STOCK SELECTION ABILITY OF INDIAN MUTUAL FUND MANAGERS UNDER CONDITIONAL MODELS

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Abstract

The Mutual Funds provides alternative opportunities to investors with benefits of diversification and professional research back up. Once the objectives of investment and associated constraints have been identified, the Fund Managers could select an efficient portfolio. The Fund Managers normally identify the appropriate stock selection and develop a suitable fund management style. The ability of Fund Managers depends on the final performance of the funds. However, factors like nature of portfolio, classes of assets, and portfolio switching also determine the performance of Mutual Funds. Hence the present study proposes to examine the stock selection abilities of Fund Managers by using six variables. The study found that few sample Schemes' Managers performed with correct stock selection skills under conditional Treynor and Mazuy (TM) Model and Conditional Hendrickson and Merton (HM) Model used in the study.

Key Words: Equity Mutual Funds, Stock Selection Ability, Treynor and Mazuy (TM) Model, Hendrickson and Merton (HM) Model.

1.0 Introduction

An attempt has been made in this study to appraise the stock selection abilities of Mutual Fund Managers by using conditional TM and HM Models. The stock selection skills involve micro forecasting of the price movements of the individual stock in the market and identification of the individual stocks that are under or overvalued. There are a number of models and studies available to assess the stock selection ability of Fund Managers according to micro forecasting of market movements. The present study has used two models to test whether the Fund Managers generate superior performance through their stock selection abilities or not. These models are, namely, Conditional Treynor and Mazuy (TM) Model and Conditional Hendrickson and Merton (HM) Model. The Conditional TM and HM Models are employed in this study to find out the stock selection ability in terms of alpha (α). The conditional models check the Information Efficiency of Fund Managers for selecting the stocks at macro level. For the purpose of this study, 91 days Treasury Bills Return, GOI Bonds of 1 to 3 years maturity period return, 3 to 8 years maturity period return, greater than 8 years maturity period return, market dividend yield return and Global market index return were used to check Informational Efficiency of Fund Managers under the above conditional models.

2.0 Review of Literature

A brief overview of select studies is presented here.

Mohinder N. Kaura and Jayadev.M (1995) found that Growth Oriented Mutual Funds possibly outperformed the market with respect to systematic risk and exceptionally demonstrate the superior performance in terms of total risk. **Yuxing Yan (1999)** has directed the researchers, who use the Bivariate GARCH Model, to estimate the TM Index when the time dependent variances of Portfolio and the Market Index are estimated. The empirical results of **Maria Doceu Cortez and Florinda Silva (2002)** found that the incorporation of public information variables were an important contribution to the process of evaluating fund performance and time varying betas might allow for a better assessment of performance. **Priti Pandey and Sudesh (2005),** in their study, found that 43 percent of schemes provided better returns than the market during the period under study which had primarily been a bearish period. **Ruzbeh J. Bobhanwala, (2006)** empirically evaluated the portfolio formation of Fund Managers and found from the study that

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Fund Managers rely primarily on financial statement analysis. **Jeffery A. Busse and Paul J. Irvine (2006)** compared the performance predictability of Bayesian Estimates of Mutual Funds performance with standard frequents measures and found that daily fund returns dominated the more common monthly returns in the context of forecasting future performance. **Meenu Verma (2007)** found that majority of the Mutual Funds managers adopt the security specific investment style and prefer the Bottom-Up Approach Style while selecting stocks. **Nageswari P. and Selvam M. (2007)** evaluated the performance of sample Mutual Fund Schemes. It is reported that the performance of sample schemes during the study period was good. However, the results revealed that there were some instances where poor performance had been reflected. **Babu M. and Indhumathi G. (2008),** in their paper, reviewed the growth and development of Indian Mutual Funds. The authors found that Mutual Funds are organized as an important segment of financial market in India.

The above studies provide an overview of earlier studies carried out in the area of research. All the above studies attempted to test the performance of Mutual Funds Schemes and stock selection ability. An attempt has been made in this study to evaluate the stock selection abilities of Mutual Fund Managers using Conditional TM and HM Models.

3.0 Statement of the Problem

A number of studies have been conducted across the world, including India, to find out the performance of Mutual Funds by using different performance measures. The Researchers have used different tools like Treynor, Sharpe, Fama and Jenson Models and Treynor and Mazuy (TM) and Henriksson and Merton (HM) under both conditional and unconditional Models. The earlier studies analyzed the stock selection abilities of Fund Managers by using only variables like Forex Reserves, Interest Rate and Market Dividend Yield. But there was no comprehensive study conducted by considering variables like GOI Bonds Indices having different maturity periods. Hence the present study has been made to fill this research gap and analyze the performance of Open Ended Equity Mutual Fund Schemes and analyze the stock selection ability. Against this background, the present study was undertaken.

