

## PERFORMANCE EVALUATION OF INDIAN AND FOREIGN MUTUAL FUNDS : A COMPARATIVE STUDY

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### ABSTRACT

Saving for the future is good. Investing for it is even better. Mutual funds have many benefits that make them one of the most efficient, cost-effective, and easy investments available. They are also ideal vehicles for individual investors who don't have the time, willingness or ability to manage their own portfolio of bonds or stocks. Mutual funds which have been operating for greater than five years and performing during the period of study (i.e. 2003 - 2007) are selected for the present research. The sample for the study consists of 340 mutual funds belonging to four categories - Money market category funds, Debt Category Funds, Equity category funds and Balanced category funds. The performance of selected funds is evaluated using average rate of return of fund, standard deviation, Risk/Return, Sharpe Ratio, Treynor ratio and Jensen ratio. Benchmark comparison is also made as it indicates to what extent the fund managers were able to produce better performance of managed portfolio compared to the market or index portfolios.

**Key words:** Benchmark comparison, Sharpe ratio, Treynor ratio and Jensen ratio.

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### INTRODUCTION:

Saving for the future is good. Investing for it is even better. Mutual funds have many benefits that make them one of the most efficient, cost-effective, and easy investments available. They are also ideal vehicles for individual investors who don't have the time, willingness or ability to manage their own portfolio of bonds or stocks. A mutual fund is the ideal investment vehicle for today's complex and modern financial scenario. Markets for equity shares, bonds and other fixed income instruments, real estate, derivatives and other assets have become mature and information driven. Price changes in these assets are driven by global events occurring in distant places. A small investor is unlikely to have the knowledge, skills, inclination and time to keep track of events, understand their implications and act speedily and in this context mutual funds come to his rescue.

Mutual Fund industry today, is one of the most preferred investment avenues in India. However, with a plethora of schemes available for option, the retail investor faces problems in selecting funds. In addition to qualitative measures like investment strategy, management style etc., the funds record is an important indicator too. Though past performance alone cannot be indicative of future performance, it is, frankly, the only quantitative way to judge how good a fund is at present. The impressive growth of mutual funds in India has attracted the attention of Indian researchers, individuals and institutional investors during past ten years. The Indian mutual fund industry is currently

in the phase of consolidation and growth stage of the product life cycle. The competition would intensify in the coming years as it happened in other industries. Hence, it is appropriate, relevant and topical to focus our attention as to how the Indian mutual industry would emerge in the coming few years to ascertain what kind of products (mutual fund schemes) would be able to win the investors' confidence and survive in the market place.

### OBJECTIVES OF THE STUDY:

The study will have a proper direction by setting the objectives of the study. The following objectives are formulated for the present study:

1. To evaluate performance of different Indian and foreign mutual funds schemes on the basis of risk- return parameters.
2. To appraise performance of mutual funds on risk adjusted measures as suggested by Sharpe, Treynor, and Jensen.

### HYPOTHESES OF THE STUDY:

1. There is no significant difference between the returns of different mutual fund schemes of Indian mutual fund category.
2. There is no significant difference between the returns of different mutual fund schemes of foreign mutual fund category.
3. There is no significant difference between the

returns of mutual fund schemes of Indian and foreign mutual funds categories.

#### RESEARCH METHODOLOGY:

**Funds selected for the study:** Mutual funds which have been operating for greater than five years and performing during the period of study (i.e. 2003 - 2007) were selected for the present research. There were 340 such mutual funds belonging to four categories - Money market category funds, Debt Category Funds, Equity category funds and Balanced category funds. These were further sub-divided into Indian and foreign category funds. The reasons for studying the performance of mutual fund for a period of five years (2003-2007) are:

- A large number of mutual funds have been instigated during 2003 - 2007.
- The mutual fund industry in India registered notable growth during 2003 - 2007 Period.
- The Indian stock market has done exceptionally well during 2003 - 2007.

**Data Collection:** The Research Study has been based on Secondary Data. To gain an overview of the current performance trends of the Indian mutual fund industry secondary data has been an important source and was collected from the fact sheets, newspapers, journals, books, periodicals, websites, etc. The data was collected from various websites of AMCs, AMFI, value research online, moneycontrol.com, etc. Bombay Stock Exchange Sensex annualized returns values have been drawn from website for the study period to compute market returns for Equity diversified, equity tax savings, equity banking, equity MNC, Equity other and Equity index, balanced and hybrid funds. Bombay Stock Exchange FMCG Index values have been taken for computing market returns for equity FMCG funds, Bombay Stock Exchange Information Technology Index values have been selected for computing market returns for equity Technology funds, Bombay Stock Exchange Health Care index values have been taken for computing market return for Equity Pharmacy and 364 Days Treasury bill values were taken for computing market returns for money market institutional, debt institutional, debt short term, debt specialty, debt long term, debt floating rate, money income plan and money market funds.

**Performance Measures Used in the Study:** The performance of selected funds is evaluated using average rate

of return of fund, standard deviation, Risk/Return, Sharpe Ratio, Treynor ratio and Jensen ratio. Return alone should not be considered as the basis of measurement of the performance of a mutual fund scheme, it should also include the risk taken by the fund manager because different funds will have different levels of risk attached to them. Risk associated with a fund, in a general, can be defined as variability or fluctuations in the returns generated by it. The higher the fluctuations in the returns of a fund during a given period, higher will be the risk associated with it. Standard deviation is a statistical measure of the range of a fund's performance, and is reported as an annual number. When a fund has a high standard deviation, its range of performance has been very wide, indicating that there is a greater potential for volatility. The most common measures that combine both risk and reward are Sharpe Ratio, Treynor ratio and Jensen ratio. Treynor's index =  $(R_p - R_f) \div \beta_p$  Where,  
 $R_p$  = Portfolio return over a period  
 $R_f$  = Risk-free return over a period  
 $\beta_p$  = Market-risk, beta coefficient

Higher value of Treynor's index indicates better performance of portfolio and vice versa. The Treynor's measure of portfolio performance is relative measure that ranks the funds in terms of risk (market risk) and return. The index is also termed as reward to volatility ratio. Sharpe's index =  $(R_p - R_f) \div \sigma_p$

$R_p$  = Portfolio return over a period

$R_f$  = Risk-free return over a period

$\sigma_p$  = Total risk, standard deviation of portfolio return

Higher value of Sharpe's index indicates better performance of portfolio and vice versa. The Sharpe's measure of portfolio performance is also relative measure that ranks the funds in terms of risk (total risk) and return. The ratio is also termed as reward to variability ratio. Jensen's Measure is a risk-adjusted performance measure that represents the average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. This is the portfolio's alpha. In fact, the concept is sometimes referred to as "Jensen's alpha."

Jensen's Measure is calculated as:

$$\alpha_p = \bar{r}_p - [\bar{r}_f + \beta_p (r_m - r_f)]$$

Where,

$\bar{r}_p$  = Expected total portfolio return

$r_f$  = Risk free rate

$\beta_p$  = Beta of the portfolio

$\bar{r}_m$  = Expected market return

Jensen's measure is one of the ways to help determine if a portfolio is earning the proper return for its level of risk. If the value is positive, then the portfolio is earning excess returns. In other words, a positive value for Jensen's alpha means a fund manager has "beat the market" with his or her stock picking skills. The Jensen ratio measures how much of the portfolio's rate of return is attributable to the manager's ability to deliver above-average returns, adjusted for market risk. The higher the ratio, the better the risk-adjusted returns. A portfolio with a consistently positive excess return will have a positive alpha, while a portfolio with a consistently negative excess return will have a negative alpha.

#### PERFORMANCE OF INDIAN AND FOREIGN MUTUAL FUNDS:

Mutual funds are classified into eight categories -

1. Indian balanced category funds
2. Foreign balanced category funds
3. Indian debt category funds
4. Foreign debt category funds
5. Indian equity category funds
6. Foreign equity category funds
7. Indian money market category funds
8. Foreign money market category funds

**Performance of Indian Balanced Category Funds:** It can be observed from Table 1 that two Indian Balanced Category Funds i.e. SBI Magnum and HDFC Prudence Funds have generated greater returns than the market returns of 43.66%. The average risk per unit return (coefficient of Variation) for Indian Balanced Category Funds works out to 0.26.

The returns for Indian Balanced Category Funds range from 17.02% to 47.96%. The returns are highest for SBI Magnum Balanced Fund followed by HDFC Prudence Fund with 47.46%, Escorts Balanced Fund with 43.62% and lowest for UTI CRTS 81. Seven Indian Balanced Category Funds have returns ranging from 40% to 50%, nine funds have returns range from 30% to 40%, six funds have returns range from 20% to 30% and remaining two have returns less than 20%. The risk for Indian Balanced Category Funds ranges from 8.76 to 25.95. The risk is highest for HDFC Prudence Fund and lowest risk is for UTI CRTS 81. The risk per unit return for Indian Balanced

Category Funds ranges from 0.38 to 0.70. BOB Balance Fund has the highest risk per unit return and Kotak Balance has the lowest risk per unit return.

