

PERFORMANCE OF INDIAN MUTUAL FUNDS WITH SPECIAL REFERENCE TO EVALUATION OF THEIR RELIABILITY

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ABSTRACT

In the contemporary world, many fast mushrooming financial institutions are, offering new products and services to the investors. A proper evaluation measure will get rid of the confusion and help investors to decide the relatively better investment in various mutual fund schemes. In this paper, an attempt has been made to examine the components and sources of investment performance of various schemes of Mutual funds which are floated in the market. The objective of this study is to evaluate the performance of Indian Mutual Fund Schemes through relative performance index (RPI), risk- return analysis, Treynor's ratio, Sharpe's ratio, Jensen's measure, and Fama's measure. The study covers a sample of 320 schemes of 37 Fund houses for the purpose of performance evaluation on Non-probability Convenience Sampling basis which covers in all 14 types of fund classes for the time period of February 2006- January 201. The empirical results reported here reveal the fact that the mutual funds were not able to compensate the investors for the additional risk that they have taken by investing in the mutual funds. The results of performance measures suggest that out sample of 320 schemes only 90 were able to satisfy investors expectations by giving excess returns over expected returns based on both premium for systematic risk and total risk.

Key Words: Risk adjusted Returns, Performance Measures, and Mutual Funds.

INTRODUCTION:

Mutual Funds is a topic which is of enormous interest not only to researchers all over the world, but also to investors. A mutual fund as a medium-to-long term investment option is preferred as a suitable investment option by investors. The mutual fund industry in India began with setting up of the Unit Trust of India (UTI) in 1964 by the Government of India. In 1987 public sector banks and two Insurance

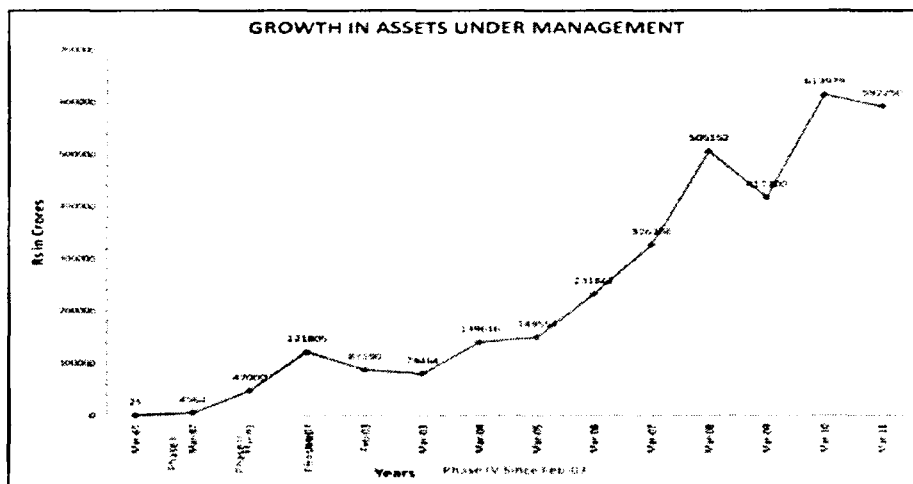
companies (Life Insurance Company and General insurance company) were allowed to launch mutual funds. Securities and Exchange Board of India (SEBI), regulatory body for Indian capital market, formulated comprehensive regulatory framework for Mutual Funds in 1993 and allowed private corporate bodies to launch mutual fund schemes. Since then several mutual funds have been set up by the private and joint sectors.



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From the depicted growth in AUM, we can say that investments in mutual funds are increasing day by day. The issues related to the choice of schemes among the public and private sector funds on the one hand and high risk associated schemes such as equity funds, on the other, have become highly important for every investor. It is relevant that even a single wrong decision of Fund Manager may put the investors in a financial crisis, sometimes leading to their bankruptcy. Therefore a proper performance evaluation measure is required as it will remove confusion and help the small investors in selecting suitable Mutual Funds Schemes for investment. The performance evaluation of Mutual Funds and the identification of successful Fund Managers are of great interest to investors, general public and academicians. A number of studies have been conducted across the world, including India, to find out the performance of Mutual Funds by using different performance measures. The earlier studies analysed the performance of the mutual funds till 2005. After that many new AMC's have entered into mutual fund industry and floated various schemes in to the market.

The aim behind this study is to evaluate the performance of the various mutual fund schemes from period 2006-2011 which is a combination of bull and bear phases of the market. Various financial tools are used to measure performance like Relative performance index, Risk-return analysis, Treynor's ratio, Sharpe's measure, Jensen's measure, and Fama's measure.

REVIEW LITERATURE OF VARIOUS INDIAN AND INTERNATIONAL STUDIES ON PERFORMANCE EVALUATION OF MUTUAL FUNDS.

