

## **Credit Obtaining Challenges Faced by Micro and Small and Medium Enterprises SMEs**

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### **Abstract**

Small and medium enterprises (SMEs) are considered as powerful instrument to help in the development of a country and improve the employment and poverty base of the country specifically for the developing countries. But unfortunately there are many constraints which prevent the growth of these sectors. Among many constraints, access to financial resources is the major hindrance. The purpose of this study is to determine the challenges faced by micro, small and medium enterprises in credit obtaining such as absence of collateral, high interest rates and poor infrastructure and also it will identify what are sources of funding available to the SMEs. Data was collected using questionnaires. 28 questionnaires were circulated in Bahawalpur, Pakistan using convenience sampling technique. The major findings of the study are.

Among major constraints lack of finance, biggest one is the high interest rate, which erode all the profit of the firms and gave them no advantage of having credit. Second challenge is the absence of collateral makes SMEs not to access the financial institutions like bank. Finally the study recommends some suggestions to improve the development of SMEs by urging the government to regulate the bank policies and making collateral requirements flexible. And to provide awareness to entrepreneurs about ranges of financing options.

**Keywords:** small and medium enterprises (SMES), financial resources, growth and economic development, high interest rate, poor infrastructure and collateral.

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## **Introduction**

Mutual funds are a brain child of asset management companies and are an investment alternative that encourages both retail and institutional investors. These companies invest in a wide array of market options for example stocks, bonds, futures and other financial instruments. The companies want to earn better market returns against the better management of risk adjusted returns (Abdullah, Hassan, & Mohamad, 2007). All mutual funds can be categorized into two; the open ended and the closed ended. Open-end mutual funds are not restricted by the quantity of shares than can be issued, when demand is high enough the fund can issue unlimited number of shares. On the contrary closed- end funds are characterized by an Initial Public Offering (IPO) and then traded like any normal stock in the stock market. Mutual funds offer investors three primary benefits; first they reduce the risk associated with stocks through diversification; secondly, they offer expertise to filter out those shares that could potentially offer greater return with high risk; thirdly, small investors have an opportunity to hold a diversified portfolio through the amalgamation of speculative funds. The first and the third benefits are mutually accepted by all concerned but the bone of contention between the practitioners has been second benefit (Raza, Raza, & Zia, 2011). However diversification, being the core aim of mutual funds, allows investors to minimize non market risk of securities. The systematic risk however is the primary risk involved but with a diversified portfolio consisting of international securities, market risk can also be mitigated. This is possible given the low level of correlation between the world's stock markets.(Varamin & Kalash, 2008).

Mutual Funds in Pakistan were first marketed in 1962 with the initial public offering of the National Investment (Unit) Trust (Aamir Shah & Hijazi, 2005). The

industry has undergone tremendous growth and still follows a bidirectional growth rate making it worth billions of Pakistani Rupee (PKR). There has been substantial growth in the NAV and in the number of mutual funds itself (Nafees, Ahmed, & Zeeshan, 2013). Although there exists limited literature documenting performance of Pakistani mutual funds but most of them are quite recent with the last empirical research published in 2013. We would now turn our focus on the Islamic mutual funds as this sector has seen massive growth not just in Pakistan but also in other Muslim states.

Islamic Finance has continued to grow despite uncertainty in the world's financial markets. The recent increase in liquidity in Middle Eastern capital markets has created quite a great deal of interest among Middle Eastern and international money managers. Western financial institutions of the likes of Citibank, Merrill Lynch, HSBC, Morgan Stanley and Barclays have begun tapping in this relatively new but persistent market by offering Sharia compliant funds (Hassan & Girard, 2010). Sharia compliant assets globally continued the double digit growth and by the end of 2011 were valued at about \$1.4 trillion. The reach and span of Sharia compliant financing is spreading fast; Asia, especially Malaysia and the Gulf Cooperation Council (GCC) remain the inception points and powerhouses to continued development of Islamic financing but new markets are opening up. Most notable among new entrants are Turkey, Kazakhstan, Nigeria and South Africa. Even stock exchanges in New York and London launched Islamic indexes to evaluate performance of Sharia compliant companies (Hassan & Girard, 2010). However because this industry is still in the phase of development it continues to be demand driven with limited supply and options. However there is every possibility and belief that with age Sharia Compliant instruments would develop to specific asset classes in their own right.(Standard & Poor's, September 2012).

