Risk Adjusted Performance Evaluation of Balanced Mutual Fund Schemes in Pakistan

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Abstract

Mutual fund existed since 1964 in Pakistan capital market carrying certain benefits like risk diversification, assured returns and professional management for the retail investors. Growth of this investment mode has not been in the parallel levels in Pakistan as is the case around the world but still mutual funds in Pakistan appeared to be highly competitive financial service industry. This research paper aimed to study the performance of some selected mutual fund schemes in Pakistan based on risk-return relationship and various measures. Five balanced schemes offered by various mutual funds in Pakistan are selected for this study from 2010 to 2013. The analysis has been made on the basis of mean return, beta risk, total risk, Sharpe ratio, Treynor ratio, Jensen Alpha and Fama's decomposition measure. The empirical results reveal that average returns of selected portfolio are below from market returns, mix trend of risk in selected schemes and overall defensive beta values. In short results indicate underperformance of most of schemes during selected span of study.

Keywords: Risk adjusted performance, Balanced mutual fund, Treynor, Sharpe and Jensen's Alpha measure. KSE 100

INTRODUCTION

A mutual fund is a specialized collective investment scheme. It invests a pool of money which is collected from the investors with the purpose of investing in various securities like stocks, bonds, money market instruments and other similar assets. (MUFAP) The basic aim behind the mutual funds is to create a Pool of money by collecting it from the investors and then invested it in profitable activities with the aim to maximize the investor's wealth. The management of the fund just charges the Operating fees for managing the fund. There are number of benefits of investing in mutual funds, such as Liquidity, Diversification, Variety and Convenience. Mutual Fund investment was originated in 1924 in North America, but during 1980s it became popular all over the world, especially in United States. The total Funds investment was nearly twenty trillion dollars and almost half of this amount was denoted from United States investment in mutual Funds (Milford, 2008). In Pakistan this investment concept was hosted in 1962, but the main arrival of mutual Funds came in 1964. A closed ended mutual Fund, with the name of "Investment Corporation of Pakistan" (ICP) was set up in 1966. This Industry managed almost 26 Funds; these funds were traded in financial market under two different sorts, namely, open ended Funds and closed ended Funds. ICP had government monopoly in this industry, but later the private sector injected huge resources, during 1995-1996. The investment size of this industry enlarged to 6 billion dollars i.e. equivalent to 385.5 billion rupees. This growth was predominantly due to open ended Funds that amounted to Rs. 331.6 billion; whereas the closed ended fund was almost stagnant at Rs. 54 billion by the end of 2008.

Mutual funds industry in various countries has practiced tremendous progress but in developing countries this industry is not accomplishing the standard. Growing number of mutual fund In the developed financial markets show investor's preference for this mode of investment (Hermann, 2005).Despite the tremendous worldwide importance of mutual funds industry, this industry did not catch the interest of Pakistani investors until now; this may be due to under performance of these funds and deficiency of manager's contribution to enlarge this industry. When we compare Pakistani mutual fund industry internationally it is very small sized. Pakistan holds only 1.33% mutual fund assets to primary securities, in dissimilarity to India with 3.7%, Malaysia 4.0%, Hong Kong 20.3%, and South Korea 16.5%. (Khorana et al. 2005). These facts point out that mutual fund industry in Pakistan has noteworthy room to grow, if management of mutual funds pay attention to improve the performance of these funds and able to attract new investors. Though comparison of performance on the basis of returns is the simplest, but it is not comprehensive. As the risk ingredient is neglected. It is now considered a generally accepted fact in finance that there is a direct relationship between risk and return: the higher the risk, the higher is the expected return. So, in this paper we explore the risk adjusted performance of balanced mutual funds and there is no previous research in Pakistan on this specific scheme of mutual funds.

REVIEW OF LITERATURE

Gupta and Aggarwal (2007) conducted a research to evaluate the operations of mutual funds in India. They explored the performance of returns on quarterly basis for all the equity mutual funds from January 2002 to December 2006. For analysis, Capital Asset Pricing Model (CAPM) and Fama-French Model was used and concluded that the increment in the value of the funds depend upon certain characteristics. These characteristics were excess market returns, size factor and value factor and suggested that returns earned on Mutual funds were actually due to the exposure of these characteristics only and fund managers did not able to add any value.

