

## **Performance-Chasing Behavior and Mutual Funds Performance in an Emerging Economy, New Evidence from Multi-Fund Managers: A case of Pakistan open ended mutual funds**

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### **Abstract**

*Mutual Funds through its professional managers enable small investors to enjoy benefits of capital market with small amount. This study with special focus on Performance-Chasing Behavior and Mutual Funds in an Emerging Economy like Pakistan. The data of 100 open-end Mutual Funds, for the period 2013 to 2018 was collected from Mutual Fund Association of Pakistan; while the risk free rates data was collected from State Bank of Pakistan and Stock data from Pakistan Stock Exchange for predicting the results, Ratio and models were used to understand its suitability. The study has certain implications for the investors in knowing which funds perform better and which kind of funds are ideal for investment.*

**Key Words:** *Mutual Fund Performance Relation, Risk Adjusted Performance, Managers Skills*

### **1. Introduction**

The assets management companies provide an opportunity to all those investors who have lack of financial expertise to manage or unable to diversify their investment. Mutual Fund act like a bridge between investors and their destined objectives, acting as an agent to invest the investors' investment in different securities. Mutual Fund is a collective investment of individual and groups in which experts (Financial Managers) invest the pool investment in various mix of investment (stock, bonds, money markets and others) for maximizing the stake of their stakeholders. The responsibility of making investing decisions in suitable portfolio is totally rests on the asset management companies (Mutual Funds AMC's). The investors invest by purchasing units to become shareholder of the Mutual Fund. Comparative to risk and return, the Mutual Funds provides high return by investing in diversified portfolio. Mutual Funds assemble and collect from small investors, and then invest in securities or assets or in mixture of it according to investors'

objectives (Afza & Rauf, 2009). Mutual Funds are operated by financial managers and banks for generating income and capital gain for their own interest as well as for investors (Ali, 2015). Mutual Fund earns money from the security on two basis, first from obtaining dividend on security, second from the increasing of security price (Razzaq, Gul, Sajid, Khan & Razzaq, 2012).

In open-end there is no compulsion to fix the numbers of shares, the funds issues shares as demanded by investor, no restriction and limitation on investors for purchasing of shares. The open ended fund on its holder's demand continuously creates and redeem units. The term unit trust is used for it in financial market. Investor buy units and can redeem as and when deem fit at a prevailing Net Assets Value (NAV). The open ended fund units are bought and redeemed through (AMCs) Management Companies. These AMCs announce offer price and redemption price on daily basis. Similarly the Closed ended fund have fixed number of units and initially are floated same like public companies through IPO (initial Price Offer) and then be sold in Stock Exchange. The buying and selling rate are announced on daily basis in stock exchange (MUFAP 2017). The large project needs huge investment; Mutual Funds provide this opportunity by making pools through accepting investment from individual. . The gap exist to evaluate Mutual Fund performance through both traditional and modern method. This study explore both traditional and modern methods to evaluate Mutual Fund performance which will fill the gap from Pakistani perspective.

### **1.1 Statement of Problem**

Investing decision is one of the critical functions of financial manager of any organization, upon which future of the organization hinges considerably. In Pakistan there are many options to destine investment; however selection of a particular option is governed by trade-off between risks and return associated with competing options. Pakistan's Mutual Fund is mostly considered as most preferred choice for long term investment by the various organizations on the pretext that it has better returns & less risk. To test the validity of these assumptions there is a dire need to carry out an in-depth empirical appraisal of its performance over the years. To carry out an in-depth empirical analysis of the Pakistani Mutual Fund, the research study aimed to conduct an analysis of performance of both types (Open & Close) funds using triangulation methods of analysis i.e tradition methods (Ratio Analysis) and Fama French 3 factors, CAPM & Carhart 4 factors models (Modern Method) with a view to validate modern method on one hand and conduct a comparative analysis between the close and open end fund on the other.

## **2. Review Of Literature**

### **2.1 Mutual Fund**

Mutual Fund offers wide area of research investigations. Many research studies contributed in evaluating the fund performance. Sharp (1964) introduced Capital Asset Pricing theory formally CAPM. The same model was used by researcher like Linter (1965), Treynor (1965) & Mossin (1966). Treynor (1965) investigated the market impact on portfolio return. Jensen (1968) found the association of funds' performance to particular benchmark. He found that fund having positive alpha beat the market. Carleson (1970) investigated return through regression and found that majority of fund outperform market return.

## **2.2 Mutual Fund Growth And History**

Mutual Fund are very ancient investment vehicle, collects savings of small investors for investing in money market instruments or stocks and bonds (Shah & Hijazi, 2005). This concept of investment company concept derived from Europe in late 1700s when Abraham van Katwitsch Dutch Merchant asked investment contributions from investors with narrow means. The “investment Pooling” concept or materializing of investment in the era of 1800s in England bring the idea more closer to United States shores. The depiction of British company Laws (the 1862 and 1867 Joint Stock Companies Acts), legalized the sharing of profit in the investment of an enterprise as well as the liability of the investor become limited up-to the investment. In early British fund customary established link with securities markets in U.S. to serve post-Civil War financing. The SAIT (Scottish American Investment Trust), Robert Fleming (fund pioneer) was the founder in February, 1873 invested in United States economic potential, done over with American railroad bonds (Gupta & Choudhury, 2001).

