0.04	12	8	-0.29	-0.13	0.10	-0.01	11	17
PAK_OAIIF	0.00	0.02	9	15	-0.43	0.12	-0.08	-0.01	12	7

PAK_OIIALF	0.02	0.03	2	11	0.26	0.02	0.32	0.00	1	9
AL_MF	0.01	0.05	3	7	0.09	0.01	0.55	0.00	4	12
Overall performance	**0.00**	**0.01**			**-0.30**	**0.05**	**0.10**	**-0.01**		

Interpretation

The above mention results states the Islamic mutual funds' performance for the year 2010-11. On the basis of standard deviation we can inferred that Meezan Islamic income fund and Atlas Islamic income fund are less risky. Dawood Islamic fund are having higher average returns and with positive higher alpha i.e. = 0.01 which shows that its fund manager has the ability to generate excess returns. Pak Oman Islamic asset allocation fund has highest Sharpe ratio .i.e. 0.26 and it's having positive alpha. The lowest Sharpe ratio is for Meezan Islamic income fund i.e. -1.2579 which reveals poor performer of the fund. However On the basis of Treynor ratio results Meezan Islamic income fund founded to be best performer among all funds. Most of funds represents negative alpha which shows poor ability of manager to generate excess returns.

On the above analysis it can be inferred that Dawood Islamic fund performed better as compared to its counterparts, as it's having average returns, positive alpha, Sharpe and Treynor. Al ameen Shariah stock fund were founded to be the poor performer as it is having the lowest Treynor ratio, average returns and high standard deviation.

Table 4 Islamic Mutual Funds for the year 2011-12

Islamic MF	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIGIF (G)	-0.01	0.06	14	11	-0.33	-0.05	0.34	-0.02	12	13
AIGIF (I)	-0.01	0.06	16	9	-0.36	-0.06	0.36	-0.02	13	14
ASSF	-0.01	0.07	12	5	-0.23	-0.03	0.62	-0.02	8	8
AGISF	0.01	0.03	1	14	-0.18	-0.02	0.34	-0.01	2	4
AIIF	0.00	0.01	7	17	-0.91	-3.01	0.00	-0.01	17	18
AISF	-0.01	0.11	15	2	-0.18	-0.02	0.98	-0.02	4	7
DIF	-0.02	0.06	17	6	-0.52	-0.34	0.10	-0.03	16	16
JSIF	-0.07	0.30	18	1	-0.26	-0.04	1.93	-0.08	9	11
MBF	0.00	0.04	5	13	-0.22	-0.12	0.08	-0.01	7	15
MCF	0.00	0.00	8	18	-2.77	-0.56	0.02	-0.01	18	17
MIF	-0.01	0.08	10	3	-0.18	-0.02	0.89	-0.01	3	6
MIIF	0.00	0.02	4	15	-0.52	0.09	-0.10	-0.01	15	2
NAFA_IGIF	0.00	0.05	3	12	-0.19	-0.04	0.20	-0.01	5	12
NAFA_IAAF	-0.01	0.06	11	10	-0.28	-0.04	0.45	-0.02	10	9
PAK_IEIAF	0.00	0.06	9	7	-0.21	-0.02	0.76	-0.01	6	5
PAK_OAIIF	0.00	0.01	2	16	-0.48	0.10	-0.06	-0.01	14	1

PAK_OIIALF	-0.01	0.06	13	8	-0.28	-0.04	0.44	-0.02	11	10
AL_MF	0.00	0.08	6	4	-0.12	-0.01	1.28	-0.01	1	3
Overall performance	**-0.01**	**0.02**			**-0.45**	**-0.23**	**0.48**	**-0.02**		

Interpretation

The above mention results show the Islamic mutual funds' performance for the year 2011-12. On the basis of standard deviation it is suggested that Meezan cash fund and Atlas Islamic income fund are less risky. Alfalah ghp Islamic stock fund and Pak Oman advantage Islamic income fund are having higher average returns and higher positive Treynor ratio which shows higher risk-reward ratio. However on average most of the funds are having negative Sharpe, Treynor and Jensen alpha which reflect poor managerial efficiency. It can be suggested that for the year 2011-12 most of the funds portray poor performance, however Alfalah ghp Islamic stock fund and Pak Oman advantage Islamic income fund performed relatively better which reveals better diversification ability of their managers.

Table 5 Islamic Mutual Funds for the year 2012-13

Islamic MF	**AV.Rt**	**SD**	**Rank on AV.Rt**	**Rank on SD**	**Sharpe Ratio**	**Treynor ratio**	**B**	**Jensen alpha**	**Sharp Ranking**	**Treynor Ranking**
AIGIF (G)	0.01	0.02	9	13	0.06	-0.01	-0.21	0.01	8	14
AIGIF (I)	0.01	0.02	10	15	0.04	0.00	-0.20	0.01	10	13
ASSF	0.02	0.04	3	8	0.37	0.02	0.67	0.00	3	6

AGISF	0.01	0.06	12	3	-0.04	0.00	1.34	-0.04	12	12
AIIF	0.00	0.01	17	16	-0.75	-0.06	0.14	-0.01	17	17
AISF	0.01	0.05	11	6	-0.01	-0.03	0.02	0.00	11	16
DIF	0.05	0.16	1	1	0.28	0.25	0.18	0.04	4	1
JSIF	0.03	0.03	2	10	0.71	0.03	0.72	0.00	1	4
MBF	0.01	0.05	8	5	0.05	0.00	0.72	-0.02	9	11
MCF	0.00	0.02	18	12	-0.42	-1.09	0.01	-0.01	16	18
MIF	0.02	0.06	6	2	0.16	0.01	0.71	-0.01	6	9
MIIF	0.00	0.02	15	14	-0.31	0.07	-0.08	0.00	14	3
NAFA_IGIF	0.01	0.01	14	18	-0.42	0.03	-0.11	0.00	15	5
NAFA_IAAF	0.02	0.03	4	11	0.45	0.02	0.63	0.00	2	7
PAK_IEIAF	0.01	0.05	7	7	0.12	0.01	0.98	-0.02	7	10
PAK_OAIIF	0.00	0.01	16	17	-0.91	0.13	-0.06	-0.01	18	2
PAK_OIIALF	0.01	0.03	13	9	-0.08	-0.01	0.39	-0.01	13	15
AL_MF	0.02	0.06	5	4	0.18	0.01	0.77	-0.01	5	8
Overall performance	**0.01**	**0.01**			**-0.03**	**0.03**	**0.37**	**0.00**		

Interpretation

The above mention results show the Islamic mutual funds' performance for the year 2012-2013. Dawood Islamic fund is generating highest average returns but the standard

deviation of the fund is also higher which shows total risk associated with the fund are higher. as it has the highest Treynor ratio i.e. = 0.25, positive Sharpe ratio i.e. = 0.28 and positive alpha which shows superior managerial performance and diversification ability of fund's manager. JS Islamic fund has also remarked with superior performance as it is having higher positive average returns as compared to other funds, low standard deviation, highest Sharpe ratio which reflect manager diversification ability, positive Treynor and alpha. However Meezan cash fund was founded to be poor performer of the year.