A majority of Islamic funds are commodity, equity or lease finance-based funds but the innovation of ‘sukuk’ (Islamic bonds) has fuelled the emergence of the Islamic asset management industry. Sukuk grew from zero issuance before 1996 to an aggregate of \$350 billion by mid 2012. The compound annual growth rate for the Islamic bond is expected to be about 25% in the period 2012-2015 with new markets starting to develop in Iran, Yemen, Jordan, Turkey, Pakistan and Brunei(Standard & Poor's, September 2012).

Financing or investing in Islam is governed by the laws of Sharia. The sacred law of Allah (SAW) revealed on the Holy Prophet (PBUH) encourages profit sharing and partnership but does not allow riba (interest), maysir (gambling and pure games of chance) and gharar (selling something that is not owned or that cannot be described in accurate detail; i.e. in terms of type, size and amount). Islamic mutual funds are also governed by Sharia guidelines. The Funds cannot invest in businesses which are involved in operations that go against the teachings of Holy Quran and Sunnah; for example, firms those manufacture or sell alcohol, biotech firms that deal with aborted embryos and human cloning, or securities like corporate bonds, treasury bills, Certificate of Deposits, options and preferred stocks. Secondly Islamic funds cannot use debts that have interest payments attached to finance its investments and cannot indulge in speculation; and lastly the funds cannot take advantage of repo or buy backs (Elfakhani, Hasan, & Sidani, November 2005).

## **Literature Review**

This section first reviews studies that develop performance gauging methods and test mutual fund performance against benchmark indices globally and subsequently move on to evaluate performance of mutual funds in Pakistan against local benchmarks. Lastly it presents studies on Islamic mutual funds.

Mutual fund's credibility in outperforming the market through the use of Active Investment Management has long been questioned and researched. Some of the earliest studies date back to the 1950's and the 1960's and include works by Markovitz, Sharpe (Sharpe, 1966) and Fama (Fama, 1970). However the first formal approach towards understanding the mutual fund's apparent outsmarting of the market was done by William F. Sharpe (Prince & Bacon). He identified three methodologies for measuring performance namely the Capital Asset Pricing Model (CAPM), portfolio selection and the general behavior of stock market prices. The Portfolio Selection Approach involves three key players, the security analyst, the portfolio analyst and the investor. The security analyst is tasked with evaluating the correlations between the returns of securities. The portfolio analysis is done to identify and select those diverse securities which can achieve the desired risk for the portfolio or in other words select the most efficient portfolio. The investor on the other hand selects from a wide array of available portfolios one that optimizes both the risk and return relationship. Sharpe tested and concluded that mutual fund's performance does not differ from portfolio analysis theory, the variance in performance and hence return is due to 'intentional or unintentional selection of risk classes.' He also states that 'the portfolios of some funds may be more efficient than others (i.e. give greater average return at the same level of variability) if managers differ in their ability to diversify effectively' and 'the persistently inferior performance would

be the continued expenditure of large amounts of a fund's assets on the relatively fruitless search for incorrectly valued securities' (Sharpe, 1966)

The performance of mutual funds can also be checked through the CAPM model. According to (Sharpe, 1966) portfolio performance depends upon the expected rate of return and the predicted risk. He maintains that at any given point in time the predictions about expected performance of securities are uniform for every investor. A well diversified portfolio would produce returns comparable with the average market returns and meet the expected risk. Any deviations in performance occur when Mutual Funds do not divest appropriately and spend huge amounts on market research and administration.

The Sharpe- Lintner Model uses the risk-return relationship to check performance. The model states that one year expected return on a security is the sum of risk free return and some risk premium for the same one year period. According to (Fama, 1970) since every investor has a combination of the risk-free asset and the market portfolio, it is possible to calculate the risk of an individual asset as a covariance of the market portfolio. The model is in fact called Capital Asset Pricing Model (CAPM).