Friend, et al., (1962) made an extensive and systematic study of 152 mutual funds found that mutual fund schemes earned an average annual return of 12.4 percent, while their composite benchmark earned a return of 12.6 percent. Their alpha was negative with 20 basis points. Overall results did not suggest widespread inefficiency in the industry. Comparison of fund returns with turnover and expense categories did not reveal a strong relationship. Friend et. al, "A Study of Mutual Funds" U.S. Securities and Exchange Commission, USA, (1962).

Treynor (1965) used 'characteristic line' for relating expected rate of return of a fund to the rate of return of a suitable market average. He coined a fund performance measure taking investment risk into account. Further, to deal with a portfolio, 'portfolio-possibility line' was used to relate expected return to the portfolio owner's risk preference. The most prominent study by **Sharpe, William F** (1966) developed a composite measure of return and risk. He evaluated 34 open-end mutual funds for the period 1944-63. Reward to variability ratio for each scheme was significantly less than DJIA and ranged from 0.43 to 0.78.

Jensen (1968) developed a composite portfolio evaluation technique concerning risk-adjusted returns. He evaluated the ability of 115 fund managers in selecting securities during the period 1945-66. Analysis of net returns indicated that, 39 funds had above average returns, while 76 funds yielded abnormally poor returns. Using gross returns, 48 funds showed above average results and 67 funds below average results.

Fama (1972) developed methods to distinguish observed return due to the ability to pick up the best securities at a given level of risk from that of predictions of price movements in the market. He introduced a multi-period model allowing evaluation on a period-by-period and on a cumulative basis. He branded that, return on a portfolio constitutes of return for security selection and return for bearing risk. His contributions combined the concepts from modern theories of portfolio selection and capital market equilibrium with more traditional concepts of good portfolio management.

Gupta (1974) evaluated the performance of mutual fund industry for the period 1962-71 using Sharpe, Treynor, and Jensen models. All the funds covered under the study outperformed the market irrespective of the choice of market index. The results indicated that all the three models provided identical results. All the mutual fund subgroups outperformed

The market using DJIA while income and balanced groups underperformed S&P 500. Return per unit of risk varied with the level of volatility assumed and he concluded that, funds with higher volatility exhibited superior performance.

Ippolito's (1989) results and conclusions were relevant and consistent with the theory of efficiency of informed investors. He estimated that risk-adjusted return for the mutual fund industry was greater than zero and attributed positive alpha before load charges and identified that fund performance was not related to expenses and turnover as predicted by efficiency arguments.

Gupta L C (1992) attempted a household survey of investors with the objective of identifying investors' preferences for mutual funds so as to help policy makers and mutual funds in designing mutual fund products and in shaping the mutual fund industry.

Yadav R A and Mishra, Biswadeep (1996) evaluated 14 close end schemes over the period of April 1992 to March 1995 with BSE Index as benchmark. Their analysis indicated that, 57 percent of sample schemes had a mean return higher than that of the market, higher

Gupta and Sehgal (1998) evaluated performance of 80 mutual fund schemes over four years (1992-96). The study tested the proposition relating to fund diversification, consistency of performance, parameter of performance and risk-return relationship. The study noticed the existence of inadequate portfolio diversification and consistency in performance among the sample schemes.

Gupta Amitabh (2001) evaluated the performance of 73 selected schemes with different investment objectives, both from the public and private sector using Market Index and Fundex. NAV of both close-end and open-end schemes from April 1994 to March 1999 were tested. The sample schemes were not adequately diversified, risk and return of schemes were not in conformity with their objectives, and there was no evidence of market timing abilities of mutual fund industry in India.

Muthappan P K and Damodharan E (2006) evaluated 40 schemes for the period April 1995 to March 2000. The study identified that majority of the schemes earned returns higher than the market but lower than 91 days Treasury bill rate. The average risk of the schemes was higher than the market. 15 schemes had an above average monthly return. Growth schemes earned average monthly return. The risk and return of the schemes were not always in conformity with their stated investment objectives. The sample schemes were not adequately diversified, as the average unique risk was 7.45 percent with an average diversification of 35.01 percent. 23 schemes outperformed both in terms of total risk and systematic risk. 19 schemes with positive alpha values indicated superior performance. The study concludes that, the Indian Mutual Funds were not properly diversified.

RESEARCH METHODOLOGY

OBJECTIVES OF THE STUDY

- 1) The main objective of the study is to understand the importance of various measures as a part of performance measurement of mutual funds.
- 2) To study the risk and return of various categories of funds of all the 37 AMCs.
- 3) To compare funds in a specific peer group of mutual funds to be able to measure the performance at same evaluative criteria and same parameters of selection and study.

