Performance Evaluation of Pakistani Mutual Funds: Empirical Evidence

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Abstract

The study was conducted by evaluating the performance of Pakistan mutual funds. The objective of the study was to evaluate the risk adjusted performance of closed ended, open ended funds in Pakistani markets. The dependent variable was performance and the independent variable was assets, expenses, age and liquidity. The results of one sample t-test show that Sharpe, Treynor ratio, Jensen Alpha, Sotino ratio and Information ratio of market portfolio (test value) is significantly higher than that of the mutual funds at 10% level of confidence.

Keywords: Sharp ratio, Treynor ratio, Jensen Alpha, Sotino ratio and Information ratio

Introduction

Mutual fund is basically an organization that pools the cash from a gathering of speculators (its shareholders) to pay for monetary securities, fabricating a less hazardous portfolio than an individual financial specialist would do (Abbasi, Kalantari & Abbasi, 2012).

Mutual funds have become one of the most famous tools of investment for common people because they provide opportunity of diversified investment for small investors. Assets under management are increasing and mutual funds are getting diversified as their demand is growing. Consequently, performance assessment of mutual funds has become an attractive area for academic researchers and an area of vital interest for investors and mutual funds managers (Simons,1998), because the historical performance of mutual funds is usually a highly significant determinant of the investment decision (Zhao et al, 2011; Brown et al, 1992; Nouman and Shah, 2013).

Throughout the years mutual fund industry has encountered enormous development, though, mutual fund is as yet a current marvel in a portion of the creating nations. Expanding number of mutual funds in the well-established money related markets show investor's inclination for this method of venture (Huhmann, 2005). Zera (2001) called attention

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to the most abnormal normal for open-ended funds by characterizing these as having no clients yet just shareholders. Fundamentally, mutual funds are foundations set up with the end goal of profiting little investors, who can't put specifically in different sorts of securities.

Objectives of the Study

i). To describe prevailing kinds of mutual funds operating in Pakistan market and the determine factors affecting Performance of the mutual funds.

ii). To evaluate Performance of Mutual Funds in Pakistan for the period 1962 – 2015 and to compare open and close ended in this regard. The performance evaluating shall also include measurement of managerial effectiveness and operational efficiency.

Literature Review

Sharpe proportion is a metric that means to gauge the attractive quality of a venture by isolating the normal time frame return in overabundance of the hazard free rate by the standard deviation of the arrival producing process. Conceived in 1966 by Stanford Finance Professor William F. Sharpe as a measure of execution for mutual funds, it without a doubt has some an incentive as a measure of speculation "quality," however it has a couple of impediments moreover.

Dhimen & Rajeev (2014) matched three schemes. ICICI, Birla Sun life & HDFC for one year only. Jan 2013 - Dec 2013. They used Sharpe ratio & compared them with market return. They concluded that only ICICI top 100 was not negative on the basis of Sharpe. Birla sun life top 100 and ICICI top 100 did better than market return. Also Lilly & Anusuya (2014) using Sharpe ratio, Treynor ratio, Sortino ratio and Jensen’s Alpha examined the performance of 49 open ended tax saving ELSS schemes for April 2008 to March 2013. They found that only LIC Nomura MF growth & dividend were risk endured & yielded comparatively encouraging returns than the market.

Goel (2015) comparing debt & equity schemes, tried to analyze the maximum return giving fund in Coimbatore Capital Ltd. The span of study was 5 years i.e. 2007-2011. When these schemes were compared, only HDFC EQUITY FUND and HDFC TOP 200 FUND showed encouraging performance in the market. It was due to the fact that these mentioned funds had high risk & high return. Jacob T. et.al (2013) examined the top mutual fund scheme of UTI & SBI. He recommended that investors should invest in UTI floating Fund and SBI FMCG Fund because these funds possessed the highest risk &returns.

