International Journal of Advances in Engineering and Management (IJAEM)
Volume 2, Issue 12, pp: 346-351 www.ijaem.net ISSN: 2395-5252

Computational Model for Performance of Mutual Funds with Special Reference Jabalpur and Result Analysis

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Date of Submission: 15-12-2020 Date of Acceptance: 30-12-2020

ABSTRACT: In this paper we calculate performance of investment fund. The performance of investment fund (POIF) give a powerful result analysis with non-parametric method. The methodology used here to predict the performance of fund is Data Envelopment Analysis (DEA).We Calculate here Jabalpur top five market Gorakhpur Main Market, Ganjipura Shopping Complex, Sadar, Market, Adhartal Market, Mominpura Talaiya people investment in to Mutual Funds experimental analysis and result analysis done .We are used here MATLAB 7.14 software tools for calculating result analysis of efficiency of Performance of investment fund.

Keywords: Non Parametric, Load Status, Risk, Past Performance, Expense Ratio, Efficiency, MATLAB 7.14.

I. INTRODUCTION

Performance of Mutual Funds is an important issue for investors. Mutual funds have been widely applicable with different factors of Non Parametric, Load Status, Risk, Past Performance, Expense Ratio. Mutual funds appear in other different Company schemes like ICICI Prudential Equity & Debt Fund,Mirae Asset Hybrid Equity Fund,Axis Bluechip Fund,ICICI Prudential Bluechip Fund,L&T Midcap Fund,HDFC Mid-Cap Opportunities Fund,L&T Emerging Businesses Fund,HDFC Small Cap Fund,Motilal Oswal Multicap 35 Fund,Kotak Standard Multicap Fund etc. There exist many Mutual funds methods in the literature.

In last recent years lot of research work has been done on Performance of Mutual Funds. Some contributions are as follows:

Cai J, Chan K C and Yamada " The Performance of Japanese Mutual Funds" [7],,Patil, Shrinivas R; Rao, Prakash,An Empirical Study on Performance of Mutual Fund in India[2], Navdeep Aggarwal and Mohit Gupta, , "performance of Mutual funds in india an empirical study" [10].

Sharpe, W.F., , 'Mutual Fund Performance', Journal of Business[4], Bollen N P B and Busse J A "short-term persistence in Mutual Fund Performance" [6].

Millstone Michael, "Mutual funds: A study of selected attributes on long-term performance" [1], Miranda Detzler, James Wiggins, "The Performance of Actively Managed International Mutual Funds" [5], Chang, E., and W. Levellen, " Market Timing and Mutual Fund Investment Performance" [8],

Jensen, M.C., 'The Performance of Mutual Funds in the period 1945-1964'[3], Jaydev M. " Mutual Funds Performance, An Analysis of Monthly Returns" [9].

Otten R and Bams D "European Mutual Fund Performance" [11], Sondhi, H.J and Jain, P.K . Market Risk and Investment Performance of Equity Mutual Funds in India: Some Empirical Evidence [20].

Garg, Sanjay A Study on Performance Evaluation of Selected Indian Mutual Funds[17],Soumya Guha Deb "performance of Indian equity Mutual funds Vis-a-Vis their style benchmarks" [14] , Debasish, SathyaSwaroop .Investigating Performance of Equitybased Mutual Fund Schemes inIndian Scenario[16], Sharpe W. F. "Mutual Fund Performance" [13].

The Performance of Mutual Funds in the Period 1945-1964[15], Jayadev, M Mutual Fund Performance: An Analysis of Monthly Returns[18],Prabakaran, G and Jayabal, G. Performance Evaluation of Mutual Fund Schemes in India: An Empirical Study[19]. Ravi vyas and suresh Chandra moonat "Perception and behaviour of Mutual Funds Investors in Madhya Pradesh"[12], sweta goel,rahul sharma, mukta mani" performance of mutual
funds and investors'behavior " synopsis of the thesis[21] .