Table 6 Islamic Mutual Funds for the year 2013-14

Islamic MF	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIGIF (G)	0.00	0.03	11	11	-0.29	0.11	-0.08	-0.01	8	4
AIGIF (I)	0.00	0.03	12	12	-0.32	0.08	-0.12	-0.01	9	5
ASSF	-0.01	0.07	15	3	-0.25	-0.05	0.34	-0.02	7	14
AGISF	0.00	0.05	6	7	-0.12	-0.01	0.69	-0.02	4	10
AIIF	0.00	0.01	9	17	-0.77	0.42	-0.02	-0.01	17	1
AISF	0.00	0.07	8	4	-0.10	0.03	-0.25	0.00	2	7
DIF	0.00	0.01	3	16	-0.41	-0.04	0.11	-0.01	15	12
JSIF	0.01	0.06	1	5	0.02	0.00	0.53	-0.01	1	9
MBF	-0.01	0.06	16	6	-0.34	-0.22	0.09	-0.02	12	16
MCF	0.00	0.02	10	14	-0.34	-1.63	0.00	-0.01	13	18

MIF	-0.02	0.10	18	1	-0.33	0.15	-0.22	-0.03	10	3
MIIF	-0.01	0.02	14	13	-0.58	0.05	-0.27	-0.01	16	6
NAFA_IGIF	0.01	0.02	2	15	-0.12	0.01	-0.13	0.00	3	8
NAFA_IAAF	0.00	0.03	7	9	-0.22	-0.05	0.15	-0.01	6	13
PAK_IEIAF	0.00	0.03	5	10	-0.19	-0.02	0.36	-0.01	5	11
PAK_OAIIF	0.00	0.00	4	18	-1.49	-1.40	0.00	-0.01	18	17
PAK_OIIALF	0.00	0.04	13	8	-0.35	0.19	-0.06	-0.01	14	2
AL_MF	-0.02	0.07	17	2	-0.34	-0.20	0.12	-0.03	11	15
Overall performance	**0.00**	**0.01**			**-0.36**	**-0.14**	**0.04**	**-0.01**		

Interpretation

The above mention results show the Islamic mutual funds' performance for the year 2013-2014. JS Islamic fund are showing remarkable Average returns as well as it is having highest positive Sharpe ratio which shows better diversification ability of fund manager, Treynor ratio is also positive for it. Atlas Islamic income fund is associated with higher total risk and lower Sharpe ratio. However it has the highest risk-reward ratio. Pak Oman advantage Islamic income fund was founded to be the poor performer. Most of the funds having negative alpha depicts poor ability of manager to earn abnormal returns.

Table 7 Islamic Mutual Funds for the year 2014-15

Islamic MF	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIGIF (G)	0.00	0.01	13	15	-0.45	-0.16	0.02	0.00	14	13
AIGIF (I)	0.00	0.01	12	14	-0.41	-0.18	0.02	0.00	13	14
ASSF	0.01	0.07	7	3	0.01	0.00	1.23	0.00	7	7
AGISF	-0.01	0.09	18	2	-0.17	-0.02	0.90	-0.02	10	10
AIIF	0.00	0.01	11	16	-0.54	-0.33	0.01	0.00	15	16
AISF	0.00	0.07	14	4	-0.07	0.00	1.04	-0.01	9	9
DIF	0.01	0.02	5	11	0.15	0.08	0.03	0.00	3	1
JSIF	0.01	0.10	10	1	-0.02	0.00	1.44	0.00	8	8
MBF	0.01	0.03	6	10	0.06	0.00	0.59	0.00	6	6
MCF	0.01	0.00	9	17	-1.03	-0.39	0.01	0.00	18	17
MIF	0.02	0.06	3	6	0.14	0.01	0.97	0.01	4	4
MIIF	0.01	0.00	8	18	-0.65	-0.11	0.01	0.00	17	12
NAFA_IGIF	0.00	0.01	15	12	-0.32	-0.27	0.02	0.00	12	15
NAFA_IAAF	0.02	0.05	1	8	0.32	0.03	0.66	0.02	1	3
PAK_IEIAF	0.02	0.05	2	7	0.30	0.03	0.54	0.02	2	2
PAK_OAIIF	0.00	0.01	16	13	-0.56	-0.55	0.01	-0.01	16	18

PAK_OIIALF	0.00	0.04	17	9	-0.21	-0.02	0.43	-0.01	11	11
AL_MF	0.01	0.06	4	5	0.07	0.00	1.02	0.00	5	5
Overall performance	**0.01**	**0.01**			**-0.14**	**-0.08**	**0.50**	**0.00**		

Interpretation

The above mention results show the Islamic mutual funds' performance for the year 2014-2015. NAFA Islamic asset allocation fund generated highest average returns as well highest Sharpe ratio and higher positive Treynor ratio. In the same way Pak Int'l element Islamic asset allocation fund is having remarkable returns, Sharpe ratio, and Treynor ratio. Dawood Islamic fund also performed better. Pak Oman advantage Islamic income fund performed worst. On overall basis NAFA Islamic asset allocation fund and Pak Int'l element Islamic asset allocation fund were founded to be the best performer as it also having positive alphas which reflect superior manager's diversification ability as well ability to generate premium returns.

Table 8 Islamic Mutual Funds for the year 2015-16

Islamic MF	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIGIF (G)	0.00	0.01	7	17	-0.28	0.03	-0.11	0.00	13	4
AIGIF (I)	0.00	0.02	9	16	-0.28	0.03	-0.13	0.00	14	5
ASSF	0.01	0.05	3	6	0.04	0.01	0.32	0.00	3	10
AGISF	0.01	0.05	4	3	0.01	0.01	0.06	0.00	4	8

AIIF	0.00	0.02	15	12	-0.34	0.04	-0.20	-0.01	16	3
AISF	0.00	0.05	16	2	-0.15	-0.01	0.69	-0.01	8	14
DIF	-0.06	0.26	18	1	-0.24	0.07	-0.92	-0.06	10	1
JSIF	0.01	0.05	5	4	0.00	0.00	0.47	0.00	5	11
MBF	0.01	0.03	6	11	-0.01	0.00	0.15	0.00	6	12
MCF	0.00	0.02	14	13	-0.37	0.04	-0.19	-0.01	17	2
MIF	0.01	0.05	1	5	0.10	0.01	0.55	0.00	1	7
MIIF	0.00	0.02	13	15	-0.32	-0.06	0.10	-0.01	15	16
NAFA_IGIF	0.00	0.02	10	14	-0.26	0.03	-0.19	0.00	12	6
NAFA_IAAF	0.00	0.03	11	10	-0.19	-0.04	0.15	-0.01	9	15
PAK_IEIAF	0.00	0.04	17	9	-0.26	-0.09	0.11	-0.01	11	17
PAK_OAIIF	0.00	0.01	12	18	-0.44	-0.09	0.06	-0.01	18	18
PAK_OIIALF	0.00	0.04	8	8	-0.10	-0.01	0.50	0.00	7	13
AL_MF	0.01	0.04	2	7	0.06	0.01	0.37	0.00	2	9
Overall performance	**0.00**	**0.01**			**-0.15**	**0.00**	**0.09**	**-0.01**		

Interpretation

The above mention results show the Islamic mutual funds' performance for the year 2015-2016. Meezan Islamic fund earned highest average returns as well highest Sharpe ratio and higher positive Treynor ratio. Dawood Islamic fund generated lowest average

returns and associated with highest total risk, however it has positive Treynor value. Al-Meezan mutual fund performance is remarkable as the manager of the fund is able to generated maximum average returns, higher Sharpe which shows diversification ability, Treynor and positive Jensen alpha. Pak Oman advantage Islamic income fund performed worst.