4.0 Scope of the Study

Mutual Fund Institutions are dynamic financial institutions which play a crucial role in an economy by mobilizing savings and investing them in the Capital Market. Mutual Funds have provided investors with alternative opportunities with benefits of diversification and professional research back up. Once the objectives of investment and associated constraints have been identified, Fund Managers could select an efficient portfolio. The Fund Managers have to consider the appropriate stock selection and develop a suitable fund management style. The ability of Fund Managers depends on the final performance of the funds. However, factors like nature of portfolio, classes of assets and portfolio switching also determine the performance of Mutual Funds. Hence the present study proposes to examine the stock selection abilities of Fund Managers by using six variables like 91 days Treasury Bills Returns, GOI Bonds of 1 to 3 years maturity period returns, 3 to 8 years maturity period returns, greater than 8 years maturity period returns, Market Dividend Yield Returns and Global Market Index Returns as bench market.

5.0 Objectives of the Study

The study was undertaken with the objective of evaluating the Stock Selection Abilities of Mutual Fund Managers by using conditional TM and HM Models.

6.0 Hypothesis of the Study

The present study was undertaken to test the following hypothesis.

NH$_1$: Indian Mutual Fund Managers are not positive stock selectors during the study period under conditional models.

7.0 Methodology of the Study
7.1 Period of the Study

The present study on the stock selection ability of Fund Managers of sample Equity Mutual Funds Schemes covered a period of six years from January 1, 2002 to December 31, 2007. For the purpose of analysis, benchmark portfolio and other macro economic factors were collected for the same period.

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7.2 Sample Selection

For this purpose of analyzing the continuous performance of Mutual Fund Companies, the sample was selected from the Mutual Fund Companies in which daily NAV and other information of their schemes were available for the whole study period. As on 1st December 2002, Indian Mutual Funds Industry had 36 players in the market. Out of 36 players, the required information for this research was available only from 21 players. Hence the Researcher has selected only 21 Mutual Funds Companies of different categories. The selected sample Mutual Fund Companies were categorized into bank sponsored institutions, private sector from foreign and Indian, joint ventures between foreign and Indian companies and UTI Mutual Funds. The details of the sample Mutual Funds Companies and Schemes are given in **Table – 1**.

7.3 Source of Data

The secondary data regarding Open Ended Equity Mutual Funds Schemes were collected and used for this study. The required daily NAV for sample Mutual Funds were obtained from the ALPHA Mutual Funds database software of CMIE and Association of Mutual Funds in India (AMFI). The value of benchmark portfolio S&P CNX NIFTY was collected from NSE website and global bench mark – S&P GLOBAL 1200 was collected from Standard &Poor's website. RBI 91 days Treasury Bills' interest rates were taken as a Risk Free Rate. The index returns for GOI Bonds with maturity 1 to 3 years, GOI Bonds with maturity 3 to 8 years, GOI Bonds with greater than 8 years and Dividend Yield of the Market Index were collected from the NSE website. The other relevant information were obtained from books, journals, magazines, and various websites.

7.4 Tools used for Analysis

Majority of the studies have essentially used the modified versions of two basic models, namely, Treynor Mazuy Model(TM) and the Henriksson Merton Model (HM). In this study, the Researcher has used the conditional form of these models to test the security selection abilities of the Equity Mutual Fund Managers. Ferson and Scadt (1996) proposed the conditional approach of measuring the stock selection ability of Fund Managers. The general consensus was that the conditional approach did a better job to assess the stock selection ability of Fund Managers than the unconditional models. The conditional models presuppose that

Portfolio Managers can change both their alphas and betas over time depending on the influence of publicly available information about the economy.

7.4.1 Treynor Mazuy Model

This Model assesses the stock selection ability of Fund Managers by using different macro economic factors as follows.

$$Rp_t = \alpha_0 + \alpha_1 * DP_{(t-1)} + \alpha_2 * TB_{(t-1)} + \alpha_3 * B1-3_{(t-1)} + \alpha_4 * B3-8_{(t-1)} + \alpha_5 * B-8_{(t-1)} + \alpha_6 * Rgmt_{(t-1)} + \beta_0 * Rm_t + \beta_1 * Rm_t * DP_{(t-1)}$$
$$+ \beta_2 * Rm_t * TB_{(t-1)} + \beta_3 * Rm_t * B1-3_{(t-1)} + \beta_4 * Rm_t * B3-8_{(t-1)} + \beta_5 * Rm_t * B-8_{(t-1)} + \beta_6 * Rm_t * Rgmt_{(t-1)} + \gamma * Rm^2_t + \varepsilon p_t$$