Sipara (2006) evaluated the performance of closed-ended mutual funds in Pakistan. Sample was selected from the data for the period 1995 – 2004. He used Treynor ratio, Jensen Alpha and Fama's net selectivity. He reported that when Jensen and Treynor measures were used, almost half of the funds outperformed the market portfolio over the last five years in Pakistan but when adjusted risk factor for Fama's net selectivity was used to measure the market portfolio, then all the funds outperformed except one.

Afza et al. (2009) examined the performance of Pakistani mutual funds and explored the effectiveness of management for open-ended mutual funds in Pakistan. The purpose of the study was to benefit the fund's managers and the small investors. Performance was evaluated by examining the relationship of mutual funds returns with different attributes like fund's size, fund's expenses, fund's age, portfolio turnover and level of cash. The sample data was collected on quarterly basis for all forty-three open-ended mutual funds listed on MUFAP, from the years 1999–2006. Results were tested by using regression model. Moreover, funds Age and liquidity were used as additional variables to explain their relationship with fund returns. The purpose of the study was to investigate the relationship between funds attributes and fund's performance for the effective management of funds. It also implied that when investors made the investment decision, they keep in mind the past performance of the funds and level of cash holding by these funds.

Debasish (2009) investigated the Equity based mutual fund schemes in Indian scenario. The Study explored the performance of selected equity mutual funds by using the risk-return relationship models and measures. Sample was selected by taking 23 schemes which were offered by six private sector mutual funds and three public sectors for 13 years from April 1996 to March 2009. The analysis was done by using mean return, beta risk, co-efficient of determination, Sharpe ratio, Treynor ratio and Jensen Alpha. The overall analysis concluded that Franklin Templeton and UTI were the outperformers and provided relatively higher returns to the investors while Birla SunLife, HDFC and LIC mutual funds showed poor performance even below-average performance.

Soderlind et al. (2000) evaluated the relationship between mutual funds performance and size of funds in the Swedish market. They used regression model as a research tool. They stated that there was a survivorship bias in this relationship and due to this bias performance evaluation showed mixed results, means better performance was achieved when we purchased equity funds which were smaller in size. Research also examined that larger equity funds performed less than smaller equity funds and also explored that actively managed equity funds performed in a better sway than passively managed funds.

Otten and Bams (2002) carried out a research on "European mutual funds performance" by using both conditional and unconditional models. Results suggested that Europeans mutual funds especially small capitalization funds were good for adding value due to their out-performance. The author also examined that European mutual funds industry lagged behind the US industry in terms of both total assets size and market capitalization. Finally results also explored that French, Italian , Dutch and UK funds out-performed significantly while German funds under-performed the market, though not significantly.

Rao et al. (2013) analyzed the performance of mutual funds in Indian scenario. They attempted to analyze the performance on the basis of risk-return relationship model and other measures. Sample data was selected by taking 10 balanced mutual funds schemes over the period from April 2010- March 2013. The analysis was done on the basis of mean return, beta risk, total risk, Sharpe ratio, Treynor ratio, Jensen Alpha and Fama's decomposition measure. The overall analysis concluded that JM Balanced-G (-0.0282) and Kotak Balanced fund (-0.6974) schemes were poor performed and the remaining 8 were performing well according to benchmark which was S&P CNX Nifty. The reason of failure was low Average beta, disproportionate unsystematic risk and miss-match of the risk and return relationship in some schemes.

Shah and hijazi (2005) reviewed the performance of mutual funds in Pakistan. They evaluated the performance of both open-ended and close-ended funds by comparing it with KSE-100 index. Income after tax, NAV, No of certificates outstanding and monthly returns of KSE-100 index were picked as variables. Sample consisted on close-ended funds and open-ended funds which were selected randomly over the period from 1997-2004. Analysis was done by using sharp model, treynor model and Jensen differential measure. The overall results suggested that Pakistani mutual funds industry was still in growing stage and this industry had the potential to add value if regulatory bodies and management was effective but at the same time some mutual funds were underperforming and facing problem of diversification.