In section1we describe introduction to Performance of Mutual Funds. Section 2 we are describe preliminaries and basic definitions and in section 3 are we describe proposed Performance of Mutual Funds in section 4 are we describe proposed Performance of Mutual Funds experimental result

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analysis and in section 5 are we describe proposed Performance of Mutual Funds conclusion.

II. BASIC DEFINATION

1. Load Status: Every mutual fund company have charged fee. Load status is just like as a dummy variable in many past studies.In the present study, it is Boolean type coded as 1 for schemes with load fee, 0 otherwise.

2. Risk: There are two risk measures as standard deviation (σ) and beta (β).In the present research we use risk measure beta (β) has been used for analyzing the efficiency of fund schemes and standard deviation (σ) has been taken for analyzing the relationship of performance with attributes.
Standard Deviation or Total Risk of Portfolio: Standard deviation (σ) represents the total risk of the portfolio. The σ of all the sample schemes has been calculated on the yearly returns.

Systematic Risk or Beta (β): Systematic risk is that component of total portfolio risk which is not controlled through the process of diversification. β of mutual fund schemes has been obtained through eq. (i) by using standard regression methodology.

$$Rpt = \alpha p + \beta p\ Rmt + \grave{e}p \quad \text{.....(i)}$$

Where, Rpt = return on mutual fund scheme for the year t
Rmt is the return on the market index for time t; αp represents the coefficient term
βp beta coefficient, the measure of sensitivity; ėp is the error term

3. **Past Performance:** It has been measured by Sharpe Ratio (Sp)-

$$Sp = (Rp - Rf)/\sigma p \quad \text{.....(ii)}$$

Here, Rp and Rf have been calculated for the period from number of years.
The expected relationship of these attributes with performance is positive.

4. Expense Ratio: Expense Ratio is per unit cost incurred in managing the mutual fund and has been obtained by the average of number of year which you want number of year expense ratios of mutual fund schemes.

III. RESEARCH METHODOLOGY

1: Data Collection

In this phase I shall collect relevant data from various heterogeneous and homogeneous resources. Data from various mutual fund schemes is large and very useful. These data help to do Performance of Mutual Funds.

2: Performance of Mutual Funds Process:
In this process we have different steps like Load Status, Risk, Past Performance, Expense Ratio, and Efficiency.

3: Performance of Mutual Funds Methods:
In this step we user preference Mutual Funds can be represented by Numerical calculation of Load Status, Risk, Past Performance, Expense Ratio, and Efficiency.

4: Result Analysis:

Also developed synthetic benchmark databases are to be acquired for further testing of algorithms. All algorithms will be tested on both real and synthetic data. This performance will also be compared with theoretically calculated performance.

IV. CALCULATIONS FOR EFFICIENCY OF PERFORMANCE OF MUTUAL FUNDS

In this paper we used five markets analysis for Gorakhpur Main Market, Ganjipura Shopping Complex, Sadar, Market, Adhartal Market, Mominpura Talaiya for experimental results and performance evaluation. The five markets analysis Mutual Funds are used in experiment.

Table 1, Table 2, Table 3 Table 4, Table 5 shows for Load Status, Risk, Past Performance, Expense Ratio, and Efficiency percentages for Gorakhpur Main Market, Ganjipura Shopping Complex, Sadar, Market, Adhartal Market, Mominpura Talaiya Datasets.

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TABLE 1: GORAKHPUR MAIN MARKET FOR LOAD STATUS, RISK, PAST PERFORMANCE, EXPENSE RATIO, AND EFFICIENCY

Sample of data	Load Status	Risk (SD)	Past Performance	Expense Ratio	Efficiency
50	1	0.20	0.15	0.17	.80
100	0	0.16	0.13	0.15	.77
200	0	0.17	0.16	0.26	.72
350	1	0.36	0.14	0.13	.67
500	1	0.21	0.21	0.12	.89
650	0	0.26	0.23	0.12	.76
800	0	0.34	0.27	0.17	.68
1000	1	0.19	0.29	0.19	.69

