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Stock Selection Ability of Equity Diversified Mutual Fund Managers

Dr. S. Poornima — Associate Professor, Department of Business Management, P.S.G.R. Krishnammal College for Wome, Coimbatore

R.K.Sudhamathi — Research Scholar, Department of Business Management, P.S.G.R. Krishnammal College for Women, Coimbatore.

ABSTRACT

Mutual fund industry in India has grown enormously with 42 mutual fund companies and with about 7,391 schemes. The difficult role of investor comes here in the form of identifying right mutual fund scheme which produces adequate return. Firmly producing adequate return for a mutual fund scheme depends on the stock selection ability of the mutual fund managers. Jensen and Fama measure which is used to assess the stock selection ability of the mutual fund managers has been used to identify the funds generating the adequate return. Accordingly 102 funds which were performing for the period from April- 2006 to March- 2011 were selected for the study. The analysis has revealed that according to Jensen Measure out of 102 funds 73 funds have produced the return than expected from a portfolio using Capital Asset Pricing Model. Fama measure shows that out of 102 funds only 49 funds could earn excess positive return. Thus the analysis very clearly shows that stock selection ability plays a vital role in generating excess return for the mutual fund schemes

KEYWORDS: Equity diversified mutual fund, Beta, Return, Jensen measure, Fama measure

INTRODUCTION

Mutual fund industry in India has grown enormously and right now there are 42 mutual fund companies operating in India with about 7,391 schemes. However, with ample of schemes to choose from, the retail investors face problems in selecting right schemes and right mutual fund company as well. However the only quantitative way to evaluate the mutual fund is on the basis of return generated by the mutual funds. 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. However the investment decision making process of mutual fund managers plays vital role in giving adequate returns to the funds. In other words stock selection ability of mutual fund managers should be assessed to identify the better performing fund. Thus in this article attempt is made to analyze about the stock selection ability of the mutual fund managers for selected growth oriented equity diversified mutual funds.

OBJECTIVES OF THE STUDY

To analyze the stock selection ability of the growth oriented equity mutual fund scheme fund managers.

METHODOLOGY OF THE STUDY

Research design used for the study is descriptive and analytical in nature.

Target population of the study is equity mutual fund schemes operating in India. There are about 354 actively operating equity schemes as on December 2011.

(Source: AMFI Quarterly updates).

Sampling Technique Used: Judgment sampling technique is used to select the growth oriented equity mutual fund schemes. Accordingly Open-ended growth oriented equity diversified mutual funds which have been operating for greater than five years and performing during the period of study (i.e. April 2006- March 2011) and for which the data is available on continuous basis is taken for the study.

One hundred and two funds were selected for the study based on the above criteria.

Period of study is for five years from April 2006 to March 2011.

Data Source: Secondary source of data is used for the study. Monthly Net Asset Value (NAV) of the selected schemes which used for performance measure is collected from various websites of various asset management companies, mutual funds India .com, value research online .com, money control .com

Benchmark indices value is obtained from the Bombay Stock Exchange and National Stock Exchange websites.

Framework of analysis:

Return:

The returns for the various mutual funds selected for the study is computed on the basis of the Net Asset Value (NAV) of the schemes using the sformulae (S.Kevin, 2011)

Rp = (NAVt- NAVt-1) / NAVt-1
Where Rp = Return on the fund
NAVt & NAVt-1 are the net assets values for the time period t and t-1 respectively.

Mean return of mutual fund scheme is calculated as (Khatri, 2008):

$$Rp = \sum_{t=1}^{N} Rpt / N$$

N= total number of time period studied

Market Return of benchmark index is calculated as (Khatri, 2008):
Rm = (Mt - Mt-1)/Mt-1
Where Rm = Market return
Mt & Mt-1 are the market indices values for the time period t and t-1 respectively.

Mean Market Return is calculated as (Khatri, 2008):

$$Rm = \sum_{t=1}^{N} Rmt/N$$

N= total number of time period studied

Risk-free rate of return (Rf): In this study, post office time deposit rate of 1 year i.e. is 6.25% per annum is choosed as risk free rate.

Since monthly average rate of return is used to study mutual fund performance the monthly risk –free rate of return is arrived at, which is 0.52 [(30/360)*6.25] (Khatri, 2008).