4.2. Over view on Islamic Mutual Funds Analysis

The year 2009-10, it is states on the basis of statically techniques Meezan Islamic fund, Atlas Islamic stock fund and Al-Meezan mutual fund having higher average returns as compare to other Islamic funds. Al ameen Islamic aggressive income fund (Growth) recorded lowest standard deviation it means these both funds are relatively less riskier as compare to other funds but Al ameen Islamic aggressive income fund (Income) reveals poor performer of the fund. 2010-11. Meezan Islamic income fund and Atlas Islamic income fund are less risky. It is found that the manager Dawood Islamic fund has the ability to generate excess returns. However On the basis of Treynor ratio results Meezan Islamic income fund founded to be best performer among all funds. 2011-12. On the basis of standard deviation it is suggested that Meezan cash fund and Atlas Islamic income fund are less risky. Alfalah ghp Islamic stock fund and Pak Oman advantage Islamic income fund founded higher risk-reward ratio. However on average most of the funds are having negative Sharpe, Treynor and Jensen alpha which reflect poor managerial efficiency. Alfalah ghp Islamic stock fund and Pak Oman advantage Islamic income fund performed relatively better which reveals better diversification ability of their managers. 2012-2013. It is founded that Dawood Islamic fund total is risk associated with the fund are higher and it is show superior managerial performance and diversification ability of fund's manager. JS Islamic fund has also remarked with superior performance reflect manager diversification ability, positive Treynor and alpha. However Meezan cash fund was founded to be poor performer of the year. 2013-2014. It is found that JS Islamic fund are showing remarkable and better diversification ability of fund manager, Treynor ratio is also positive for it. Atlas Islamic income fund has the highest risk-reward ratio. Pak Oman advantage Islamic income fund was founded to be the poor performer. 2014-2015. NAFA Islamic asset allocation fund generated highest average

returns as well highest Sharpe ratio and higher positive Treynor ratio. In the same way Pak Int'l element Islamic asset allocation fund is having remarkable returns. Dawood Islamic fund also performed better. Pak Oman advantage Islamic income fund performed worst. 2015-2016. Meezan Islamic fund is performing well according to the above calculated results. Al-Meezan mutual fund performance is remarkable as the manager of the fund is able to generated maximum average returns, higher Sharpe which shows diversification ability, Pak Oman advantage Islamic income fund performed worst.

However, we conclude that performance of Islamic Mutual Fund as compare all eighteen funds the JS Islamic Fund relatively perform well and also the Meezan Islamic Fund perform well the worst performer in these seven year analysis period founded Pak Oman.

4.3) Conventional funds

Table 9 conventional Mutual Funds for the year 2009-10

Conventional funds	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	β	Jensen alpha	Sharp Ranking	Treynor Ranking
AIF	0.00	0.01	18	24	-0.70	0.13	-0.07	-0.01	21	7
ASF	0.02	0.06	1	7	0.21	0.01	0.89	0.00	2	9
AKD_OF	0.01	0.07	11	3	0.00	0.00	1.01	0.06	11	18
ALF_GAF	-0.01	0.09	28	1	-0.23	-0.03	0.76	-0.03	16	23
ALGIMF	0.00	0.02	26	21	-0.82	0.20	-0.07	-0.01	26	6
ALGSF	0.00	0.08	24	2	-0.15	-0.02	0.69	-0.02	14	22
AAAF	0.01	0.04	12	15	-0.02	0.00	0.57	-0.01	12	19
AHYS	0.00	0.01	17	28	-0.98	-0.57	0.02	-0.01	28	27
ATIF	0.00	0.01	23	27	-1.18	0.72	-0.02	-0.01	29	3
DIF	-0.01	0.04	27	16	-0.54	0.27	-0.07	-0.02	18	4
FAAF	0.02	0.05	2	10	0.24	0.02	0.57	0.00	1	8
FBGF	0.02	0.04	5	13	0.15	0.01	0.60	0.00	3	10
FSGF	0.00	0.01	22	22	-0.82	-4.71	0.00	-0.01	24	30
FDMF	-0.01	0.04	29	14	-0.54	-0.06	0.33	-0.03	19	24
FHIF	0.00	0.01	21	23	-0.82	-1.40	0.01	-0.01	25	28

HBL_IF	0.00	0.01	15	29	-0.98	3.26	0.00	-0.01	27	1
HBL_MAF	0.01	0.03	8	18	0.09	0.01	0.50	0.00	7	14
HBL_SF	0.01	0.05	7	11	0.07	0.00	0.76	-0.01	8	15
JS_FOF	0.01	0.06	13	5	-0.04	0.00	0.88	-0.02	13	20
MCB_DIF	0.00	0.01	14	25	-0.60	-0.15	0.05	-0.01	20	25
MCB_PAAF	0.01	0.04	9	17	0.06	0.00	0.52	-0.01	9	16
NAFA_SF	0.01	0.05	10	8	0.01	0.00	0.79	-0.01	10	17
NIUT	0.00	0.06	20	4	-0.17	-0.01	0.81	-0.02	15	21
PAK_CMF	0.01	0.03	6	19	0.12	0.01	0.47	0.00	6	13
PAK_IEF	0.00	0.01	19	30	-1.48	0.24	-0.04	-0.01	30	5
PAK_IF	0.00	0.02	25	20	-0.70	0.95	-0.01	-0.01	22	2
PAK_OAAAF	-0.01	0.05	30	12	-0.48	-0.22	0.11	-0.03	17	26
UNI_SAF	0.02	0.06	3	6	0.14	0.01	0.90	-0.01	5	12
UBL_LPF	0.00	0.01	16	26	-0.79	-1.65	0.01	-0.01	23	29
MCB_PSMF	0.02	0.05	4	9	0.15	0.01	0.79	0.00	4	11
Overall performance	**0.00**	**0.01**			**-0.36**	**-0.10**	**0.39**	**-0.01**		

Interpretation

The above mention results show the conventional mutual funds' performance for the year 2009-2010. ABL stock fund reflects highest average returns as well highest Sharpe ratio

and positive Treynor ratio. However it could not generate abnormal returns at the given level of risk as it is having negative alpha. Faysal asset allocation fund showed superior performance on all of the performance measures which reveals superior managerial skill of diversification and risk-reward ratio. Pakistan income enhancement fund performed worst on all of the performance measures.