The average risk per unit return (coefficient of Variation) works out to be  $8.72/33.98 = 0.26$

2 Indian Balanced Category Funds have generated greater returns than the market returns.

The Sharpe ratio for 24 Indian Balanced Category Funds has been calculated and the ratio ranges from 1.13 to 2.23 in this category. The Kotak balance with the ratio of 2.23 is the best performed mutual fund and BOB balanced fund with 1.13 is the least performed fund in this category. Treynor performance measure was computed for India Balanced Category Fund. The Treynor ratio ranges from 28.20 to 86.64. All the funds have a positive Treynor ratio. BOB Balance fund has the highest Treynor ratio with 86.64 and Tata Young Citizens Fund has the least Treynor ratio with 28.20. Jensen ratio for Indian Balanced Category Funds ranges from -7.07 to 14.58. SBI Magnum Balanced Fund has the highest Jensen ratio of 14.58 and Tata Young Citizens Fund has the least Jensen ratio of -7.07. Fourteen Indian Balanced Funds have superior performance. Performance of Foreign Balanced Category Funds: It can be understood from Table 2 that all Foreign Balanced Category Funds have generated lesser returns than the market returns of 43.66%. The average risk per unit return (coefficient of Variation) works out to 0.29 for Foreign Balanced Category Funds.

The returns for Foreign Balanced Category Funds range from 18.26% to 42.02%. DSP-ML Balanced Fund has the highest returns followed by FT India Balanced Fund with 37.86%, Sundaram BNP Paribas Balanced Fund with 34.62% and lowest returns for Templeton (I) Childrens Asset Plan - Gift Plan. The risk is highest for DSP-ML Balanced Fund with 22.59 and lowest risk is for Templeton India Pension Plan with 11.63. The risk per unit return ranges from 0.46 to 0.77 for Foreign Balanced Category Funds. Templeton (I) Childrens Asset Plan - Gift Plan has the highest ratio signifying high risk per unit return and ING Balanced Portfolio has the lowest ratio signifying low risk per unit return. T

Table 1: Indian Balanced Category Funds

S. No	Indian Balanced Category Funds	Returns (%)	Risk	Risk/Return	Sharpe	Treynor	Jensen
1	<b>SBI Magnum Balanced Fund</b>	<b>47.96</b>	19.29	0.4	2.18	57.73	<b>14.58</b>
2	<b>HDFC Prudence Fund</b>	47.46	<b>25.95</b>	0.55	1.6	39.88	2.28
3	Escorts Balanced Fund	43.62	25.01	0.57	1.51	39.65	1.86
4	ICICI Pru Child Care Plan - Gift Plan	43.58	24.08	0.55	1.56	41.3	3.28
5	Tata Balanced Fund	43.5	24.72	0.57	1.52	36.7	-1.02
6	<b>Kotak Balance</b>	41.08	15.77	<b>0.38</b>	<b>2.23</b>	57.06	11.92
7	Birla Sun Life95 Fund	40.76	20.38	0.5	1.71	44.72	5.46
8	Principal Child Benefit Fund - Future Guard Plan	39.82	17.84	0.45	1.9	57.64	11.72
9	Principal Child Benefit Fund - Career Builder Plan	39.82	17.87	0.45	1.89	57.46	11.64
10	ICICI Pru Balanced Fund	36.98	19.74	0.53	1.57	37.11	-0.48
11	Principal Balanced Fund	35.66	19.78	0.55	1.5	40.51	2.06
12	JMBalanced Fund	33.58	14.72	0.44	1.88	45.62	4.8
13	Birla Sun Life Balance	32.74	20.56	0.63	1.3	32.23	-4.54
14	LICMF Balanced Fund - C	32.7	20.18	0.62	1.32	48.79	6.08
15	UTI Balanced Fund	31.3	17.18	0.55	1.47	35.59	-1.5
16	HDFC Balanced Fund	30.52	17.19	0.56	1.43	33.59	-3
17	LICMF Unit Linked Insurance Scheme	29.12	12.29	0.42	1.88	55.85	7.53
18	<b>BOB Balance Fund</b>	28.52	20.03	<b>0.7</b>	<b>1.13</b>	<b>86.64</b>	12.74
19	HDFC Childrens Gift Fund - Investment Plan	27.8	17.36	0.62	1.26	35.52	-1.34
20	<b>Tata Young Citizens Fund</b>	26.96	17.53	0.65	1.2	<b>28.2</b>	<b>-7.07</b>
21	Escorts Opportunities Fund	23.62	15.16	0.64	1.16	33.71	-2.09
22	UTI Mahila Unit Scheme	22.62	10.73	0.47	1.55	37.51	-0.08
23	UTI Childrens Career Balanced Plan	18.76	9.21	0.49	1.39	32.24	-2.17
24	<b>UTI CRTS 8I</b>	<b>17.02</b>	<b>8.76</b>	0.51	1.26	59.75	4.08
<b>Mean Return</b>		<b>33.98</b>					
<b>Standard Deviation of Returns</b>			<b>8.72</b>				
<b>Market Return (BSE Sensex)</b>		<b>43.66</b>					
<b>The average risk per unit return (coefficient of Variation) works out to be <math>8.72/33.98=0.26</math></b>							
<b>2 Indian Balanced Category Funds have generated greater returns than the market returns.</b>							

Table 2: Foreign Balanced Category Funds

S. No	Foreign Balanced Category Funds	Returns (%)	Risk	Risk/Return	Sharpe	Treynor	Jensen
1	<b>DSP-ML Balanced Fund</b>	<b>42.02</b>	<b>22.59</b>	0.54	1.6	38.94	1.16
2	<b>FT India Balanced Fund</b>	37.86	21.08	0.56	1.51	<b>34.8</b>	<b>-2.66</b>
3	Sundaram BNP Paribas Balanced Fund	34.62	19.67	0.57	1.46	35.93	-1.41
4	<b>ING Balanced Portfolio</b>	31.44	14.33	<b>0.46</b>	<b>1.78</b>	49.85	6.21
5	<b>Templeton India Pension Plan</b>	22.78	<b>11.63</b>	0.51	1.45	35.35	-1.11
6	<b>Templeton (I) Childrens Asset Plan - Gift Plan</b>	<b>18.26</b>	13.98	<b>0.77</b>	<b>0.88</b>	<b>130.16</b>	<b>8.73</b>
<b>Mean Return</b>		<b>31.16</b>					
<b>Standard Deviation of Returns</b>			<b>9.07</b>				
<b>Market Return (BSE Sensex)</b>		<b>43.66</b>					
<b>The average risk per unit return (coefficient of Variation) works out to be <math>9.07/31.16 = 0.29</math></b>							
<b>All the Foreign Balanced Category Funds have generated lesser returns than the market returns.</b>							

For six Foreign Balanced Category Funds risk adjusted performance measure in the form of Sharpe ratio has been computed. The Sharpe ratio ranges from 0.88 to 1.78 in this category. Templeton (I) Childrens asset plan gift plan with Sharpe ratio 0.88 is the least and with Sharpe ratio of 1.78 ING balanced portfolio is the highest performed fund in foreign balanced funds. Treynor ratio was computed for Foreign Balanced Category Fund and the performance of Foreign Balanced Fund ranges from 34.80 to 130.16. All the Foreign Balanced funds have positive performance. Templeton (I) Childrens Asset Plan Gift Plan with 130.16 has the highest Treynor ratio and FT India Balanced Fund has the least Treynor ratio with 34.80.

Jensen performance ratio has been computed for Foreign Balanced Category Funds and the ratio ranges from -2.66 to 8.73. There are three Foreign Balanced funds with superior performance. Among them Templeton (I) Childrens Asset Plan Gift Plan with 8.73 has the highest Jensen ratio and FT India Balanced Fund with -2.66 has the least Jensen ratio.

**Performance of Indian Debt Category Funds:** It can be inferred from Table 3 that 29 Indian Debt Category Funds have generated greater returns than the market returns of 5.97%. The average risk per unit return (coefficient of Variation) works out to 0.41.

The returns for Indian Debt Category Funds range from 0.78% to 15.72%. The returns are highest for LIC MF Childrens Fund followed by Canara Robeco CIGO

with 15.10%, ICICI Pru Child Care Plan - Study Plan with 14.70% and lowest for JM Short Term Plan - Institutional Plan. The risk for Indian Debt Category Funds ranges from 0.29 to 19.95. The risk is highest for LIC MF Childrens Fund and lowest for Kotak Gilt Savings Plan. The risk per unit return for Indian Debt Category Funds ranges from 0.06 to 13.20. JM Short Term Plan - Institutional Plan has the highest ratio representing high risk per unit return and Kotak Gilt Savings Plan has the lowest ratio representing low risk per unit return.