## **2.3 Performance Measures of Mutual Fund Industry**

Before 1965, the method of evaluating Mutual Fund performance was comparing fund returns and this was the only method available for portfolio managers to evaluate the fund performance. Possibly only the Close (1959) study was available in earliest, Close compare the two Mutual Fund performance i-e close ended and open ended, concluded that the close ended Mutual Fund performance is higher than the open ended even though the sale proportion of open ended Mutual Fund is 3 three time higher than the closed ended Mutual Fund. Brown & Vickers (1963) argued that each and every Mutual Fund has different criteria for measuring the performance in other words performance measuring criteria are deferent for every Mutual Fund, similarly different performance measure developed and adopted in which initially measure taken from Modern . John McDonald (1974) inspected the connection between the fund goals, risks and return. There are a few studies conducted to accommodate the discussion one of the investigation was led by John G. McDonald (1974). This study finds that in a relation of the market line with 123 Mutual Funds there is no proof that the fund managers could reliably beat the market on the risk balanced return situations. James R.F. Fellow (1978) assessed the performance of the risk balanced UK investment trusts through the utilization of bid and Jensen measures. This study elaborate that no trust had shown better performance analyzed than the London Stock Exchange Index.

## **2.4 Factors affecting Mutual Fund Performance**

Numbers of factors influence performance of Mutual Funds. these factors can be segmented as Mutual Fund related factors (like fund flow, fund size, fund style, expense ratio, fund age, loads and fund fee etc.) and some of the factors relates to fund family like (management function of the fund and fund family size etc.) or identified and relates to managers (manager skill, knowledge, experience, tenure etc.); factors identified to country (economic and financial development, political condition, country GDP, investing behavior of the people of the country, in case of international fund border and geography etc.) and environmental factors where funds are to be operates (like financial and legal condition). These factors also called Mutual Fund flow determinants. Past literature support the Connection between fund size and fund performance. researcher also contended that most of the managers are strongly motivated to increase in fund size

(on the grounds that fund industry remuneration is on the basis of asset under the management), to the detriment of returns (Becker & Vaughan, 2001).

## **2.5 Pakistan mutual fund industry overview**

### **2.5.1 Mutual Fund Association of Pakistan (Mufap)**

MUFAP is a trade body representing country major portion of investment, the investment of multi billion rupees in asset management industry. Assets management companies invest the pool investment of the small investors in various mix of investment (stock, bonds, money markets and others). These investments are managed in a wide variety of investment by skilled managers under the MUFAP. The role of MUFAP is to ensure transparency, Mutual Fund industry growth and high ethical conduct. AMC's operate by the Mutual Fund and these AMC's are controlled by Mutual Fund association of Pakistan registered as Public limited Company which is limited by Guarantee without share capital, companies ordinance 1984 (now Company Act 2017) MUFAP was established in 1996 licensed by the ministry of commerce.

### **Hypotheses**

**H0:** The manager of the fund do not capture the market variation in emerging economy like Pakistan.

**H1:** The Fund managers do capture the market variation in Pakistan.

## **3. Research Methodology**

### **3.1 Population and Collection**

Currently 20 AMC's are operating over 211 open ended mutual funds. Sampling consisting upon all those open ended mutual funds that intercept before July 2013 and exist till June 2018. Some of fund were dropped due to the non-availability of data for the study period. 66 funds were left which were exist from 2005 and included in the sample of the study, the remaining 34 funds were incepted after 2007, for such funds the monthly NAV of the missing period were added as average of the subsequent years so that our sample consisted on 100 open ended mutual funds. 12 years data time period started from 2005 to 2017 selected to get the return of more than 60 months data, as for estimating the beta 60 observations are commonly used (Simons, 1998). The total number of open ended Mutual Fund traded on MUFAP was the population for this research study.

Secondary data used for performance analysis of the Pakistani funds. Data has been collected for this research through the following two ways. The financial reports and annual reports of the Mutual Fund used for analyzing Mutual Fund performance. Pakistan stock exchange and MUFAP web site are the main source for the secondary data of the Mutual Fund. Monthly data for Mutual Fund analysis been collected from 2013 to 2018.

### **3.2 Proxies for Risk Free rate**

The dividend payout and the Net Asset Value of the Month end (NAV) has been used to calculate Mutual fund return. The KSE 100 index is used as a base for market return. Six months of treasury bills returns are used as proxies for the risk-free rate (Sipra 2006). Historical Data regarding KSE 100 has been obtained from Yahoo Finance page and data relates to T-bills obtained from Statistical Bulletins (Issued by State bank of Pakistan) (Nouman & Shah, 2013).