Jensen's Measure:

It 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, 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. If the alpha value is positive, then the portfolio is earning excess return.
Jensen's measure is calculated as (S.Kevin, 2011):

Jp= Rp- [Rf+ βp(Rm-Rf)]
Where:
Jp = Jensen performance measure (αP)
Rp= Return on portfolio
Rf = Risk-free return
βp = beta of portfolio
Rm = Market return
To rank the funds according to Jensen performance measure the formula αP / βp is used.

The higher the ratio better is the performance.

Fama's Measure:
Fama's measure which is also called as Eugene Fama model is an extension of Jensen model. This model compares the performance, measured in terms of returns, of a fund with the required return commensurate with the total risk associated with it. The difference between these two is taken as a measure of the performance of the fund and is called net selectivity. The net selectivity represents the stock selection skill of the fund manager, as it is the excess returns over and above the return required to compensate for the total risk taken by the fund manager. Higher value of which indicates that fund manager has earned returns well above the return commensurate with the level of risk taken by him.

Fama's net selectivity can be calculated as (S.Kevin, 2011):
Rp – [Rf+(σp/ σm) (Rm-Rf)]
Where:
Rp = Return on portfolio
Rf = Risk free return
σp=Standard deviation of portfolio
σm =Standard deviation of market
Rm =Market return

Fama's pure selectivity which helps in measuring funds performance can be calculated by using the formula:

Fama's Pure selectivity = Rp – (Rf +R1+R2)
R1= βp (Rm-Rf)
R2 =[(σp/ σm) – βp] (Rm-Rf)

DATA ANALYSIS AND INTERPRETATION
Jensen measure evaluates the portfolio manager's stock selection ability by finding out the difference between the return actually earned on a portfolio and the return expected from a portfolio using Capital Asset Pricing Model (CAPM). The α value which measure the differential return gives an indication of the portfolio manager's predictive ability or managerial skills. Positive α value indicates the superior stock selection ability. When α is negative it indicates that excess return could not be earned than the expected return. Zero α it indicates neutral performance.

Table – 1: Stock Selection Ability of Mutual Fund Managers for the Growth Oriented Equity Schemes

S.No.	Name of the Scheme	Jensen Measure			Fama Measure			
		Jensen Measure(α)	α/β	Rank	Pure Selectivity	Rank	Net Selectivity	Rank
1	Birla Sun Life Advantage Fund-Plan B (Growth)	0.22	1.02	45.00	-0.24	74	-0.24	74
2	Birla Sun Life Dividend Yield Plus-Plan B (Growth)	0.04	0.50	51.00	0.35	15	0.35	15
3	Birla Sun Life Equity Fund-Plan B(Growth)	0.59	2.38	34.00	0.05	46	0.05	46
4	Birla Sun Life Frontline Equity Fund-Growth	0.89	2.27	35.00	0.06	45	0.06	45
5	Birla Sun Life MIDCAP Fund-Growth	0.14	0.15	65.00	0.12	34	0.12	34
6	Birla Sun Life Top 100 Fund -Growth Option	-0.07	-0.1	78.00	-0.11	61	-0.11	61
7	BNP PARIBAS Equity Fund-Growth Plan	-0.24	-0.25	87.00	-0.29	80	-0.29	80
8	BNP PARIBAS Dividend Yield Fund-Growth Option	0.39	3.05	27.00	-0.14	65	-0.14	65
9	BNP Paribas Mid Cap Fund-Growth Option	-0.95	-1.00	99.00	-0.97	100	-0.97	100
10	Canara Robeco Emerging Equities-GROWTH OPTION	-0.28	-0.27	89.00	-0.32	82	-0.32	82
11	Canara Robeco Equity Diversified-Growth Option	1.32	2.96	29.00	-0.47	91	-0.47	91
12	DWS Investment Opportunity Fund Reg Plan - Growth Option	0.77	4.76	11.00	0.17	28	0.17	28
13	DSP BlackRock Opportunities Fund-Regular Plan - Growth	0.17	0.20	63.00	0.16	30	0.16	30
14	DSP BlackRock Top 100 Equity Fund - Regular Plan - Growth	0.89	4.83	10.00	0.42	11	0.42	11
15	Escorts Growth Plan-GROWTH OPTION	-0.22	-0.24	86.00	-0.40	87	-0.40	87