Raza et al. (2011) explored the performance of equity mutual funds with risk and return analysis. Variables were following: yearly Return (YR), Dividend (Div), and Market Portfolio (MP) and Pakistan investment bonds

(PIB's) for 10 years. The sample of equity mutual funds was taken from the Top 10 AMC's (on the basis of average return offered) over the period of 1999-2009. Performance was compared with the benchmark Returns of KSE-100 index by using multi regression model. Results suggested that returns on the most of the mutual funds were out performed than the benchmark return. Only 2 or 3 funds performed less than KSE-100. Results also explored that close and positive relationship exists between the returns of market (KSE-100) and returns of the selected equity mutual funds (sample).

Ali et al (2012) attempted to evaluate the performance of mutual funds in Pakistan with an aim to investigate the rate of returns of mutual funds and effectiveness of regulating bodies to minimize the risk involved in these funds. Sample of 15 mutual funds was taken over the period of 2005-2009. Closing monthly prices of funds and Dividend were picked as variables to calculate the monthly returns for these funds and KSE-100 index. Sharp and Treynor ratios were used as research tool. Results suggested that selected mutual funds were not performing well as compared to market returns (market portfolio) and it might be due to the time limitation as data was taken for only five years.

Nafees et al (2011) carried out a research to evaluate the performance of both open and close-ended mutual funds in Pakistan for the period of 2006-2010. Risk adjusted performance was measured by using different models like sharpe, Treynor, sortino, Jensen Differential model and information measure. Sample data was consisted on eight open end and eleven close end equity and balanced mutual funds and variables were Returns on open end and close end equity mutual funds. Market performance was selected as a relative benchmark for determining the excess returns. Different measures reflected performance of industry in different ways. Some funds were outperforming while some were underperformed.

Soongswang et al. (2007) conducted a comprehensive research on Thai mutual funds for the period of May 2005 to April 2007. Sample of 138 open ended equity mutual funds managed by 17 AMC's was taken. Variables were Net asset value NAV and Dividends. Performance evaluation was done by using different techniques like Sharpe ratio, Treynor ratio and Jensen's alpha as these tools are traditional and evaluate performance on the basis of Risk and Return relationship. So, in addition to these traditional tools authors used a multi-criteria approach Data Envelopment Analysis (DEA). Results of 3 traditional tools suggested that selected mutual funds outperformed the market for the whole period of investment while results drawn by using last tool (DEA) were varied, some funds were out-performing the market and some were under-performing depending upon the time horizon.

Almonte (2013) studied the risk adjusted performance of mutual funds in Philippine by using Sharpe ratio, Treynor ratio and Information ratio. Based on the coefficient correlation results suggested that both equity and balanced funds show different performance some were out-performing while some were under-performing depending upon the % of benchmark. With regards to research Hypotheses results suggested that there was a significant correlation between the Sharpe and Treynor ratio, Treynor and Information ratio and Sharpe and information ratio for both equity and balanced mutual funds.

Mahmud & Mirza (2011) indicated the performance of mutual funds in Pakistan during the period of 2006 – 2010. For evaluating the performance firstly Excess return was calculated through Sharpe measure, then performance was evaluated by comparing it with the Benchmark which was market return. Sharpe ratio, Jensen's Alpha, CAPM model and Fama French three factors model were used as research tools. Results revealed that Islamic funds show strong growth and performance than conventional funds and income funds have negative excess returns due to underdevelopment of bonds market and high rates on T-bill.

Carhart (1997) investigated the Persistence in equity mutual funds performance over the period of 1962-1993 by using CAPM model and Performance Attribution model (4 Factors Model). He found the negative relationship among Expense ratio, portfolio turnover and mutual funds Performance however he also found that the persistence to performance can be achieved if the cost is managed as constraint, he further suggested that performance is highly attributed to the persistence of expenses and under-performance and out-performance of funds largely depend upon number of attributes.