#### **3.2.1 Return**

The returns from a fund are calculated, net of expenses to the fund including management fees. Simons (1998) suggests the monthly returns for each fund:

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

Where  $R_p$  = Fund Return  
 $NAV_t$  = Fund Closing NAV (on the last trading day of the month)  
 $NAV_{t-1}$  = Fund Previous Month last day NAV  
 $DIST_t$  = Capital Gain/Income distributed in the form of cash dividend

The market portfolio monthly returns are calculated using the KSE 100 index as the basis for calculations. The returns on the market portfolio are calculated as:

$$R_m = \frac{KSE100 \text{ index } t - KSE100 \text{ index } t-1}{KSE100 \text{ Index } t-1}$$

Where

$R_m$  = Market return  
 $KSE100 \text{ index } t$  = Month last working day closing value  
 $KSE100 \text{ index } t-1$  = Previous month last working day closing value

### 3.2.2 Risk

Return variance and standard deviation are used for and variance of returns are used as total risk proxy. The standard deviation and variance are accepted for measuring the total risk of a portfolio (Rao and Ravindran, 2004).

$Var(R)$  = Variance of the returns

$$Var(R) = \frac{1}{n} \sum_{t=1}^n (R - R_m)^2$$

Standard Deviation

$$\sigma = \sqrt{Var(R)}$$

## 4. Data analysis and findings

Mutual fund average risk and return (from July 2013 to June 2018)

Fund Category	Excess Return over Benchmark(%)	Excess return over risk free (%)	$\sigma$	Cooff. Of Variation (%)	$\beta$
Equity	-0.191	-0.190	0.681	4.091	0.321
Asset Allocation Fund	-0.901	0.013	0.071	7.001	0.199
Fund of Fund	-0.649	0.199	0.051	3.601	0.089
Capital Protected	-0.691	0.023	0.023	2.321	0.210
Income Scheme	-1.199	-0.361	0.019	1.901	0.071
Index Tracker fund	-0.799	0.071	0.080	7.501	0.332
Aggressive Fixed fund	1.719	-0.860	0.031	20.999	0.110
Commodity	-0.701	0.392	0.021	3.091	0.210
Islamic Sharia fund	-1.287	-0.438	0.013	3.130	0.039
Balanced	0.849	-0.004	0.039	5.000	0.310

### The performance analysis of fund managers in Pakistan using Jensen Alpha

The recurring Jensen alpha value is above the benchmark (Market return), these funds

Fund Category	Jensen Alpha	Treynor Ratio	Sharp Ratio
Equity	0.058	0.080	0.792
Asset Allocation Fund	-0.052	-0.031	-0.682
Fund of Fund	0.004	-0.021	-0.381
Capital Protected	0.001	0.020	0.231
Income Scheme	-0.050	-0.008	-0.212
Index Tracker fund	-0.041	-0.018	-0.341
Aggressive Fixed fund	- 0.060	-0.031	0.312
Commodity	-0.009	-0.002	-0.214
Islamic Sharia fund	-0.007	-0.023	-0.003
Balanced Fund	0.003	-0.907	-0.002

category outperform the market return. The value of Capita protected fund is 0.001 and aggressive fixed income value is 0.060 and the sign indicates positive result that is also beyond the market normal return and these stated funds performed out performance from the current market scenario. The result of the Balanced fund, Asset tracking fund, Income, index tracking, commodity and Islamic sharia fund have negative value of Jensen Alpha which indicates that the return in less than the bench mark (Market return).

### Risk Adjusted Performance: Mutual Fund vs Benchmark Portfolio

1 One sample t test

\* Significant at 5% level of confidence,  
level of confidence

\*\* Significant at 10%

The results of the table indicate risk adjusted performance that Sharpe , Treynor's and Jensen Alpha of the portfolio (test value) percentage is considerably higher than that of 10% confidence level.. We can therefore conclude that the portfolio of benchmarks works in a stronger way than those of mutual funds.

### 5. Conclusion

This paper focused on knowing testability of Performance-Chasing Behavior and Mutual Funds in an Emerging Economy. The Mutual Fund analysis across the world is debatable

Mutual Funds Values					
Measure	Test value	Mean	Standard Error	t-value	Sig
Sharpe Ratio	0.119	-0.320	0.91	-8.04	0.000
Treynor ratio	0.009	-1.065	0.001	-1.30	0.000
Jensen Alpha	0.012	0.000	0.010	-0.030	0.979

concerns for the researchers. Mutual Funds channelize the saving of small investor who

find hard to invest at their cost and manage these investment in profitable avenues. The study analyzed the various categories of open-end funds in Pakistan through the application of models and ratios. The study used the daily NAV of funds and stocks were obtained and then applied the validated mechanism of conversion in the light of past validated researches. The results demonstrate that most of the investor prefer to invest in those fund who have better performance tracking record. This study has certain implications for the managers of asset management companies and the investors. This research can be extended to use more sophisticated and advance performance measures i.e. Fama French -5 factor model. Similar studies can also apply multi-level techniques for better comprehending the Mutual Fund performance in Pakistan. The same models can be tested for comparing conventional and Islamic Mutual Fund in Pakistan as well as emerging economies.

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