Table –1: (Continued) Stock Selection Ability of Mutual Fund Managers for the Growth Oriented Equity Schemes

S.No.	Name of the Scheme	Jensen Measure			Fama Measure			
		Jensen Measure(α)	α/β	Rank	Pure Selectivity	Rank	Net Selectivity	Rank
16	Fidelity Equity Fund-Growth Option	0.83	3.82	19.00	0.38	14	0.38	14
17	Fidelity India Special Situations Fund-Growth Option	0.86	3.63	21.00	0.30	20	0.30	20
18	Franklin India Bluechip Fund-Growth	0.22	5.43	7.00	0.82	3	0.82	3
19	Franklin India Flexi Cap Fund-Growth Plan	0.20	0.23	61.00	0.19	26	0.19	26
20	Franklin India Opportunities Fund - Growth	0.50	2.1	37.00	-0.10	59	-0.10	59
21	Franklin India Prima Fund-Growth	2.33	4.66	12.00	1.20	1	1.20	1
22	Franklin India Prima Plus-Growth	0.34	0.41	54.00	0.33	18	0.33	18
23	Franklin India Smaller Companies Fund-Growth	-0.97	-1.04	101.00	-0.99	102	-0.99	102
24	Templeton India Growth Fund-Growth Plan	0.93	4.2	15.00	0.39	13	0.39	13
25	HDFC LONG TERM EQUITY FUND-Growth	-0.09	-0.11	80.00	-0.12	62	-0.12	62
26	HDFC Capital Builder Fund - Growth Option	0.27	0.32	58.00	0.24	23	0.24	23
27	HDFC Core and Satellite Fund - GROWTH	0.69	3.39	22.00	0.12	34	0.12	34
28	HDFC Equity Fund - Growth Option	0.55	0.65	48.00	0.52	7	0.52	7
29	HDFC Growth Fund - Growth Option	0.93	4.32	13.00	0.45	10	0.45	10
30	HDFC Premier Multi-Cap Fund-Growth	0.12	0.14	66.00	0.11	37	0.11	37
31	HDFC Top 200 Fund - Growth Option	1.00	4.09	16.00	0.54	6	0.54	6
32	HSBC Equity Fund - Growth	0.53	2.48	32.00	0.10	38	0.10	38
33	HSBC India Opportunities Fund - Growth	0.40	1.87	38.00	-0.04	53	-0.04	53
34	HSBC Midcap Equity Fund - Growth	0.01	0.04	72.00	-0.27	78	-0.27	78

Table –1: (Continued) Stock Selection Ability of Mutual Fund Managers for the Growth Oriented Equity Schemes

S.No.	Name of the Scheme	Jensen Measure			Fama Measure			
		Jensen Measure(α)	α/β	Rank	Pure Selectivity	Rank	Net Selectivity	Rank
35	ICICI Prudential Discovery Fund-GROWTH OPTION	0.22	0.25	60.00	0.18	27	0.18	27
36	ICICI Prudential Dynamic Plan-Growth Option	0.33	0.40	55.00	0.29	21	0.29	21
37	ICICI Prudential Top 100 Fund-Growth Option	0.44	0.05	68.00	0.00	49	0.00	49
38	ICICI Prudential Top 200 Fund - Growth	0.58	2.65	31.00	0.08	40	0.08	40
39	IDFC Classic Equity Fund-Plan A- Growth	0.31	1.46	42.00	-0.17	69	-0.17	69
40	IDFC Imperial Equity Fund-Plan A - Growth	0.16	0.20	63.00	0.15	32	0.15	32
41	IDFC Premier Equity Fund_Plan A - Growth	1.29	5.70	6.00	0.78	4	0.78	4
42	ING Core Fund -Growth Option	0.53	2.16	36.00	-0.01	51	-0.01	51
43	ING Dividend Yield Fund-Growth Option	1.00	6.57	4.00	0.42	11	0.42	11
44	ING Large Cap Equity Fund-Growth Option	-0.04	-0.04	74.00	-0.04	53	-0.04	53
45	ING Midcap Fund-Growth Option	-0.44	-0.47	94.00	-0.46	90	-0.46	90
46	JM Equity Fund-Growth	0.04	0.13	67.00	-0.57	95	-0.57	95
47	Kotak 50 - Growth	0.12	0.40	55.00	0.07	44	0.07	44
48	Kotak Contra Scheme---Growth	-0.13	-0.17	83.00	-0.23	72	-0.23	72
49	Kotak Opportunities---Growth	0.26	0.28	59.00	0.22	24	0.22	24
50	Kotak-Mid-Cap-Growth	-0.44	-0.49	95.00	-0.48	93	-0.48	93
51	L&T Contra Fund-Cumulative Option	-0.23	-1.14	102.00	-0.81	98	-0.81	98
52	L&T Growth Fund-Cumulative	-0.21	-0.20	85.00	-0.23	72	-0.23	72
53	L&T Mid Cap Fund-Cumulative	-0.08	-0.08	76.00	-0.09	58	-0.09	58

