

CLUSTER ANALYSIS OF MUTUAL FUNDS

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ABSTRACT

Markets for equity shares, bonds and other fixed income instruments, real estate, derivatives and other assets have become mature and information driven. Small investors face a lot of problems in the share market due to lack of professional advice and lack of information. Mutual funds have come as a much needed help to these investors.

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 19 investment styles. The performance of selected funds is evaluated using rate of return of fund, standard deviation and coefficient of variation. Using cluster analysis, mutual funds are categorized into several groups based on different evaluation indices: rates of return, standard deviation, Sharpe index, Treynor index and Jensen index.

KEYWORDS: Cluster analysis, Sharpe index, Treynor index and Jensen index.

INTRODUCTION

With the growth of the economy and the capital market in India, the size of investors has also increased rapidly. In fact, small investors in India have regularly invested in public issues to finance big and small green-field project of known promoters. They have been benefited from such investments in the past. As the stock market crumbled later on and new issues flopped, small investors again began looking for a good opportunity. In this situation, mutual funds proved that they are able to deliver the goods.

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 faraway places. Small investors face a lot of problems in the share market due to lack of professional advice and lack of information. Mutual funds have come as a much needed help to these investors.

NEED AND SIGNIFICANCE OF THE STUDY

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 mutual funds schemes on the basis of risk- return parameters.
2. To categorize different mutual funds into several groups based on different evaluation indices: rates of return, standard deviation, Sharpe, Treynor and Jensen index

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 19 investment styles. This include 14 money market institutional funds, 11 debt institutional funds, 47 debt short term funds, 7 debt speciality funds, 60 debt long term funds, 12 debt floating rate funds, 56 equity diversified funds, 18 equity tax savings funds, 3 equity FMCG funds, 7 Equity Technology funds, 3 Equity Pharmacy funds, 1 Equity Banking fund, 3 Equity MNC funds, 5 Equity Others funds, 21 Equity Index funds, 30 Balanced funds, 12 Money Income Plan funds, 29 Money Market funds and 1 Hybrid fund. 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 AND ANALYSIS

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.

Performance measures like average rate of return, standard deviation, coefficient of variation, Sharpe, Treynor and Jensen index are calculated. A cluster analysis is done to categorize the huge amount of equity mutual funds into several groups based on different evaluation indices: rates of return, standard deviation, Sharpe, Treynor and Jensen index, that will aid investors in making the investment decision.

RESULTS AND DISCUSSION

COMPARISON OF DIFFERENT INVESTMENT STYLES BASED ON RETURN AND RISK PARAMETERS

The return, risk and coefficient of variation are calculated for different investment styles and presented in table 1. It is observed that the average returns for investment styles range from 3.88% to 55.87%. The Equity tax Savings funds have the highest returns followed by Equity Diversified and Equity others. These three investment style funds have average returns greater than 50%. Average returns are between 40% and 50% for Equity index and Equity MNC investment styles. The average returns for Equity Technology, Equity Pharmacy and Balanced investment styles are between 30% and 40%. Debt Speciality, Money Income Plan, Money Market, Money Market Institutional, Debt Short Term, Debt Long Term and Debt Institutional investment styles' returns are less than 15%. Debt Institutional funds have the least average returns.

As far as risk is concerned, Equity Diversified investment style has the highest risk. The average returns are also high for this investment style. This is followed by Equity Pharmacy and Equity others for which the risk is greater than 9. Money Market Institutional investment style has the lowest risk with 0.24. The risk per unit return ranges from 0.04 to 0.85. The risk per unit return ratio is highest for Debt Institutional investment style with 0.85. The average return for this fund is 3.88% and risk is 3.31. The risk per unit return ratio is lowest for Money Market Institutional investment style.

CLUSTER ANALYSIS

One can envisage significant room for growth in the mutual-fund business since a small fraction of the country's savings is invested in the capital markets. Foreign money managers have also started pouring money into the mutual fund market. In this vibrant trading atmosphere, the buyers face the challenge of diversifying their portfolio among different types of funds. A cluster analysis is done to categorize different mutual funds into several groups based on different evaluation indices: rates of return, standard deviation, Sharpe, Treynor and Jensen index, that will aid investors in making the investment decision.

For an investor with inadequate knowledge and an urge for investment the results will indicate how one can diversify investment in mutual funds across sectors and styles or objectives. The past performance should be taken into account before making investment decisions since funds

from different classifications may go together in terms of their performance as has been found in the clusters.