Risk adjusted performance measure in the form of Sharpe ratio has been calculated for 106 Indian Debt Category Funds. The range of excess returns over risk free return per unit of total risk ranges from -2.64 to 2.03. ICICI Pru long term plan with Sharpe ratio of 2.03 and Kotak gilt savings plan with Sharpe ratio of -2.64 are the highest and least performed mutual funds in Indian debt mutual funds respectively. Treynor ratio has been computed for Indian Debt Category Funds and the ratio ranges from -4.77 to 12.21. ICICI Pru Child Care Plan Study Plan has the highest Treynor ratio with 12.21 and ICICI Pru Long Term Plan has the least Treynor ratio with -44.77.

Jensen ratio had been computed and the ratio ranges from -5.19 to 9.75. LIC MF Childrens Fund has the highest Jensen ratio of 9.75 and JM Short Term Plan Institutional Plan has the least Jensen ratio of -5.19. There are 29 Indian Debt Mutual Funds with superior performance.

Table 3: Indian Debt Category Funds

S. No	Indian Debt Category Funds	Returns (%)	Risk	Risk/Return	Sharpe	Treynor	Jensen
1	LICMF Childrens Fund	15.72	19.95	1.27	0.49	0.66	9.75
2	Canara Robeco CIGO	15.1	6.88	0.46	1.33	1.92	9.13
3	ICICI Pru Child Care Plan - Study Plan	14.7	5.97	0.41	1.46	12.21	8.73
4	SBI Magnum Childrens Benefit Plan	11.76	6.27	0.53	0.92	-6.42	5.79
5	HDFC Childrens Gift Fund - Savings Plan	11.44	7.49	0.65	0.73	-5.1	5.47
6	UTI Monthly Income Scheme	8.46	3.78	0.45	0.66	1.03	2.49
7	ICICI Pru Long Term Plan	7.72	0.86	0.11	2.03	-44.77	1.75
8	Reliance Short Term Plan	7	1.73	0.25	0.6	0.89	1.03
9	ICICI Pru Short Term Plan - Institutional Plan	6.8	1.72	0.25	0.48	0.62	0.83
10	Escorts Income Plan	6.62	2.9	0.44	0.22	-2.08	0.65
11	Tata Short Term Bond Fund	6.56	1.84	0.28	0.32	0.44	0.59
12	Birla Sun Life Income Fund	6.54	4.66	0.71	0.12	0.19	0.57
13	ICICI Pru Short Term Plan	6.52	1.69	0.26	0.33	0.43	0.55
14	Reliance Gilt Securities Fund - Long Term Plan	6.5	0.72	0.11	0.73	1.44	0.53
15	Kotak Bond - Short Term Plan	6.46	1.74	0.27	0.28	0.37	0.49
16	JM Short Term Plan	6.36	1.65	0.26	0.24	0.36	0.39
17	ICICI Pru Income Plan - Institutional Plan	6.36	3.76	0.59	0.1	0.25	0.39
18	Birla Sun Life Gilt Plus (Regular Plan)	6.28	4.95	0.79	0.06	0.22	0.31
19	Birla Sun Life Short Term Fund	6.26	2.28	0.36	0.13	0.17	0.29
20	Kotak Bond (Regular Plan)	6.2	3.02	0.49	0.08	0.15	0.23
21	HDFC High Interest Fund - Short Term Plan	6.18	2.31	0.37	0.09	0.12	0.21
22	Principal Income Fund - Short Term Plan	6.16	1.15	0.19	0.17	0.21	0.19
23	ICICI Pru Flexible Income Plan	6.12	3.18	0.52	0.05	0.13	0.15
24	Birla Sun Life Gilt Plus (Liquid Plan)	6.1	1.81	0.3	0.07	-1.06	0.13
25	ICICI Pru Gilt - Treasury Plan	6.04	1.97	0.33	0.04	0.17	0.07
26	Birla Sun Life Liquid Plus Fund - Retail (Plan B)	6.04	1.35	0.22	0.05	0.07	0.07
27	Reliance Income Fund	6.02	2.61	0.43	0.02	0.04	0.05
28	IDFC Super Saver Income Fund - STP	6	2.09	0.35	0.02	0.02	0.03
29	UTI Gilt Advantage Fund - Long Term Plan	5.98	5.2	0.87	0	-0.03	0.01
30	Birla Sun Life Liquid Plus Fund - Institutional (Plan C)	5.96	1.57	0.26	-0.01	-0.01	-0.01
31	ICICI Pru Gilt - Investment Plan	5.94	3.76	0.63	-0.01	-0.02	-0.03
32	HDFC Floating Rate Income Fund - STP - Retail Plan	5.94	1.47	0.25	-0.02	-0.02	-0.03
33	IDFC Dynamic Bond Fund	5.92	3.49	0.59	-0.01	-0.03	-0.05
34	Tata Income Fund	5.9	4.45	0.75	-0.02	-0.09	-0.07
35	HDFC Short Term Plan	5.88	1.95	0.33	-0.05	-0.06	-0.09
36	ICICI Pru Floating Rate Plan B	5.8	1.77	0.31	-0.1	-0.11	-0.17
37	UTI Bond Fund	5.8	3.11	0.54	-0.05	-0.12	-0.17
38	Principal Income STP - Institutional Plan	5.8	1.71	0.3	-0.1	-0.12	-0.17
39	IDFC Liquid Plus Fund - Treasury Plan A	5.8	0.95	0.16	-0.18	-0.23	-0.17
40	Canara Robeco Liquid Plus - Retail Plan	5.76	3.33	0.58	-0.06	-0.1	-0.21
41	Canara Robeco Income	5.76	2.74	0.48	-0.08	-0.37	-0.21
42	Principal Income Fund	5.74	3.12	0.54	-0.07	-0.15	-0.23
43	Birla Sun Life Income Plus - Retail (Plan B)	5.7	4.94	0.87	-0.05	-0.09	-0.27
44	Principal Income Fund - Institutional Plan	5.64	2.73	0.48	-0.12	-0.16	-0.33
45	Principal Govt Sec. Fund - Investment Plan	5.64	4	0.71	-0.08	-0.51	-0.33
46	Birla Floating Rate Fund - Long Term Plan	5.56	1.99	0.36	-0.2	-0.26	-0.41
47	SBI Magnum Gilt - Short Term Plan	5.54	3.42	0.62	-0.13	-0.26	-0.43

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48	HDFC Floating Rate Income Fund - LTP	5.52	1.37	0.25	-0.33	-0.38	-0.45
49	Kotak Floater Short Term Plan	5.44	2.12	0.39	-0.25	-0.32	-0.53
50	ICICI Pru Income Plan	5.4	3.62	0.67	-0.16	-0.31	-0.57
51	Birla Floating Rate Fund - Short Term Plan	5.4	1.83	0.34	-0.31	-0.4	-0.57
52	JM Floater Fund - Short Term Plan	5.38	1.82	0.34	-0.32	-0.45	-0.59
53	Kotak Bond (Deposit Plan)	5.24	2.63	0.5	-0.28	-0.67	-0.73
54	Birla Sun Life Gilt Plus (PF Plan)	5.22	4.91	0.94	-0.15	-1.52	-0.75
55	Kotak Gilt Savings Plan	5.2	0.29	0.06	-2.64	-3.31	-0.77
56	Kotak Gilt Investment Plan Regular	5.14	3.87	0.75	-0.21	1.33	-0.83
57	LIC MF Bond Fund	5.06	2.8	0.55	-0.32	-0.63	-0.91
58	Tata Dynamic Bond Fund - Plan A	5.04	2.49	0.49	-0.37	-0.52	-0.93
59	Tata Dynamic Bond Fund - Plan B	5.02	2.4	0.48	-0.4	-0.55	-0.95
60	Tata Gilt Securities - Short Maturity Fund	4.96	1.73	0.35	-0.58	-1.32	-1.01
61	Tata Income Plus Fund - Plan B	4.96	3.34	0.67	-0.3	-4.04	-1.01
62	Sahara Income Fund	4.94	3.01	0.61	-0.34	-0.64	-1.03
63	UTI Floating Rate Fund - STP	4.94	2.09	0.42	-0.49	-0.81	-1.03
64	IDFC G-Sec. Fund - Investment Plan	4.92	4.24	0.86	-0.25	-0.79	-1.05
65	Tata Income Plus Fund - Plan A	4.9	3.25	0.66	-0.33	-3.49	-1.07
66	IDFC Liquid Plus Fund - Treasury Plan - Institutional Plan B	4.86	1.54	0.32	-0.72	-1.1	-1.11
67	IDFC Super Saver Income Fund	4.82	4	0.83	-0.29	-0.63	-1.15
68	JM Liquid Plus Fund - Regular Plan	4.82	2.07	0.43	-0.56	-0.72	-1.15
69	Birla Sun Life G-Sec. Fund - Long Term	4.64	4.97	1.07	-0.27	5.68	-1.33
70	JM G-Sec Fund - PF Plan	4.62	3.73	0.81	-0.36	1.74	-1.35
71	IDFC Super Saver Income Fund - Medium Term Plan - A	4.62	2.45	0.53	-0.55	-0.69	-1.35
72	LIC MF Short Term Plan	4.62	1	0.22	-1.35	-1.58	-1.35
73	Reliance Medium Term Fund	4.6	2.47	0.54	-0.55	-1.09	-1.37
74	HDFC Income Fund	4.6	3.6	0.78	-0.38	-1.67	-1.37
75	HDFC Gilt Fund - Short Term Plan	4.56	1.53	0.34	-0.92	-3.24	-1.41
76	UTI G-Sec Fund	4.5	4.37	0.97	-0.34	-2.38	-1.47
77	BOB Income Fund	4.44	0.8	0.18	-1.91	6.22	-1.53
78	SBI Magnum Gilt - Long Term Plan	4.44	3.95	0.89	-0.39	-1.37	-1.53
79	Principal Govt Sec. Fund - Savings Plan	4.44	1.46	0.33	-1.05	-13.83	-1.53
80	Tata Gilt Securities Fund B (App)	4.4	5.31	1.21	-0.3	-2.32	-1.57
81	IDFC G-Sec. Fund - Short Term Plan	4.36	3.19	0.73	-0.5	-2.28	-1.61
82	Taurus Libra Bond	4.34	4.8	1.11	-0.34	2.87	-1.63
83	UTI Liquid Plus Fund - Retail Plan	4.32	3	0.7	-0.55	-2.29	-1.65
84	JM Income Fund	4.32	2.86	0.66	-0.58	-5.05	-1.65
85	HDFC High Interest Fund	4.2	3.33	0.79	-0.53	-2.35	-1.77
86	Escorts Gilt Fund	4.2	2.8	0.67	-0.63	-5.81	-1.77
87	Canara Robeco Gilt PGS	4.18	3.43	0.82	-0.52	-1.18	-1.79
88	SBI Magnum Income Fund	4.18	3.24	0.77	-0.55	-1.65	-1.79
89	JM G-Sec Fund (RP)	4.16	3.31	0.8	-0.55	7.3	-1.81
90	LIC MF Govt. Sec. Fund	4.16	3.07	0.74	-0.59	-2.18	-1.81
91	Birla Sun Life G-Sec. Fund - Short Term	4.1	3.14	0.77	-0.59	-1.2	-1.87
92	HDFC Gilt Fund - Long Term Plan	3.92	4.74	1.21	-0.43	-4.66	-2.05
93	Reliance Gilt Securities Fund- Short Term Plan	3.9	1.93	0.49	-1.07	-1.57	-2.07
94	Birla Sun Life Short Term Opportunities Fund - Retail Plan	3.86	2.84	0.74	-0.74	-1.6	-2.11
95	UTI Gilt Advantage Fund - LTP - PF (PDAR)	3.12	3.22	1.03	-0.89	-1.23	-2.85
96	UTI Gilt Advantage Fund - LTP - PF	3.1	3.24	1.05	-0.88	-1.23	-2.87
97	Tata Gilt High Fund	3.1	3.69	1.19	-0.78	-1.52	-2.87
98	Sahara Gilt Fund	3.08	2.89	0.94	-1	-1.56	-2.89

