

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, ECONOMICS & MANAGEMENT

I
J
R
C
M



A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories

Indexed & Listed at:

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A.

as well as in Open J-Gate, India (link of the same is duly available at Infibnet of University Grants Commission (U.G.C.))

Registered & Listed at: Index Copernicus Publishers Panel, Poland

Circulated all over the world & Google has verified that scholars of more than 1500 Cities in 141 countries/territories are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

www.ijrcm.org.in

CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	THE EFFECTS OF THE STOCKS PERFORMANCE RELATIVE TO THE INDEX PERFORMANCE, ON TRADERS' BEHAVIOR IN NYSE MOHSEN BAHRAMGIRI, SAJJAD NEAMATI, ASHKAN M. GHASHGHAEE & MOHAMMAD H. MUSAVI	1
2.	MEASURING PRICE INSTABILITY OF PULSES IN BANGLADESH M. MONIRUZZAMAN	12
3.	A COMPARATIVE ECONOMIC STUDY OF BRRI DHAN51 AND BR11 RICE PRODUCTION IN A SELECTED AREA OF RANGPUR DISTRICT IN BANGLADESH MD. SAIDUR RAHMAN & MD. KAMRUZZAMAN	23
4.	THE IMPACT OF CORPORATE GOVERNANCE MECHANISMS ON EARNINGS MANAGEMENT: EVIDENCE FROM BANKS IN ETHIOPIA OBSA TEFERI ERENA & TILAHUN AEMIRO TEHULU	27
5.	EDUCATION EXPENDITURE AND ECONOMIC GROWTH IN NIGERIA: CO-INTEGRATION AND ERROR CORRECTION TECHNIQUE AHEMD HALLIRU MALUMFASHI	34
6.	THE EFFECTS OF BUSINESS PLANNING ON SERVICING OF LOANS BY SMALL AND MEDIUM ENTERPRISES: A CASE STUDY OF HAIR SALON ENTERPRISES IN ELDORET TOWN NANDWA J. MUSAMBAYI	38
7.	THE POLITICAL ECONOMY OF POVERTY IN NIGERIA MARTINS IYOBOYI	45
8.	MICRO, SMALL AND MEDIUM ENTERPRISES IN INDIA- AN ANALYSIS DR. S. KALIYAMOORTHY & S. PARITHI	49
9.	SCOPE OF NEEM (AZADIRACHTA INDICA) PESTICIDES IN AGRICULTURE – A STUDY IN WEST BENGAL DR. A. K. NANDI, DR. JAYANTA DUTTA & DR. B. K. BERA	53
10.	MOOD STATE AND CUSTOMER ORIENTATION DR. ANANT GWAL, RAJESHWARI GWAL & DR. SANJEEVNI GANGWANI	58
11.	PERFORMANCE EVALUATION OF MUTUAL FUNDS IN RECESSION IN INDIA: AN EMPIRICAL STUDY SUBRATA ROY & SHANTANU KUMAR GHOSH	63
12.	PERSONALITY AS A MODERATOR OF QUALITY OF WORK LIFE AND JOB ATTITUDE SUSAN, V. & JAYAN, C.	74
13.	ROLE OF EDUCATION IN PROMOTING SOCIAL INCLUSION: AN ANALYSIS OF THE WORKING OF MID DAY MEAL S. K. PANT & MUKESH PANDEY	78
14.	EMPIRICAL STUDY OF URBANISATION IN INDIA DR. MOOL CHAND & DR. RAJ PAL SINGH	84
15.	AN EMPIRICAL STUDY ON RURAL CONSUMERS' PERCEPTION TOWARDS TRADE FAIR AS A MARKETING TOOL BHAUTIK A. PATEL & DR. RAJU M. RATHOD	89
16.	BUYING DECISIONS OF RURAL CONSUMERS WITH REFERENCE TO FAST MOVING CONSUMER GOODS R. MOHAMED NASRUDEEN & DR. L. P. RAMALINGAM	97
17.	A STUDY OF BENEFICIARIES AVAILING CONSUMER LOAN IN NATIONALIZED BANKS VILLAVARAYER LATHA & DR. K. KAMALAKANNAN	104
18.	CRUDE OIL PRICES VARIATIONS' ENCROACHMENT ON INDIAN STOCK MARKET [AN EMPIRICAL STUDY OF BSE] DR. NIDHI SHARMA & KIRTI KHANNA	108
19.	THE SPREAD OF SELF HELP GROUPS – BANK LINKAGE PROGRAMME IN INDIA DR. V.DHEENADHAYALAN	111
20.	SUSTAINABLE DEVELOPMENT IN NORTHEAST INDIA DR. RAJESHWAR SINGH	116
21.	COMPOSITION OF NON-PERFORMING ASSETS: A COMPARATIVE STUDY OF NATIONALISED BANKS AND SBI AND ITS ASSOCIATES MANISH B. RAVAL	124
22.	A CRITICAL EVALUATION OF PERFORMANCE OF MNREGA DR. TUSHAR CHAUDHARI	127
23.	WEAK-FORM OF EFFICIENCY IN CHINESE STOCK MARKET N. ANURADHA	131
24.	CHALLENGES AND PROSPECTUS OF SUCCESSFUL WOMEN ENTREPRENEURS (A CASE STUDY IN DAVANGERE CITY) VENKATESH BABU .S	135
25.	EVALUATING THE MICRO-CREDIT MODEL AND SUCCESS STORY OF GRAMEEN BANK, BANGLADESH DR. RICHA SINHA	139
26.	COMMON PROPERTY RESOURCES-AVAILABILITY AND DEPENDENCY PATTERN (A CASE STUDY OF BOLUVAMPATTI PANCHAYATH - TAMIL NADU) K. BABY & R. REMA	145
27.	HOUSING PROPERTY INVESTMENT PREFERENCESIN POST RECESSIONARY BANGALORE ECONOMY - A CONSUMER PERSPECTIVE ANALYSIS PRADEEPA.M & VIDYA.R	153
28.	VALUES FOR CORPORATE DEVELOPMENT DR. ANUVIYAN & SARISHA BHARUCHA	158
29.	CHILD LABOUR IN INDIA: CAUSES, PERSPECTIVE & GOVERNMENTAL POLICIES IMPERATIVES RATNA BINODINI AMIYA PRIYADARSHINI DAS & APARAJITA BISWAL	164
30.	IMPACT OF FOREIGN DIRECT INVESTMENT (FDI) ON INDIAN ECONOMY: A SECTORAL ANALYSIS IRAM KHAN	171
	REQUEST FOR FEEDBACK	178