The clusters obtained are given in Tables 2 to 8. All 340 mutual funds are classified into five cluster centers out of which Cluster 2 is the largest cluster with 194 mutual funds which have the following parameters – Returns 5.80%, Risk 3.01, Sharpe -0.18, Treynor -0.58, Jensen -0.33 and risk by return 0.85. 136 mutual funds belong to cluster 1, the next largest cluster with the following parameters: Returns 47.15%, Risk 30.14, Sharpe 1.43, Treynor 36.77, Jensen -1.95 and risk by return 0.63. Next comes the cluster 4 which has eight mutual funds and the parameters in this cluster are Returns 44.31%, Risk 19.05, Sharpe 1.97, Treynor 101.90, Jensen 23.33 and risk by return 0.48. Clusters 3 & 5 have only one mutual fund and the parameters for the clusters are Returns 46.24%, Risk 22.64, Sharpe 1.78, Treynor -1770.87, Jensen 41.13 & risk by return 0.49 and Returns 49.08%, Risk 15.22, Sharpe 2.83, Treynor -304.40, Jensen 46.42 and risk by return 0.31 respectively.

Risk is highest in cluster one and this shows that the mutual funds in this cluster have high risk. Risk by return variable is highest in cluster 2 indicating that mutual funds in this category assume more risk to generate returns. Treynor ratio is highest in cluster four indicating that the funds in this cluster have performed better. Returns, Sharpe ratio and Jensen ratio are highest in cluster five indicating better returns.

In cluster 1 almost all the funds belong to Balanced and Equity Category. In cluster 2 majority of the funds belong to Debt and Money Market Category. In cluster 3 & 5 there is only one fund which belongs to Equity Category and in cluster 4 majority are Equity Category funds.

In cluster 1, out of 136 funds Twenty Seven are of Balanced Investment Style, 51 Equity Diversified, Three Equity FMCG, Twenty One Equity Index, Three Equity MNC, Four Equity Others, Three Equity Pharmacy, Eighteen Equity Tax Savings and six belong to Equity Technology Investment Styles. In cluster 2 one is Balanced, Twelve Debt Floating Rate, Eleven Debt Institutional, 60 Debt Long Term, 47 Debt Short Term, Seven Debt Speciality, one Hybrid, Twelve Money Income Plan, Twenty Nine Money Market and Fourteen Money Market Institutional. Cluster 3 has only one fund which belongs to Equity Banking. There are Five Equity Diversified, one Equity Others and Two Balanced funds in cluster 4. Cluster 5 has only one which belongs to Equity Technology fund.

A summary picture of cluster centers is presented in Table 3. The mix of different categories performing similarly in terms of their variables provides important investment insights to the investors.

CONCLUSION

The tremendous success 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.

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TABLE 1: RETURN AND RISK PARAMETERS FOR DIFFERENT INVESTMENT STYLES

S. No	Investment Style	Return (%)	Risk	Coefficient of Variation
1	Balanced	33.42	8.71	0.26
2	Debt Floating Rate	5.49	0.43	0.08
3	Debt Institutional	3.88	3.31	0.85
4	Debt Long Term	4.64	1.44	0.31
5	Debt Short Term	5.37	0.87	0.16
6	Debt Speciality	12.57	2.67	0.21
7	Equity Diversified	55.54	9.7	0.18
8	Equity FMCG	38.69	8.95	0.23
9	Equity Index	41.64	5.58	0.13
10	Equity MNC	40.61	4.39	0.11
11	Equity Others	50.96	9.07	0.18
12	Equity Pharmacy	34.57	9.31	0.27
13	Equity Tax Savings	55.87	8.61	0.15
14	Equity Technology	35.1	8.59	0.25

15	Money Income Plan	9.78	2.29	0.23
16	Money Market	5.71	0.27	0.05
17	Money Market Institutional	5.57	0.24	0.04

TABLE 2: CLUSTER ANALYSIS

Variables	Cluster				
	1	2	3	4	5
Returns (%)	47.15	5.8	46.24	44.31	49.08
Risk	30.14	3.01	22.64	19.05	15.22
Sharpe	1.43	-0.18	1.78	1.97	2.83
Treynor	36.77	-0.58	-1770.87	101.9	-304.4
Jensen	-1.95	-0.33	41.13	23.33	46.42
Risk/Return	0.63	0.85	0.49	0.48	0.31
Number of Cases in each Cluster	136	194	1	8	1