Where,

Rp_t	=Returns on Fund
Rm_t	=Returns on Market Index
$DP_{(t-1)}$	=Dividend Yield of the Market Returns,
$TB_{(t-1)}$	=91 days Treasury Bills Returns,
$B1-3_{(t-1)}$	=GOI Bonds (1 to 3 years maturity) Returns,
$B3-8_{(t-1)}$	=GOI Bonds (3 to 8 years maturity) Returns,
$B-8_{(t-1)}$	=GOI Bonds (greater than 8 years maturity) Returns,
$Rgmt_{(t-1)}$	=Returns on Global Market Index
εp_t	= Error Term

and α_0, α_1, α_2, α_3, α_4, α_5, α_6 are the intercept values and β_0, β_1, β_2, β_3, β_4, β_5, β_6 are coefficient values, γ represents the market timing ability of Mutual Fund Managers, and α_0 represents the security selection ability of Fund Managers.

7.4.2 Henriksson and Merton Model

This Model is based on the following formula.

$$Rp_t = \alpha_0 + \alpha_1 * DP_{(t-1)} + \alpha_2 * TB_{(t-1)} + \alpha_3 * B1-3_{(t-1)} + \alpha_4 * B3-8_{(t-1)} + \alpha_5 * B-8_{(t-1)} + \alpha_6 * Rgmt_{(t-1)} + \beta_0 * Rm_t + \beta_1 * Rm_t * DP_{(t-1)}$$
$$+ \beta_2 * Rm_t * TB_{(t-1)} + \beta_3 * Rm_t * B1-3_{(t-1)} + \beta_4 * Rm_t * B3-8_{(t-1)} + \beta_5 * Rm_t * B-8_{(t-1)} + \beta_6 * Rm_t * Rgmt_{(t-1)} + \gamma * D * Rm_t + \varepsilon p_t$$

Where,

Rp_t	=Returns on Fund
Rm_t	=Returns on Market Index
$DP_{(t-1)}$	=Dividend Yield of the Market Returns,
$TB_{(t-1)}$	=91 days Treasury Bills Returns,
$B1-3_{(t-1)}$	=GOI Bonds (1 to 3 years maturity) Returns,
$B3-8_{(t-1)}$	=GOI Bonds (3 to 8 years maturity) Returns,
$B-8_{(t-1)}$	=GOI Bonds (greater than 8 years maturity) Returns,
$Rgmt_{(t-1)}$	=Returns on Global Market Index
D	= Dummy Variable that equals 0 in up markets and -1 in down markets
εp_t	= Error Term

and α_0, α_1, α_2, α_3, α_4, α_5, α_6 are the intercept values and β_0, β_1, β_2, β_3, β_4, β_5, β_6 are coefficient values and γ represents the market timing ability of Mutual Fund Managers, and α_0 represents the security selection ability of Fund Managers.

In the above models, conditional alpha and conditional beta are expressed as follows,

$\beta = \beta_0 + \beta_1 *(DP_{(t-1)}) + \beta_2 *(TB_{(t-1)}) + \beta_3 *(B1\text{-}3_{(t-1)}) + \beta_4 *(B3\text{-}8_{(t-1)}) + \beta_5 *(B\text{-}8_{(t-1)}) + \beta_6 *(Rgmt_{(t-1)})$

$\alpha = \alpha_0 + \alpha_1 *(DP_{(t-1)}) + \alpha_2 *(TB_{(t-1)}) + \alpha_3 *(B1\text{-}3_{(t-1)}) + \alpha_4 *(B3\text{-}8_{(t-1)}) + \alpha_5 *(B\text{-}8_{(t-1)}) + \alpha_6 *(Rgmt_{(t-1)})$

8.0 Analysis of Stock Selection Ability of Equity Fund Managers under Conditional TM and HM Models

The following macro economic variables were used to study the Stock Selection Ability of Equity Fund Managers under conditional TM and HM Models.

(1) Returns on Market Index (Rmt),

(2) Dividend Yield of the Market Returns (DP),

(3) 91 days Treasury Bills Returns (TB),

(4) GOI Bonds Returns under three Different Maturity Periods (B1-3, B3-8, B-8), and

(5) Returns on Global Benchmark (Rgmt).