CHIEF PATRON

PROF. K. K. AGGARWAL

Chancellor, Lingaya's University, Delhi
Founder Vice-Chancellor, Guru Gobind Singh Indraprastha University, Delhi
Ex. Pro Vice-Chancellor, Guru Jambheshwar University, Hisar

PATRON

SH. RAM BHAJAN AGGARWAL

Ex.State Minister for Home & Tourism, Government of Haryana
Vice-President, Dadri Education Society, Charkhi Dadri
President, Chinar Syntex Ltd. (Textile Mills), Bhiwani

CO-ORDINATOR

DR. BHAVET

Faculty, M. M. Institute of Management, MaharishiMarkandeshwarUniversity, Mullana, Ambala, Haryana

ADVISORS

DR. PRIYA RANJAN TRIVEDI

Chancellor, The Global Open University, Nagaland

PROF. M. S. SENAM RAJU

Director A. C. D., School of Management Studies, I.G.N.O.U., New Delhi

PROF. M. N. SHARMA

Chairman, M.B.A., HaryanaCollege of Technology & Management, Kaithal

PROF. S. L. MAHANDRU

Principal (Retd.), MaharajaAgrasenCollege, Jagadhri

EDITOR

PROF. R. K. SHARMA

Professor, Bharti Vidyapeeth University Institute of Management & Research, New Delhi

CO-EDITOR

DR. SAMBHAV GARG

Faculty, M. M. Institute of Management, MaharishiMarkandeshwarUniversity, Mullana, Ambala, Haryana

EDITORIAL ADVISORY BOARD

DR. RAJESH MODI

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

PROF. SIKANDER KUMAR

Chairman, Department of Economics, HimachalPradeshUniversity, Shimla, Himachal Pradesh

PROF. SANJIV MITTAL

UniversitySchool of Management Studies, Guru Gobind Singh I. P. University, Delhi

PROF. RAJENDER GUPTA

Convener, Board of Studies in Economics, University of Jammu, Jammu

PROF. NAWAB ALI KHAN

Department of Commerce, Aligarh Muslim University, Aligarh, U.P.