Fama used the Jensen model which is based on the Sharpe-Lintner model discussed above to evaluate MF's performance and answer the question 'do fund managers have access to monopolistic information?' Jensen studied 115 mutual funds over a ten year period (1955-64) and used the S&P 500 as an alternative to the market portfolio. He tested his model by presuming different scenarios. In the first setup he tested funds for being able to give such returns that would compensate investors for all costs including loading charges. The results were negative, in 89 out of 115 cases, the market outperformed the fund the result of which was that on average consumer's were less wealthy after investing for 10 years in mutual funds by fifteen percent less than if

they would have had invested in portfolios with returns comparable to the market average. Jensen states that since loading charges are salesperson's commission and the fund itself earns no benefit from it, he tested for mutual funds' performance by simply ignoring the load charges. The results were a lot similar to the previous ones as in 72 out of 115 funds tested the risk return of the mutual funds was below the average market return. Fama concludes that the results supporting strong form efficiency are quite amazing and unexpected given the nature that analysts operate in the securities market daily and have links in both financial communities and businesses. Moreover he also states that with contradictory evidence to the strong form efficiency in the shape of Niederhoffer and Osborne study and the Scholes study indicating corporate insiders and specialists as the only ones having access to monopolistic information. However since the monopolistic evidence is sparse markets can be deemed as efficient. (Fama, 1970).

Bruce. N Lehmann in his research 'Mutual Fund Performance: A Comparison of Benchmarks and Benchmark Comparisons' added a new dimension to evaluating the performance of Mutual Funds. He tested whether mutual funds actually did perform well or was it just a case of manipulated performance benchmarks. 130 Mutual Funds over a period of fifteen years (Jan 1968-Dec1982) were examined to determine their performance sensitivity to the benchmarks chosen. Jensen's equation was used but its risk was adjusted to the theoretical dictates of the Arbitrage Pricing Theory (APT) and the CAPM. The intercepts were then studied and conclusions drawn. The first conclusion stated that as per Jensen measures and Treynor-Black appraisal ratios, individual mutual funds were responsive to the methods used to formulate the APT. Funds using a limited no of securities performed differently to funds having divested in a greater no of securities. Another conclusion drawn was that the exact number of the same type of un-

diversifiable risk did not utterly affect fund ranking; the exposure to common type and number of systematic risk had little impact on the ranking of funds. Lastly substantial differences were observed between performance measures when tested with the CAPM benchmark and the APT benchmark. Thus it is of utmost importance that a suitable model of risk and expected return be selected as a normal performance benchmark. (Lehmann & Modest, June 1987);

Most studies since the 1960s conclude that actively managed mutual funds are not worth investing in since they fail to systematically outperform benchmark portfolios. However a study published in 1986 by Rugg advocates, but with caution, that investments in aggressive growth equity funds that top their class in the short run (one-six months) of a bull market can be profitable. In another research proves that fund managers do uncover mispriced prices and do better than passively managed funds and according to the Consumer Guide (1988) most financial professionals select funds on the basis of consistent performance rather than on costs the funds incur.(Hendricks, Patel, & Zeckhauser, March 1993).The study was further tested by Hendricks in his research article. He classified all equity funds from 1974-1988 into open-ended, load less and growth aligned equity funds to minimize the effect of survivorship bias. The performance of funds was checked by evaluating with other funds and with various benchmark portfolios including a multi- portfolio benchmark to phase out discrepancies such as firm size effects etc. The results yielded robust evidence in support of actively managed funds. It was witnessed that funds that had performed well continue to be super performers in the recent short run spreading one to eight quarters with managers realizing generous gains. Specifically speaking, fund managers could substantially outsmart the average mutual fund by selecting in every quarter top performing securities from the previous

four quarters. However it should also be noted that mutual funds despite doing significantly well than the average mutual fund performed only marginally well than the benchmarks. However the strongest results were witnessed when the funds were evaluated for one year; ex ante investment strategies based on persistent short run superior performance can successfully identify funds to improve the risk adjusted returns by 6% per year. (Hendricks, Patel, & Zeckhauser, March 1993)