Raza et al, (2011) investigated the execution of equity mutual funds with risk and return examination. Factors were taking after: yearly Return

(YR), Dividend (Div), and Market Portfolio (MP) and Pakistan venture securities (PIB's) for a long time. The specimen of equity mutual funds was taken from the Top 10 AMC's (on the premise of normal return offered) over the time of 1999-2009. Execution was contrasted and the benchmark Returns of KSE-100 list by utilizing multi relapse display. Comes about recommended that profits on the vast majority of the mutual funds were out performed than the benchmark return. Just 2 or 3 funds performed not as much as KSE-100. Comes about additionally investigated that close and positive relationship exists between the profits of market (KSE-100) and returns of the chose equity mutual funds.

Shazia et al. (2010) examined the execution assessment of mutual funds. She took 23 closed-end mutual funds from 2001-2010 as sample. Jensen Alpha, Treynor ratio, Sharpe index, Sortino and informational measure were used in the research. Besides Sortino ratio, which dealt only with downsize risk, the rest of the measures found similar association between risk and return of mutual funds. As all those ratios gave negative results, it suggested that the Pakistani mutual funds industry had still a long way to go and that the fund managers should implement policies which, by offering maximum benefits and returns, could attract the larger investors.

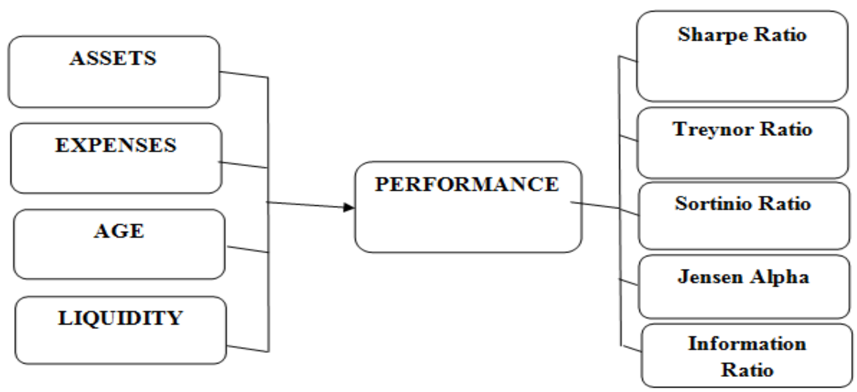
Afza and Rauf (2009) and Nazir and Nawaz (2010) both focus on finding the determinants of mutual fund execution. Afza and Rauf endeavor to comprehend and clarify open ended mutual fund execution for the 1999–2006 periods as demonstrated by a quarterly Sharpe proportion. They find not very many components that seem, by all accounts, to be huge and the outcomes indicate the significance of past returns anticipating future returns while different elements, for example, cost proportions or the fund's asset size are not huge. Nazir and Nawaz (2010), then again, concentrate on a little example of 13 mutual funds where there is family or group possession, and attempt to distinguish critical components that decide the development of the business. They find that estimate of the assets has a positive effect on execution, as do administration charges.

Research Methodology

Ojo (2003) characterized the term methodology as an arrangement of express standards and techniques in which research is based and against which cases of information are assessed. Along these lines, this area concentrates on the exploration methods received and utilized for this review with the point of accomplishing the examination destinations. In the proposed study closed ended and open ended mutual funds enrolled in Mutual Funds Association of Pakistan (MUFAP) was considered as populace of the review and that is 119 mutual funds. Out of the total 119 mutual funds, 93 mutual funds were selected for the sample of the study on the basis of the availability of the data. Data was collected from these mutual funds from 1962 to 2015. For analysis the data was gathered from their yearly reports and also from Balance sheet investigation of State Bank of Pakistan. The information of the Net Assets Values (NAVs) was the major component of the data analysis. The historical data of NAVs were collected from the official web site of Mutual Funds Association of Pakistan (MUAF). The study used regression analysis to find the effects of the variables on one another, coefficient of variance, t-test was run to find the significance.