PROF. S. P. TIWARI

Head, Department of Economics & Rural Development, Dr. Ram Manohar Lohia Avadh University, Faizabad

DR. ANIL CHANDHOK

Professor, Faculty of Management, Maharishi Markandeshwar University, Mullana, Ambala, Haryana

DR. ASHOK KUMAR CHAUHAN

Reader, Department of Economics, Kurukshetra University, Kurukshetra

DR. SAMBHAVNA

Faculty, I.I.T.M., Delhi

DR. MOHENDER KUMAR GUPTA

Associate Professor, P.J.L.N. Government College, Faridabad

DR. VIVEK CHAWLA

Associate Professor, Kurukshetra University, Kurukshetra

DR. SHIVAKUMAR DEENE

Asst. Professor, Dept. of Commerce, School of Business Studies, Central University of Karnataka, Gulbarga

ASSOCIATE EDITORS**PROF. ABHAY BANSAL**

Head, Department of Information Technology, Amity School of Engineering & Technology, Amity University, Noida

PARVEEN KHURANA

Associate Professor, Mukand Lal National College, Yamuna Nagar

SHASHI KHURANA

Associate Professor, S.M.S. Khalsa Lubana Girls College, Barara, Ambala

SUNIL KUMAR KARWASRA

Principal, Aakash College of Education, Chander Kalan, Tohana, Fatehabad

DR. VIKAS CHOUDHARY

Asst. Professor, N.I.T. (University), Kurukshetra

TECHNICAL ADVISORS**MOHITA**

Faculty, Yamuna Institute of Engineering & Technology, Village Gadholi, P. O. Gadholi, Yamunanagar

AMITA

Faculty, Government M. S., Mohali

FINANCIAL ADVISORS**DICKIN GOYAL**

Advocate & Tax Adviser, Panchkula

NEENA

Investment Consultant, Chambaghat, Solan, Himachal Pradesh

LEGAL ADVISORS**JITENDER S. CHAHAL**

Advocate, Punjab & Haryana High Court, Chandigarh U.T.

CHANDER BHUSHAN SHARMA

Advocate & Consultant, District Courts, Yamunanagar at Jagadhri

SUPERINTENDENT**SURENDER KUMAR POONIA**

CALL FOR MANUSCRIPTS

We invite unpublished novel, original, empirical and high quality research work pertaining to recent developments & practices in the area of Computer, Business, Finance, Marketing, Human Resource Management, General Management, Banking, Insurance, Corporate Governance and emerging paradigms in allied subjects like Accounting Education; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Monetary Policy; Portfolio & Security Analysis; Public Policy Economics; Real Estate; Regional Economics; Tax Accounting; Advertising & Promotion Management; Business Education; Management Information Systems (MIS); Business Law, Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labor Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; Public Administration; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism, Hospitality & Leisure; Transportation/Physical Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Digital Logic; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Multimedia; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic and Web Design. The above mentioned tracks are only indicative, and not exhaustive.

Anybody can submit the soft copy of his/her manuscript **anytime** in M.S. Word format after preparing the same as per our submission guidelines duly available on our website under the heading guidelines for submission, at the email address: infoijrcm@gmail.com.

GUIDELINES FOR SUBMISSION OF MANUSCRIPT

1. **COVERING LETTER FOR SUBMISSION:**

DATED: _____

THE EDITOR
IJRCM

Subject: SUBMISSION OF MANUSCRIPT IN THE AREA OF.

(e.g. Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)

DEAR SIR/MADAM

Please find my submission of manuscript entitled ' _____ ' for possible publication in your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published elsewhere in any language fully or partly, nor is it under review for publication elsewhere.