Bauer et al. (2006) examined the performance persistence of New Zealand mutual funds (Dead + Surviving). Survivorship bias controlled Sample of 143 open-ended mutual funds was selected for the period of January 1990- September 2003. Single factor model (CAPM), Quadratic timing model which is the extension of CAPM and performance attribution model was used as research tool. Excess returns, Management fees, fund size, fund timing, and expense ratios were used as variables. Overall results revealed that New Zealand mutual funds are not able to outperform. Alphas for equity funds were insignificantly different from zero while for balanced funds were significant. They further found that risk adjusted performance of equity mutual funds has positive relationship with expense ratio and fund size.

Shazia et al. (2008) observed the performance evaluation of mutual funds by taking the sample of 23 closed-end mutual funds for the period of 2001-2008. Results were drawn via five ratios which were Sharpe index, treynor ratio, Jensen Alpha, Sortino and informational measure. Almost all the measures found the same relationship between risk and return of mutual funds except sortino ratio as it dealt with only downside risk. Negative Results

of all these ratios also indicated that mutual funds industry in Pakistan is still lagging behind and fund managers should adopt such strategies that could attract the larger investors by offering them maximum returns and benefits.

Narayanasamy (2013) tested the performance of equity mutual funds. The purpose of the study was to investigate the risk adjusted performance of selected large cap equity mutual funds by using various statistical tools like Sharpe ratio, Alpha, Beta, Standard Deviation and R-Squared. Sample data comprised of 5 mutual funds schemes offered by various private sectors and covered the period of 3 years from January 2010 – December 2012. Overall results revealed that all the funds performed well in the highly volatile market during this selected period. Author also suggested that when investors want to invest in mutual funds they should also consider the statistical tools in addition to Total Return and NAV for ensuring the past performance and persistence in performance of these mutual funds.

Bangash (2012) attempted to analyze the performance of European mutual funds and impact of fees and other expenses on this performance. After screening, out of 296 open-ended mutual funds Sample of 122 equity mutual funds was taken for the period of June 1990-December 2009. Carhart four factors model (1997) was used as research tool to find out the risk adjusted performance of mutual fund returns. Overall results revealed that there was a significant negative relationship between mutual funds performance and fees charged on these funds.

OBJECTIVES OF THE PRESENT STUDY

This study aims to find out the necessary facts regarding performance of selected balanced mutual funds, which can benefit the investors and fund managers. Following are the main objectives of this study:

1. To examine the comparative performance of selected balanced fund schemes and KSE-100 index in terms of risk and return.
2. To analyze the excess return per unit of risk evidenced by selected mutual fund schemes and to draw comparisons.

METHODOLOGY

Sampling:

Faysal asset mgt, HBL, JS, MCB, and NBP offered balanced mutual fund schemes which are considered for analysis under this study.

Data Sources:

The study is based on the secondary data. For evaluating the performance of the sample schemes the adjusted Daily base NAV (Net Assets Value) data during 2010–2013 have been collected from various Websites like www.Mutualfundspakistan.com, KSE 100 index and official sites of mutual fund companies provided valuable data and information for the study. The data are also drawn from the respective websites of the selected mutual funds. Kibor rate is collected from state bank site.

PERFORMANCE EVALUATION MEASURES

The idea behind the performance evaluation is to compare the returns obtained by the portfolio (or selected mutual fund schemes) through active management by the investment manager. And a stock market index is selected as a benchmark portfolio. To carry on this exercise, two types of techniques are applied that consider total risk and measures that consider systematic risk. The performance of selected mutual fund schemes has been evaluated by using following performance measures:

(a)Rate of Return and Risk
(b) Sharpe measure
(c) Treynor measure
(d) Jensen differential return measure,
(e) Fama's Components of Investment Performance.

a) RETURN

For each mutual fund schemes in the sample, the returns have been calculated taking monthly Net Asset Values from April 2010 to March, 2013. Here two types of returns are calculated i.e: portfolio return and market return. The return is calculated by using the following formula.