Table – 1: (Continued) Stock Selection Ability of Mutual Fund Managers for the Growth Oriented Equity Schemes

S.No.	Name of the Scheme	Jensen Measure			Fama Measure			
		Jensen Measure(α)	α/β	Rank	Pure Selectivity	Rank	Net Selectivity	Rank
54	L&T Opportunities Fund-Cumulative	0.50	0.49	52.00	0.32	19	0.32	19
55	LIC NOMURA MF Equity Fund-Growth	0.40	2.8	30.00	-0.25	75	0.25	75
56	LIC NOMURA MF Growth Fund - Growth Option	0.23	1.15	43.00	-0.37	84	-0.37	84
57	LIC NOMURA MF Opportunities Fund-Growth	0.12	0.58		-0.40	87	-0.40	87
58	Morgan Stanley Growth Fund-Growth	0.15	0.62	49.00	-0.37	84	-0.37	84
59	Principal Dividend Yield Fund-Growth Plan	-0.22	-0.26	88.00	-0.25	75	-0.25	75
60	Principal Growth Fund-Growth Plan	-0.12	-0.54	96.00	-0.64	97	-0.64	97
61	Principal Large Cap Fund-Growth	0.91	4.04	17.00	0.34	17	0.34	17
62	Reliance Equity Fund-Growth Plan-Growth Option	-0.30	-0.38	92.00	-0.32	82	-0.32	82
63	Reliance Equity Opportunities Fund-Growth Plan-Growth Option	0.87	4.29	14.00	0.29	21	0.29	21
64	Reliance Growth Fund-Growth Plan-Growth Option	0.95	4.95	9.00	0.35	15	0.35	15
65	Reliance NRI Equity Fund-Growth Plan-Growth Option	1.00	3.79	20.00	0.49	8	0.49	8
66	Reliance Regular Savings Fund-EQUITY OPTION-Growth Option	1.45	9.06	1.00	0.77	5	0.77	5
67	Reliance Vision Fund-GROWTH PLAN-Growth Option	0.63	3.18	24.00	0.08	40	0.08	40
68	Sahara Growth Fund-Growth	0.18	0.21	62.00	0.16	30	0.16	30

Table – 1 (Continued) Stock Selection Ability of Mutual Fund Managers for the Growth Oriented Equity Schemes