RESEARCH DESIGN STRATEGY

I. Research Type: Exploratory Research

The research basically constitutes Exploratory Research. It is because the research involves analysis of measures which provides an idea regarding which mutual firm is better compared to another in technical terms.

II. Collection of Data:

Sources:

The data collection method to be undertaken during the entire research process consists of Primary data collection as well as secondary source of data collection.

Secondary Data:

The secondary data collection includes Fund Fact Sheets of all 37 AMCs, Books, Journals, Magazines, Newspapers and Internet.

III. Financial Tools Used:

The preferred financial tools for the entire research will be based on the main evaluating factors for the risk and return of funds in mutual funds. The main financial tools for the research are:

a) For Diversified funds:

- 1) Treynor's Ratio
- 2) Jensen Alpha Ratio

b) For Non-Diversified funds:

- 1) Sharpe's Ratio, ex-post
- 2) Eugene Fama Ratio

c) For Risk Return Performance:

- 1) Relative performance index
- 2) Risk-return analysis

IV. Sampling Design

I. Targeted Population:

- a) 37 Asset Management Companies.
- b) 3 types of fund classes.

II. Sampling Unit:

- a) Equity Funds
- b) Debt Funds
- c) Balanced Funds

III. Sampling Size:

The Sample size that is to be taken for the research purpose are 37 funds of each type of sample unit. The total sample size sums up to 320 funds.

IV. Sample Technique:

The sampling technique used for the research purpose is Non-probability convenience sampling. The sampling so taken is because the samples are classified on the basis of specified quota of samples and the units within the quota.

RESEARCH ANALYSIS

Relative Performance Index (Table I):

RPI: $\text{Current Face value} - \text{Face Value} * 100$

(Current Sensex – Sensex at the beginning)

Refer Table I

Analysis:

Relative performance indices for 320 mutual fund schemes are computed. On the basis of RPI analysis we classified the 320 schemes into: I) under performers (returns less than 1%) II) Schemes with returns of 1%-2.99%, III) schemes with returns 3%-4.99%, IV) schemes with returns 5% and above. The returns are derived from RPI and summarized in Table –I.

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Findings:

- The Medium Term Debt Funds can be rated as the best performers. All the **55** funds outperformed the market, with **35** of them giving returns of **5%** & above.
- InfoTech Equity Funds, Tax Planning Equity Funds, Pharma Equity Funds, FMCG Equity Funds, Auto Equity Funds, Banking Equity Funds are the worst performers with all underperforming, and none of them giving returns of **5%** and above.
- Out of **174** equity based schemes, **156** are under performers, **20** are par performers and only **6** out of them giving returns of **5%** and above. This shows that some fund managers were able to diversify the risks and maximize returns under bear market.

We will now consider only 90 schemes with RPI greater than **5** that gave returns at risk free rates and above for detailed analysis.

RISK-RETURN ANALYSIS (TABLE II):

Refer Table II

Analysis:

Table-II shows that **8** schemes gave negative returns, and the remaining **82** gave positive returns. From the systematic risk point of view ($\hat{\alpha}$) **15** schemes are of low risk, **40** are of below average risk, **11** are of average risk, and **15** are of above average risk and **9** in the high risk class.

Risk-Return Analysis (Table III):

Refer Table III

Analysis:

Table-III gives the values of r_p , $\hat{\alpha}$ and $\hat{\beta}$ values (for beta) of the sample schemes. The average mutual fund with its mean yearly return of **8.86%** at total risk

level ($\hat{\alpha}$) of **35.45%** has outperformed the market with **13.18%**. The analysis shows that out of **90** funds equity diversified are the worst performers and most riskier ones with all the **6** funds giving negative returns and delivering standard deviation of at least **25%** respectively in the last one year where by the market was going through a bearish face.

Risk-Return Analysis (Table IV):

Refer Table I

Analysis:

A look at Table-IV reveals that the debt funds have performed better. Among the equity funds, diversified and balanced funds have performed better. This is expected in a bear.

Risk-Return Analysis (Table V):

Refer Table V

Analysis:

A look at Table-V reveals that out of **90** schemes **8** have underperformed the market, **87** are found to have higher total risk than the market and only **65** schemes have given returns higher than the risk free rates.

Risk Return Analysis (Sharpe and Treynor ratio):

The Treynor's ratio for **53** schemes are positive, **37** are negative. Sharpe's ratio **78** are with positive, **12** are with negative. When T_p is positive it means that the returns of the portfolio are greater than risk free return so 53 schemes have provided higher return than risk free rate of return and when S_p is positive it means that the investor gets risk premium for the total risk undertaken. Thus, here 90 schemes have provided risk premium for the total risk undertaken.