Another research testing consistency in performance of mutual fund is of the view that persistent performance does not explain strong stock picking ability of the managers rather it is the expenses and the transaction costs that offers explanation to predictable mutual fund returns. The author is of the view that ‘hot hands’ phenomenon is the effect of the momentum strategy. The study tests monthly returns of diversified mutual funds from Jan 1962 to Dec 1993. The data collected is free from survivorship bias. The funds’ performance is evaluated against the CAPM model and the author’s (Carhart (1995)) 4-factor model. For wealth maximizing mutual fund managers three important rules are derived from the results a) investments should not be made in persistently poor performing funds b) superior performing funds yield high returns the following year but become ordinary performing funds in the subsequent years. c) Investment costs of expense ratios, load fees and transaction costs affect performance negatively. (Carhart, March 1997)

Another study by Theodore Prince and Frank Bacon tested forty funds that had a ten year threshold and benchmarked them against the Russell 2000 market index for small-cap growth mutual funds. The average return, variance, and standard deviation were calculated for the selected funds and compared against the risk free bench mark. The risk free benchmark was derived through the use of Jensen’s equation and Sharpe

and Treynor's measure. The results were overwhelmingly in support of the efficient market hypothesis. Except for a handful of funds that generated higher returns all other actively managed funds yielded results that were largely expected. Moreover the study states that past performance, except for a few cases, cannot be accurately measured through the use of a single benchmark. (Bacon & Prince)

We now turn our focus on the Pakistani Mutual Fund Industry. A study conducted by (Aamir Shah & Hijazi, 2005) tested performance of Pakistani Mutual Funds on the basis of the Sharpe Ratio, Treynor Measure and the Jensen Differential Measure. Mutual fund data was collected for the period 1997-2004. To control survivorship bias the author terminated funds that were merged with other funds or had become dysfunctional after two-three years of commencing business. The results are in complete contrast with the EMH theory. The overall fund industry outperformed the market proxy by 0.86 percent. The Sharpe ratio for the funds again exceeded the market in terms of 0.27 risk premium per one percent of standard deviation. However there are also some funds that underperform and as the author explains, it is because these funds aren't properly diversified.

Extending the study of (Aamir Shah & Hijazi, 2005) the author tests the performance of the Mutual Fund Industry in Pakistan for a period 1988-2008. This extended study however is more focused as it specifically evaluates the performance of open ended funds in the industry as according to the author previous researchers did not wholly focus on this segment. The above mentioned three evaluation methods were incorporated in this study as well. The Equity funds and the Income funds both failed to outperform the market index but the equity funds did show slightly better consistency in annual returns than the market proxy. Beta for the equity funds are on the higher side

meaning they are on average more affected by systematic risk. The results provide evidence of the presence of the EMH theory with tests classifying Pakistani mutual fund industry as being semi strong efficient (Keshwani, 2008).

In another study testing performance of mutual funds in Pakistan for the period 1999-2009 the authors employed a different technique than the one employed by (Keshwani, 2008). The authors used multiple regression method on data collected from secondary sources to evaluate multiple independent variables' effect on a single dependent variable. The results are astonishing keeping in mind earlier studies that classified Pakistani mutual funds as failing to outsmart the benchmark index. Majority of the mutual funds' returns surpassed the returns of the KSE-100 index; only 2 or 3 funds did worse than the benchmark (Raza, Raza, & Zia, 2011).

The literature on Islamic investing which is considered as a subset of ethical investing is still in stages of being probed and documented (Hassan & Girard, 2010). The remainder of the literature review presents whatever limited studies have been done so far.

The first study examined the Dow Jones Islamic Market Index (DJIM) for market efficiency and time varied risk return relationship over a period of 4 years (1996-2000). Market efficiency was analyzed using serial correlation, variance ratio and Dickey Fuller tests. Results indicate that DJIM returns are efficient and normally distributed. GARCH framework proves that a significant positive relationship exists between conditional probability and DJIM equity index returns (Hassan, Risk, Return and Volatility of Faith-Based Investing: The Case of the Dow Jones Islamic Index, 2002).