TABLE 3: SUMMARY OF CLUSTER CENTRES

Cluster No	No of Mutual Funds from each Category	No of Mutual Funds from each Investment Styles
1	Balanced - 27 Equity - 109	Balanced - 27
		Equity Diversified - 51
		Equity FMCG – 3
		Equity Index – 21
		Equity MNC – 3
		Equity Others – 4

		Equity Pharmacy -3
		Equity Tax Savings - 18
		Equity Technology - 6
Total Mutual Funds	136	136
2	Balanced - 1	Balanced – 1
	Debt - 137	Debt Floating Rate - 12
	Hybrid - 1	Debt Institutional - 11
	Money Market - 55	Debt Long Term – 60
		Debt Short Term – 47
		Debt Speciality – 7
		Hybrid – 1
		Money Income Plan - 12
		Money Market – 29
		Money Market Institutional - 14
Total Mutual Funds	194	194
3	Equity - 1	Equity Banking – 1
Total Mutual Funds	1	1
4	Equity - 6	Equity Diversified – 5
	Balanced - 2	Equity Others – 1
		Balanced – 2
Total Mutual Funds	8	8

5	Equity - 1	Equity Technology - 1
Total Mutual Funds	1	1

TABLE 4: CLUSTER 1

S. No	Fund Category	Fund Name	Investment Style
1	Balanced	SBI Magnum Balanced Fund	Balanced
2	Balanced	HDFC Prudence Fund	Balanced
3	Balanced	Escorts Balanced Fund	Balanced
4	Balanced	ICICI Pru Child Care Plan - Gift Pl	Balanced
5	Balanced	Tata Balanced Fund	Balanced
6	Balanced	DSP-ML Balanced Fund	Balanced
7	Balanced	Kotak Balance	Balanced
8	Balanced	Birla Sun Life 95 Fund	Balanced
9	Balanced	Principal Child Benefit Fund - Care	Balanced
10	Balanced	Principal Child Benefit Fund - Future	Balanced
11	Balanced	FT India Balanced Fund	Balanced
12	Balanced	ICICI Pru Balanced Fund	Balanced
13	Balanced	Principal Balanced Fund	Balanced
14	Balanced	Sundaram BNP Paribas Balanced Fund	Balanced
15	Balanced	JM Balanced Fund	Balanced
16	Balanced	Birla Sun Life Balance	Balanced
17	Balanced	LIC MF Balanced Fund - C	Balanced
18	Balanced	ING Balanced Portfolio	Balanced

19	Balanced	UTI Balanced Fund	Balanced
20	Balanced	HDFC Balanced Fund	Balanced
21	Balanced	LIC MF Unit Linked Insurance Scheme	Balanced
22	Balanced	HDFC Childrens Gift Fund - Investment	Balanced
23	Balanced	Tata Young Citizens Fund	Balanced
24	Balanced	Escorts Opportunities Fund	Balanced
25	Balanced	Templeton India Pension Plan	Balanced
26	Balanced	UTI Mahila Unit Scheme	Balanced
27	Balanced	UTI CRTS 81	Balanced
28	Equity	Reliance Growth Fund - Retail Plan	Equity Diversified
29	Equity	Tata Equity Opportunities Fund - Pl	Equity Diversified
30	Equity	Sundaram BNP Paribas Select Midcap	Equity Diversified
31	Equity	Taurus Star Share	Equity Diversified
32	Equity	Franklin India Prima Fund	Equity Diversified
33	Equity	HSBC Equity Fund	Equity Diversified
34	Equity	Reliance Vision Fund - Retail Plan	Equity Diversified
35	Equity	SBI Magnum Multiplier Plus	Equity Diversified
36	Equity	DSP-ML Equity Fund - Regular Plan	Equity Diversified
37	Equity	Birla Sun Life Equity Fund	Equity Diversified
38	Equity	DSP-ML Opportunities Fund - Regular	Equity Diversified
39	Equity	Tata Select Equity Fund	Equity Diversified
40	Equity	Tata Pure Equity Fund	Equity Diversified
41	Equity	Birla Sun Life Midcap Fund	Equity Diversified
42	Equity	DSP-ML Top 100 Equity Fund - Regular	Equity Diversified