When T_p is greater than $(r_m - r_f)$ and S_p is greater than $(r_m - r_f / \hat{\alpha}_m)$ then the fund is considered to have outperformed the market so here **53** funds and **78** funds have greater T_p and S_p than the benchmark.

Risk-Return Analysis (Jensen and Fama ratio):

Analysis:

A positive value of J_p would indicate that the scheme has provided a higher return over the CAPM return and lies above Security Market Line (SML) and a

negative value would indicate it has provided a lower than expected returns and lies below SML. Table-VIII suggests that **72** schemes have provided excess returns over CAPM returns. Jensen model suffers from limitation of CAPM. The Fama model results show the net superior returns due to selectivity is positive for **55** schemes and negative for **35** schemes. This is due to the fact $r_m < r_f$ during the period under study.

Taking the Fama's ratio into consideration which says:

A positive value for F_p indicates that the fund earned returns higher than expected returns and lies above CML, and a negative value indicates that the fund earned returns less than expected returns and lies below CML.

Following are the top 10 schemes which have positive value for F_p as their returns are higher than expected returns:

No.	Schemes	Type of fund
1	UTI Bond	Debt (Short Term)
2	Sahara Growth	Open Ended-Equity Diversified
3	DWS Alpha Equity	Open Ended-Equity Diversified
4	ICICI Prudential Infrastructure	Open Ended-Equity Diversified
5	Reliance Regular Savings Equity	Open Ended-Equity Diversified
6	FT India Dynamic PE Ratio FoF	Balance (Asset Allocation)
7	ICICI Prudential Blended Plan A	Balance (Arbitrage)
8	DWS Investment Opportunity	Open Ended-Equity Diversified
9	Kotak Equity Arbitrage	Balance (Arbitrage)
10	HDFC Floating Rate Income LT	Debt (Floating Short Term)

MAJOR FINDINGS OF THE STUDY

The objective of this study was to evaluate the performance of Indian Mutual Fund Schemes through relative performance index (RPI), risk- return analysis, Treynor's ratio, Sharpe's ratio, Jensen's measure, and Fama's measure. The conclusions are as follows:

RPI ANALYSIS:

Out of **320** schemes, **197** were under performers, **33** were par performers and **90** were out performers of the market. Medium Term Debt Funds were the best. None of the equity funds were able to diversify the risks and maximize the returns in the bear market.

STATISTICAL RISK-RETURN ANALYSIS:

The average mutual fund was found with low unsystematic and high total risk. Out **90** sample

schemes **8** schemes gave negative returns and **82** gave positive returns, with only **15** giving excess returns over the risk free rates. Medium term debt funds were the out performers.

Treynor's Ratio (T_p):

53 out of **90** schemes were found with positive Treynor's ratio and as the scheme is considered to have outperformed the market when T_p is greater than $(r_m - r_f)$ thus here **53** funds are considered to have outperformed the market.

Sharpe's Ratio (S_p):

78 out of **90** schemes were found with positive Sharpe's ratio and as the scheme is considered to have outperformed the market when S_p is greater than $(r_m - r_f) / \sigma_m$ thus here **78** funds are considered to have outperformed the market.

Jensen's Measure (Jp):

72 schemes of 90 schemes have provided positive Jensen measure which means that they have provided excess returns over CAPM returns.

Fama's Measure (Fp):

However 55 out of 90 schemes found with positive Fama's net superior returns due to selectivity. The result means that the fund managers have successfully been able to deliver the best possible portfolio for the above mentioned 55 funds so as to get better returns against market greater risk in a bear market. The deviation is again due to the fact that $r_m < r_f$.

Following is the table showing the no. of schemes that has been over performers and under performers on the basis of different measures:

Particulars	Over performers	Under Performers
Treynor Ratio	53	37
Sharpe Ratio	78	12
Jensen Measure	72	18
Fama Measure	55	35

SUGGESTIONS:

From the analysis it is found that over the tenure of Feb 2006- January 2011, Debt short term and debt medium term funds have performed well amongst all types of schemes. The top performers are listed below after analysing all the performance measures. So the investors can take up the decision to invest in the following schemes.