$$Rpt = \frac{NAVt - NAVt-1}{NAVt-1} \dots (1.1)$$

Where, Rpt is the difference between Net Asset Values (NAVs) for two consecutive days divided by the NAV of the preceding day. 't' and 't-1' indicate month end month beginning respectively, t-1,2,3,…n. In is the Natural logarithm to the base 'e'. The average return on the market portfolio is determined as follows:

$$Rp = \sum_{t=1}^{n} Rpt/n \dots (1.2)$$

Where,

Rp is the average return on the mutual fund schemes. It is also called an average return on the portfolio.
The returns on market portfolio are computed as follows:

$$Rmt = \frac{[Index\ t - Index\ t-1]}{Index\ t-1} \dots\dots (1.3)$$

Where,
Rmt is the returns on the basis of KSE-100 index.
The average return on market index is as follows:

$$Rm = \sum_{t=1}^{n} Rmt/n \dots\dots (1.4)$$

Where,
Rm is the average return on the market.

RISK
Risk is also calculated for portfolio as well as for market to make comparison.
Standard Deviation:
Standard deviation is a measure of total risk. In the present study, the standard deviation of monthly returns has been taken as the measure of risk.

$$\sigma p = \{ 1/n\Sigma\ (Rpt-Rp)2 \}1/2 \dots\dots(1.5)$$

t=1, Where,
σp is the total risk of the portfolio.
The total risk on the market line portfolio is computed as follows:

$$\sigma m = \{ 1/n\Sigma\ (Rmt - Rp)2 \}1/2 \dots\dots(1.6)$$

t=1, Where,
σm is the total risk of the market portfolio.

BETA:
Beta measures the systematic risk and shows how sensitive the return of a security is in relation to the market return. It is calculated by relating the return on a security with return for the market.
The beta estimated form the following formula is,

$$Rpt = \alpha + \beta\ Rmt + ep \dots\dots(1.7)$$

Where,
Rpt is the return on the mutual fund scheme
Rmt is the return on market index i.e. KSE-100
ep is the error term
α is the constant term

b) Sharpe's Measure
According to Sharpe, it is the total risk of the fund that the investors are concerned about. So, this measure evaluates mutual funds on the basis of reward per unit of total risk. Symbolically, it can be written as:

$$Sharpe\ Measure = (Rp - Rf)\ /\sigma p \dots\dots (1.8)$$

Where,
Rp represents return on fund; Rf is risk free rate of return and σp is standard deviation of the fund. While a high and positive Sharpe Ratio shows a superior risk-adjusted performance of a fund, a low and negative Sharpe Ratio is an indication of unfavorable performance.

c) Treynor's Measure
This performance measure evaluates funds on the basis of ratio of return generated by the fund over and above risk free rate of return during a given period and systematic risk associated with it (beta). Symbolically, it can be represented as:

$$Treynor's\ Measure = (Rp - Rf)\ /\beta \dots.(1.9)$$

Where,
Rp represents return on fund,
Rf is risk free rate of return and
β is beta of the fund.
All risk-averse investors would like to maximize this value. While a high and positive Treynor's Measure shows a superior risk-adjusted performance of a fund, a low and negative ratio is an indication of unfavorable performance.

d) Jensen Differential Measure
This measure involves evaluation of the returns that the fund has generated in relation to the returns actually expected out of the fund given the level of its systematic risk. The surplus between the two returns is calledAlpha, which measures the performance of a fund compared with the actual returns over the period. Required return of a fund at a given level of risk (β) can be calculated as:

Rp- Rf = α + β (Rm - Rf) + ep ….(1.10)

Where,

Rp = Average return on the portfolio

Rm = average market return

Rf = risk free rate of return

α = Intercept measuring of the forecasting ability of the manager

β = Systematic risk measure

ep = error term.