Table 2 explains the stock selection abilities of sample Equity Mutual Fund Schemes' Managers (Dividend) under conditional TM and HM Models during the study period from 2002 to 2007. According to the conditional TM Model, no scheme enjoyed the positive stock selection skill of managers during the study period. It is important to note that only Principal Child Benefit Fund (Super Saver) – Dividend ($\alpha = 0.0107$, t-$\alpha = 2.2063$) demonstrated the better stock selection ability under the conditional HM Model at 5% level of significance. Franklin India Index Fund – Nifty Plan – Dividend Plan ($\alpha = -0.0518$, t-$\alpha = -3.2795$), Franklin India Blue Chip Fund – Dividend ($\alpha = -0.0481$, t-$\alpha = -2.8709$) and Franklin India Prima Fund – Dividend ($\alpha = -0.0538$, t-$\alpha = -2.9891$) showed negative significant stock selection skill of their Fund Managers under the conditional HM Model at 1% level. This indicates the inadequate information efficiency of Fund Managers. The overall analysis of stock selection ability indicates that Fund

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Managers of sample Schemes (Dividend Option) did not possess adequate information efficiency for selecting the stocks under both Models during the study period from 2002 to 2007.

The analysis of stock selection abilities of sample Equity Mutual Fund Schemes' Managers (Growth) under conditional TM and HM Models during the period of 2002 to 2007 is given in **Table – 3**. It is to be noted that out of eighty one sample scheme under Growth Option, only JM Basic Fund – Growth was managed with better stock selection ability under conditional TM (α = 0.0372, t-α = 2.3048) and HM (α = 0.0362, t-α = 2.2339) Models during the study period. The Principal Child Benefit Fund (Super Saver) – G (α = 0.0105, t-α = 2.1617) showed better stock selection ability of Fund Managers under the conditional HM Model. But among the sample schemes, one sample scheme under the conditional TM Model and eight sample schemes under the conditional HM Model suffered form negative significant stock selection ability of Fund Managers during the whole study period. It is understood from the above Table that only two sample schemes recorded better stock selection ability during the whole study period. The Fund Managers of sample schemes did not acquire sufficient knowledge about macro economic factors for intelligently selecting the stocks during the study period.

9.0 Summary of Results on Stock Selection Ability

Table – 4 summarizes the overall results of stock selection ability of Managers for one hundred and sixteen sample Equity Mutual Fund Schemes under two models during the whole study period. It is inferred from the above Table that the stock selection ability of sample schemes did not produce significant results of t – alpha values. However, few sample schemes under both Dividend and Growth Option experienced significant alpha values under conditional TM and HM Models during the study period. The overall analysis shows that the Fund Managers of sample Schemes did not acquire sufficient information efficiency about the macro economic factors that affected the returns of stocks.

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10.0 Testing of Hypotheses

The overall analyses demonstrate that in general, the Managers of Sample Funds did not prove their efficiency in selecting the correct stock after considering macro economic factors. This is clear from the insignificant t- values. However, a few Fund Managers possessed adequate stock selection ability during the study period. Hence the null hypothesis, namely, **"The Indian Mutual Fund Managers are not positive stock selectors during the study period under conditional models"** is partially accepted.

11.0 Findings of the Study

The followings are the major findings of the present study.

➢ Indian Mutual Funds Industry is relatively new but it has grown at a rapid speed and influenced various sectors of financial markets and the national economy.

➢ The Mutual Funds is one type of an investment that mobilizes savings of individuals and institutions and channelizes these savings into corporate securities to provide good returns and capital appreciation to the investors.

➢ Only one scheme under Dividend Option, namely, Principal Child Benefit fund (Super Saver) – Dividend proved the better stock selection ability of the Fund Manager under conditional HM Models.

➢ It is to be noted that selected sample schemes under Dividend Option did not have Fund Managers, with adequate information efficiency for selecting the stocks under conditional TM and HM Models during the study period. Only two sample schemes exhibited better stock selection ability of their Fund Managers during the whole study period.

➢ The Fund Managers of sample schemes did not acquire sufficient knowledge about macro economic factors which influenced the market movement.

12.0 Suggestions of the Study

On the basis of the findings of the study, the following suggestions are given to the Investors and Mutual Fund Companies and Regulators.

➢ Investors may first design their investment goal. They should select the schemes and option according to their investment goals and returns earning needs.

- It is found that out of sample schemes, only 20% of sample schemes displayed better stock selection ability of Fund Managers under conditional TM and HM Models. Hence the investors are advised that they may identify the schemes that have been introduced by the Managers with stock selection ability before they invest in that scheme.
- The Mutual Funds operations utilized the public money of retail investors. Hence the Fund Managers have to use this public money in a proper way and distribute reasonable returns to investors.
- The Fund Managers must find the portfolio allocation under risk and returns proposition. After that they have to select the stocks for fund allocation.
- In the long term investment, there are many factors that affect the fund performance. Hence the Fund Managers may identify those factors and take correct decisions suitable to the different macro economic factors in the long term as well as short term.
- The Stock Selection Ability is the primary qualification of Fund Managers and they are advised to take more care while selecting the stocks according to the fund characteristics.
- The Fund Management is a difficult task and it requires lot of skills, expertise and professional training. Therefore, it is suggested that the Regulators check and study the educational qualifications and working experience of Directors, Trustees and Employees of Mutual Funds Companies.