Top 7 performers of Debt -Short term fund	
Ranking	Fund name
1	ICICI Prudential Short-term
2	HDFC Short-term
3	Reliance Short-term

4	IDFC SSI Short-term Plan A
5	Tata Short-term Bond
6	ING Short Term Income
7	Kotak Bond Short-term

Top 10 performers of Debt -Medium term fund	
Ranking	Fund name
1	Canara Robeco Income
2	Sahara Income
3	IDFC Dynamic Bond Plan A
4	ICICI Prudential Income
5	Kotak Bond Regular
6	Kotak Bond Deposit
7	Reliance Income
8	Birla Sun Life Income Plus
9	Birla Sun Life Dynamic Bond Retail
10	LICMF Bond

CONCLUSION:

From the entire analysis, it can be concluded that 90 of 320 open ended mutual funds have provided better returns than the market during the period of February 2006 - January 2011, some of the funds provided excess returns over expected returns based on both premium for systematic risk and total risk and the schemes of the mutual fund houses which have come into existence after 2004 have also performed well. So the investor's can take into consideration those AMC's also for the purpose of making investments in mutual funds.

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ANNEXURES

Table I : Results of RPI Analysis					
Scheme Type	Under Performers	Annual Returns (%)			Total
		1 - 2.99	3 - 4.99	5 & >5	
Equity (Diversified)	114	8	6	6	134
Equity (Tax Planning)	24	0	0	0	24
Equity (Info Tech)	6	0	0	0	6
Equity (Pharma)	5	0	0	0	5
Equity (FMCG)	3	0	0	0	3
Equity (Auto)	2	0	0	0	2
Equity (Banking)	2	0	0	0	2
Balance (Arbitrage)	0	0	0	4	4
Balance (Asset Allocation)	2	0	0	1	3
Balance (Equity Oriented)	20	7	3	0	30
Debt (Short Term)	7	1	0	16	24
Debt (Medium Term)	12	3	5	35	55
Debt (Floating Short Term)	0	0	0	17	17
Debt (Floating Long Term)	0	0	0	11	11
Total	197	19	14	90	320

(Source: Compiled by Author after analysing secondary data and calculating RPI)

Table II: Risk (b) and Return of Mutual Funds (No. of Schemes)

Risk → Yearly Return(%) ↓	Low Risk $\beta \leq 0$	Below Avg. Risk $0 > \beta < 0.4$	Avg. Risk 0.4 $> \beta < 0.8$	Above Avg. Risk $0.8 > \beta < 1.2$	High Risk $1.2 > \beta < 1.6$	Total
<0	1	0	1	6	0	8
0-0.05	0	2	2	0	0	4
0.05-0.10	12	28	4	3	1	48
0.10-0.15	1	9	3	5	5	23
0.15-0.20	1	1	0	1	3	6
0.20-0.25	0	0	0	0	0	0
0.25-0.30	0	0	1	0	0	1
Total	15	40	11	15	9	90

(Source: Compiled by Author after analysing secondary data)

Table III : Scheme Details				
No.	Scheme	rp	σ	β
Open Ended : Equity: Diversified				
1	DSPBR Top 100 Equity Reg	0.3506	28.17	0.88
2	DWS Alpha Equity	0.4233	32.91	1
3	DWS Investment Opportunity	0.4893	34.88	1.07
4	ICICI Prudential Infrastructure	0.4516	36.11	1.12
5	Reliance Regular Savings Equity	0.5175	37.41	1.07
6	Sahara Growth	0.3568	28.2	0.88
Balance (Arbitrage)				
7	Benchmark Derivative	0.067	--	--
8	ICICI Prudential Blended Plan A	0.0793	1.37	0.13
9	ICICI Prudential Blended Plan B	0.0707	0.99	0.17
10	Kotak Equity Arbitrage	0.0731	1.02	0.17
Balance (Asset Allocation)				
11	FT India Dynamic PE Ratio FoF	0.2725	17.49	0.69
Debt: (Short Term)				
12	HDFC Short-term	0.1387	2.39	0.15
13	HSBC Income Short -term	0.0971	0.46	0
14	ICICI Prudential Short -term	0.1541	3.6	0.1

Table III : Scheme Details				
No.	Scheme	rp	σ	β
46	ING Income	0.1325	8.4	1.02
47	Kotak Bond Deposit	0.1334	8.43	1.17
48	Kotak Bond Regular	0.1398	8.43	1.17
49	Kotak Flexi Debt Regular	0.0902	0.11	0
50	LICMF Bond	0.1294	4.65	0.63
51	Principal Income	0.0741	7.86	0.89
52	Reliance Income	0.1299	8.68	1.28
53	Reliance Medium Term	0.0823	0.45	0.02
54	Sahara Income	0.1754	6.64	0.85
55	Sundaram BNP Paribas Bond Saver	0.0701	4.88	0.61
56	Tata Dynamic Bond A	0.0423	5.32	0.38
57	Tata Income	0.0582	6.74	0.88
58	Tata Income Plus	0.0809	1.3	0.09
59	Tata Income Plus HI	0.0813	1.3	0.09
60	Templeton India Income	0.05	4.69	0.43
61	Templeton India Income Builder	0.0433	4.56	0.44
62	UTI Bond	0.0802	9.82	1.37
Debt: (Floating Short Term)				