Table 10 conventional Mutual Funds for the year 2010-11

Conventional funds	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIF	0.00	0.01	16	26	-0.80	0.15	-0.07	-0.01	26	9
ASF	-0.01	0.11	24	5	-0.15	-0.03	0.57	-0.02	9	22
AKD_OF	-0.03	0.16	28	2	-0.27	1.76	-0.02	-0.04	16	1
ALF_GAF	0.01	0.04	3	17	0.09	0.01	0.57	0.00	3	16
ALGIMF	-0.01	0.02	25	21	-0.79	0.20	-0.09	-0.02	25	6
ALGSF	0.00	0.08	23	7	-0.19	-0.05	0.32	-0.02	12	25
AAAF	-0.04	0.16	29	3	-0.35	0.30	-0.18	-0.05	19	4
AHYS	0.00	0.04	22	19	-0.43	0.86	-0.02	-0.02	20	3
ATIF	0.00	0.02	14	24	-0.61	0.21	-0.05	-0.01	23	5
DIF	0.01	0.06	6	9	-0.06	0.01	-0.34	0.00	6	14
FAAF	0.00	0.07	21	8	-0.21	-0.06	0.24	-0.02	14	26
FBGF	-0.02	0.11	27	4	-0.30	-0.23	0.14	-0.03	18	28
FSGF	0.00	0.02	20	25	-0.69	-0.15	0.08	-0.01	24	27

FDMF	0.02	0.04	1	16	0.12	0.01	0.45	0.00	1	15
FHIF	0.00	0.01	17	28	-0.88	0.15	-0.07	-0.01	29	8
HBL_IF	0.00	0.02	19	22	-0.56	-0.84	0.01	-0.01	21	30
HBL_MAF	0.00	0.05	11	13	-0.15	-0.05	0.18	-0.01	10	24
HBL_SF	0.01	0.04	4	15	0.04	0.00	0.47	0.00	4	17
JS_FOF	0.02	0.05	2	14	0.11	0.02	0.32	0.00	2	13
MCB_DIF	0.00	0.02	15	23	-0.59	0.14	-0.08	-0.01	22	11
MCB_PAAF	0.00	0.03	9	20	-0.20	-0.04	0.15	-0.01	13	23
NAFA_SF	0.01	0.05	8	11	-0.07	-0.01	0.58	-0.01	7	19
NIUT	0.01	0.05	5	12	-0.01	0.00	0.71	-0.01	5	18
PAK_CMF	-0.02	0.11	26	6	-0.29	0.86	-0.04	-0.03	17	2
PAK_IEF	0.00	0.01	10	30	-1.13	-0.53	0.01	-0.01	30	29
PAK_IF	0.00	0.01	13	29	-0.81	0.13	-0.07	-0.01	27	12
PAK_OAAAF	0.01	0.04	7	18	-0.10	-0.01	0.46	-0.01	8	20
UNI_SAF	-0.09	0.38	30	1	-0.27	0.15	-0.68	-0.10	15	10
UBL_LPF	0.00	0.01	18	27	-0.82	0.15	-0.07	-0.01	28	7
MCB_PSMF	0.00	0.06	12	10	-0.16	-0.02	0.41	-0.01	11	21
Overall performance		**0.02**			**-0.35**	**0.10**	**0.13**	**-0.02**		

Interpretation

The above results indicates the most on average most of funds underperform on the basis of Sharpe ratio, however Treynor shows relatively better performance of funds. JS fund of funds performed superiorly on the basis of all performance measures which imply that it has diversified its portfolio very well. On overall basis the performance of funds is not significantly satisfactory.

Table 11 conventional Mutual Funds for the year 2011-12

Conventional funds	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	β	Jensen alpha	Sharp Ranking	Treynor Ranking
AIF	0.00	0.02	11	22	-0.67	0.11	-0.09	-0.01	22	8
ASF	-0.01	0.10	22	1	-0.16	-0.02	0.65	-0.02	4	20
AKD_OF	0.02	0.06	1	6	0.21	0.01	1.06	0.01	1	10
ALF_GAF	-0.01	0.06	26	10	-0.32	-0.03	0.78	-0.02	15	21
ALGIMF	0.00	0.04	14	17	-0.26	-0.04	0.25	-0.01	12	26
ALGSF	-0.01	0.08	25	3	-0.24	-0.02	1.09	-0.02	9	14
AAAF	0.01	0.04	2	16	0.00	0.00	0.69	0.00	2	11
AHYS	0.00	0.01	9	28	-0.83	0.24	-0.04	-0.01	27	5
ATIF	0.00	0.02	5	21	-0.50	-0.04	0.22	-0.01	21	25
DIF	-0.01	0.05	24	15	-0.40	-0.13	0.14	-0.02	16	30
FAAF	0.00	0.03	17	19	-0.41	-0.03	0.38	-0.01	18	23
FBGF	-0.02	0.06	30	11	-0.44	-0.06	0.47	-0.03	20	27

FSGF	0.00	0.01	8	27	-0.78	0.89	-0.01	-0.01	25	2
FDMF	-0.01	0.03	29	20	-0.75	-0.11	0.21	-0.02	24	29
FHIF	0.00	0.01	6	26	-0.69	0.35	-0.03	-0.01	23	3
HBL_IF	0.00	0.02	3	23	-0.40	0.29	-0.02	-0.01	17	4
HBL_MAF	-0.01	0.06	21	8	-0.25	-0.03	0.62	-0.02	11	22
HBL_SF	0.00	0.06	16	13	-0.23	-0.02	0.75	-0.01	7	13
JS_FOF	0.00	0.07	18	5	-0.21	-0.02	0.67	-0.01	5	17
MCB_DIF	0.00	0.01	12	25	-0.80	0.07	-0.15	-0.01	26	9
MCB_PAAF	-0.01	0.06	23	12	-0.32	-0.06	0.30	-0.02	14	28
NAFA_SF	0.00	0.07	4	4	-0.11	-0.01	0.95	-0.01	3	12
NIUT	0.00	0.06	20	7	-0.24	-0.02	0.83	-0.01	8	16
PAK_CMF	0.00	0.04	13	18	-0.27	-0.02	0.50	-0.01	13	18
PAK_IEF	0.00	0.00	7	30	-2.50	1.46	-0.01	-0.01	30	1
PAK_IF	0.00	0.01	10	29	-0.97	0.12	-0.09	-0.01	29	7
PAK_OAAAF	-0.01	0.05	28	14	-0.44	-0.04	0.65	-0.02	19	24
UNI_SAF	-0.01	0.09	27	2	-0.24	-0.02	0.98	-0.02	10	19
UBL_LPF	0.00	0.01	15	24	-0.86	0.15	-0.08	-0.01	28	6
MCB_PSMF	0.00	0.06	19	9	-0.23	-0.02	0.77	-0.01	6	15
Overall performance	**0.00**	**0.01**			**-0.48**	**0.10**	**0.42**	**-0.01**		

Interpretation

The above results revealed that performance of conventional funds on average is not satisfactory as most of funds are having negative returns. only few funds performed better the rest of funds performed poor. AKD opportunity fund performed better on all measures of performance evaluation. Positive alpha of this funds implied superior ability of manager to produce abnormal returns as well superior diversification ability as Sharpe and Treynor both are positive. First Dawood mutual fund performed worst among all.