13.0 Conclusion

Indian Mutual Funds have emerged as strong financial intermediaries and they play a significant role in bringing stability into the financial system and efficiency in resource allocation. The present study has presented empirical results pertaining to the Stock Selection Ability of Fund Managers under two models proposed by Treynor and Mazuy (conditional model) and Henriksson and Merton (conditional model). However, the study found that few sample Schemes' Managers performed significantly with correct stock selection skills under conditional TM and HM Models. It is found that the public information variables are important to be considered while evaluating fund stock. The overall results of this study indicate that the Indian Mutual Fund Managers did not have adequate information efficiency. Hence it is concluded that the Indian Mutual Fund Managers must improve their skills relating to internal activities as well as external market related information so as to promote confidence among

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small investors who prefer to invest their savings in Mutual Fund. The growth of Indian Mutual Fund Industry mainly depends on Mutual Fund Managers whose skills in stock selection would improve the confidence of the investing public in Mutual Funds Schemes.

14.0 Scope for future Research

The scope for further research is summarized below.

➢ The study with similar objectives could be made from time to time.

➢ The study with similar objectives could be made with reference to other types of Mutual Fund Schemes like Income Mutual Fund Schemes, Different Sector Mutual Fund Schemes and Debt Mutual Fund Schemes.

➢ The study may be conducted with comparative analysis of different types of Mutual Fund Schemes.

➢ The study may be conducted with comparative analysis of Indian and Foreign Mutual Funds Performance.

➢ The study may cover more economic factors like inflation rate, currency exchange rate and GDP for analysis.

➢ Similar types of study may be attempted by increasing the study period with similar objectives.

➢ The study may analyze the entry and exit load of Mutual Funds Schemes.

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Table 1 – List of Sample Mutual Fund Companies

S. No.	Categories of Mutual Funds Companies	No. of Sample Schemes
I	**BANK SPONSORED**	
I-a	**Joint Ventures - Predominantly Indian**	
1	Canara Robeco Asset Management Company Ltd	3
2	SBI Funds Management Private Ltd	7
I-b	**Others**	
3	UTI Asset Management Company Ltd	8
II	**INSTITUTIONS**	
4	LIC Mutual Fund Asset Management Company Ltd	3
III	**PRIVATE SECTOR**	
III-a	**Indian**	
5	Escorts Asset Management Ltd	6
6	JM Financial Asset Management Private Ltd	3
7	Kotak Mahindra Asset Management Company Ltd	3
8	Reliance Capital Asset Management Ltd.	3
9	Sahara Asset Management Company Private Ltd	1
10	Tata Asset Management Ltd	4
11	Taurus Asset Management Company Ltd	3
III-a(i)	**Joint Ventures - Predominantly Indian**	
12	Birla Sun Life Asset Management Company Ltd	18
13	DSP Black Rock Investment Managers Ltd	5
14	HDFC Asset Management Company Ltd	12
15	ICICI Prudential Asset Mgmt. Company Ltd	6
16	Sundaram BNP Paribas Asset Management Company Ltd	3
III-b	**Foreign**	
17	Franklin Templeton Asset Management (India) Private Ltd	17
III-b(i)	**Joint Ventures - Predominantly Foreign**	
18	Baroda Pioneer Asset Management Company Ltd	1
19	ING Investment Management (India) Pvt. Ltd.	2
20	Morgan Stanley Investment Management Pvt. Ltd.	1
21	Principal PNB Asset Management Co. Pvt. Ltd.	7
	TOTAL	**116**

Source: ALPHA –CMIE database

Table 2 - Stock Selection Ability of Sample Equity Mutual Fund Schemes Managers (Dividend) Under Conditional (TM & HM) Models during the Period of 2002 to 2007