Conceptual Frame Work

Independent Variable Dependent Variable



Result and Discussion

Category	No of Funds	Excess return Over Benchmark (%)	Excess return Over Risk Free (%)	σ	Coeff. of Variation (%)	B
Money Market	15	-0.00679	-0.71284	0.090748	-0.03338	0.814606
Income	19	-0.0034	-0.88713	0.069887	-0.00827	0.894487
Equity	14	0.040016	-0.84381	0.249357	0.104702	1.269814
Index tracker	1	0.0084	0.878	0.0576	0.145833	0.9254
Assets allocation	6	0.00138	-0.88233	0.075467	-0.03638	0.9506
Balanced	7	0.034637	-0.84936	0.240086	0.061756	0.034637
Fund of funds	1	0.00518	-0.8766	0.1195	0.043347	0.8422
Aggressive Income	2	0.000925	-0.8828	0.03155	0.02922	0.90395
Sharia Complaint	15	0.000794	-0.8445	0.0167	0.046869	0.87625
Closed ended	13	.00075	0.9293	.0008	-0.9375	0.0244
Total	93					

Risk & Return of the portfolios

Showed the risk and return of the portfolios, the first column is the name of the funds, second is no of funds which shows the number of funds in the individual portfolio and also the total funds i.e. 93. The excess return column shows the average return of the portfolios. The purpose to check whether the investors are taking good return or not? The values show that the all the portfolios are having positive return except money market and income funds who's investors are facing loss in the market. The values show that the investors of equity funds are enjoying 4 percent return on their investment in the funds while the other outstanding performance is of balanced funds who have 3 percent return. But researcher look at the beta of these two funds which shows that the equity funds are highly risky funds i.e. 1.26 while the balanced funds are having low risk beta 0.034. It means that the equity funds in the Pakistani market are highly risky funds to invest but at the same time they are the only funds getting highest return in the market as well. The balanced funds are the profitable funds and they are less risky to invest.

Closed ended Risk adjusted performance: Mutual funds vs benchmark portfolio

	Mutual Funds Values				
Measure	Test value	Mean	Standard Error	t-value	Sig
Sharpe Ratio	.00	25.036	2.52	9.923	.000
Treynor ratio	.00	-.9578	.032	-29.11	.000
Jensen Alpha	.00	-.0029	.003	-.851	.396
Sortino	.00	1.868	2.69	.692	.490
Information	.00	-30.821	4.77	-6.450	.000

One sample t-test.

Regression

	SR	TR	JR	STR	INR
Total Assets	1.08331 0.12	9.22131 1.8034	9.18279 2.4995	6.25472 0.43	-4.74694 -0.01
Expenses	1.87441 0.31	1.47919 1.8337	9.47569 0.1635	-1.34818 -0.34	8.93128 0.12
Age	4.75868 2.74	7.79104 3.5474	3.04315 1.9284	0.357142 .084	-3.1815 -0.42
Cash	0.368482 0.88	-0.308884 -1.8705	-0.419906 -3.5391	-4.59642 -0.21	-9.17132 -0.24
R-square	0.84	0.30	0.25	.004	.003

The results of regression of the Sharpe ratio, Treynor ratio Jensen alpha, Sortino Ratio and Information ratios used to analyzed the performance of the closed ended firms in the current study. The findings suggested that the Sharpe ratio has positive relationship which suggested that the performance measured in terms of Sharpe ratio will be lower when the funds try to increase their assets. The results suggested that the funds should try to invest in equity financing and not in the assets. The expenses have positive relationship with the performance measured by Sharpe concluded that the funds having more expenses will get more returns or will have higher performance. The relationship with the age of the funds and cash holdings are positive which suggested that the firms will have more return or good performance when the funds have cash or mature funds will have more returns.

Relation B/w sharp ratio and assets is insignificant which clears that large fund size which benefits neither the shareholders through high economics of scale nor does it costs them due to more agency problems. The large fund size although, certainly give benefits management fee of management is fixed % of assets fund (Afza and Rauf, 2009).