S.No.	Name of the Scheme	Jensen Measure			Fama Measure			
		Jensen Measure(α)	α/β	Rank	Pure Selectivity	Rank	Net Selectivity	Rank
69	Sahara Midcap Fund-Growth Plan	0.01	0.005	73.00	-0.02	52	-0.02	52
70	Sahara Wealth Plus Fund-Fixed Pricing Option-Growth Option	0.03	0.05	68.00	-0.13	63	-0.13	63
71	Sahara Wealth Plus Fund-Variable Pricing Option-Growth Option	-0.05	-0.07	75.00	-0.08	57	-0.08	57
72	Magnum Equity Fund- Growth	-0.09	-0.09	77.00	-0.13	63	-0.13	63
73	SBI BLUE CHIP FUND-GROWTH	0.24	1.07	44.00	-0.28	79	-0.28	79
74	SBI MAGNUM GLOBAL FUND 94 - GROWTH	-0.13	-0.13	82.00	-0.16	67	-0.16	67
75	SBI Magnum MIDCAP FUND - GROWTH	-0.50	-0.46	93.00	-0.55	94	-0.55	94
76	SBI Magnum Multicap Fund - Growth Option	0.11	0.44	53.00	-0.38	86	-0.38	86
77	SBI Magnum Multiplier Plus Scheme - 93 -Growth	0.04	0.05	68.00	0.012	47	0.012	47
78	SBI MSFU CONTRA-GROWTH	0.70	3.26	23.00	0.13	33	0.13	33
79	SBI MSFU EMERGING BUSINESSES FUND - GROWTH	0.61	1.83	39.00	-0.005	50	-0.005	50
80	Sundaram Growth Fund-Growth	0.56	6.49	5.00	-0.07	56	-0.07	56
81	Sundaram India Leadership Fund-Growth	-0.11	-0.11	80.00	-0.17	69	-0.17	69
82	Sundaram S.M.I.L.E.Fund-Growth	-0.95	-1.00	99.00	-0.97	100	-0.97	100
83	Sundaram Select Focus-Growth	0.05	0.05	68.00	0.008	48	0.008	48
84	Sundaram Select Midcap-Growth	1.38	7.03	2.00	0.92	2	0.92	2
85	Tata Contra Fund - Growth	0.003	0.33	57.00	-0.04	53	-0.04	53

Table –1 (Continued) Stock Selection Ability of Mutual Fund Managers for the Growth Oriented Equity Schemes

S.No.	Name of the Scheme	Jensen Measure			Fama Measure			
		Jensen Measure(α)	α/β	Rank	Pure Selectivity	Rank	Net Selectivity	Rank
86	Tata Equity Opportunities Fund - B Growth	0.46	1.80	40.00	-0.10	59	-0.10	59
87	Tata Growth Fund - Bonus (Growth)	-0.16	-0.18	84.00	-0.21	71	-0.21	71
88	Tata Growth Fund - Growth	-0.09	-0.10	78.00	-0.16	67	-0.16	67
89	Tata Mid Cap Fund - Growth	-0.53	-0.61	97.00	-0.58	96	-0.58	96
90	Tata Pure Equity Fund - Growth	0.65	3.83	18.00	0.12	34	0.12	34
91	Taurus Bonanza Fund-Growth Option	0.21	0.98	46.00	-0.45	89	-0.45	89
92	Taurus Discovery Fund - Growth Option	-0.90	-0.80	98.00	-0.95	99	-0.95	99
93	UTI - Equity Fund-Growth Option	0.55	3.12	26.00	0.08	40	0.08	40
94	UTI - Master Index Fund-Growth Option	0.61	2.44	33.00	0.08	40	0.08	40
95	UTI - Master Plus Unit Scheme-Growth Option	0.37	1.78	41.00	-0.14	65	-0.14	65
96	UTI - Master Share-Growth Option	0.59	3.16	25.00	0.10	38	0.10	38
97	UTI - Master Value Fund-Growth Option	0.84	5.20	8.00	0.20	25	0.20	25
98	UTI Contra Fund-Growth-Growth Option	0.14	0.80	47.00	-0.31	81	-0.31	81
99	UTI Leadership Equity Fund-Growth-Growth option	-0.24	-0.27	89.00	-0.25	75	-0.25	75
100	UTI Mid Cap Fund-Growth Option	-0.19	-0.29	91.00	-0.47	91	-0.47	91
101	UTI Opportunities Fund-Growth Option	0.66	2.98	28.00	0.17	28	0.17	28
102	UTI-Dividend Yield Fund.-Growth	0.99	6.73	3.00	0.49	8	0.49	8

Table- 1 depicts Jensen α value for all the funds selected for the study which ranges from 2.33 to -0.97. Out of 102 funds 73 funds shows positive α value and 29 funds shows negative α value. To rank the funds according to Jensen measure funds α value must be divided by funds β, accordingly top 5 funds in terms of Jensen's performance measure are: 1. Reliance Regular Savings Fund-EQUITY OPTION-Growth Option (α/β = 9.06) 2. Sundaram Select Midcap-Growth (α/β = 7.03) 3. UTI-Dividend Yield Fund.-Growth (α/β = 6.73) 4. ING Dividend Yield Fund-Growth Option (α/β = 6.54) 5. Sundaram Growth Fund-Growth (α/β = 6.49)