S. NO	Scheme Name(Categories Wise)	TM Conditional Model		HM Conditional Model	
		α-(TM)	t-α(TM)	α-(HM)	t-α(HM)
I	**Bank Sponsored**				
I-a	**Joint Ventures- Predominantly Indian**				
I-b	**Others**				
II	**Institution**				
1	LICMF Growth Fund – Dividend	0.0005	0.0491	0.0040	0.3705
III	**private Sector**				
III-a	**Indian**				
2	Escorts Growth Plan-Dividend	0.0146	0.3936	0.0207	0.5569
3	Escorts Opportunities Fund-Dividend	0.0091	0.4609	0.0121	0.6144
4	Escorts Tax Plan-Dividend	-0.0014	-0.0531	0.0038	0.1448
5	JM Equity Fund-Dividend	0.0166	1.1686	0.0176	1.2325
6	Reliance Growth Fund-Dividend	0.0017	0.1124	0.0068	0.4521
7	Tata Equity Opportunities Fund-Dividend	-0.0162	-0.9920	-0.0180	-1.1075
III-a(i)	**Joint Ventures- Predominantly Indian**				
8	Birla M N C Fund-Dividend	0.0153	1.0435	0.0169	1.1486
9	Birla India Opportunities Fund -Dividend	-0.0095	-0.4470	-0.0076	-0.3563
10	Birla Equity Plan Dividend Option	0.0154	0.8107	0.0189	0.9910
11	Birla Advantage Fund-Plan A (Dividend)	-0.0004	-0.0204	0.0013	0.0694
12	Birla Sun Life Equity Fund-Plan A(Dividend)	0.0067	0.3990	0.0086	0.5084
13	Birla Sun Life Basic Industries Fund-Plan A(Dividend)	-0.0109	-0.2725	-0.0103	-0.2562
14	Birla Sun Life New Millennium Fund-Plan A (Dividend)	0.0151	0.8153	0.0164	0.8806
15	Birla Sun Life Buy India Fund-Plan A(Dividend)	0.0147	0.9688	0.0155	1.0222
16	DSP Merrill Lynch Equity Fund - Regular Plan-Dividend	-0.0116	-0.3139	-0.0111	-0.2982
17	D S P Merrill Lynch Opportunities Fund-Dividend	-0.0024	-0.1783	0.0001	0.0087
18	H D F C Capital Builder Fund-Dividend	0.0205	1.3709	0.0261	1.7496
19	H D F C Equity Fund-Dividend	-0.0010	-0.0597	0.0013	0.0758
20	H D F C Growth Fund-Dividend	-0.0049	-0.3051	-0.0019	-0.1189
21	H D F C Long Term Advantage Fund-Dividend	0.0105	0.6750	0.0140	0.8942
22	H D F C Tax Saver-Dividend	0.0125	0.7910	0.0154	0.9736
23	H D F C Top 200 Fund-Dividend	0.0003	0.0204	0.0035	0.2053
24	ICICI Prudential FMCG Fund-Dividend	0.0088	0.9511	0.0102	1.1054
25	ICICI Prudential Growth Plan-Dividend	-0.0145	-1.3506	-0.0119	-1.1057
III-b	**Foreign**				
26	Franklin India Index Fund- Nifty Plan - Dividend Plan	0.0002	0.0541	-0.0518	-3.2795*
27	Franklin India Blue chip Fund-Dividend	-0.0023	-0.2423	-0.0481	-2.8709*
28	Franklin India Prima Fund-Dividend	-0.0143	-1.0375	-0.0538	-2.9891*
29	Franklin India Prima Plus-Dividend	-0.0041	-0.1209	-0.0414	-1.1540
30	Franklin India Tax shield- Dividend	0.0082	0.1531	-0.0292	-0.5403
31	Franklin Infotech Fund-Dividend	0.0010	0.0620	-0.0311	-1.4817
III-b(i)	**Joint Ventures- Predominantly Foreign**				
32	I N G Vysya Select Stocks Fund-Dividend	0.0119	0.7350	0.0147	0.9033
33	Principal Child Benefit Fund (Super Saver)-Dividend	0.0089	1.8453	0.0107	2.2063**
34	Principal Growth Fund-Dividend	-0.0099	-0.8719	-0.0071	-0.6250
35	Principal Resurgent India Equity Fund-Dividend	0.0256	0.9952	0.0215	0.8323

Source: Computed from ALPHA –CMIE database,
*Significant at 1% level, **Significant at 5% level.