In another study DJIM was examined with the Wilshire 500 Index and the three month Treasury bill for the period 1999-2002 using co-integration and the casualty analysis. Results determined that no relationship existed between DJIM and the said

benchmarks; changes in DJIM were not because of changes in Wilshire 500 Index or the Treasury bond rather they are the result of unique risk-return characteristics defining Islamic indexes. Islamic indexes filter out companies' non adherent to Sharia guidelines and thus are unaffected by the conventional and broad equity market. In addition to this the author found DJIM performed relatively well as compared to Dow Jones World Index (DJW) but provided lower returns as compared to Dow Jones Sustainability World Index (DJS)(Hakim & Rashidian, 2004).

In another study DJIM returns over a period of 1996-2003 were evaluated against certain criteria involving industry, size and economic conditions. Islamic indexes outperformed benchmark in the bull-run period giving investors abnormal returns but they underperformed in bearish stock market conditions. Moreover investors who invested in small size and in elementary materials, consumer cyclical, industrial and telecommunication firms made abnormal gains (Hussein & K.A, 2005). Extending the study,(Abdullah, Hassan, & Mohamad, 2007) tested 14 Islamic funds and 51 conventional funds in the Malaysian capital market for the period Jan 1992 – Dec 2001. He used the usual performance measures, the Sharpe, Treynor ratios and Jensen Alpha in addition to the adjusted Sharpe Ratios, Modigliani measure and time and selectivity ability. The results were opposite to the results of Hussein's study. Islamic funds were found to underperform in bullish conditions but outperform the conventional funds in bearish market conditions. The results also indicated that the induction of Islamic funds in a portfolio helps reducing downside risk in difficult economic conditions. Furthermore it was also found that bad selection and timing performance were same for both types of funds.(Elfakhani S. H., 2007)tested 46 Islamic mutual funds and calculated their Sharpe Ratio, Treynor ratio, Jensen Alpha and ANOVA. The results were much similar to

(Hussein 2005), 63% of the entire sample or 24% of the mutual funds depending on the used performance measure and market benchmark outperformed.

The study concluded that no significant difference in behavior existed between conventional funds and Islamic funds; some Sharia compliant funds outperformed the benchmark while some underperformed. A broader and more in-depth study was conducted in 2009 involving 262 Islamic mutual funds from 20 countries and 4 regions from September 1990 to April 2009. Data was tested using the one factor model, Fama and French (1993) 3 factor model, Carhart (1997) model, 3 levels Carhart model and conditional 3 level Carhart model. The findings were quite interesting. Islamic funds from eight nations, majority which belonged to the west, performed poorly as compared to international equity market benchmarks, only three funds managed to outgun the benchmark return. Moreover only small stocks impacted Islamic funds but this criterion was limited to nations apart from those in the Gulf Cooperation Council (GCC) and Malaysia. Lastly the authors maintained that Islamic Equity Funds are an effective tool to hedge against risk because of their low debt/ equity nature (Hoepner, Rammal, & Rezec, 2009). In another study which drew comparison between the secular and the Islamic funds in the Kingdom of Saudi Arabia (KSA) contained seven year data from January 2003 to January 2010. Conventional funds were found to make greater returns in overall as well as in bullish conditions, however in times of financial instability or bearish situations Islamic funds have lower systematic risk and they do better than conventional funds. Since the study specifically focused on funds managed by HSBC Saudi Arabia, results yielded that HSBC did possess economically modest selectivity skills during bullish and bearish periods. During bullish times these skills were put to good use for managing conventional funds and vice versa (Merdad, Hassan, & Alhenawi, 2010).

Another research on performance comparison of the funds in KSA is basically an extension of the above mentioned article; 159 mutual funds were tested for the period 2007 to 2011. Standard CAPM regression and Treynor and Mazuy (1966) models were used to evaluate performance and stock selection and market timing ability of the funds. The results were no different from the previous research; Islamic funds outperformed conventional funds during difficult financial times and the managers of the same funds showed superior stock picking ability during the said times but it should also be noted that these funds showed no supremacy in market timing ability. The study recommended that conventional fund managers should follow the same screening process as Islamic funds during periods of crises (Ashraf, 2012).