99	Taurus Libra Gilt	3.06	4.4	1.44	-0.66	1.79	-2.91
100	BOB Gilt Fund	2.82	3.44	1.22	-0.91	-2.04	-3.15
101	Tata Gilt Retirement Plan (28/02/13 Maturity)	2.5	3.62	1.45	-0.96	-1.37	-3.47
102	Tata Gilt Retirement Plan (28/02/09 Maturity)	2.4	3.57	1.49	-1	-1.4	-3.57
103	Tata Gilt Retirement Plan (28/02/11 Maturity)	2.36	3.6	1.52	-1	-1.39	-3.61
104	Tata Gilt Retirement Plan (28/02/10 Maturity)	2.3	3.62	1.58	-1.01	-1.38	-3.67
105	Tata Gilt Retirement Plan (28/02/25 Maturity)	2.06	3.75	1.82	-1.04	-1.36	-3.91
106	JM Short Term Plan - Institutional Plan	0.78	10.3	13.2	-0.5	0.81	-5.19
	Mean Return	5.46					
	Standard Deviation of Returns		2.26				
	Market Return (364 Days T Bill)	5.97					
The average risk per unit return (coefficient of Variation) works out to be $2.26/5.46 = 0.41$							
29 Indian Debt Category Funds have generated greater returns than the market returns.							

Performance of Foreign Debt Category Funds: Table 4 depicts that eight Foreign Debt Category Funds have generated greater returns than the market returns of 5.97%. The average risk per unit return (coefficient of Variation) works out to 0.52 for Foreign Debt Category Funds.

The returns range from 0.14% to 10.80% for Foreign Debt Category Funds. The returns are highest for DSP-ML Saving Plus Fund - Moderate and lowest for HSBC Income Fund - STP - Institutional Plan. Two funds have negative returns and they are Franklin Indian International Fund - 0.52 and DBS Chola Freedom Income - STF Institutional Plan -3.64. The risk for Foreign Debt Category Funds

ranges from 0.82 to 21.54. The risk is highest for DBS Chola Freedom Income - STF Institutional Plan and risk is lowest for ING Gilt Fund - Regular Plan. The risk per unit return ranges from 0.20 to 69.26 for Foreign Debt Category Funds. HSBC Income Fund - STP - Institutional Plan has the highest ratio indicating high risk per unit return and DSP-ML Short Term Fund has the lowest ratio indicating low risk per unit return. DBS Chola Freedom Income - STF Institutional Plan and Franklin Indian International Fund risk return ratio is negative as their return are negative.

**Table 4: Foreign Debt Category Funds**

S. No	Foreign Debt Category Funds	Returns (%)	Risk	Risk/Return	Sharpe	Treynor	Jensen
1	DSP-ML Saving Plus Fund - Moderate	10.8	3.7	0.34	1.31	-11.04	4.83
2	ING Short Term Income Fund	6.76	1.8	0.27	0.44	0.62	0.79
3	Templeton India Govt. Sec. - Long Term Plan	6.7	5.02	0.75	0.15	-0.84	0.73
4	Templeton India Short Term Income Plan	6.44	2.18	0.34	0.22	0.29	0.47
5	Templeton Floating Rate Income Fund - STP	6.08	1.46	0.24	0.08	0.1	0.11
6	DWS Short Maturity Fund	6.06	1.51	0.25	0.06	0.09	0.09
7	Templeton Floating Rate Income Fund - LTP	6.02	1.32	0.22	0.04	0.05	0.05
8	DWS Insta Cash Plus Fund	5.84	1.38	0.24	-0.09	-0.11	-0.13
9	DBS Chola Freedom Income - Short Term Fund	5.78	1.68	0.29	-0.11	-0.19	-0.19
10	DSP-ML Short Term Fund	5.76	1.13	0.2	-0.18	-0.37	-0.21
11	HSBC Income Fund - Short Term Plan	5.74	1.43	0.25	-0.16	-0.24	-0.23
12	DWS Premier Bond Fund - Regular Plan	5.48	4.12	0.75	-0.12	0.6	-0.49
13	HSBC Income Fund - Investment Plan	5.4	3.48	0.64	-0.16	-0.51	-0.57
14	Templeton India Govt Sec - Treasury Plan	5.4	1.5	0.28	-0.38	-9.74	-0.57
15	ING Income Fund - Institutional Option	5.2	3.03	0.58	-0.25	-0.38	-0.77
16	Templeton India Income Fund	5.14	3.86	0.75	-0.21	-0.47	-0.83
17	Templeton India Govt Sec - Composite Plan	5.1	4.2	0.82	-0.21	14.59	-0.87
18	DSP-ML Govt. Sec. Fund - Plan B	5.1	1.19	0.23	-0.73	-2.51	-0.87
19	DSP-ML Govt. Sec. Fund - Plan A	5.08	3.6	0.71	-0.25	-8.1	-0.89
20	DSP-ML Floating Rate Fund - Regular Plan A	4.94	1.1	0.22	-0.93	-2.04	-1.03



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21	HSBC Income Fund - Investment Plan - Inst. Plan	4.74	3.04	0.64	-0.4	-0.48	-1.23
22	DBS Chola Gilt - Investment Plan	4.64	5.13	1.11	-0.26	1.33	-1.33
23	ING Income Fund	4.5	3.19	0.71	-0.46	-0.9	-1.47
24	Templeton India Income Builder Account	4.42	3.41	0.77	-0.45	-1.39	-1.55
25	DSP-ML Bond Fund - Retail Plan	4.32	2.77	0.64	-0.6	-2.92	-1.65
26	Sundaram BNP Paribas Bond Saver	4	3.29	0.82	-0.6	-1.77	-1.97
27	ING Gilt Fund - Regular Plan	3.78	0.82	0.22	-2.68	-78.17	-2.19
28	DBS Chola Triple Ace	3.12	2.77	0.89	-1.03	10.87	-2.85
29	HSBC Income Fund - STP - Institutional Plan	0.14	9.7	69.26	-0.6	1.07	-5.83
30	Franklin Indian International Fund	-0.52	4.25	-8.17	-1.53	8.89	-6.49
31	DBS Chola Freedom Income - STF Institutional Plan	-3.64	21.54	-5.92	-0.45	-0.9	-9.61
	Mean Return	4.78					
	Standard Deviation of Returns		2.47				
	Market Return (364 Days T Bill)	5.97					
The average risk per unit return (coefficient of Variation) works out to be $2.47/4.78 = 0.52$							
8 Foreign Debt Category Funds have generated greater returns than the market returns.							