Table 3 - Stock Selection Ability of Sample Equity Mutual Fund Schemes Managers (Growth) Under Conditional(TM & HM) Models during the Period of 2002 to 2007

S. NO	Scheme Name (Categories Wise)	TM Conditional Model		HM Conditional Model	
		α-(TM)	t-α(TM)	α-(HM)	t-α(HM)
I	**Bank Sponsored**				
I-a	**Joint Ventures- Predominantly Indian**				
1	Canara Robeco Equity Tax Saver-Growth	0.0072	0.3634	0.0140	1.0907
2	Canara Robeco Expo(Growth)	0.0042	0.2500	0.0070	0.4114
3	Canara Robeco Fortune'94(Growth)	-0.0085	-0.5893	*-0.0050*	-0.3455
4	S B I Magnum Global Fund-1994-Growth	0.0092	0.7101	0.0122	0.9372
5	S B I Magnum Contra Fund-Growth	-0.0368	-1.2351	-0.0331	-1.1067
6	S B I Magnum Equity Fund-Growth	-0.0101	-0.8818	-0.0079	-0.6912
7	S B I Magnum F M C G Fund-Growth	0.0187	1.3855	0.0226	1.6729
8	S B I Magnum I T Fund Growth	-0.0117	-0.8560	-0.0081	-0.5927
9	S B I Magnum Multiplier Plus-1993 (Open)-Growth	0.0114	0.6927	0.0139	0.8487
10	S B I Magnum Pharma Fund-Growth	0.0206	0.4590	0.0246	0.5463
I-b	**Others**				
11	Master growth-Growth	-0.0066	-0.6730	-0.0092	-0.9330
12	Masterplus-91-Growth	-0.0056	-0.2171	-0.0102	-0.3972
13	U T I Equity Tax Savings Plan-Growth	0.0007	0.0779	-0.0026	-0.2803
14	U T I Growth Sectors Fund (Pharma & Healthcare)-Growth	-0.0084	-0.3588	-0.0147	-0.6241
15	U T I Growth Sectors Fund (Service Sector)-Growth	-0.0109	-0.5388	-0.0142	-0.7017
16	U T I Master Index Fund-Growth	-0.0001	-0.0108	-0.0006	-0.0878
17	U T I Nifty Index Fund-Growth	-0.0002	-0.0273	0.0002	0.0331
18	U T I Growth Sectors Fund (Software)-Growth	0.0072	0.5133	0.0053	0.3759
II	**Institution**				
19	LICMF Equity Fund-Growth	0.0103	1.3971	0.0131	1.7724
20	LICMF Tax Plan-Growth	0.0076	0.5458	0.0098	0.6992
III	**Private Sector**				
III-a	**Indian**				
21	Escorts Growth Plan-Growth	0.0132	0.3600	0.0160	0.4352
22	Escorts Opportunities Fund-Growth	0.0019	0.1165	0.0035	0.2151
23	Escorts Tax Plan-Growth	0.0015	0.0905	0.0062	0.3723
24	J M Basic Fund-Growth	0.0372	2.3048**	0.0362	2.2339**
25	J M Equity Fund-Growth	0.0068	0.9806	0.0089	1.2917
26	Kotak Mahindra MNC Scheme-Growth	0.0178	1.6607	0.0196	1.8255
27	Kotak Mahindra Technology Scheme-Growth	-0.0072	-0.6339	-0.0066	-0.5749
28	Kotak Mahindra 30 Unit Scheme-Growth	0.0057	1.0529	0.0064	1.1875
29	Reliance Growth Fund-Growth	0.0042	0.5528	0.0077	1.0277
30	Reliance Vision Fund-Growth	-0.0147	-2.1980**	-0.0120	-1.8053
31	Sahara Tax Gain Fund	0.0163	0.3232	0.0220	0.4358
32	Tata Life Sciences & Technology Fund-Growth	-0.0058	-0.7681	-0.0077	-1.0225
33	Tata Pure Equity Fund-Growth	-0.0082	-1.3398	-0.0110	-1.7874
34	Tata Select Equity Fund-Growth	-0.0032	-0.4211	-0.0074	-0.9731
35	Taurus Discovery Stock Fund-Growth	-0.0189	-0.7357	-0.0275	-1.0722
36	Taurus Libra Tax shield-Growth	-0.0016	-0.1058	-0.0086	-0.5520
37	Taurus Star share-Growth	-0.0052	-0.1737	-0.0116	-0.3857
III-a(i)	**Joint Ventures- Predominantly Indian**				
38	Birla Tax Plan '98-Growth	0.0072	0.4792	0.0104	0.6924
39	Birla M N C Fund-Growth	0.0037	0.3250	0.0061	0.5255
40	Birla India Opportunities Fund-Growth	-0.0008	-0.0504	0.0008	0.0513
41	Birla Equity Plan-Growth	0.0105	0.2093	0.0118	0.2341

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Table 3 (Continued)