TABLE 2: GANJIPURA SHOPPING COMPLEX FOR LOAD STATUS, RISK, PAST PERFORMANCE, EXPENSE RATIO, AND EFFICIENCY

Sample of data	Load Status	Risk (SD)	Past Performance	Expense Ratio	Efficiency
50	0	0.36	0.21	0.26	.86
100	0	0.21	0.13	0.34	.67
200	1	0.26	0.16	0.21	.72
350	1	0.34	0.14	0.13	.67
500	0	0.21	0.21	0.12	.83
650	1	0.13	0.17	0.21	.76
800	0	0.16	0.15	0.26	.68
1000	1	0.14	0.26	0.34	.79

TABLE 3: SADAR, MARKET FOR LOAD STATUS, RISK, PAST PERFORMANCE, EXPENSE RATIO, AND EFFICIENCY

Sample of data	Load Status	Risk (SD)	Past Performance	Expense Ratio	Efficiency
50	0	0.36	0.26	0.16	.89
100	1	0.21	0.34	0.14	.76
200	0	0.13	0.21	0.21	.68
350	1	0.16	0.13	0.17	.69
500	0	0.14	0.16	0.15	.89
650	1	0.21	0.14	0.13	.76
800	1	0.21	0.15	0.16	.68
1000	1	0.14	0.26	0.14	.69

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TABLE 4: ADHARTAL MARKET FOR LOAD STATUS, RISK, PAST PERFORMANCE, EXPENSE RATIO, AND EFFICIENCY

Sample of data	Load Status	Risk (SD)	Past Performance	Expense Ratio	Efficiency
50	1	0.14	0.17	0.14	.68
100	0	0.21	0.15	0.21	.69
200	1	0.17	0.13	0.21	.89
350	0	0.15	0.14	0.14	.76
500	0	0.21	0.21	0.12	.89
650	1	0.13	0.17	0.21	.76
800	0	0.16	0.15	0.26	.68
1000	1	0.14	0.26	0.34	.69

TABLE 5: MOMINPURA TALAIYA FOR LOAD STATUS, RISK, PAST PERFORMANCE, EXPENSE RATIO, AND EFFICIENCY

Sample of data	Load Status	Risk (SD)	Past Performance	Expense Ratio	Efficiency
50	0	0.36	0.21	0.26	.76
100	1	0.21	0.13	0.34	.68
200	0	0.26	0.16	0.21	.89
350	1	0.34	0.14	0.13	.76
500	0	0.21	0.21	0.12	.89
650	1	0.13	0.17	0.21	.76
800	1	0.16	0.15	0.26	.68
1000	1	0.14	0.26	0.34	.69

V. EXPERIMENTAL RESULTS

In this experiment we used five markets analysis for Gorakhpur Main Market, Ganjipura Shopping Complex, Sadar, Market, Adhartal Market, Mominpura Talaiya with experimental results and performance evaluation.