15	IDFC SSI Short-term Plan A	0.1209	3.58	0.07
16	ING OptiMix Active Short Term Retail	--	--	--
17	ING Short Term Income	0.1172	1.63	0.08
18	JM Shortterm Reg	0.159	2.97	0.03
19	Kotak Bond Short -term	0.1129	1.99	0.01
20	Magnum NRI Inv ST Bond	0.0107	0.17	0.01
21	Principal Income Short-term	0.0979	1.47	0.12
22	Reliance Short -term	0.1242	2.19	0.04
23	Religare Short -term Retail	0.0775	0.75	0.05
24	SBI Short Horizon Short Term Retail	0.0992	2.23	0.15
25	Sundaram BNP Paribas SD Short-term	0.0637	0.24	0.01
26	Tata Shortterm Bond	0.1202	4.87	0.05
27	Templeton India Short-term Income Retail	0.1044	1.52	0.14
Debt: (Medium Term)				
28	Birla Sun Life Dynamic Bond Retail	0.1333	2.48	0.29
29	Birla Sun Life Income	0.1043	11.12	1.5
30	Birla Sun Life Income Plus	0.1307	10.59	1.47
31	Canara Robeco Income	0.2886	4.33	0.69
32	DSPBR Bond Retail	0.1121	5.5	0.8
33	DWS Premier Bond Regular	0.1256	8.2	1.24
34	Escorts Income	0.1064	2.72	0.29
35	Fortis Flexi Debt Reg	0.156	--	--
36	HDFC High Interest	0.1001	8.66	1.07
37	HDFC Income	0.0944	7.74	0.95
38	HSBC Income Investment	0.1065	7.79	0.92
39	ICICI Prudential Advisor -Very Cautious	0.0855	0.3	0.01
40	ICICI Prudential Flexible Income	0.0939	0.13	0
41	ICICI Prudential Income	0.1609	9.63	1.29
42	ICICI Prudential Long -term	0.0947	0.56	0.02
43	IDFC Dynamic Bond Plan A	0.1685	9.22	1.34
44	IDFC SSI Inv Plan A	0.1494	9.25	1.31
45	IDFC SSI Medium -term Plan A	0.0942	6.09	0.74

63	Birla Sun Life Floating Rate ST	0.0879	0.19	0.6
64	Canara Robeco Floating Rate ST	0.0947	0.15	0.21
65	DBS Chola ST Floating Rate	0.0711	0.2	0.35
66	Escorts Floating Rate	0.0933	0.43	-0.05
67	HSBC Floating Rate ST Regular	0.0815	0.14	0.34
68	ICICI Prudential Floating Rate A	0.0867	0.11	0.29
69	JM Floater ST	0.0808	0.11	0.21
70	Kotak Floater ST	0.0896	0.15	0.45
71	LICMF Floating Rate ST	0.1003	0.13	0.24
72	Magnum Floating Rate ST	0.0937	1.43	-1.14
73	Magnum InstaCash Liquid Floater	0.0885	0.12	0.04
74	Principal Floating Rate Short Maturity	0.0906	0.1	0.26
75	Reliance Floating Rate	0.0917	0.1	0.24
76	Sundaram BNP Paribas FRST Reg	0.0869	0.08	0.14
77	Tata Floating Rate ST	0.0919	0.1	0.18
78	Templeton Floating Rate ST Retail	0.0918	0.14	0.28
79	UTI Floating Rate ST	0.098	0.12	0.21
Debt:(Floating Long Term)				
80	Birla Sun Life Floating Rate LT	0.09.25	0.18	0.31
81	HDFC Floating Rate Income LT	0.0991	0.55	0.16
82	HSBC Floating Rate LT Regular	0.0907	0.17	0.28
83	ICICI Prudential LT Floating Rate A	0.0781	0.21	0.27
84	Kotak Floater LT	0.0915	0.24	0.34
85	Magnum Floating Rate LT Retail	0.0748	1.34	-1.32
86	Principal Floating Rate Flexible Maturity	0.0888	0.11	0.26
87	Sundaram BNP Paribas FRLT Reg	0.0785	0.22	0.22
88	Tata Floater	0.0932	0.13	0.32
89	Tata Floating Rate LT	0.1004	0.46	0.46
90	Templeton Floating Rate LT Retail	0.0915	0.29	0.15
Average Values		0.089	0.3545	0.132

(Source: Compiled by Author after analysing secondary data)