S. NO	Scheme Name (Categories Wise)	TM Conditional Model		HM Conditional Model	
		α-(TM)	t-α(TM)	α-(HM)	t-α(HM)
42	Birla Advantage Fund (Growth)	-0.0008	-0.0473	0.0004	0.0250
43	Birla Sun Life Relief 96	0.0031	0.1404	0.0075	0.3432
44	Birla Sun Life Equity Fund-Plan B(Growth)	0.0168	1.0956	0.0112	0.7368
45	Birla Sun Life Basic Industries Fund-Plan B(Growth)	-0.0041	-0.1070	-0.0032	-0.0845
46	Birla Sun Life New Millennium Fund-Plan B(Growth)	0.0103	0.8474	0.0107	0.8781
47	Birla Sun Life Buy India Fund-Plan B(Growth)	-0.0105	-0.8345	-0.0122	-0.9609
48	D S P Merrill Lynch Equity Fund-Growth	-0.0041	-0.3520	-0.0024	-0.2079
49	D S P Merrill Lynch Opportunities Fund-Growth	0.0006	0.0364	0.0021	0.1387
50	D S P Merrill Lynch Technology.Com Fund-Growth	-0.0051	-0.3940	-0.0021	-0.1580
51	H D F C Capital Builder Fund-Growth	0.0081	0.6104	0.0122	0.9206
52	H D F C Equity Fund-Growth	0.0012	0.0822	0.0034	0.2288
53	H D F C Growth Fund-Growth	0.0031	0.2205	0.0065	0.4576
54	H D F C Long Term Advantage Fund-Growth	0.0045	0.3582	0.0073	0.5829
55	H D F C Tax Saver-Growth	0.0065	0.4668	0.0093	0.6642
56	H D F C Top 200 Fund-Growth	0.0012	0.0825	0.0036	0.2430
57	ICICI Prudential FMCG Fund-Growth	0.0097	1.1427	0.0113	1.3348
58	ICICI Prudential Growth Plan-Growth Option	-0.0035	-0.3045	-0.0022	-0.1859
59	ICICI Prudential Power-Growth	0.0117	0.6565	0.0159	0.8931
60	ICICI Prudential Technology Fund-Growth	0.0192	1.0679	0.0232	1.2872
61	Sundaram B N P Paribas Growth Fund-Growth	0.0051	0.9461	0.0075	1.3891
62	Sundaram B N P Paribas Tax Saver-Growth	0.0077	0.3065	0.0136	0.5386
63	Sundaram B N P Paribas Tax Saver '98-Growth	0.0011	0.1656	-0.0011	-0.1687
III-b	**Foreign**				
64	Franklin FMCG Fund-Growth	0.0012	0.1704	-0.0266	-2.4402**
65	Franklin India Blue chip Fund-Growth	0.0068	1.2956	-0.0423	-2.8454*
66	Franklin India Index Tax Fund-Growth	0.0006	0.1272	-0.0504	-3.1560*
67	Franklin India Opportunities Fund-Growth	-0.0110	-1.2054	-0.0582	-3.3012*
68	Franklin India Prima Fund-Growth	-0.0062	-0.6997	-0.0441	-3.0871*
69	Franklin India Prima Plus-Growth	0.0054	0.0826	-0.0380	-0.5745
70	Franklin India Tax shield-Growth	-0.0128	-0.2426	-0.0493	-0.8890
71	Franklin India Tax shield 98-Growth	0.0028	0.4857	-0.0384	-2.7150*
72	Franklin India Tax shield 99-Growth	0.0031	0.4140	-0.0369	-2.3167**
73	Franklin Infotech Fund-Growth	-0.0018	-0.1349	-0.0373	-1.8758
74	Franklin Pharma Fund-Growth	-0.0058	-0.6638	-0.0356	-2.9419*
III-b(i)	**Joint Ventures- Predominantly Foreign**				
75	BOB Elss 96	0.0754	1.0908	0.0754	1.0908
76	I N G Vysya Select Stocks Fund-Growth	0.0058	0.7203	0.0085	1.0478
77	Morgan Stanley Growth Fund	-0.0070	-0.6084	-0.0085	-0.7374
78	Principal Index Fund-G	0.0007	0.2684	0.0008	0.3064
79	Principal Child Benefit Fund (Super Saver)-G	0.0088	1.8134	0.0105	2.1617**
80	Principal Growth Fund-Growth	0.0024	0.3911	0.0054	0.8782
81	Principal Resurgent India Equity Fund-Growth	0.0001	0.0154	0.0023	0.2797

Source: Computed from ALPHA –CMIE database,
*Significant at 1% level, **Significant at 5% level.

Table 4 - Summary of Results

Model	Option	No. of Sample Schemes	Positive Significant Stock Selectors	Negative Significant Stock Selectors	Insignificant Market Timers
Conditional TM Model	Dividend	35	0	0	35
	Growth	81	1	1	79
Conditional HM Model	Dividend	35	1	3	31
	Growth	81	2	8	71

Source: Computed from Table 2 & 3.