Rf after calculating it, alpha can be obtained by subtracting required return from the actual return of the fund.

f) Fama's Decomposition Measure

The purpose of performance evaluation is to identify the mistakes and suggest a direction for making necessary corrections. According to Fama, portfolio return constitutes four components. They are:

a) Risk-Free return   **Rf**

b) Compensation for systematic risk   **{β (Rm-Rf) }**

c) Compensation for inadequate diversification   **(Rm-Rf) (σ p /σm -β)**

d) Net Superior returns due to selectivity   **(Rp-Rf) - (σp/βm) (Rm-Rf)**

In the above, second and third measures indicate the impact of market risk (Systematic risk) and diversification. By altering systematic and Unique risk a portfolio can be reshuffled to get desired level of return. A portfolio manager can earn superior return by identifying the undervalued securities through constant research and professional acumen. The ability of selectivity can be known with the help of the fourth component.

EMPIRICAL RESULTS

Table 1 shows that during the time span of this study all balanced mutual funds show positive return except Faysal asset mgt fund. Among five selected mutual funds schemes only NBP outperformed the market. The study illustrates that in 2012 all schemes show positive return but below market return while in 2011 Fayysal asset mgt shows negative return and others fund schemes show positive return but below market retun.

TABLE 1: RETURNS ON SELECTED BALANCED MUTUAL FUND SCHEMES

Return calculated				
Name of Schemes	**Avg Daily Return**			
	2010-11	**2011-12**	**2012-13**	**Avg. results**
Faysal asset mgt	0.00047831	0.000146673	0.00005195	0.000127864
HBL	0.000513209	0.000428133	0.000530817	0.00049072
JS	0.000275235	0.000593606	0.000428897	0.000432579
MCB	0.000051377	0.000495361	0.000337362	0.0002947
NBP	0.000036626	0.000797739	0.082518252	0.027784206
KSE 100 index	0.000613669	0.001317057	0.001557288	0.001162671

TABLE 2: RISK OF SELECTED MUTUAL FUND SCHEMES

Risk calculated				
Name of Schemes	**Σ**			
	2010-11	**2011-12**	**2012-13**	**Avg. results**
Faysal asset mgt	0.013098859	0.00577187	0.106276155	0.041715628
HBL	0.030016282	0.008657269	0.008761565	0.015811705
JS	0.00787138	0.008450259	0.009769596	0.008697078
MCB	0.007536606	0.00746136	0.008342643	0.007780203
NBP	0.011524077	0.005815602	0.004992674	0.007444118
KSE 100 index	0.013381129	0.009736806	0.009230099	0.010782678

This table 2 shows risk in term of standard deviation of returns of five selected schemes. In 2011 all schemes except HBL are less risky than market while in 2012 all schemes are less risky than market risk. In average results three schemes are less risky while Faysal asset mgt and HBL are more risky mutual fund schemes.

TABLE 3: BETA VALUES OF SELECTED BALANCED MUTUAL FUND SCHEMES

Beta Values				
Name of Schemes				
	2010-11	**2011-12**	**2012-13**	**Avg. results**
Faysal asset mgt	0.584485179	0.02354669	0.102449563	0.152829643
HBL	0.547455108	0.472520986	0.260158201	0.426711431
JS	0.706805533	0.371553594	0.046601661	0.37498693
MCB	0.508687327	0.539563735	0.176241288	0.408164117
NBP	0.392447857	0.507275644	0.032836775	0.310853426
KSE 100 index	1	1	1	1

Table 3 illustrates the average Beta of selected balanced mutual fund schemes. During study all schemes levels have defensive Beta values. In average results out of all schemes HBL has less defensive Beta value.

TABLE 4: TREYNOR INDEX AND ITS BENCHMARKS VALUES OF SELECTED BALANCED MUTUAL FUND SCHEMES

Treynor Index				
Name of Schemes				
	2010-11	**2011-12**	**2012-13**	**Avg. results**
Faysal asset mgt	-0.22734	5.030573	0.9122	1.905144333
HBL	-0.24091	-0.25009	-0.35697	-0.282656667
JS	-0.18693	-0.3176	-1.99502	-0.833183333
MCB	-0.26018	-0.21889	-0.52804	-0.335703333
NBP	-0.3372763	-0.23223	-0.33139	-0.300298767
KSE 100 index	-0.13183	-0.11725	-0.09189	-0.113656667

This table 4 shows results regarding treynor index for both sample and benchmark schemes. In 2010-2011 no scheme outperformed the market. In 2011-2012 only Faysal asset mgt outperformed the market. In 2012-2013 again only Faysal asset mgt outperformed the market. in total from these three years only 2 time a scheme outperformed the market.