Table 12 conventional Mutual Funds for the year 2012-13

Conventional funds	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIF	0.00	0.01	24	22	-0.65	-0.04	0.23	-0.01	23	24
ASF	0.02	0.09	11	1	0.09	0.00	1.78	-0.04	12	17
AKD_OF	0.19	-0.31	1	30	-0.58	0.21	0.84	0.16	21	2
ALF_GAF	0.01	0.06	14	3	0.08	0.00	1.33	-0.03	13	18
ALGIMF	0.01	0.02	16	20	0.02	0.00	0.15	0.00	15	20
ALGSF	0.03	0.06	4	5	0.30	0.03	0.66	0.00	7	7
AAAF	0.01	0.05	13	7	0.12	0.01	0.42	-0.01	11	14
AHYS	0.00	0.01	28	21	-0.71	-0.15	0.07	-0.01	24	29
ATIF	0.00	0.02	30	19	-0.62	-0.05	0.23	-0.02	22	27
DIF	0.00	0.04	29	13	-0.29	0.06	-0.20	-0.01	19	5
FAAF	0.01	0.04	17	11	0.00	0.00	0.89	-0.02	16	21
FBGF	0.01	0.03	18	16	-0.03	0.00	0.65	-0.02	17	22

FSGF	0.00	0.01	20	25	-0.57	-0.11	0.05	-0.01	20	28
FDMF	0.03	0.04	2	10	0.47	0.05	0.38	0.01	1	6
FHIF	0.00	0.01	21	28	-1.44	0.17	-0.05	-0.01	29	3
HBL_IF	0.00	0.01	26	26	-0.91	0.13	-0.07	-0.01	27	4
HBL_MAF	0.02	0.04	10	12	0.22	0.02	0.51	0.00	9	12
HBL_SF	0.02	0.04	7	9	0.33	0.02	0.77	0.00	6	10
JS_FOF	0.01	0.08	19	2	-0.04	-0.01	0.27	-0.01	18	23
MCB_DIF	0.00	0.01	22	24	-0.72	-0.04	0.21	-0.01	25	25
MCB_PAAF	0.01	0.03	15	18	0.03	0.00	0.38	-0.01	14	19
NAFA_SF	0.02	0.04	5	14	0.42	0.02	0.82	0.00	3	9
NIUT	0.03	0.05	3	6	0.36	0.02	0.84	0.00	4	8
PAK_CMF	0.02	0.03	12	15	0.22	0.01	0.74	-0.01	10	16
PAK_IEF	0.00	0.01	27	29	-1.81	-0.45	0.02	-0.01	30	30
PAK_IF	0.00	0.01	23	27	-0.97	-0.04	0.19	-0.01	28	26
PAK_OAAAF	0.02	0.03	9	17	0.44	0.02	0.74	-0.01	2	11
UNI_SAF	0.02	0.05	6	8	0.34	0.02	0.99	-0.01	5	13
UBL_LPF	0.00	0.01	25	23	-0.74	0.73	-0.01	-0.01	26	1
MCB_PSMF	0.02	0.06	8	4	0.22	0.01	1.37	-0.02	8	15
Overall performance	**0.02**	**0.03**			**-0.21**	**0.02**	**0.51**	**0.00**		

Interpretation

The above results implied that most of funds performed relatively better but on average Sharpe ratio is in negative, however on average funds alphas are in negative, only few funds are positive alpha. First Dawood mutual fund performed remarkable on all performance measures, it has positive alpha as well which reflects superior managerial ability to generate irregular returns. the performance of Pakistan income enhancement fund remained worst in this period.

Table 13 conventional Mutual Funds for the year 2013-14

Conventional funds	Av.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIF	0.00	0.01	21	22	-0.77	-0.17	0.05	-0.01	24	27
ASF	-0.02	0.17	28	2	-0.15	-0.01	1.78	-0.06	11	20
AKD_OF	0.01	0.07	3	6	0.01	0.00	0.23	0.00	4	16
ALF_GAF	0.00	0.09	13	4	-0.08	-0.01	1.03	-0.03	6	18
ALGIMF	0.00	0.02	14	19	-0.35	0.49	-0.02	-0.01	20	1
ALGSF	-0.02	0.10	27	3	-0.25	0.19	-0.13	-0.02	16	4
AAAF	0.00	0.05	12	15	-0.16	-0.08	0.09	-0.01	12	26
AHYS	0.01	0.01	4	27	0.05	0.03	0.01	0.00	3	13
ATIF	0.00	0.01	15	25	-0.87	0.39	-0.02	-0.01	25	2
DIF	0.01	0.00	6	30	-1.10	-0.57	0.00	0.00	27	29
FAAF	0.00	0.06	23	9	-0.17	0.17	-0.06	-0.01	13	5
FBGF	0.00	0.06	24	12	-0.21	0.11	-0.11	-0.01	14	10

FSGF	0.00	0.00	16	29	-1.61	-0.36	0.02	-0.01	30	28
FDMF	0.02	0.04	2	16	0.38	0.04	0.37	0.01	1	11
FHIF	0.00	0.01	17	28	-1.58	-1.22	0.01	-0.01	29	30
HBL_IF	0.00	0.01	11	24	-0.72	0.26	-0.03	-0.01	23	3
HBL_MAF	0.01	0.04	5	17	-0.04	-0.01	0.26	-0.01	5	17
HBL_SF	0.00	0.06	9	10	-0.09	-0.01	0.43	-0.01	8	19
JS_FOF	-0.10	0.39	30	1	-0.28	0.03	-3.44	-0.05	17	14
MCB_DIF	0.00	0.01	18	21	-0.70	0.13	-0.06	-0.01	22	9
MCB_PAAF	-0.01	0.05	25	14	-0.30	0.04	-0.36	-0.01	18	12
NAFA_SF	0.00	0.05	10	13	-0.11	-0.02	0.24	-0.01	9	22
NIUT	0.03	0.06	1	8	0.36	0.02	0.97	0.00	2	15
PAK_CMF	0.00	0.04	7	18	-0.09	-0.01	0.22	-0.01	7	21
PAK_IEF	0.00	0.01	20	26	-1.46	0.16	-0.05	-0.01	28	7
PAK_IF	0.00	0.01	19	23	-0.89	0.17	-0.05	-0.01	26	6
PAK_OAAAF	-0.02	0.06	29	11	-0.46	0.15	-0.18	-0.02	21	8
UNI_SAF	-0.01	0.07	26	7	-0.22	-0.03	0.45	-0.02	15	23
UBL_LPF	0.00	0.01	8	20	-0.30	-0.07	0.05	0.00	19	24
MCB_PSMF	0.00	0.07	22	5	-0.14	-0.08	0.12	-0.01	10	25
Overall performance	**0.00**	**0.02**			**-0.41**	**-0.01**	**0.06**	**-0.01**		

Interpretation

The results above indicate that only few funds performed well in this period otherwise on average most of funds performed poor. First Dawood mutual fund performed superiorly on all performance measures which show that its manager is having superior diversification ability and ability to generate abnormal returns by assuming given level of risk. Similarly National investment unit trust also remarked with better performance on overall basis. AKD opportunity fund also performed better except to alpha which was negative. However Dawood income fund, Faysal saving growth fund and First habib income fund remained poor performers of the period.