### **Methodology**

This study focuses on drawing a comparison in performance between open ended Islamic mutual funds and conventional mutual funds. In Pakistan, the closed end fund industry is very limited and has no Islamic fund registered hence it is practically impossible to do a comparative research. Moreover to be more specific, this paper would probe performance of funds from two perspectives

1. Islamic equity funds against conventional equity funds
2. Aggregate Islamic funds against aggregate conventional funds

Data consists of 25 mutual funds (21conventional funds and 4 Islamic funds) pertaining to the equity asset types. Daily NAVs and dividend payout data are collected from the website of the Mutual Fund Association of Pakistan. To control survivor ship bias only those funds are selected that have been in the market for at-least 5 years or those that have available daily returns for the same period.

Monthly returns calculation for the five year period starting January 2009 through November 2013 involves adjustments for dividends and bonuses distributed to shareholders. KSE 100 index would serve as the market benchmark, the three months Treasury bill rate would give the risk-free rate. The three month Treasury bill rate is taken from the website of the State bank of Pakistan

Daily returns are calculated using the same formula employed by (Abdullah, Hassan, & Mohamad, 2007) and which are a resultant of two components namely income and capital gain.

$$R_p = \frac{NAV_t - NAV_{t-1} + D_t}{NAV_{t-1}}$$

Where

$R_p$  = Daily return of a portfolio (individual fund);

$NAV_t$  = Daily Net Asset Value at time  $t$ ;

$NAV_{t-1}$  = Daily Net Asset Value one period before time;

$D_t$  = Dividend or cash bonus at time  $t$

To calculate monthly return for individual funds the following formula is employed

$$\bar{R}_p = \frac{1}{n} \sum_{i=1}^n R_p$$

### **Measurement of risk**

Standard deviation is used to measure the portfolio risk and the consistency of returns but since it is an absolute measure of risk we also use the coefficient of variation (CoV) ratio to calculate the relative measure of variability i.e. the amount of risk assumed per unit of average returns

$$CoV = \frac{\sigma_i}{E(R_i)}$$

Where

$\sigma_i$  = standard deviation (total risk) of asset  $i$

$E(R_i)$  = average return of asset  $i$ .

Performance is measured by the common performance yardsticks; the Sharpe and Treynor ratios,

### **Sharpe Ratio**

This ratio is among the most commonly used measures employed in the testing of the mutual fund performance. The ratio differentiates and identifies the cause of abnormal returns as being either smart investment choice of the managers or the result of taking excess risk. It is calculated by dividing risk premium by the standard deviation of portfolio returns. A high Sharpe ratio suggests that the returns from an investment are in line with its risk profile while a low Sharpe recommends that the risk exceeds return.

The ratio has two limitations; first the index uses historical information to determine results and hence cannot predict investment's behavior. Secondly it synonyms risk and volatility, this might hold true for the near future but it definitely is not applicable to for the long term.

The ratio is as follows

$$= \frac{r_p - r_f}{\sigma_p}$$

Where

$r_p$  = Expected Portfolio return

$r_f$  = Risk free rate

$\sigma_p$  = Portfolio Standard Deviation

The Sharpe ratio is calculated for individual funds, be it Islamic or conventional, and for an aggregate Islamic fund and conventional fund.

## **Treynor Ratio**

The Treynor ratio uses beta as a measure of volatility rather than the standard deviation. Treynor measures returns that are over and above of what could have been earned had the investor invested in a risk free instrument per each unit of market risk.

$$= \frac{r_p - r_f}{\beta_p}$$

Where

$r_p =$  Portfolio return

$r_f =$  Risk free return

$\beta_p =$  Portfolio's beta

## **Data Analysis and Findings**

### **Analysis of Sharpe Ratio**

The funds were grouped into an aggregate depending on their nature. A single Sharpe Ratio for all the funds in the Islamic category was calculated and compared similarly with a single Sharpe Ratio of the conventional funds (Sharpe, 1966). What is surprising is the negative Sharpe Ratio for the market benchmark over a period of 5 years (2009-2013) while both the Islamic and the conventional equity funds have positive results for the ratio. It can be stated thus that both Islamic and conventional equity fund offered returns in line with their risk profile. The market benchmark on the other hand with a negative value for the Sharpe ratio can be deemed as risky to invest in securities, in this situation a riskless asset would have performed much better than the securities analyzed. It must also be noted that conventional equity funds in comparison to Islamic equity funds show a much better risk adjusted performance because of its relatively higher Sharpe ratio. The results were similar to study conducted by (Hussein & K.A,

2005)and contradictory to (Aamir Shah & Hijazi, 2005)(Abdullah, Hassan, & Mohamad, 2007)(Carhart, March 1997).