Category	Funds	Average Return %	Average Risk(σ)	Systematic Risk β
Equity (Diversified)	6	-0.4315	32.9467	1.0033
Balance (Arbitrage)	4	0.072525	1.1267	-0.0433
Balance (Asset Allocation)	1	-0.2725	17.49	0.69
Debt: (Short Term)	16	0.0988	1.8209	0.0281
Debt: (Medium Term)	35	0.1115	5.6159	0.70185
Debt: (Floating Short Term)	17	0.0893	0.2235	0.1676
Debt:(Floating Long Term)	11	0.08866	0.3545	0.1318

No.	Scheme	rp	sp	rm	sm	Rf
Open Ended : Equity: Diversified						
1	DSPBR Top 100 Equity Reg	-0.3506	28.17	-0.5241	0.5708	0.13
2	DWS Alpha Equity	-0.4233	32.91	-0.4745	0.5119	0.13
3	DWS Investment Opportunity	-0.4893	34.88	-0.5327	0.5399	0.13
4	ICICI Prudential Infrastructure	-0.4516	36.11	-0.4745	0.4615	0.13
5	Reliance Regular Savings Equity	-0.5175	37.41	-0.5241	0.5109	0.13
6	Sahara Growth	-0.3568	28.2	-0.4745	0.3972	0.13
Balance (Arbitrage)						
7	Benchmark Derivative	0.067	--	-0.2164	-0.4295	0.1
8	ICICI Prudential Blended Plan A	0.0793	1.37	0.0835	-0.0668	0.1
9	ICICI Prudential Blended Plan B	0.0707	0.99	0.0835	-0.0987	0.1
10	Kotak Equity Arbitrage	0.0731	1.02	0.0749	-0.0813	0.1
Balance (Asset Allocation)						
11	FT India Dynamic PE Ratio FoF	-0.2725	17.49	-0.2164	0.1995	0.1
Debt: (Short Term)						
12	HDFC Shortterm	0.1387	2.39	0.0749	0.0251	0.075
13	HSBC Income Short-term	0.0971	0.46	0.0835	-0.1583	0.075
14	ICICI Prudential Shortterm	0.1541	3.6	0.0835	-0.0069	0.075
15	IDFC SSI Short -term Plan A	0.1209	3.58	0.0835	0.0368	0.075
16	ING OptiMix Active Short Term Retail	--	--	0.0749	NA	0.075
17	ING Short Term Income	0.1172	1.63	0.0835	0.1233	0.075
18	JM Shortterm Reg	0.159	2.97	0.0749	-0.028	0.075
19	Kotak Bond Short -term	0.1129	1.99	0.0835	0.0817	0.075

20	Magnum NRI Inv ST Bond	0.0107	0.17	--	NA	0.075
21	Principal Income Short-term	0.0979	1.47	0.0835	0.1322	0.075
22	Reliance Short-term	0.1242	2.19	0.0749	0.0661	0.075
23	Religare Short-term Retail	0.0775	0.75	0.0835	-0.8071	0.075
24	SBI Short Horizon Short Term Retail	0.0992	2.23	0.0835	0.2987	0.075
25	Sundaram BNP Paribas SD Short-term	0.0637	0.24	0.0749	-0.1565	0.075
26	Tata Short-term Bond	0.1202	4.87	0.0835	0.4785	0.075
27	Templeton India Short-term Income Retail	0.1044	1.52	0.0835	0.1295	0.075
Debt: (Medium Term)						
28	Birla Sun Life Dynamic Bond Retail	0.1333	2.48	0.0319	0.013	0.078
29	Birla Sun Life Income	0.1043	11.12	0.0319	0.0031	0.078
30	Birla Sun Life Income Plus	0.1307	10.59	0.0319	0.0013	0.078
31	Canara Robeco Income	0.2886	4.33	0.0319	-0.01	0.078
32	DSPBR Bond Retail	0.1121	5.5	0.0319	0.0037	0.078
33	DWS Premier Bond Regular	0.1256	8.2	0.0319	0.0015	0.078
34	Escorts Income	0.1064	2.72	0.0319	NA	0.078
35	Fortis Flexi Debt Reg	0.156	--	0.0319	0	0.078
36	HDFC High Interest	0.1001	8.66	0.0319	0.0045	0.078
37	HDFC Income	0.0944	7.74	0.0319	0.0039	0.078
38	HSBC Income Investment	0.1065	7.79	0.0319	0.0046	0.078
39	ICICI Prudential Advisor Very Cautious	0.0855	0.3	--	NA	0.078
40	ICICI Prudential Flexible Income	0.0939	0.13	0.0319	-0.0366	0.078
41	ICICI Prudential Income	0.1609	9.63	0.0319	-0.0002	0.078
42	ICICI Prudential Long-term	0.0947	0.56	0.0319	0.117	0.078
43	IDFC Dynamic Bond Plan A	0.1685	9.22	0.0319	-0.0009	0.078
44	IDFC SSI Inv Plan A	0.1494	9.25	0.0319	0.0009	0.078
45	IDFC SSI Medium-term Plan A	0.0942	6.09	0.0835	0.0144	0.078
46	ING Income	0.1325	8.4	0.0319	0.002	0.078
47	Kotak Bond Deposit	0.1334	8.43	0.0319	0.0014	0.078
48	Kotak Bond Regular	0.1398	8.43	0.0319	0.001	0.078
49	Kotak Flexi Debt Regular	0.0902	0.11	0.0319	-0.0439	0.078
50	LICMF Bond	0.1294	4.65	0.0319	0.0021	0.078
51	Principal Income	0.0741	7.86	0.0319	0.0071	0.078
52	Reliance Income	0.1299	8.68	0.0319	0.0015	0.078
53	Reliance Medium Term	0.0823	0.45	0.0835	1.4311	0.078
54	Sahara Income	0.1754	6.64	0.0319	-0.0027	0.078
55	Sundaram BNP Paribas Bond Saver	0.0701	4.88	0.0319	0.0087	0.078
56	Tata Dynamic Bond A	0.0423	5.32	0.008	-0.0138	0.078
57	Tata Income	0.0582	6.74	0.0319	0.0119	0.078