43	Equity	HDFC Top 200 Fund	Equity Diversified
44	Equity	HDFC Equity Fund	Equity Diversified
45	Equity	HDFC Capital Builder Fund	Equity Diversified
46	Equity	Sundaram BNP Paribas Select Focus -	Equity Diversified
47	Equity	Principal Resurgent India Equity Fu	Equity Diversified
48	Equity	HDFC Growth Fund	Equity Diversified
49	Equity	Sundaram BNP Paribas Growth Fund	Equity Diversified
50	Equity	ICICI Pru Power	Equity Diversified
51	Equity	Kotak 30	Equity Diversified
52	Equity	Templeton India Growth Fund	Equity Diversified
53	Equity	Franklin India Prima Plus Fund	Equity Diversified
54	Equity	DWS Alpha Equity Fund	Equity Diversified
55	Equity	Franklin India Blue chip Fund	Equity Diversified
56	Equity	Taurus Discovery Fund	Equity Diversified
57	Equity	ICICI Pru Dynamic Plan	Equity Diversified
58	Equity	Birla Sun Life Advantage Fund	Equity Diversified
59	Equity	JM Equity Fund	Equity Diversified
60	Equity	Franklin India Opportunities Fund	Equity Diversified
61	Equity	Escorts Growth Plan	Equity Diversified
62	Equity	Birla Sun Life Frontline Equity Fun	Equity Diversified
63	Equity	Sahara Growth Fund	Equity Diversified
64	Equity	DBS Chola Growth Fund	Equity Diversified
65	Equity	UTI Master Value Fund	Equity Diversified
66	Equity	UTI Master Equity Plan Unit Scheme	Equity Diversified

67	Equity	UTI Master growth 93	Equity Diversified
68	Equity	Principal Growth Fund	Equity Diversified
69	Equity	Birla Sun Life Dividend Yield Plus	Equity Diversified
70	Equity	UTI Index Select Equity Fund	Equity Diversified
71	Equity	ICICI Pru Growth Plan	Equity Diversified
72	Equity	LIC MF Growth Fund	Equity Diversified
73	Equity	UTI Master Plus Unit Scheme	Equity Diversified
74	Equity	UTI Equity Fund	Equity Diversified
75	Equity	Morgan Stanley Growth Fund	Equity Diversified
76	Equity	LIC MF Equity Fund	Equity Diversified
77	Equity	Canara Robeco Equity Diversified	Equity Diversified
78	Equity	Birla Sun Life India Opportunities	Equity Diversified
79	Equity	ICICI Pru FMCG Fund	Equity FMCG
80	Equity	SBI Magnum FMCG Fund	Equity FMCG
81	Equity	Franklin FMCG Fund	Equity FMCG
82	Equity	Benchmark Nifty Junior BeEs	Equity Index
83	Equity	HDFC Index Fund - Sensex Plus Plan	Equity Index
84	Equity	ICICI Pru SPiCE Plan	Equity Index
85	Equity	Tata Index Fund - Nifty Plan – A	Equity Index
86	Equity	UTI Master Index Fund	Equity Index
87	Equity	Tata Index Fund - Sensex Plan – A	Equity Index
88	Equity	ICICI Pru Index Fund - Nifty Plan	Equity Index
89	Equity	UTI Nifty Index Fund	Equity Index
90	Equity	Franklin India Index Fund - NSE Nifty	Equity Index

91	Equity	Birla Index Fund	Equity Index
92	Equity	Benchmark Nifty BeEs	Equity Index
93	Equity	Franklin India Index Tax Fund	Equity Index
94	Equity	UTI SUNDER	Equity Index
95	Equity	Franklin India Index Fund - BSE Sensex	Equity Index
96	Equity	SBI Magnum Index Fund	Equity Index
97	Equity	HDFC Index Fund - Sensex Plan	Equity Index
98	Equity	HDFC Index Fund - Nifty Plan	Equity Index
99	Equity	Principal Index Fund	Equity Index
100	Equity	LIC MF Index Fund - Sensex Plan	Equity Index
101	Equity	LIC MF Index Fund - Sensex Advantage	Equity Index
102	Equity	LIC MF Index Fund - Nifty Plan	Equity Index
103	Equity	Kotak MNC	Equity MNC
104	Equity	Birla MNC Fund	Equity MNC
105	Equity	UTI MNC Fund	Equity MNC
106	Equity	Birla Sun Life Basic Industries Fund	Equity Others
107	Equity	Tata Life Sciences & Technology Fund	Equity Others
108	Equity	UTI Services Industries Fund	Equity Others
109	Equity	UTI Energy Fund	Equity Others
110	Equity	SBI Magnum Pharma Fund	Equity Pharmacy
111	Equity	Franklin Pharma Fund	Equity Pharmacy
112	Equity	UTI Pharma & Healthcare Fund	Equity Pharmacy
113	Equity	SBI Magnum Tax Gain Scheme	Equity Tax Savings
114	Equity	Birla Sun Life Tax Plan	Equity Tax Savings