**Table 1: Results for Sharpe Ratio**

<b>AGGREGATE TIME PERIOD (2009-2013)</b>	<b>KSE 100 INDEX</b>	<b>CONVENTIONAL EQUITY FUNDS</b>	<b>ISLAMIC EQUITY FUNDS</b>
<b>SHARPE RATIO</b>	-0.131	1.096	0.780

### **Analysis of Treynor Ratio**

The other conventional test for checking the performance of mutual funds is the Treynor Ratio. The results strikingly are quite similar to those of the Sharpe Ratio. The market index has a negative Treynor ratio despite having a positive beta value, the explanation for this unusual behavior is the index's lower level of aggregate return as compared to the risk free rate. The performance of both types of funds was better than the benchmarked index with their beta values almost similar suggesting that both the types are almost equally sensitive to happenings in the market. Moreover it can be assumed that both investments were less volatile than the market and that the fund accepts lower risk with lower potential return. The table below gives values for the Treynor ratio and the beta. The results are similar to the studies conducted by Hussein and Elfakhani(Hussein & K.A, 2005)(Elfakhani S. H., 2007)

**Table 2: Results for Treynor ratio**

<b>Criteria</b>	<b>KSE 100 INDEX</b>	<b>CONVENTIONAL EQUITY</b>	<b>ISLAMIC EQUITY</b>
<b>BETA</b>		0.668	0.698
<b>TREYNOR RATIO</b>	-0.011	0.49	0.341

Among all Islamic equity funds, Atlas Islamic Stock Fund offered the highest average return that was even higher than the average return of all Islamic funds by 12%.

The most risky equity fund was the JS Islamic fund.

**Table 3: Ranking of Islamic Equity according to average return and standard deviation**

<b>ISLAMIC EQUITY FUNDS</b>	<b>AVERAGE RETURN</b>	<b>RETURN RANK</b>	<b>STANDARD DEVIATION (SD)</b>	<b>SD RANK</b>
Atlas Islamic Stock Fund	0.4543	1	0.3010	3
Al Meezan	0.4071	2	0.4145	2
UBL Shariah Stock Fund	0.3137	3	0.2457	4
JS Islamic Fund	0.1804	4	0.4390	1
Overall Performance	0.3364	--	0.3052	--

The table below shows in descending order conventional mutual fund based on average returns.

**Table 4: Ranking of Conventional Equity Stocks according to Average return and standard deviation**

<b>CONVENTIONAL EQUITY FUNDS</b>	<b>AVERAGE RETURN</b>	<b>RETURN RANK</b>	<b>STANDARD DEVIATION</b>	<b>SD RANK</b>
PAK STRATEGIC	1.4600	1	0.6119	3
FIRST	0.8745	2	1.1268	1
PICIC ENERGY	0.7645	3	0.7474	2
IGI	0.4865	4	0.3825	9
MCB DYNAMIC	0.4704	5	0.3642	10
ATLAS	0.3966	6	0.4083	6
PAK STOCK	0.3767	7	0.3425	11
ASIAN	0.3721	8	0.3962	8
SAFEWAY	0.3640	9	0.4001	7
PAK PRIMER	0.3454	10	0.2753	16
AKD	0.3298	11	0.2896	14
UNITED STOCK	0.3191	12	0.1542	19
NAFA STOCK	0.3053	13	0.1096	20
JS LARGE CAP	0.2860	14	0.1712	18
JS A	0.2758	15	0.3038	13
KASB	0.2619	16	0.3105	12
LAKSON	0.2033	17	0.1841	17
JS VALUE	0.1812	18	0.2820	15
ALFALAH GHP	0.1432	19	0.4096	5
ABL	0.0910	20	0.4647	4
HABIB LTD	0.0606	21	0.1633	19