Risk adjusted performance Sharpe ratio is computed for the 31 Foreign Debt Category Funds and the Sharpe ratio ranges from -2.68 to 1.31. DSP ML Savings Plus fund moderate is the highest performing fund with 1.31 and ING gilt fund regular plan is the least performing fund with the Sharpe ratio -2.68 in foreign debt funds. Treynor ratio for Foreign Debt Category Funds has been computed. The Treynor ratio for the Foreign Debt Mutual Funds ranges from -78.17 to 14.59. Templeton India Govt Sec Composite Plan has the highest Treynor ratio with 14.59 and ING Gilt Fund Regular Plan has the least Treynor ratio with -78.17.

Jensen performance ratio was computed for Foreign Debt Category Funds. DSP ML Savings Plus Fund Moderate with 4.83 and DBS Chola Freedom Income STF Institutional Plan with -9.61 are the funds with highest and least Jensen ratio. The Jensen ratio for Foreign Debt Mutual funds ranges from -9.61 to 4.83. Only 7 funds have superior

performance. Performance of Indian Equity Category Funds: It can be observed from Table 5 that 67 Indian Equity Category Funds have generated greater returns than the market returns. The average risk per unit return (coefficient of Variation) for Indian Equity Category Funds works out to 0.23.

The returns are highest for Reliance Growth Fund - Retail Plan with 76.36% followed by SBI Magnum Tax Gain Scheme with 75.52%, Tata Equity Opportunities Fund - Plan B with 73.44% and the returns are lowest for Kotak Tech with 26.26%. The returns range from 26.26% to 76.36%. The risk is highest for Tata Equity Opportunities Fund - Plan B with 61.85 and lowest risk for UTI Master Share with 16.35. The risk per unit return for Indian Equity Category Funds ranges from 0.28 to 1.17. UTI Energy Fund has the highest ratio signifying high risk per unit return and SBI Magnum Global Fund has the highest ratio signifying low risk per unit.

Table 5: Indian Equity Category Funds

S. No	Indian Equity Category Funds	Returns	Risk (%)	Risk	Sharpe /Return	Treynor	Jensen
1	Reliance Growth Fund - Retail Plan	76.36	48.54	0.64	1.45	39.12	2.58
2	SBI Magnum Tax Gain Scheme	75.52	38.03	0.5	1.83	59.4	25.41
3	Tata Equity Opportunities Fund - Plan B	73.44	61.85	0.84	1.09	28.48	-21.82
4	SBI Magnum Contra Fund	71.1	24.37	0.34	2.67	85.81	36.52
5	SBI Magnum Global Fund	69.9	19.62	0.28	3.26	148.74	47.73
6	Taurus Star Share	67.86	30.67	0.45	2.02	48.99	14.27
7	Birla Sun Life Basic Industries Fund	65.86	53.6	0.81	1.12	29.95	-15.48
8	Reliance Vision Fund - Retail Plan	65.64	53.34	0.81	1.12	27.36	-22.55
9	SBI Magnum Multiplier Plus	65.4	32.78	0.5	1.81	43.31	7.71
10	Birla Sun Life Tax Plan	64.64	55.01	0.85	1.07	27.58	-21.53

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11	Birla Sun Life Equity Fund	64.44	31.73	0.49	1.84	49.24	13.71
12	Birla Tax Plan 98	64.16	55.72	0.87	1.04	27.42	-21.79
13	ICICI Pru Tax Plan	63.24	51.13	0.81	1.12	34	-6.22
14	HDFC Tax Saver	62.54	35.39	0.57	1.6	55.3	18.01
15	Tata Select Equity Fund	62.26	41.85	0.67	1.35	31.59	-10.87
16	Tata Pure Equity Fund	62.06	44.25	0.71	1.27	32.02	-9.94
17	Birla Sun Life Midcap Fund	61.4	33.59	0.55	1.65	43.85	7.78
18	Benchmark Nifty Junior BeEs	61.18	54.14	0.88	1.02	28.75	-17.18
19	HDFC Top 200 Fund	60.38	42.05	0.7	1.29	32.78	-8.15
20	HDFC Equity Fund	59.88	39.01	0.65	1.38	35.4	-3.5
21	HDFC Capital Builder Fund	59.76	37.21	0.62	1.45	47.94	11.5
22	HDFC Long Term Advantage Fund	59.44	44.7	0.75	1.2	39.57	2.53
23	Principal Tax Savings Fund	59.34	26.41	0.45	2.02	54.67	16.58
24	Principal Resurgent India Equity Fund	58.82	48.95	0.83	1.08	27.43	-19.78
25	HDFC Growth Fund	57.94	37.84	0.65	1.37	33.53	-6.46
26	ICICI Pru Power	57.62	39.68	0.69	1.3	31.14	-10.87
27	Kotak 30	56.38	23.05	0.41	2.19	54.63	15.63
28	Birla Sun Life Tax Relief 96	55.66	34.92	0.63	1.42	36.2	-2.04
29	Tata Tax Saving Fund	55.56	44.7	0.8	1.11	30.8	-11.09
30	Taurus Discovery Fund	54.06	40.69	0.75	1.18	42.53	5.47
31	Principal Personal Tax Savings Fund	53.24	31.6	0.59	1.5	42.4	5.25
32	ICICI Pru Dynamic Plan	52.98	30.41	0.57	1.55	35.28	-3.22
33	Birla Sun Life Advantage Fund	52.94	33.55	0.63	1.4	35.2	-3.32
34	Birla Sun Life Buy India Fund	51.74	23.92	0.46	1.91	84.77	25.42
35	JM Equity Fund	51.68	30.68	0.59	1.49	34.61	-4.08
36	Escorts Growth Plan	51.22	26.27	0.51	1.72	49.7	10.93
37	Birla Sun Life Frontline Equity Fund	51.22	26.32	0.51	1.72	39.12	1.65
38	Sahara Growth Fund	51.18	30.88	0.6	1.46	34.33	-4.43
39	UTI Master Value Fund	50.96	44.38	0.87	1.01	29.46	-12.57
40	UTI Master Equity Plan Unit Scheme	50.5	36.45	0.72	1.22	30.04	-11.35
41	UTI Master growth 93	50.1	36.15	0.72	1.22	31.28	-9.05
42	Sahara Tax Gain	49.9	31.69	0.64	1.39	36.15	-1.88
43	Principal Growth Fund	49.64	23.56	0.47	1.85	56.92	14.75
44	Escorts Tax Plan	49.18	31.22	0.63	1.38	33.14	-5.93
45	Tata Life Sciences & Technology Fund	49.16	40.85	0.83	1.06	29.78	-11.47
46	ICICI Pru FMCG Fund ***	48.86	27.89	0.57	1.54	30.17	12.76
47	Canara Robeco Equity Tax Saver	48.58	26.64	0.55	1.6	39.6	2.05
48	Birla Sun Life Dividend Yield Plus	48.58	44.74	0.92	0.95	28.75	-13.26
49	UTI Index Select Equity Fund	48.12	32.6	0.68	1.29	29.9	-10.99
50	BOB ELSS 96	48.08	37.4	0.78	1.13	30.62	-9.72
51	ICICI Pru Growth Plan	47.88	29.67	0.62	1.41	31.97	-7.5
52	LIC MF Growth Fund	47.26	37.33	0.79	1.11	29.91	-10.75
53	Reliance Banking Fund	46.24	22.64	0.49	1.78	-1770.9	41.13
54	UTI Services Industries Fund	45.92	29.13	0.63	1.37	32.3	-6.67
55	UTI Master Plus Unit Scheme	45.58	33.5	0.73	1.18	26.18	-17.42
56	UTI Equity Fund	45.26	32.12	0.71	1.22	31.9	-7.13
57	SBI Magnum Pharma Fund *	45.18	43.9	0.97	0.89	38.63	13.81
58	HDFC Index Fund - Sensex Plus Plan	44.74	21.71	0.49	1.79	39.09	1.38
59	Kotak MNC	44.64	32.26	0.72	1.2	38.46	0.77
60	ICICI Pru SPICE Plan	44.48	22.93	0.52	1.68	36.51	-1.25
61	UTI Equity Tax Savings Plan	44.46	25.9	0.58	1.49	43.94	5.47