115	Equity	Birla Tax Plan 98	Equity Tax Savings
116	Equity	ICICI Pru Tax Plan	Equity Tax Savings
117	Equity	HDFC Tax Saver	Equity Tax Savings
118	Equity	Sundaram BNP Paribas Tax Saver	Equity Tax Savings
119	Equity	HDFC Long Term Advantage Fund	Equity Tax Savings
120	Equity	Principal Tax Savings Fund	Equity Tax Savings
121	Equity	Birla Sun Life Tax Relief 96	Equity Tax Savings
122	Equity	Tata Tax Saving Fund	Equity Tax Savings
123	Equity	Principal Personal Tax Savings Fund	Equity Tax Savings
124	Equity	Franklin India Tax Shield	Equity Tax Savings
125	Equity	Sahara Tax Gain	Equity Tax Savings
126	Equity	Escorts Tax Plan	Equity Tax Savings
127	Equity	Canara Robeco Equity Tax Saver	Equity Tax Savings
128	Equity	BOB ELSS 96	Equity Tax Savings
129	Equity	UTI Equity Tax Savings Plan	Equity Tax Savings
130	Equity	LIC MF Tax Plan	Equity Tax Savings
131	Equity	Birla Sun Life New Millennium	Equity Technology
132	Equity	ICICI Pru Technology Fund	Equity Technology
133	Equity	SBI Magnum IT Fund	Equity Technology
134	Equity	UTI Software Fund	Equity Technology
135	Equity	Franklin Infotech Fund	Equity Technology
136	Equity	Kotak Tech	Equity Technology

TABLE 5: CLUSTER 2

S. No	Fund Category	Fund Name	Investment Style
1	Balanced	UTI Childrens Career Balanced Plan	Balanced
2	Debt	Templeton Floating Rate Income Fund	Debt Floating Rate
3	Debt	Templeton Floating Rate Income Fund	Debt Floating Rate
4	Debt	HDFC Floating Rate Income Fund - ST	Debt Floating Rate
5	Debt	ICICI Pru Floating Rate Plan B	Debt Floating Rate
6	Debt	Birla Floating Rate Fund - Long Term	Debt Floating Rate
7	Debt	HDFC Floating Rate Income Fund - LT	Debt Floating Rate
8	Debt	Kotak Floater Short Term Plan	Debt Floating Rate
9	Debt	Birla Floating Rate Fund - Short Te	Debt Floating Rate
10	Debt	JM Floater Fund - Short Term Plan	Debt Floating Rate
11	Debt	DSP-ML Floating Rate Fund - Regular	Debt Floating Rate
12	Debt	UTI Floating Rate Fund - STP	Debt Floating Rate
13	Debt	JM Liquid Plus Fund - Regular Plan	Debt Floating Rate
14	Debt	ICICI Pru Short Term Plan - Institutional	Debt Institutional
15	Debt	ICICI Pru Income Plan - Institution	Debt Institutional
16	Debt	Birla Sun Life Liquid Plus Fund - I	Debt Institutional
17	Debt	Principal Income STP - Institutional	Debt Institutional
18	Debt	Principal Income Fund - Institution	Debt Institutional
19	Debt	ING Income Fund - Institutional Opt	Debt Institutional
20	Debt	IDFC Liquid Plus Fund - Treasury Plan	Debt Institutional
21	Debt	HSBC Income Fund - Investment Plan	Debt Institutional