**Table 5: Ranking of mutual funds according to average returns**

<b>EQUITY FUNDS</b>	<b>AVERAGE RETURNS</b>	<b>RETURN RANK</b>	<b>STANDARD DEVIATION</b>
<b>PAK STRATEGIC</b>	1.4600	<b>1</b>	0.3052
<b>FIRST</b>	0.8745	<b>2</b>	0.6119
<b>PICIC ENERGY</b>	0.7645	<b>3</b>	1.1268
<b>IGI</b>	0.4865	<b>4</b>	0.7474
<b>MCB DYNAMIC</b>	0.4704	<b>5</b>	0.3825
<b>Atlas Islamic Stock Fund</b>	0.4543	<b>6</b>	0.3010
<b>Al Meezan</b>	0.4071	<b>7</b>	0.4145
<b>ATLAS</b>	0.3966	<b>8</b>	0.3642
<b>PAK STOCK</b>	0.3767	<b>9</b>	0.4083
<b>ASIAN</b>	0.3721	<b>10</b>	0.3425
<b>SAFEWAY</b>	0.3640	<b>11</b>	0.3962
<b>PAK PRIMER</b>	0.3454	<b>12</b>	0.4001
<b>AKD</b>	0.3298	<b>13</b>	0.2753
<b>UNITED STOCK</b>	0.3191	<b>14</b>	0.2896
<b>UBL Shariah Stock Fund</b>	0.3137	<b>15</b>	0.2457
<b>NAFA STOCK</b>	0.3053	<b>16</b>	0.1542
<b>JS LARGE CAP</b>	0.2860	<b>17</b>	0.1096
<b>JS A</b>	0.2758	<b>18</b>	0.1712
<b>KASB</b>	0.2619	<b>19</b>	0.3038
<b>LAKSON</b>	0.2033	<b>20</b>	0.3105
<b>JS VALUE</b>	0.1812	<b>21</b>	0.1841
<b>JS Islamic Fund</b>	0.1804	<b>22</b>	0.4390
<b>ALFALAH GHP</b>	0.1432	<b>23</b>	0.2820
<b>ABL</b>	0.0910	<b>24</b>	0.4096
<b>HABIB LTD</b>	0.0606	<b>25</b>	0.4647

### **Conclusion and Recommendation**

The global financial crises of 2009 had a profound impact on international and domestic markets causing liquidity crunches and bailout appeals. It was at this juncture that previously ignored Islamic finance suddenly became a center of attention. Twenty one conventional equity funds and four Islamic equity funds are selected which survived at least for five years from 2009 to 2013. This study focuses on drawing a comparison in performance between open ended Islamic mutual funds and conventional mutual funds. Daily NAVs and dividend payout data are collected from the website of the Mutual Fund

Association of Pakistan. Those funds are selected that have been in the market for at-least 5 years or those that have available daily returns for the same period. Standard deviation is used to measure the portfolio risk and the consistency of returns but since it is an absolute measure of risk we also use the coefficient of variation (CoV) ratio to calculate the relative measure of variability. Performance is measured by the common performance yardsticks; the Sharpe and Treynor ratios.

The conventional funds proved better investment choices as their average returns were greater than the returns of most of the Islamic equity funds. The top five performers in terms of average returns were the conventional funds. In addition to this, these conventional funds had a greater Sharpe ratio and Treynor ratio which is testimony enough to conclude that over the years Islamic funds have been outperformed by the more traditional funds.

However it should be noted that Islamic funds did not perform dismally either. Even when the benchmark index had negative values for the Sharpe ratio and the Treynor ratio, which is indicative of the fact that the market was not able to return even the risk free rate to its stakeholders or that the return from investments was not in line with its risk profile, Islamic equities generated returns that were in excess of market return. Despite the fact that only four Islamic equities qualified to be included in the sample as against the twenty one conventional equities probed, the minimal difference between the respective Sharpe and Treynor values speak volumes of the stellar performance displayed by Islamic equity funds and potential for growth that this mode of mutual funds promises

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