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62	Tata Index Fund - Nifty Plan - A	44.22	24.79	0.56	1.54	33.7	-4.53
63	UTI Master Index Fund	43.98	22.04	0.5	1.72	37.4	-0.3
64	Tata Index Fund - Sensex Plan - A	43.32	23.61	0.55	1.58	34.77	-3.14
65	ICICI Pru Index Fund - Nifty Plan	42.92	24.02	0.56	1.54	34.3	-3.66
66	LICMF Equity Fund	42.86	33.81	0.79	1.09	27.37	-13.92
67	UTI Nifty Index Fund	42.22	23.66	0.56	1.53	34.06	-3.87
68	UTI Energy Fund	42.12	49.12	1.17	0.74	19.68	-33.07
69	Birla Index Fund	41.44	24.43	0.59	1.45	32.61	-5.53
70	Birla MNC Fund	41.26	30.79	0.75	1.15	32.09	-6.17
71	Benchmark Nifty BeEs	41.08	21.68	0.53	1.62	36.12	-1.53
72	UTI SUNDER	40.8	20.14	0.49	1.73	39.69	1.75
73	SBI Magnum Index Fund	40.6	23.64	0.58	1.46	32.31	-5.77
74	LICMF Tax Plan	40.42	33.36	0.83	1.03	25.05	-17.38
75	Birla Sun Life New Millennium **	40.3	19.92	0.49	1.72	52.96	19.21
76	HDFC Index Fund - Sensex Plan	39.72	18.73	0.47	1.8	39.19	1.29
77	HDFC Index Fund - Nifty Plan	39.48	24.27	0.61	1.38	30.47	-7.94
78	Principal Index Fund	38.88	23.71	0.61	1.39	31.28	-6.75
79	ICICI Pru Technology Fund **	38.6	24.36	0.63	1.34	28.53	5.95
80	Canara Robeco Equity Diversified	37.64	16.92	0.45	1.87	64.2	13.08
81	BOB Growth Fund	37.12	19.81	0.53	1.57	78.52	16.2
82	SBI Magnum IT Fund **	37.1	24.47	0.66	1.27	18.35	-8.45
83	UTI Master share	36.92	16.35	0.44	1.89	71.28	14.58
84	UTI MNC Fund	35.94	27.21	0.76	1.1	28.76	-9.32
85	SBI Magnum FMCG Fund ***	35.24	26.69	0.76	1.1	42.33	14.61
86	Birla Sun Life India Opportunities Fund - Plan B	34.76	18.03	0.52	1.6	43.75	3.99
87	LICMF Index Fund - Sensex Plan	34.54	19.41	0.56	1.47	33.14	-3.92
88	LICMF Index Fund - Sensex Advantage Plan	34.22	16.98	0.5	1.66	37.7	0.01
89	LICMF Index Fund - Nifty Plan	32.66	23.87	0.73	1.12	25.49	-12.77
90	UTI Pharma & Healthcare Fund *	27.76	30.45	1.1	0.72	27.21	1.75
91	UTI Software Fund **	27.74	25.05	0.9	0.87	12.98	-17.37
92	Kotak Tech **	26.26	16.88	0.64	1.2	19.4	-4.12
	Mean Return	49.82					
	Standard Deviation of Returns		11.2				
	Market Return	43.66, *31.00, **29.30, ***27.17					
	The average risk per unit return (coefficient of Variation) works out to be $11.20/49.82 = 0.23$						
	67 Indian Equity Category Funds have generated greater returns than the market returns.						

Risk adjusted performance measure in the form of Sharpe ratio has been computed for the 92 Indian Equity Category Funds. The range of excess return over risk free return per unit of total risk ranges from 0.72 to 3.26. The highest and least performed mutual funds in this category are SBI Magnum Global fund with Sharpe ratio of 3.26 and UTI Pharma & Healthcare funds with Sharpe ratio of 0.72 respectively. Treynor performance measure has been computed for Indian Equity Category Fund. The Treynor ratio for Indian Equity Category Funds ranges from -1770.87 to 148.74. SBI Magnum Global Fund has the highest Treynor ratio with 148.74 and Reliance Banking Fund has the least Treynor ratio with -1770.87. Jensen risk adjusted performance measure was computed

for Indian Equity Category Funds and the performance ratio ranges from -33.07 to 47.73. 37 Indian Equity Mutual Funds are having superior performance and among them SBI Magnum Global funds has the highest Jensen ratio. UTI Energy Fund has the least Jensen ratio of -33.07.

Performance of Foreign Equity Category Funds: Table 6 presents, that nineteen Foreign Equity Category Funds have generated greater returns than the market returns. The average risk per unit return (coefficient of Variation) works out to 0.23 for Foreign Equity Category Funds.

The returns for Foreign Equity Category Funds range from 73.20% to 26.62%. The returns are highest for Sundaram BNP Paribas Select Midcap followed by Franklin India Prima Fund with 67.08% and lowest for Franklin

Infotech Fund.

The risk ranges from 14.29 to 61.99 for Foreign Equity Category Funds. Franklin India Prima Fund has the highest risk and ING Core Equity Fund has the lowest risk. The risk per unit return for Foreign Equity Category Funds ranges from 0.31 to 1.13. Franklin Pharma Fund has the highest risk return ratio indicating high risk per unit return and DSP-ML Technology.Com - Regular Plan has the lowest risk return ratio indicating low risk per unit return.

The Sharpe ratio for 25 Foreign Equity Category Funds has been calculated. The Sharpe ratio ranges from 0.71 to 2.83 and DSP ML Technology.com regular plan is

the highest performing fund with 2.83 and Franklin Pharma fund with 0.71 is the least performed mutual fund.

The Treynor ratio ranges from -304.40 to 129.27. ING Core Equity Fund with 129.27 and DSP ML Technology.Com Regular Plan with -3.04.40 are the highest and least performed funds in this category. Jensen ratio for Foreign Equity Category Funds has been computed and the ratio ranges from -20.87 to 46.42. DSP ML Technology.Com Regular Plan has the highest Jensen ratio of 46.42 and Templeton Indian Growth Fund has the least Jensen ratio of -20.87. There are twelve Foreign Equity Mutual funds with superior performance.

**Table 6: Foreign Equity Category Funds**

S. No	Foreign Equity Category Funds	Returns (%)	Risk	Risk/Return	Sharpe	Treynor	Jensen
1	Sundaram BNP Paribas Select Midcap	73.2	47.28	0.65	1.42	35.31	-4.55
2	Franklin India Prima Fund	67.08	61.99	0.92	0.99	28.91	-18.56
3	HSBC Equity Fund	65.68	51.58	0.79	1.16	32.11	-10.38
4	DSP-ML Equity Fund - Regular Plan	64.76	38.8	0.6	1.52	36.74	-1.53
5	DSP-ML Opportunities Fund - Regular Plan	62.64	42.45	0.68	1.33	33.34	-7.4
6	DSP-ML Top 100 Equity Fund - Regular Plan	60.64	41.19	0.68	1.33	31.96	-9.82
7	Sundaram BNP Paribas Tax Saver (OE)	59.94	28.9	0.48	1.87	56.49	17.96
8	Sundaram BNP Paribas Select Focus - Retail Plan	59.4	32.57	0.55	1.64	39.17	2.01
9	Sundaram BNP Paribas Growth Fund	57.66	33.22	0.58	1.56	38.5	1.08
10	Templeton India Growth Fund	56.12	48.24	0.86	1.04	26.62	-20.87
11	Franklin India Prima Plus Fund	55.86	29.71	0.53	1.68	39.2	1.91
12	DWS Alpha Equity Fund	55.74	35.93	0.64	1.39	33.69	-5.92
13	Franklin India Bluechip Fund	54.3	36.99	0.68	1.31	31.96	-8.67
14	Franklin India Tax Shield	51.7	29.56	0.57	1.55	42.43	5.11
15	Franklin India Opportunities Fund	51.62	21.58	0.42	2.12	46.19	8.4
16	DBS Chola Growth Fund	51.06	29.36	0.58	1.54	37.72	0.04
17	DSP-ML Technology.Com - Regular Plan **	49.08	15.22	0.31	2.83	-304.4	46.42
18	Morgan Stanley Growth Fund	44.5	27.15	0.61	1.42	32.18	-6.6
19	Franklin India Index Fund - NSE Nifty Plan	42.16	21.53	0.51	1.68	37.58	-0.11
20	Franklin India Index Tax Fund	41.06	22.84	0.56	1.54	34.28	-3.5
21	ING Core Equity Fund	40.9	14.29	0.35	2.45	129.27	24.75
22	Franklin India Index Fund - BSE Sensex	40.64	19.08	0.47	1.82	39.66	1.72
23	Franklin FMCG Fund ***	31.98	22.68	0.71	1.15	22.01	0.96
24	Franklin Pharma Fund *	30.76	34.76	1.13	0.71	27.07	1.87
25	Franklin Infotech Fund **	26.62	25.08	0.94	0.82	12.76	-17.11
	Mean Return	51.8					
	Standard Deviation of Returns		11.98				
	Market Return (BSE Sensex)	43.66, *31.00, **29.30, ***27.17					
	The average risk per unit return (coefficient of Variation) works out to be $11.98/51.80 = 0.23$						
	19 Foreign Equity Category Funds have generated greater returns than the market returns.						