22	Debt	JM Short Term Plan - Institutional	Debt Institutional
23	Debt	HSBC Income Fund - STP - Institutional	Debt Institutional
24	Debt	DBS Chola Freedom Income - STF Institutional	Debt Institutional
25	Debt	ICICI Pru Long Term Plan	Debt Long Term
26	Debt	Templeton India Govt. Sec. - Long Term	Debt Long Term
27	Debt	Escorts Income Plan	Debt Long Term
28	Debt	Birla Sun Life Income Fund	Debt Long Term
29	Debt	Reliance Gilt Securities Fund - Long	Debt Long Term
30	Debt	Templeton India Short Term Income Plan	Debt Long Term
31	Debt	Birla Sun Life Gilt Plus (Regular Plan)	Debt Long Term
32	Debt	ICICI Pru Flexible Income Plan	Debt Long Term
33	Debt	DWS Short Maturity Fund	Debt Long Term
34	Debt	ICICI Pru Gilt - Treasury Plan	Debt Long Term
35	Debt	Reliance Income Fund	Debt Long Term
36	Debt	IDFC Super Saver Income Fund - STP	Debt Long Term
37	Debt	UTI Gilt Advantage Fund - Long Term	Debt Long Term
38	Debt	ICICI Pru Gilt - Investment Plan	Debt Long Term
39	Debt	UTI Bond Fund	Debt Long Term
40	Debt	Birla Sun Life Income Plus - Retail	Debt Long Term
41	Debt	Principal Govt Sec. Fund - Investment	Debt Long Term
42	Debt	DWS Premier Bond Fund - Regular Plan	Debt Long Term
43	Debt	HSBC Income Fund - Investment Plan	Debt Long Term
44	Debt	ICICI Pru Income Plan	Debt Long Term

45	Debt	Birla Sun Life Gilt Plus (PF Plan)	Debt Long Term
46	Debt	Kotak Gilt Investment Plan Regular	Debt Long Term
47	Debt	Templeton India Income Fund	Debt Long Term
48	Debt	Templeton India Govt Sec - Composition	Debt Long Term
49	Debt	DSP-ML Govt. Sec. Fund - Plan A	Debt Long Term
50	Debt	LIC MF Bond Fund	Debt Long Term
51	Debt	IDFC Super Saver Income Fund	Debt Long Term
52	Debt	Birla Sun Life G-Sec. Fund - Long T	Debt Long Term
53	Debt	DBS Chola Gilt - Investment Plan	Debt Long Term
54	Debt	JM G-Sec Fund - PF Plan	Debt Long Term
55	Debt	HDFC Income Fund	Debt Long Term
56	Debt	Reliance Medium Term Fund	Debt Long Term
57	Debt	HDFC Gilt Fund - Short Term Plan	Debt Long Term
58	Debt	UTI G-Sec Fund	Debt Long Term
59	Debt	SBI Magnum Gilt - Long Term Plan	Debt Long Term
60	Debt	Templeton India Income Builder Account	Debt Long Term
61	Debt	Tata Gilt Securities Fund B (App)	Debt Long Term
62	Debt	Taurus Libra Bond	Debt Long Term
63	Debt	JM Income Fund	Debt Long Term
64	Debt	Escorts Gilt Fund	Debt Long Term
65	Debt	HDFC High Interest Fund	Debt Long Term
66	Debt	Canara Robeco Gilt PGS	Debt Long Term
67	Debt	SBI Magnum Income Fund	Debt Long Term
68	Debt	JM G-Sec Fund (RP)	Debt Long Term

69	Debt	LIC MF Govt. Sec. Fund	Debt Long Term
70	Debt	Sundaram BNP Paribas Bond Saver	Debt Long Term
71	Debt	HDFC Gilt Fund - Long Term Plan	Debt Long Term
72	Debt	Birla Sun Life Short Term Opportunities	Debt Long Term
73	Debt	UTI Gilt Advantage Fund - LTP - PF	Debt Long Term
74	Debt	Tata Gilt High Fund	Debt Long Term
75	Debt	UTI Gilt Advantage Fund - LTP- PF	Debt Long Term
76	Debt	Sahara Gilt Fund	Debt Long Term
77	Debt	Taurus Libra Gilt	Debt Long Term
78	Debt	BOB Gilt Fund	Debt Long Term
79	Debt	Tata Gilt Retirement Plan (28/02/13	Debt Long Term
80	Debt	Tata Gilt Retirement Plan (28/02/09	Debt Long Term
81	Debt	Tata Gilt Retirement Plan (28/02/11	Debt Long Term
82	Debt	Tata Gilt Retirement Plan (28/02/10	Debt Long Term
83	Debt	Tata Gilt Retirement Plan (28/02/25	Debt Long Term
84	Debt	Franklin Indian International Fund	Debt Long Term
85	Debt	Reliance Short Term Plan	Debt Short Term
86	Debt	ING Short Term Income Fund	Debt Short Term
87	Debt	Tata Short Term Bond Fund	Debt Short Term
88	Debt	ICICI Pru Short Term Plan	Debt Short Term
89	Debt	Kotak Bond - Short Term Plan	Debt Short Term
90	Debt	JM Short Term Plan	Debt Short Term
91	Debt	Birla Sun Life Short Term Fund	Debt Short Term
92	Debt	Kotak Bond (Regular Plan)	Debt Short Term