Table 14 conventional Mutual Funds for the year 2014-15

Conventional funds	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIF	0.01	0.01	1	28	0.71	0.13	0.03	0.00	1	1
ASF	-0.01	0.11	26	4	-0.16	-0.02	1.16	-0.02	23	23
AKD_OF	-0.02	0.12	27	3	-0.22	-0.02	1.25	-0.03	26	24
ALF_GAF	-0.01	0.11	25	6	-0.15	-0.01	1.24	-0.02	21	20
ALGIMF	0.01	0.02	11	20	-0.03	-0.01	0.07	0.00	12	19
ALGSF	-0.02	0.15	28	1	-0.20	-0.02	1.27	-0.03	25	25
AAAF	0.00	0.07	22	15	-0.14	-0.01	1.05	-0.01	19	17
AHYS	0.00	0.03	17	19	-0.16	-0.07	0.07	0.00	22	28
ATIF	0.01	0.01	8	22	0.04	0.01	0.04	0.00	8	6
DIF	0.00	0.00	15	29	-0.83	-1.02	0.00	0.00	30	30

FAAF	0.00	0.07	23	12	-0.14	-0.01	1.04	-0.01	18	18
FBGF	0.00	0.05	18	16	-0.11	-0.01	0.72	-0.01	16	16
FSGF	0.01	0.01	5	23	0.19	0.03	0.05	0.00	3	4
FDMF	0.01	0.08	2	10	0.05	0.01	0.73	0.00	7	8
FHIF	0.01	0.01	9	27	0.06	0.01	0.05	0.00	6	7
HBL_IF	0.01	0.01	10	21	0.01	0.00	0.03	0.00	10	9
HBL_MAF	-0.03	0.11	29	7	-0.33	-0.05	0.74	-0.04	28	27
HBL_SF	-0.03	0.13	30	2	-0.30	-0.03	1.08	-0.04	27	26
JS_FOF	-0.01	0.09	24	8	-0.15	-0.01	0.97	-0.01	20	21
MCB_DIF	0.01	0.01	6	24	0.16	0.03	0.04	0.00	4	5
MCB_PAAF	0.01	0.04	14	17	-0.05	-0.01	0.33	0.00	14	13
NAFA_SF	0.01	0.08	4	9	0.02	0.00	1.26	0.00	9	10
NIUT	0.00	0.07	20	14	-0.11	-0.01	1.11	-0.01	17	14
PAK_CMF	0.01	0.07	13	13	-0.03	0.00	0.90	0.00	11	11
PAK_IEF	0.01	0.01	3	26	0.61	0.08	0.05	0.00	2	2
PAK_IF	0.01	0.01	7	25	0.12	0.05	0.02	0.00	5	3
PAK_OAAAF	0.00	0.03	19	18	-0.18	-0.01	0.42	-0.01	24	22
UNI_SAF	0.00	0.08	16	11	-0.05	0.00	1.26	-0.01	13	12
UBL_LPF	0.01	0.00	12	30	-0.55	-0.28	0.01	0.00	29	29

MCB_PSMF	0.00	0.11	21	5	-0.08	-0.01	1.21	-0.01	15	15
Overall performance	**0.00**	**0.01**			**-0.07**	**-0.04**	**0.61**	**-0.01**		

Interpretation

The results above suggest that on average performance for all funds are relatively satisfactory. ABL Income fund, First Dawood mutual fund, Atlas income fund and Pakistan income enhancement fund performed superiorly in this period. On the other hand Dawood income fund, HBL Multi asset fund and HBL stock fund remained poor performers of this period.

Table 15 conventional Mutual Funds for the year 2015-16

Conventional funds	AV.Rt	SD	Rank on AV.Rt	Rank on SD	Sharpe Ratio	Treynor ratio	B	Jensen alpha	Sharp Ranking	Treynor Ranking
AIF	-0.01	0.04	24	19	-0.28	0.03	-0.35	-0.01	23	7
ASF	0.00	0.04	9	14	-0.11	-0.02	0.28	0.00	10	22
AKD_OF	0.02	0.08	1	1	0.20	0.02	0.72	0.02	1	13
ALF_GAF	0.00	0.05	4	10	-0.03	-0.01	0.15	0.00	4	18
ALGIMF	0.00	0.03	12	26	-0.25	0.03	-0.26	-0.01	17	10
ALGSF	0.00	0.05	5	8	-0.03	-0.01	0.11	0.00	5	21
AAAF	-0.02	0.05	30	9	-0.46	-0.27	0.08	-0.01	30	29

AHYS	0.00	0.03	16	21	-0.24	0.03	-0.30	-0.01	15	12
ATIF	0.00	0.03	20	22	-0.26	0.03	-0.29	-0.01	19	8
DIF	0.01	0.06	3	5	0.04	0.02	0.14	0.00	3	15
FAAF	-0.01	0.06	28	4	-0.23	-0.10	0.15	-0.01	14	27
FBGF	0.00	0.07	22	3	-0.13	-0.09	0.10	-0.01	11	26
FSGF	-0.01	0.04	23	16	-0.27	0.03	-0.37	-0.01	20	9
FDMF	-0.01	0.04	29	15	-0.41	-0.23	0.07	-0.02	29	28
FHIF	0.00	0.03	21	25	-0.28	0.04	-0.23	-0.01	22	2
HBL_IF	0.00	0.02	14	28	-0.30	0.03	-0.23	-0.01	24	6
HBL_MAF	0.00	0.03	11	23	-0.18	-0.03	0.21	-0.01	12	24
HBL_SF	-0.01	0.05	26	7	-0.25	-0.07	0.19	-0.01	18	25
JS_FOF	0.00	0.04	6	13	-0.04	-0.01	0.23	0.00	6	17
MCB_DIF	0.00	0.02	13	29	-0.30	0.03	-0.22	-0.01	26	4
MCB_PAAF	-0.01	0.03	27	20	-0.37	0.07	-0.19	-0.01	28	1
NAFA_SF	0.00	0.04	7	11	-0.06	-0.01	0.47	0.00	7	16
NIUT	0.00	0.04	8	18	-0.08	-0.01	0.30	0.00	8	19
PAK_CMF	-0.01	0.04	25	12	-0.27	-1.11	0.01	-0.01	21	30
PAK_IEF	0.00	0.03	19	24	-0.25	0.03	-0.30	-0.01	16	11
PAK_IF	0.00	0.03	18	27	-0.30	0.03	-0.25	-0.01	25	5

PAK_OAAAF	0.00	0.04	17	17	-0.20	-0.02	0.47	-0.01	13	23
UNI_SAF	0.01	0.07	2	2	0.05	0.02	0.20	0.00	2	14
UBL_LPF	0.00	0.02	15	30	-0.33	0.04	-0.21	-0.01	27	3
MCB_PSMF	0.00	0.05	10	6	-0.09	-0.01	0.42	-0.01	9	20
Overall performance	**0.00**	**0.01**			**-0.19**	**-0.05**	**0.04**	**-0.01**		

Interpretation

The results implied that on average performance for all the funds remained poor, however few funds performed relatively better. AKD opportunity fund remarked with superior performance on overall basis, it has the highest alpha = 0.02. The performance of united stock advantage fund and Dawood income funds also performed better. However First Dawood mutual fund and Pakistan capital market fund remained poor performers of the period.