58	Tata Income Plus	0.0809	1.3	0.0319	0.0212	0.078
59	Tata Income Plus HI	0.0813	1.3	0.0319	0.7221	0.078
60	Templeton India Income	0.05	4.69	0.0319	0.0066	0.078
61	Templeton India Income Builder	0.0433	4.56	0.0319	0.0071	0.078
62	UTI Bond	0.0802	9.82	0.0319	1.099	0.078
Debt: (Floating Short Term)						
63	Birla Sun Life Floating Rate ST	0.0879	0.19	0.0749	-0.0789	0.073
64	Canara Robeco Floating Rate ST	0.0947	0.15	0.0749	-0.0795	0.073
65	DBS Chola ST Floating Rate	0.0711	0.2	0.0749	-0.0906	0.073
66	Escorts Floating Rate	0.0933	0.43	--	NA	0.073
67	HSBC Floating Rate ST Regular	0.0815	0.14	0.0749	-0.1164	0.073
68	ICICI Prudential Floating Rate A	0.0867	0.11	0.0749	-0.0959	0.073
69	JM Floater ST	0.0808	0.11	0.0749	-0.1157	0.073
70	Kotak Floater ST	0.0896	0.15	0.0749	-0.0791	0.073
71	LICMF Floating Rate ST	0.1003	0.13	0.0749	-0.0649	0.073
72	Magnum Floating Rate ST	0.0937	1.43	0.0749	0.1892	0.073
73	Magnum InstaCash Liquid Floater	0.0885	0.12	0.0749	0.2778	0.073
74	Principal Floating Rate Short Maturity	0.0906	0.1	0.0749	-0.0978	0.073
75	Reliance Floating Rate	0.0917	0.1	0.0749	-0.0984	0.073
76	Sundaram BNP Paribas FRST Reg	0.0869	0.08	0.0749	0.3184	0.073
77	Tata Floating Rate ST	0.0919	0.1	0.0749	-0.0985	0.073
78	Templeton Floating Rate ST Retail	0.0918	0.14	0.0749	-0.0985	0.073
79	UTI Floating Rate ST	0.098	0.12	0.0749	-0.0798	0.073
Debt:(Floating Long Term)						
80	Birla Sun Life Floating Rate LT	0.09.25	0.18	0.0749	NA	0.081
81	HDFC Floating Rate Income LT	0.0991	0.55	0.0749	-0.0655	0.081
82	HSBC Floating Rate LT Regular	0.0907	0.17	0.0749	-0.0885	0.081
83	ICICI Prudential LT Floating Rate A	0.0781	0.21	0.0749	-0.0999	0.081
84	Kotak Floater LT	0.0915	0.24	0.0749	-0.0887	0.081
85	Magnum Floating Rate LT Retail	0.0748	1.34	0.0749	-1.0534	0.081
86	Principal Floating Rate Flexible Maturity	0.0888	0.11	0.0749	-0.105	0.081
87	Sundaram BNP Paribas FRLT Reg	0.0785	0.22	0.0319	-1.0654	0.081
88	Tata Floater	0.0932	0.13	0.0749	-0.0891	0.081
89	Tata Floating Rate LT	0.1004	0.46	0.0749	-0.0761	0.081
90	Templeton Floating Rate LT Retail	0.0915	0.29	0.0749	-0.1066	0.081

(Source: Compiled by Author after analysing secondary data)