93	Debt	HDFC High Interest Fund - Short Term	Debt Short Term
94	Debt	Principal Income Fund - Short Term	Debt Short Term
95	Debt	Birla Sun Life Gilt Plus (Liquid Plan)	Debt Short Term
96	Debt	Birla Sun Life Liquid Plus Fund - R	Debt Short Term
97	Debt	IDFC Dynamic Bond Fund	Debt Short Term
98	Debt	Tata Income Fund	Debt Short Term
99	Debt	HDFC Short Term Plan	Debt Short Term
100	Debt	DWS Insta Cash Plus Fund	Debt Short Term
101	Debt	IDFC Liquid Plus Fund - Treasury Plan	Debt Short Term
102	Debt	DBS Chola Freedom Income - Short Te	Debt Short Term
103	Debt	Canara Robeco Income	Debt Short Term
104	Debt	Canara Robeco Liquid Plus - Retail	Debt Short Term
105	Debt	DSP-ML Short Term Fund	Debt Short Term
106	Debt	HSBC Income Fund - Short Term Plan	Debt Short Term
107	Debt	Principal Income Fund	Debt Short Term
108	Debt	SBI Magnum Gilt - Short Term Plan	Debt Short Term
109	Debt	Templeton India Govt Sec - Treasury	Debt Short Term
110	Debt	Kotak Bond (Deposit Plan)	Debt Short Term
111	Debt	Kotak Gilt Savings Plan	Debt Short Term
112	Debt	DSP-ML Govt. Sec. Fund - Plan B	Debt Short Term
113	Debt	Tata Dynamic Bond Fund - Plan A	Debt Short Term
114	Debt	Tata Dynamic Bond Fund - Plan B	Debt Short Term
115	Debt	Tata Income Plus Fund - Plan B	Debt Short Term
116	Debt	Tata Gilt Securities - Short Maturity	Debt Short Term

117	Debt	Sahara Income Fund	Debt Short Term
118	Debt	IDFC G-Sec. Fund - Investment Plan	Debt Short Term
119	Debt	Tata Income Plus Fund - Plan A	Debt Short Term
120	Debt	IDFC Super Saver Income Fund - Media	Debt Short Term
121	Debt	LIC MF Short Term Plan	Debt Short Term
122	Debt	ING Income Fund	Debt Short Term
123	Debt	Principal Govt Sec. Fund - Savings	Debt Short Term
124	Debt	BOB Income Fund	Debt Short Term
125	Debt	IDFC G-Sec. Fund - Short Term Plan	Debt Short Term
126	Debt	DSP-ML Bond Fund - Retail Plan	Debt Short Term
127	Debt	UTI Liquid Plus Fund - Retail Plan	Debt Short Term
128	Debt	Birla Sun Life G-Sec. Fund - Short	Debt Short Term
129	Debt	Reliance Gilt Securities Fund- Short	Debt Short Term
130	Debt	ING Gilt Fund - Regular Plan	Debt Short Term
131	Debt	DBS Chola Triple Ace	Debt Short Term
132	Debt	LIC MF Childrens Fund	Debt Speciality
133	Debt	Canara Robeco CIGO	Debt Speciality
134	Debt	ICICI Pru Child Care Plan - Study P	Debt Speciality
135	Debt	SBI Magnum Childrens Benefit Plan	Debt Speciality
136	Debt	HDFC Childrens Gift Fund - Savings	Debt Speciality
137	Debt	DSP-ML Saving Plus Fund - Moderate	Debt Speciality
138	Debt	UTI Monthly Income Scheme	Debt Speciality
139	Hybrid	UTI Variable Investment Scheme - Income	Hybrid
140	Money Market	FT India Monthly Income Plan	Money Income Plan