4.4. Overview of Conventional funds Analysis

Faysal asset allocation fund showed superior performance on all of the performance measures which reveals superior managerial skill of diversification and risk-reward ratio. Pakistan income enhancement fund performed worst on all of the performance measures. JS fund of funds performed superiorly on the basis of all performance measures which imply that it has diversified its portfolio very well. On overall basis the performance of funds is not significantly satisfactory. AKD opportunity fund performed better on all measures of performance evaluation and First Dawood mutual fund performed worst among all. The above results implied that most of funds performed relatively better but First Dawood mutual fund performed remarkable on all performance measures, the performance of Pakistan income enhancement fund remained worst in this period. First Dawood mutual fund performed superiorly on all performance measures which show that

its manager is having superior diversification ability and ability to generate abnormal returns by assuming given level of risk. Similarly National investment unit trust also remarked with better performance on overall basis. AKD opportunity fund also performed better except to alpha which was negative. Dawood income fund, HBL Multi asset fund and HBL stock fund remained poor performers of this period. The results implied that on average performance for all the funds remained poor, however few funds performed relatively better. AKD opportunity fund remarked with superior performance on overall basis. However First Dawood mutual fund and Pakistan capital market fund remained poor performers of the period. However it is confirm from the above discussion that AKD opportunity fund has remarkable performance as compare to the other thirty conventional funds and also it is found the relatively poor performer is Pak Income enhancement fund and First Dawood Mutual Fund.

Table 16 Islamic funds overall performance:

YEARS	Sharpe-ratio	Treynor-ratio	Jensen	S.D	ARMF	β
2009-10	-0.37	0.28	-0.01	0.01	0.00	0.35
2010-11	-0.30	0.05	-0.01	0.01	0.00	0.10
2011-12	-0.45	-0.23	-0.02	0.02	-0.01	0.48
2012-13	-0.03	0.03	0.00	0.01	0.01	0.37
2013-14	-0.36	-0.14	-0.01	0.01	0.00	0.04

2014-15	-0.14	-0.08	0.00	0.01	0.01	0.50
2015-16	-0.15	0.00	-0.01	0.01	0.00	0.09
Overall Performance	**-0.26**	**-0.01**	**-0.01**	**0.01**	**0.00**	**0.28**

Interpretation

The above mention results show the Islamic mutual funds' performance from the year 2009 to 2016. In the period 2014-15 Islamic mutual funds had the lowest standard deviation it means in this period Islamic mutual funds founded to be less risky as compared to the rest of the period. In the year of 2012-13 Islamic mutual funds reflect highest average returns but the Sharpe ratio and Treynor ratio are negative. Over the entire period alpha ratio is negative which shows that on average Islamic mutual fund managers did not possess superior ability to generate abnormal. However it is founded that the performance of Islamic Mutual Funds in 2012-13 was relatively better as compare to rest of the period because in this period the average returns are high and also the Treynor ratio was positive as compare to the rest of the period.

Table 17 Conventional funds overall performance:

YEARS	Sharpe-ratio	Treynor-ratio	Jensen	S.D	ARMF	β
2009-10	-0.36	-0.10	-0.01	0.01	0.00	0.39
2010-11	-0.35	0.10	-0.02	0.02	0.00	0.13

2011-12	-0.48	0.10	-0.01	0.01	0.00	0.42
2012-13	-0.21	0.02	0.00	0.03	0.02	0.51
2013-14	-0.41	-0.01	-0.01	0.02	0.00	0.06
2014-15	-0.07	-0.04	-0.01	0.01	0.00	0.61
2015-16	-0.19	-0.05	-0.01	0.01	0.00	0.04
Overall Performance	**-0.30**	**0.00**	**-0.01**	**0.02**	**0.00**	**0.31**

Interpretation

The above mention results are indicating Conventional mutual funds' performance from the year 2009 to 2016. In the period 2015-16 Conventional mutual funds' had the lowest standard deviation it means in this period Conventional mutual funds' founded to be less risky as compared to the rest of the period. In the year of 2012-13 Conventional mutual funds' reflect highest average returns and also Treynor ratio is positive but the Sharpe ratio was negative values. Over the entire period alpha is negative which means Conventional mutual funds' managers did not possess superior ability to generate abnormal. However it is founded that the performance of Conventional mutual funds' in 2012-13 was relatively better as compare to rest of the period because in this period the average returns are high and also the Treynor ratio was positive as compared to the rest of the period.

4.4. Comparative performance of Islamic and conventional mutual funds

The above given statistical results indicate that on the basis of average returns, Islamic mutual funds are having higher average returns for the overall period as compared to the conventional mutual funds. The standard deviation for Islamic mutual fund is 0.01 and conventional mutual fund standard deviation is 0.02, it means that Islamic mutual funds are relatively less risky as compared to its counterpart. Islamic mutual funds are having negative value for all the performance measures which are Sharpe, Treynor and Jensen alpha which shows on average the performance of Islamic funds on performance measures is negative. Conventional mutual funds performed relatively better on the basis of Treynor ratio, Sharpe and alpha are negative for conventional funds as well.

Chapter 5

5.1 Conclusion

The purpose of this study was to measure relative performance of Islamic and Conventional mutual funds. The researcher has chosen total of 48 mutual funds, in which 30 were conventional and 18 were Islamic mutual funds. The analysis period was from 30th June, 2009 to 31th May, 2016, the period and sample was chosen on the basis of data availability. The study used three measures for performance assessment that are 1) Sharpe 2) Treynor and Jensen alpha.

We first checked the performance of different funds categories in Islamic and conventional funds and highlighted the top and poor performers in both funds. from the above results it can be concluded that among eighteen of Islamic mutual funds, the JS Islamic Fund relatively performed well and the performance of Meezan Islamic Fund was also satisfactory, however performance of Pak Oman advantage asset allocation fund remained poor over the whole analysis period.

For the conventional mutual funds It can be inferred from the above discussion that the AKD opportunity fund has remarkable performance as compare to the other thirty conventional funds and it is also founded that Pak Income enhancement fund and First Dawood Mutual Fund performed poor over the entire analysis period.