Open ended Risk adjusted performance: Mutual funds vs benchmark portfolio

	Mutual Funds Values				
Measure	Test value	Mean	Standard Error	t-value	Sig
Sharpe Ratio	.00	24.8	1.1	21.04	.000
Treynor ratio	.00	-.976	.01	-66.2	.000
Jensen Alpha	.00	.000	.001	-.027	.979
Sortino	.00	-165.9	51.4	-3.2	.001
Information	.00	-9.6	5.9	-1.6	.106

One sample t-test Regression

	SR	TR	JR	STR	INR
Total Assets	5.48609	-1.3644	-4.91932	-3.03148	-1.15859
	2.0386	-0.5297	-2.4346	-0.15	-0.05
Expenses	2.7128	2.06013	2.12969	3.30367	2.2733
	0.4416	2.2958	3.0257	1.86	1.09
Age	-8.35034	-1.30289	5.26261	48.7877	-
	-0.6848	-0.7540	0.0388	1.26	0.479951
					-0.10
Cash	-0.67014	-	-	-3.66339	-1.13764

	-6.2210	0.161119 -4.0994	0.109596 -3.5549	-0.40	-1.06
R-square	0.87	0.06	0.06	0.16	.006

The above tables shows of regression for the Sharpe ratio, Treynor ratio and Jensen alpha used to analyzed the performance of the open ended firms in the current study. The findings suggested that the Sharpe ratio has positive relationship which suggested that the performance measured in terms of Sharpe ratio will be lower when the funds try to increase their assets. The results suggested that the funds should try to invest in equity financing and not in the assets. The expenses have positive relationship with the performance measured by Sharpe concluded that the funds having more expenses will get more returns or will have higher performance. The relationship with the age of the funds and cash holdings are negative which suggested that the firms will have more return or good performance when the funds have less in cash and more investment in shares in the market or less mature funds will have more returns.

Gorman (1991) found also that small mutual funds as net assets measured it performs abut better than large mutual fund results shows that mutual funds quickly exhaust scale economics and deserved expensive returns (Becker and Vaughan, 2001; Chen *et al.*, 2004).

Conclusion

The regression results of closed ended shows, that the Sharpe ratio has positive relationship which suggested that the performance measured in terms of Sharpe ratio will be lower when the funds try to increase their assets. The results suggested that the funds should try to invest in equity financing and not in the assets. The expenses have positive relationship with the performance measured by Sharpe concluded that the funds having more expenses will get more returns or will have higher performance. The relationship with the age of the funds and cash holdings are positive which suggested that the firms will have more return or good performance when the funds have cash or mature funds will have more returns. According to the regression of open ended, The expenses have positive relationship with the performance measured by Sharpe concluded that the funds having more expenses will get more returns or will have higher performance. The relationship with the age of the funds and cash holdings are negative which suggested that the firms will have more return or good performance when the funds have less in cash and more investment in shares in the market or less mature funds will have more returns.

The Sharpe ratio was used to show the risk adjusted performance. Some of the funds are having negative Sharpe ratios which means that their performance is not and they are not having favorable risk adjusted performance. The management of these funds should try to invest the investor's funds in the diversified portfolios so that they might get return and the investors attract in these funds which leads to have positive sharpe ratio. Some of the funds are having negative Treynor Ratios which indicate not a good performance by the fund. The management should try to get positive treynor ratio so that they their performance might get good and investor will attract.

Application

The research will help the investment companies in Pakistan to achieve the trust of the investors to invest funds in their portfolios. Furthermore, it will also help to induce the behavioral change of investors and to educate them to invest in Mutual Funds. The research will benefit academic area that is it will contribute to the existing body of knowledge and will provide basis for future research. The researchers can increase the independent variables and sample size or they might be more focused on open or closed ended to provide more knowledge to the market.

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