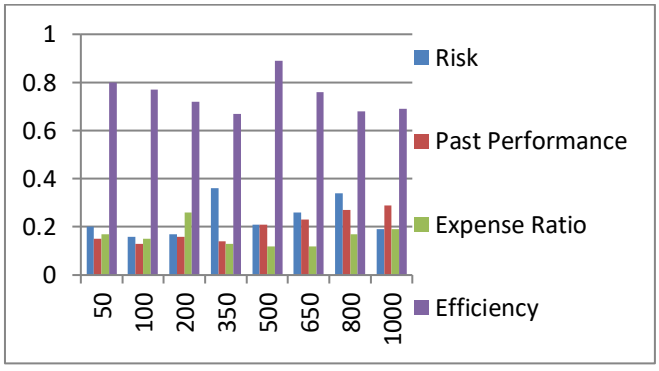

Figure 1: Gorakhpur Main Market for Performance analysis

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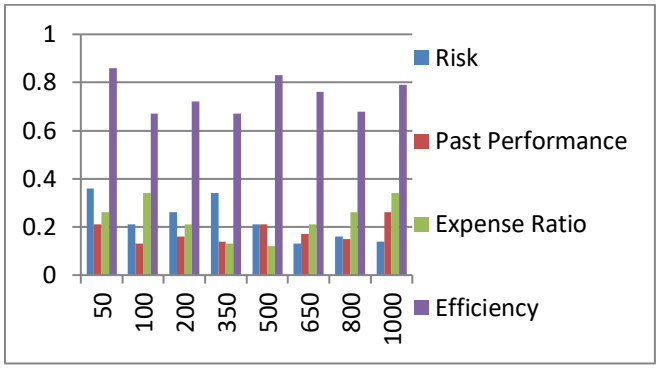

Figure 2: Ganjipura Shopping Complex for Performance analysis

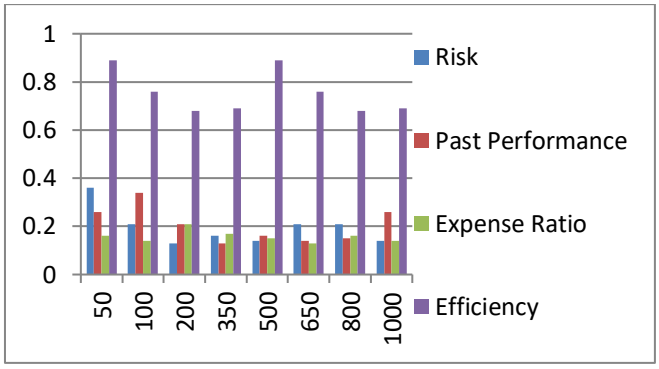

Figure 3: Sadar, Market for Performance analysis

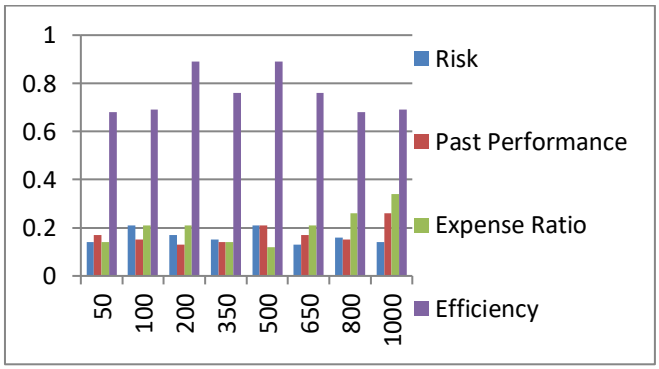

Figure 4: Adhartal Market for Performance analysis

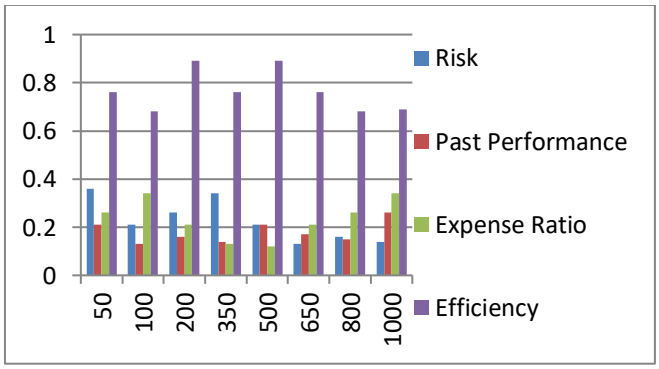

Figure 5: Mominpura Talaiya for Performance analysis

VI. CONCLUSION

The proposed algorithm is useful for Mutual Funds. People investment in to Mutual Funds experimental analysis and result analysis done here. We are calculating here accuracy and efficiency of Mutual Funds and result analysis. The accuracy and efficiency percentages calculated by MATLAB 7.14 Software tools. Outcomes are very efficient and accurate and give good outcomes to existing algorithms.

ACKNOWLEDGMENT

This research work is done at Madhyanchal Professional University Research and Development Lab, Bhopal, M.P. India. Authors would like to thank to Vice-Chancellor, Dean and staff for their helpful nature.

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