The bottom 5 performers in terms of Jensen performance measure are: 1. L&T Contra Fund-Cumulative Option (α/β = -1.14) 2. Franklin India Smaller Companies Fund-Growth (α/β = -1.04) 3. BNP Paribas Mid Cap Fund-Growth Option (α/β = -1) 4. Sundaram S.M.I.L.E.Fund-Growth (α/β = -1) 5. Taurus Discovery Fund - Growth Option (α/β = -0.8) .

Fama has proposed two formula namely pure selectivity and net selectivity formula to measure stock selection ability. Higher these values better is the stock selection ability of the fund managers. Table -1 depicts the Fama measure values according to the pure selectivity and net selectivity formula. The value ranges from 1.2 to -0.99. Out of 102 funds selected for the study only 49 funds could earn excess positive return and 53 funds have generated negative return. The top 5 funds according to Fama's net and pure selectivity are: 1. Franklin India Prima Fund-Growth (Pure and Net selectivity = 1.2) 2. Sundaram Select Midcap-Growth (Pure and Net selectivity = 0.92) 3. Franklin India Bluechip Fund-Growth (Pure and Net selectivity = 0.82) 4. IDFC Premier Equity Fund_Plan A – Growth (Pure and Net selectivity = 0.78) 5. Reliance Regular Savings Fund-EQUITY OPTION-Growth Option (Pure and Net selectivity = 0.77).

The bottom 5 funds according to Fama's net and pure selectivity are: 1. Franklin India Smaller Companies Fund-Growth (Pure and Net selectivity = -0.99) 2. BNP Paribas Mid Cap Fund-Growth Option (Pure and Net selectivity = -0.97) 3. Sundaram S.M.I.L.E.Fund-Growth (Pure and Net selectivity = -0.97) 4. Taurus Discovery Fund - Growth Option (Pure and Net selectivity = -0.95) 5. L&T Contra Fund-Cumulative Option (Pure and Net selectivity = -0.81).

CONCLUSION

Stock selection ability of mutual fund managers based on Jensen performance measure shows that 72% of funds selected for the study have produced the return than expected from a portfolio using Captial Asset Pricing Model, whereas remaining 28% have produced the return less than the expected return.

Stock selection ability of mutual fund managers based on Fama's measure shows that only 48% of funds could earn excess positive return based on Fama's pure and net selectivity approach, whereas 52% of funds could give only negative return. Thus the study very clearly depicts that stock selection ability of mutual fund managers plays vital role in producing excess return. By understanding these techniques investors should carefully evaluate mutual fund schemes in which they prefer to invest in.

REFERENCES

1. Chander, R. (2005). Investment Performance of Manager's Stock Selection abilities: Empirical Evidence From the Indian Capital Market. Decision, 32(1). 2. Deb, S. G. (2007). Market Timing and Stock Selection Ability of Mutual Funds in India: An Empirical Investigation. Vikalpa, 52(3), 39-51. 3. Ferri Michael G., O. D. (1984). Market Timing and Mutual Fund Portfolio Composition. Journals of Financial Research, VII(2), 143-150. 4. Gupta, A. (2000). Market Timing Abilities of Indian Mutual Fund Managers: An Empirical Study. The ICFAI Journal of Applied Finance. 6 (2), 47-60. 5. Khatri, D. K. (2006). Investment management and security analysis. Chennai: Macmillan India Ltd. 6. Lee, C.-F. a. (1990). Market Timing, Selectivity and Mutual Fund Performance: An Empirical Investigation. The Journals of Business, 63(2), 291-278. 7. Ramesh Chander (2005). Investment Performance of Manager's Stock Selection Abilities: Empirical Evidence from the Indian Capital Market. Decision, 32(1). 8. S.Kevin. (2011) Security Analysis and Portfolio Management, Delhi, PHI Learning Private Limited