The above mentioned results also implied that in the period 2014-15, Islamic mutual funds had the lowest standard deviation it means in this period Islamic mutual funds founded to be less risky as compared to the rest of the period. In the year of 2012-13 Islamic mutual funds reflect highest average returns but the Sharpe ratio and Treynor ratio are negative. Over the entire period alpha ratio is negative which shows that on average Islamic mutual fund managers did not possess superior ability to generate abnormal. However it is founded that the performance of Islamic Mutual Funds in 2012-13 was relatively better as compare to rest of the period because in this period the average returns are high and also the Treynor ratio was positive as compared to the rest of the period.

The above mentioned result revealed that in the period 2015-16 Conventional mutual funds' had the lowest standard deviation, which means in this period Conventional mutual funds' founded to be less risky as compared to the rest of the period. In the year of 2012-13 Conventional mutual funds' reflect highest average returns and also Treynor ratio is positive but the Sharpe ratio was negative values. Over the entire period alpha is negative which means Conventional mutual funds' managers did not possess superior ability to generate abnormal. However it is founded that the performance of Conventional mutual funds' in 2012-13 was relatively better as compared to rest of the period because in this period the average returns are high and also the Treynor ratio was positive as compared to the rest of the period.

The above given statistical results indicate that on the basis of average returns, Islamic mutual funds are having higher average returns for the overall period as compared to the conventional mutual funds. the standard deviation of Islamic mutual fund is 0.01 and conventional mutual fund standard deviation is 0.02, it means that Islamic mutual funds are relatively less risky as compared to its counterpart. Islamic mutual funds are having negative value for all the performance measures which are Sharpe, Treynor and Jensen alpha which shows on average the performance of Islamic funds on performance measures is negative. Conventional mutual funds performed relatively better on the basis of Treynor ratio, Sharpe and alpha are negative for conventional funds as well.

5.2. Recommendations

On the basis of above discussions we suggest that the funds that are underperforming over the entire period of time should devise their policies for long term performance persistence. Islamic funds are relatively less risky than that of conventional funds and it also offers risk adjusted returns at the given level of risk. So the investors who are looking for relatively less risky investment should go for Islamic mutual funds.

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Appendixes

Islamic mutual funds

Islamic MF	Funds name	AMCs	Date of inception
AIGIF (G)	Al ameen islamic aggressive income fund (Growth)	UBL Fund Manager Ltd	30-oct- 2007
AIGIF (I)	Al ameen islamic aggressive income fund(Income)	UBL Fund Manager Ltd	20-Oct-07
ASSF	Al ameen shariah stock fund	UBL Fund Manager Ltd	24-Dec-06
AGISF	Alfalah ghp islamic stock fund	Alfalah GHP Investment Management Limited	3-Sep-07
AIIF	Atlas islamic income fund	Atlas Asset Management Limited	14-Oct-08
AISF	Atlas islamic stock fund	Atlas Asset Management Limited	12-Sep-06
DIF	Dawood islamic fund	Dawood Capital Management Limited	14-Jul-07
JSIF	Js islamic fund	JS Investments Limited	27-Dec-02

MBF	Meezan balanced fund	Al Meezan Investment Management Limited	20-Dec-04
MCF	Meezan cash fund	Al Meezan Investment Management Limited	15-Jun-09
MIF	Meezan islamic fund	Al Meezan Investment Management Limited	8-Aug-03
MIIF	Meezan islamic income fund	Al Meezan Investment Management Limited	15-Jan-07
NAFA_IGIF	NAFA islamic aggressive income fund	NBP Fullerton Asset Management Limited	29-Oct-07
NAFA_IAAF	NAFA islamic asset allocation fund	NBP Fullerton Asset Management Limited	29-Oct-07
PAK_IEIAF	Pak int'l element islamic asset allocation fund	MCB-Arif Habib Savings and Investments Limited	22-Apr-06
PAK_OAIIF	Pak oman advantage islamic income fund	Pak O man Asset Management Company Limited	28-Oct-08
PAK_OIIALF	Pak oman islamic asset allocation fund	Pak O man Asset Management Company Limited	28-Oct-08

AL_MF	Al-meezan mutual fund	Al Meezan Investment Management Limited	13-Jul-95

Conventional funds

Conventional funds	Funds name	AMCs	Date of inception
AIF	ABL income fund	ABL Asset Management Company Limited	19-Sep-08
ASF	ABL stock fund	ABL Asset Management Company Limited	28-Jun-09
AKD_OF	AKD opportunity fund	AKD Investment Management Limited	31-Mar-06
ALF_GAF	Alfalah ghp alfalah fund	Alfalah GHP Investment Management Limited	9-Sep-08
ALGIMF	Alfalah ghp income multiplier fund	Alfalah GHP Investment Management Limited	15-Jun-07
ALGSF	Alfalah ghp stock fund	Alfalah GHP Investment Management Limited	15-Jul-08
AAAF	Askari asset allocation	Askari Investment Management Limited	13-Sep-07

	fund		
AHYS	Askari high yield scheme	Askari Investment Management Limited	16-Mar-06
ATIF	Atlas income fund	Atlas Asset Management Limited	22-Mar-04
DIF	Dawood income fund	Dawood Capital Management Limited	20-May-03
FAAF	Faysal asset allocation fund	Faysal Asset Management Limited	24-Jul-06
FBGF	Faysal balanced growth fund	Faysal Asset Management Limited	19-Apr-04
FSGF	Faysal saving growth fund	Faysal Asset Management Limited	11-May-07
FDMF	First dawood mutual fund	Dawood Capital Management Limited	22-Mar-05
FHIF	First habib income fund	Habib Asset Management Limited	29-May-07
HBL_IF	HBL income fund	HBL Asset Management Limited	19-Feb-07
HBL_MAF	HBL mutli asset fund	HBL Asset Management Limited	8-Nov-07

HBL_SF	HBL stock fund	HBL Asset Management Limited	23-Aug-07
JS_FOF	JS fund of funds	JS Investments Limited	31-Oct-05
MCB_DIF	MCB DCF income fund	MCB-Arif Habib Savings and Investments Limited	3-Jan-07
MCB_PAAF	MCB pakistan asset allocation fund	MCB-Arif Habib Savings and Investments Limited	17-Mar-08
NAFA_SF	NAFA stock fund	NBP Fullerton Asset Management Limited	22-Jan-07
NIUT	National investment unit trust	National Investment Trust Limited	12-Nov-62
PAK_CMF	Pakistan capital market fund	MCB-Arif Habib Savings and Investments Limited	24-Jan-04
PAK_IEF	Pakistan income enhancement fund	MCB-Arif Habib Savings and Investments Limited	28-Aug-08
PAK_IF	Pakistan income fund	MCB-Arif Habib Savings and Investments Limited	11-Mar-02

PAK_OAAAF	Pak oman advantage asset allocation fund	Pak O man Asset Management Company Limited	30-Oct-08
UNI_SAF	United stock advantage fund	UBL Fund Managers Limited	4-Aug-06
UBL_LPF	UBL liquidity plus fund	UBL Fund Managers Limited	21-Jun-09
MCB_PSMF	MCB Pakistan stock market fund	MCB-Arif Habib Savings and Investments Limited	11-Mar-02