141	Money Market	Birla Sun Life Monthly Income	Money Income Plan
142	Money Market	LIC MF Monthly Income Plan	Money Income Plan
143	Money Market	Templeton Monthly Income Plan	Money Income Plan
144	Money Market	ICICI Pru Monthly Income Plan	Money Income Plan
145	Money Market	Birla Sun Life Monthly Income Plan	Money Income Plan
146	Money Market	Principal Monthly Income Plan	Money Income Plan
147	Money Market	SBI Magnum Monthly Income Plan	Money Income Plan
148	Money Market	Tata Monthly Income Fund	Money Income Plan
149	Money Market	DBS Chola Monthly Income Plan - Regular	Money Income Plan
150	Money Market	JM Monthly Income Plan	Money Income Plan
151	Money Market	Templeton Monthly Income Plan	Money Income Plan
152	Money Market	LIC MF Liquid Fund	Money Market
153	Money Market	Canara Robeco Liquid	Money Market
154	Money Market	HDFC Cash Management Fund - Saving	Money Market
155	Money Market	SBI Magnum Insta Cash Fund - Liquid	Money Market
156	Money Market	Birla Sun Life Cash Manager	Money Market
157	Money Market	HDFC Cash Management Savings Plus -	Money Market
158	Money Market	Birla Cash Plus - Retail (Plan B)	Money Market
159	Money Market	HDFC Liquid Fund	Money Market
160	Money Market	SBI Magnum Insta Cash Fund (Cash)	Money Market
161	Money Market	Tata Liquid Fund	Money Market
162	Money Market	Templeton India Treasury Mgmt Account	Money Market
163	Money Market	UTI Money Market Fund	Money Market
164	Money Market	ING Liquid Fund	Money Market

165	Money Market	Sundaram BNP Paribas Money Fund	Money Market
166	Money Market	HSBC Cash Fund	Money Market
167	Money Market	DBS Chola Liquid Fund - Regular	Money Market
168	Money Market	ICICI Pru Liquid Plan	Money Market
169	Money Market	Principal Cash Mgmt - Liquid Fund	Money Market
170	Money Market	DSP-ML Liquidity Fund	Money Market
171	Money Market	BOB Liquid Fund	Money Market
172	Money Market	Reliance Liquid Fund - Treasury Plan	Money Market
173	Money Market	JM High Liquidity Fund	Money Market
174	Money Market	Kotak Liquid Regular	Money Market
175	Money Market	UTI Liquid Fund - Short Term Plan –	Money Market
176	Money Market	HDFC Cash Management Fund - Call Plan	Money Market
177	Money Market	IDFC Cash Fund	Money Market
178	Money Market	UTI Liquid Fund - Cash Plan - Growth	Money Market
179	Money Market	ICICI Pru Liquid (Sweep Plan)	Money Market
180	Money Market	Reliance Liquid Fund - Cash Plan	Money Market
181	Money Market	ICICI Pru Liquid - Institutional Pl	Money Market Institutional
182	Money Market	HDFC Liquid Fund - Premium Plus	Money Market Institutional
183	Money Market	HDFC Liquid Fund - Premium Plan	Money Market Institutional
184	Money Market	Tata Liquid Fund - High Investment	Money Market Institutional
185	Money Market	Birla Sun Life Cash Manager - Inst.	Money Market Institutional

186	Money Market	Tata Liquid - Super High Investment	Money Market Institutional
187	Money Market	Birla Sun Life Cash Plus - Institutional	Money Market Institutional
188	Money Market	DBS Chola Liquid Fund - Institution	Money Market Institutional
189	Money Market	Kotak Liquid - Institutional Plan	Money Market Institutional
190	Money Market	Principal Cash Mgmt - Liquid - Inst	Money Market Institutional
191	Money Market	JM High Liquidity Fund - Institutional	Money Market Institutional
192	Money Market	IDFC Cash Fund - Institutional Plan	Money Market Institutional
193	Money Market	ICICI Pru Liquid Plan - Institution	Money Market Institutional
194	Money Market	HSBC Cash Fund - Institutional Plan	Money Market Institutional

TABLE 6: CLUSTER 3

S. No	Fund Category	Fund Name	Investment Style
1	Equity	Reliance Banking Fund	Equity Banking

TABLE 7: CLUSTER 4

S. No	Fund Category	Fund Name	Investment Style
1	Equity	SBI Magnum Contra Fund	Equity Diversified
2	Equity	SBI Magnum Global Fund	Equity Diversified
3	Equity	ING Core Equity Fund	Equity Diversified

4	Equity	BOB Growth Fund	Equity Diversified
5	Equity	UTI Master share	Equity Diversified
6	Equity	Birla Sun Life Buy India Fund	Equity Others
7	Balanced	BOB Balance Fund	Balanced
8	Balanced	Templeton (I) Childrens Asset Plan	Balanced

TABLE 8: CLUSTER 5

S. No	Fund Category	Investment Style	Investment Style
1	Equity	DSP-ML Technology.Com - Regular Plan	Equity Technology