Performance of Indian Money Market Category Funds: Table 7 indicates that eleven Indian Money Market Category Funds have generated greater returns than the market returns of 5.97%. The average risk per unit return

(coefficient of Variation) works out to 0.29.

The returns are highest for Birla Sun Life Monthly Income with 12.18% followed by LIC MF Monthly Income Plan with 11.28% and lowest returns are for Reliance Liquid

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Fund - Cash Plan with 5.08%. The risk ranges from 0.76 to 6.30 for Indian Money Market Category Funds. Principal Monthly Income Plan has the highest risk and IDFC Cash Fund has the lowest risk. The risk per unit return for Indian

Money Market Category Funds ranges from 0.14 to 0.64. Tata Monthly Income Fund has the highest risk per unit return and IDFC Cash Fund has the lowest risk per unit return.

Table 7: Indian Money Market Category Funds

S. No	Indian Money Market Category Funds	Returns (%)	Risk	Risk/Return	Sharpe	Treynor	Jensen
1	Birla Sun Life Monthly Income	12.18	6.21	0.51	1	4.54	6.21
2	LICMF Monthly Income Plan	11.28	4.5	0.4	1.18	1.42	5.31
3	ICICI Pru Monthly Income Plan	10.9	3.72	0.34	1.33	3.46	4.93
4	Birla Sun Life Monthly Income Plan	10.66	4.95	0.46	0.95	2.79	4.69
5	Principal Monthly Income Plan	10.22	6.3	0.62	0.67	1.38	4.25
6	SBI Magnum Monthly Income Plan	9.02	4.17	0.46	0.73	12.21	3.05
7	Tata Monthly Income Fund	9	5.8	0.64	0.52	-5.25	3.03
8	JM Monthly Income Plan	7.68	3.5	0.46	0.49	0.6	1.71
9	LICMF Liquid Fund	6.34	1.17	0.18	0.32	0.42	0.37
10	Canara Robeco Liquid	6.08	1.24	0.2	0.09	0.11	0.11
11	HDFC Cash Management Fund - Saving Plan	6.06	1.35	0.22	0.07	0.08	0.09
12	SBI Magnum Insta Cash Fund - Liquid Floater Plan	5.94	1.47	0.25	-0.02	-0.03	-0.03
13	Birla Sun Life Cash Manager	5.86	1.22	0.21	-0.09	-0.11	-0.11
14	HDFC Cash Management Savings Plus - Retail Plan	5.84	1.52	0.26	-0.08	-0.1	-0.13
15	ICICI Pru Liquid - Institutional Plan	5.84	1.52	0.26	-0.08	-0.1	-0.13
16	HDFC Liquid Fund - Premium Plus	5.82	1.54	0.26	-0.1	-0.11	-0.15
17	HDFC Liquid Fund	5.82	1.51	0.26	-0.1	-0.12	-0.15
18	Tata Liquid Fund	5.82	1.39	0.24	-0.11	-0.13	-0.15
19	UTI Money Market Fund	5.82	1.35	0.23	-0.11	-0.13	-0.15
20	Birla Cash Plus - Retail (Plan B)	5.82	1.34	0.23	-0.11	-0.13	-0.15
21	SBI Magnum Insta Cash Fund (Cash)	5.82	1.2	0.21	-0.12	-0.15	-0.15
22	HDFC Liquid Fund - Premium Plan	5.8	1.56	0.27	-0.11	-0.13	-0.17
23	Tata Liquid Fund - High Investment Plan	5.78	1.51	0.26	-0.12	-0.15	-0.19
24	Birla Sun Life Cash Manager - Inst. Plan	5.76	1.67	0.29	-0.13	-0.15	-0.21
25	ICICI Pru Liquid Plan	5.76	1.38	0.24	-0.15	-0.18	-0.21
26	Principal Cash Mgmt - Liquid Fund	5.72	1.23	0.21	-0.2	-0.25	-0.25
27	BOB Liquid Fund	5.7	0.93	0.16	-0.29	-0.36	-0.27
28	Reliance Liquid Fund - Treasury Plan	5.68	1.22	0.22	-0.24	-0.3	-0.29
29	Tata Liquid - Super High Investment Plan	5.66	1.95	0.34	-0.16	-0.19	-0.31
30	Birla Sun Life Cash Plus - Institutional Plan (Plan C)	5.62	1.66	0.29	-0.21	-0.25	-0.35
31	Kotak Liquid - Institutional Plan	5.62	1.35	0.24	-0.26	-0.3	-0.35
32	JM High Liquidity Fund	5.6	1.2	0.21	-0.31	-0.39	-0.37
33	UTI Liquid Fund - Short Term Plan - Growth	5.5	2.12	0.39	-0.22	-0.27	-0.47
34	Kotak Liquid Regular	5.5	1.15	0.21	-0.41	-0.51	-0.47
35	Principal Cash Mgmt - Liquid - Inst. Plan	5.46	1.8	0.33	-0.28	-0.35	-0.51
36	JM High Liquidity Fund - Institutional Plan	5.42	1.48	0.27	-0.37	-0.45	-0.55
37	HDFC Cash Management Fund - Call Plan	5.34	1.51	0.28	-0.42	-0.49	-0.63
38	IDFC Cash Fund	5.34	0.76	0.14	-0.83	-1.02	-0.63
39	UTI Liquid Fund - Cash Plan - Growth	5.28	1.92	0.36	-0.36	-0.46	-0.69
40	ICICI Pru Liquid (Sweep Plan)	5.26	1.91	0.36	-0.37	-0.45	-0.71
41	IDFC Cash Fund - Institutional Plan B	5.26	0.82	0.16	-0.86	-1.01	-0.71
42	ICICI Pru Liquid Plan - Institutional Plus	5.24	2.7	0.52	-0.27	-0.37	-0.73
43	Reliance Liquid Fund - Cash Plan	5.08	0.8	0.16	-1.1	-1.57	-0.89
	Mean Return	6.49					
	Standard Deviation of Returns		1.87				
	Market Return (364 Days T Bill)	5.97					
	The average risk per unit return (coefficient of Variation) works out to be $1.87/6.49 = 0.29$						
	11 Indian Money Market Category Funds have generated greater returns than the market returns.						

Risk adjusted Sharpe ratio measure has been computed for the 43 Indian Money Market Category Funds. The range of excess returns over risk free return per unit of total risk ranges from -1.10 to 1.33. The ICICI Pru monthly income plan has the highest performance with 1.33 and Reliance liquid fund cash plan is the least performing fund with -1.10. Treynor performance measure has been computed for Indian Money Market Category Funds and the Treynor ratio ranges from -5.25 to 12.21. SBI Magnum Monthly Income Plan has the highest Treynor ratio with 12.21 and Tata Monthly Income fund has the least Treynor ratio with -5.25. Jensen performance measure for Indian Money Market Category Funds was computed and it is found that eleven funds have superior performance. Among them Birla Sun Life Monthly Income funds has the highest Jensen ratio of 6.21. Reliance Liquid Fund Cash Plan has the least Jensen ratio of -0.89. The Jensen ratio for this category ranges from -0.89 to 6.21.

Performance of Foreign Money Market Category Funds: Table 8 shows that three Foreign Money Market Category Funds have generated greater returns than the market returns of 5.97%. The average risk per unit return (coefficient of Variation) works out to 0.38 for Foreign Money Market Category Funds.

The returns range from 4.10% to 12.38% for Foreign Money Market Category Funds. The returns are highest for FT India Monthly Income Plan followed by Templeton Monthly Income Plan with 11.20% and lowest for Templeton Monthly Income Plan. The risk is highest for Templeton Monthly Income Plan with 4.63 and risk is lowest for DSP-ML Liquidity Fund with 0.89. The risk per unit return ranges from 0.16 to 0.48 for Foreign Money Market Category Funds. The risk return ratio is highest for HSBC Cash Fund - Institutional Plan indicating high risk per unit return and the risk return ratio is lowest for DSP-ML Liquidity Fund indicating low risk per unit return.

**Table 8: Foreign Money Market Category Funds**

S. No	Foreign Money Market Category Funds	Returns (%)	Risk	Risk/Return	Sharpe	Treynor	Jensen
1	FT India Monthly Income Plan	12.38	4.32	0.35	1.48	7.58	6.41
2	Templeton Monthly Income Plan	11.2	4.63	0.41	1.13	5.29	5.23
3	DBS Chola Monthly Income Plan - Regular	8.78	3.96	0.45	0.71	1.02	2.81
4	Templeton India Treasury Mgmt Account	5.82	1.19	0.2	-0.13	-0.16	-0.15
5	HSBC Cash Fund	5.8	1.23	0.21	-0.14	-0.17	-0.17
6	ING Liquid Fund	5.8	1.15	0.2	-0.15	-0.18	-0.17
7	Sundaram BNP Paribas Money Fund	5.8	1.06	0.18	-0.16	-0.19	-0.17
8	DBS Chola Liquid Fund - Regular	5.78	1.06	0.18	-0.18	-0.21	-0.19
9	DSP-ML Liquidity Fund	5.72	0.89	0.16	-0.28	-0.34	-0.25
10	DBS Chola Liquid Fund - Institutional Plus	5.62	1.48	0.26	-0.24	-0.29	-0.35
11	HSBC Cash Fund - Institutional Plan	5.08	2.46	0.48	-0.36	-0.49	-0.89
12	Templeton Monthly Income Plan	4.1	1.56	0.38	-1.2	-2.7	-1.87
	Mean Return	6.82					
	Standard Deviation of Returns		2.56				
	Market Return (364 Days T Bill)	5.97					
	The average risk per unit return (coefficient of Variation) works out to be $2.56/6.82 = 0.375$						
	3 Foreign Money Market Category Funds have generated greater returns than the market returns.						