TABLE 5: SHARPE'S INDEX AND ITS BENCHMARKS VALUES OF SELECTED BALANCED MUTUAL FUND SCHEMES

Sharpe Index				
Name of Schemes				
	2010-11	**2011-12**	**2012-13**	**Avg. results**
Faysal asset mgt	-10.1443	-20.5225	-8.793	-13.15326667
HBL	-4.39384	-13.65	-10.5996	-9.547813333
JS	-16.7855	-13.9648	-9.51637	-13.42222333
MCB	-17.5608	-15.8295	-11.1551	-14.84846667
NBP	-11.4858113	-20.2562	-2.17954	-11.30718377
KSE 100 index	-10.3602	-12.8223	-1.12855	-8.103683333

Table 5 shows sharp index for selected portfolio schemes and the bench mark. All schemes are under performers except for HBL in 2010-2011. Overall trends including market returns are negative.

TABLE 6: JENSEN'S ALPHA OF SELECTED BALANCED MUTUAL FUND SCHEMES

Jensen Differential Measure:				
Name of Schemes				
	2010-11	**2011-12**	**2012-13**	**Avg. results**
Faysal asset mgt	0.000478	-0.1187276	-0.0934	-0.070549867
HBL	-0.1324	-0.1186	-0.0934	-0.1148
JS	-0.1324	-0.1186	-0.0934	-0.1148
MCB	-0.1324	-0.1186	-0.0934	-0.1148
NBP	-0.133	-0.1186	-0.0934	-0.115

Table 6 illustrates results of Jensen Alpha measure of the selected schemes. In 2010-2011 all schemes except Faysal aseet mgt show negative results. In 2011-2012 and 2012-2013 all schemes show negative results. All average results are also negative.

TABLE 7: FAMA'S NET PORTFOLIO RETURNS DUE TO SELECTIVITY FOR SELECTED BALANCED MUTUAL FUND SCHEMES

Fama's Decomposition Measure:				
Name of Schemes	Net Portfolio Return due to Selectivity			
	2010-11	2011-12	2012-13	Avg. results
Faysal asset mgt	-0.13108	-0.1179	-0.09247	-0.113816667
HBL	-0.12793	-0.11715	-0.09206	-0.11238
JS	-0.13108	-0.11702	-0.09207	-0.11339
MCB	-0.13136	-0.11897	-0.09229	-0.114206667
NBP	-0.13084	-0.11712	-0.01042	-0.086126667

Table 7 shows Fama's measure, whose positive value shows superior stock selection skill of the managers. Here negative values show that managers of all selected schemes showed poor stock selection skills during the whole period.

SUMMARY AND CONCLUSIONS

This paper analyzes the performance of selected mutual fund schemes in Pakistan using performance measures like treynor, sharpe and Jensen's Alpha measure. In addition Fama's measure decomposes selected scheme's performance into various components and analyzes them. The daily Net Asset Value of five balanced mutual funds for three years are used to calculate rate of return of selected schemes which are then compared with market returns represented by KSE100. The empirical results show that total returns from all selected schemes are positive except Faysal asset mgt fund, however average returns are below market returns. Findings also reveal the mix trend of risk in selected schemes, overall defensive beta values. In 2011 all schemes except HBL are less risky than market while in 2012 all schemes are less risky than market risk.

The empirical results indicate underperformance by most of schemes during span of study through treynor measure, negative Sharpe index, Jensen's measure and Fama's measure. These can be mainly attributed to the lack of professional management skills in security analysis and consequent poor stock selection, inadequate diversification on the one hand and highly conservative approach in constructing portfolios when market conditions demand aggressive portfolios on the other hand.

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