Risk adjusted performance Sharpe ratio for twelve Foreign Money Market Category Funds has been computed. The range of excess return over risk free return per unit of total risk ranges from -1.20 to 1.48. The highest and least performed funds are FT Indian monthly income plan with Sharpe ratio of 1.48 and Templeton monthly income plan

with Sharpe ratios of -1.20 funds respectively. Treynor ratio has been computed for Foreign Money Market Category Funds and Treynor ratio ranges from -2.70 to 7.58. FT India Monthly Income Plan has the highest Treynor ratio with 7.58 and Templeton Monthly Income Plan has the least Treynor ratio with -2.70. Jensen ratio for Foreign Money

Market Category Funds has been computed and the ratio ranges from -1.87 to 6.41. FT India Monthly Income Plan with 6.41 has the highest Jensen ratio and Templeton Monthly Income Plan with -1.87 has the least Jensen ratio. Only 3 funds are having superior performance. Comparison of Indian and Foreign Mutual Funds based on Return and Risk Parameters: Table 9 presents that the returns of Indian Category and Foreign category mutual funds range from 4.78 % to 51.8 %. Foreign Equity

category has the highest returns followed by Indian Equity. The returns are lowest for Foreign Debt category. The risk is highest for Foreign Equity category and lowest for Indian Money Market category. The risk ranges from 1.87 to 11.98. The risk per unit returns ranges from 0.23 to 0.52. The risk per unit return ratio is highest for Foreign Debt category and lowest for Indian Equity category. Indian Equity followed by foreign equity generated more returns per unit of risk that is reflected by low coefficient of variation value.

**Table 9: Return and Risk Parameters for Indian and Foreign Mutual Fund Categories**

S. No	Type of Fund	Return (%)	Risk	Coefficient of Variation
1	Indian Balanced	33.98	8.72	0.26
2	Foreign Balanced	31.16	9.07	0.29
3	Indian Debt	5.46	2.26	0.41
4	Foreign Debt	4.78	2.47	0.52
5	Indian Equity	49.82	11.2	0.23
6	Foreign Equity	51.8	11.98	0.23
7	Indian Money Market	6.49	1.87	0.29
8	Foreign Money Market	6.82	2.56	0.38

Comparison of Indian and Foreign Mutual Funds: It is observed from Table 10 that both Indian and Foreign

Mutual Funds have almost similar returns, risk and risk per unit returns.

**Table 10: Comparison of Indian and Foreign Mutual Funds**

S. No	Type of Fund	Returns (%)	Risk	Coefficient of Variation
1	Indian	23.59	21.91	0.93
2	Foreign	23.14	23.02	0.99

Hypothesis: There is no significant difference between returns of various mutual fund schemes of foreign mutual funds category.

Table 11 reveals that Foreign Money Market Category Mutual Funds the calculated value is greater than the table value. Therefore the null hypothesis that there is no significant difference between the returns of chosen mutual

funds schemes within the Foreign Money Market mutual funds category is rejected and the alternative hypothesis that there is significant difference between the returns of chosen mutual fund schemes within the Foreign Money Market Category is accepted. It implies that returns of mutual fund schemes significantly differ from one another within the Foreign Money Market Category.

**Table 11: ANOVA between returns of various mutual fund schemes of Foreign mutual funds category**

S. No	Name	F Value	Result
1	Foreign Balanced	1.31	Not Significant
2	Foreign Debt	1.17	Not Significant
3	Foreign Equity	1.65	Not Significant
4	Foreign Money Market	5.34	Significant at 1% Level

For Foreign Balanced, Foreign Debt and Foreign Equity Categories the calculated value is less than the table value. Therefore the null hypothesis that there is no significant difference between the returns of mutual fund schemes within the Foreign Mutual Fund Categories is accepted. It implies that returns of mutual fund schemes do not significantly differ from others within the same Foreign Mutual Fund Categories. Hypothesis: There is no significant difference between returns of various mutual

fund schemes of Indian mutual funds category.

From Table 12 it can be observed that F value is significant at 1% level for Indian Debt, Indian Equity and Indian Money Market Categories. Therefore the null hypothesis that there is no significant difference between the returns of chosen mutual funds schemes within Indian Categories is rejected. It implies that the returns of mutual fund schemes significantly differ from one another within the same Indian Mutual Fund Categories.

**Table 12: ANOVA for Indian Categories**

S. No	Name	F Value	Result
1	Indian Balanced	1.11	Not Significant
2	Indian Debt	1.67	Significant at 1% Level
3	Indian Equity	1.82	Significant at 1% Level
4	Indian Money Market	2.7	Significant at 1% Level

For Indian Balanced Category F value is not significant at 1% level. Therefore alternative hypothesis that there is significant difference between the returns of mutual fund schemes within the Indian Balanced category is rejected. It implies that the returns of mutual fund. Hypothesis: There is no significant difference between returns of Indian and foreign category mutual funds

From Table 13 it can be observed that F value is significant at 5% level. Therefore the null hypothesis that there is no significant difference between performance of Indian and Foreign mutual funds is rejected. It implies that the return of Indian mutual funds significantly differ from Foreign mutual funds' returns.

**Table 13: ANOVA between returns of Indian and foreign category mutual funds**

S. No	Name	F Value	Result
1	Indian Foreign	282.96	Significant at 5% Level

Conclusion: Mutual funds are the intermediaries in the investment business which indirectly connect the public and the corporate sector. So, based on this, they are considered to be the powerful engines and catalytic agents for resource mobilization from the common investors to the corporate sector. In this context, they are playing a vital role and are attracting more and more investors with their better performance.

The success of the fund industry has enjoyed is due to the fact that, it has done more than any other financial services industry to offer investors solid products tailored to meet real financial needs, and marketed those products responsibly. But it cannot be ignored that rapid changes and market pressures are challenging. It cannot be afforded to remain "pigeonholed" by outdated thinking or antiquated business practices. If the long-term health of the industry and investor protection is maintained, the record of success can be maintained in the future.

## REFERENCES

### Books:

1. Amit Singh Sisodiya. (2005), Mutual Fund Industry in India - An Introduction, ICAI Publications.
2. Donald E. Fischer and Ronald J. Jordan. (1996), Security Analysis and Portfolio Management, Prentice Hall of India, New Delhi.
3. E. Mrudula. (2005), Mutual Fund Industry in India, ICAI publications, 2005.
4. Gupta, O.P. and Sehgal, S. (1997), Investment Performance of Mutual Funds - The Indian Experience', 'Indian Capital Market - Trends and Dimensions', Tata McGraw Hill Publishing Company Ltd. (on behalf of Institute of Capital Market, Navi Mumbai).
5. H. Sadhak. (2003), Mutual Funds in India - Marketing Strategies and Investment Practices, Second Edition, Response Books, A division of Sage Publications India Pvt.



Ltd.

6. Ms. Rachana Baid. (2007), Mutual Funds Products and Services, Taxmann Publications Pvt. Ltd, New Delhi.

**Journal Articles:**

1. Banikanta Mishra, Mahmud Rahman. (2001), "Measuring mutual fund performance using lower partial moment", Global Business Trends, Contemporary Readings.
2. Grossman, B.R. and W.F. Sharpe. (1986), "Financial implications of South African divestment", Financial Analysts Journal, 49: 62-66.
3. Jaydev, M. (1996), "Mutual Fund Performance: An Analysis of Monthly Returns", Finance India, 10 (1):73-84.
4. Pendaraki, K., Zopounidis, C. and Doumpos, M. (2005), "On the construction of mutual fund portfolios: A Multi-criteria methodology and an application to the Greek market of equity mutual funds", European Journal of Operational Research, 163 (2) :462-481.
5. Reilly, F.K. and E. A. Norton. "Investments (South-Western, Mason, OH)", (2003) Statman, M., "Socially responsible mutual funds", Financial Analysts Journal 56, 2000 :30-38.
6. Sharpe, W.F (1994), "The Sharpe ratio", Journal of Portfolio Management, 21:49-59.
7. Sharpe, W.F (1992), "Asset Allocation: Management Style and Performance Measurement," Journal of Portfolio Management, Winter: 7-19.
8. Sharpe, W.F (1988), "Determining a Fund's Effective Asset Mix," Investment Management Review: 59-69.
9. Sharpe, W.F (1966), "Mutual Fund Performance", Journal of Business, 34 (2): 119-138.