I affirm that all the author (s) have seen and agreed to the submitted version of the manuscript and their inclusion of name (s) as co-author (s).

Also, if my/our manuscript is accepted, I/We agree to comply with the formalities as given on the website of the journal & you are free to publish our contribution in any of your journals.

NAME OF CORRESPONDING AUTHOR:

Designation:

Affiliation with full address, contact numbers & Pin Code:

Residential address with Pin Code:

Mobile Number (s):

Landline Number (s):

E-mail Address:

Alternate E-mail Address:

NOTES:

- a) The whole manuscript is required to be in **ONE MS WORD FILE** only (pdf. version is liable to be rejected without any consideration), which will start from the covering letter, inside the manuscript.
- b) The sender is required to mention the following in the **SUBJECT COLUMN** of the mail:
New Manuscript for Review in the area of (Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)
- c) There is no need to give any text in the body of mail, except the cases where the author wishes to give any specific message w.r.t. to the manuscript.
- d) The total size of the file containing the manuscript is required to be below **500 KB**.
- e) Abstract alone will not be considered for review, and the author is required to submit the complete manuscript in the first instance.
- f) The journal gives acknowledgement w.r.t. the receipt of every email and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of manuscript, within two days of submission, the corresponding author is required to demand for the same by sending separate mail to the journal.

2. **MANUSCRIPT TITLE:** The title of the paper should be in a 12 point Calibri Font. It should be bold typed, centered and fully capitalised.

3. **AUTHOR NAME (S) & AFFILIATIONS:** The author (s) **full name, designation, affiliation (s), address, mobile/landline numbers, and email/alternate email address** should be in italic & 11-point Calibri Font. It must be centered underneath the title.

4. **ABSTRACT:** Abstract should be in fully italicized text, not exceeding 250 words. The abstract must be informative and explain the background, aims, methods, results & conclusion in a single para. Abbreviations must be mentioned in full.

5. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of five. These should be arranged in alphabetic order separated by commas and full stops at the end.
6. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. It must be prepared on a single space and single column with 1" margin set for top, bottom, left and right. It should be typed in 8 point Calibri Font with page numbers at the bottom and centre of every page. It should be free from grammatical, spelling and punctuation errors and must be thoroughly edited.
7. **HEADINGS:** All the headings should be in a 10 point Calibri Font. These must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
8. **SUB-HEADINGS:** All the sub-headings should be in a 8 point Calibri Font. These must be bold-faced, aligned left and fully capitalised.
9. **MAIN TEXT:** The main text should follow the following sequence:

INTRODUCTION**REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESES****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****SCOPE FOR FURTHER RESEARCH****ACKNOWLEDGMENTS****REFERENCES****APPENDIX/ANNEXURE**

It should be in a 8 point Calibri Font, single spaced and justified. The manuscript should preferably not exceed **5000 WORDS**.

10. **FIGURES & TABLES:** These should be simple, crystal clear, centered, separately numbered & self explained, and **titles must be above the table/figure**. **Sources of data should be mentioned below the table/figure**. It should be ensured that the tables/figures are referred to from the main text.
11. **EQUATIONS:** These should be consecutively numbered in parentheses, horizontally centered with equation number placed at the right.
12. **REFERENCES:** The list of all references should be alphabetically arranged. The author (s) should mention only the actually utilised references in the preparation of manuscript and they are supposed to follow **Harvard Style of Referencing**. The author (s) are supposed to follow the references as per the following:
 - All works cited in the text (including sources for tables and figures) should be listed alphabetically.
 - Use **(ed.)** for one editor, and **(ed.s)** for multiple editors.
 - When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
 - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
 - The title of books and journals should be in italics. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
 - For titles in a language other than English, provide an English translation in parentheses.
 - The location of endnotes within the text should be indicated by superscript numbers.

PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

WEBSITES

- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>

PERFORMANCE EVALUATION OF MUTUAL FUNDS IN RECESSION IN INDIA: AN EMPIRICAL STUDY

SUBRATA ROY
ASST. PROFESSOR

RABINDRA MAHAVIDYALAYA
CHAMPADANGA

SHANTANU KUMAR GHOSH
PROFESSOR
DEPARTMENT OF COMMERCE
THE UNIVERSITY OF BURDWAN
GOLAPBAG CAMPUS, BURDWAN

ABSTRACT

The examination of mutual fund performance has got a special attention to the academicians as well as professionals worldwide. In this study, the risk-adjusted performance and the consistency of performance of the open-ended growth type of mutual fund schemes (Birla Sunlife Mutual Fund Company) have been examined in India during the recession occurred in 2008; post recession period (2007) and after the recession period (2009). The data relating to the above mentioned company has been obtained from the website of association of mutual funds in India (AMFI) and daily closing net asset value (NAV) has been considered. The evaluation of performance of the open-ended mutual fund schemes based on Sharpe, Treynor, Jensen, Treynor & Mazuy and auto-regressive (AR₁) models for the three year period highlighted different market characteristics and movement. Finally, the study reported that Sharpe ratio and Treynor ratio of all the schemes have been found positive in pre-recession period (2007) and consequently, negative in recession (2008) period and mixed performance in post recession (2009). However, the positive selectivity and market – timing performers of post recession (2009) period is higher than the pre (2007) and recession (2008) periods. However, the persistence of NAV performance of pre, post and recession periods has no significant differences. But, in case of persistence of return the results are quite same in pre and post recession periods.

KEYWORDS

Birla Sun Life, Mutual Fund, Performance, Recession, India.

INTRODUCTION

With the recent development of financial market in India, the mutual fund industry has got an immense importance for investment to the general public. Different types of investors however they are financially strong or weak, aggressive or defensive can invest in mutual fund without having any knowledge in mutual fund investment because the money invested in mutual funds is managed by the expert managers. In India, the mutual fund institutions are in a growing phase. The investment in mutual fund industry increases the real GDP in the country which indicates a healthy economic prosperity. Therefore, the positive effect of economic growth falls into the stock market that represents strong economic growth. But, in the time of recession it is assumed that the economic growth of a country will be declined because the financial indicators which are formed by the economic activities like real GDP including employment, real income and different stock indices are declined. During the recession period the stock market declines and after that rises when the stock-market gets good signal. So, at the time of recession, it is also expected that the mutual fund industry will decline in the same way like stock-market as a result the variation of performance of the mutual fund will be occurred. In this study, the performance will be evaluated of some selected open-ended growth schemes of a particular mutual fund company in India and its effect on performance before recession, during recession and after the recession should be judged.

REVIEW OF LITERATURE

The literature on mutual fund is enormous. A large number of academicians as well as professionals are spending their valuable time on mutual fund research. The research on mutual fund performance first started in USA and gradually the importance on mutual fund research is rising tremendously all over the world because the mutual fund is the attractive source of investment today. Some of the pioneer works will be discussed here in order to develop the basis of the present empirical research in the Indian context.

It has been found that most of the earlier researches were based on Sharpe, Treynor, Jensen and Fama's models. In Treynor's (1965) model popularly known as reward to volatility ratio found that risks are divided into two categories namely total risk and systematic risk. According to the Treynor's model it is assume that portfolios are well diversified and there is non-existence of diversifiable risk. Therefore, beta (a measure of systematic risk) is the appropriate measure of risk. Similarly, Sharpe (1966) developed another model of portfolio performance evaluation popularly known as reward to variability ratio. In R/V ratio total risk is considered in place of systematic risk. This is the difference between Sharpe ratio and Treynor ratio. Therefore, total variability is the appropriate measure of risk. According to this model it may be said that return is not the only measure of mutual fund performance, the component of risk obviously influence the performance. After that Jensen (1968) developed an important model for the evaluation of portfolio performance which is popularly known as Jensen alpha (J_{α}) which is derived from capital asset pricing model (CAPM). The basic objective of this model is to predict the ability of the portfolio managers through successful prediction of security prices. According to this model the ability of the portfolio managers can be judged with the help of alpha value. If the value of alpha is positive it may be expected that the portfolio managers will provide to the investors higher return. However, there was no such evidence of positive alpha could be found in the study. After, Sharpe, Treynor and Jensen, Fama (1972) developed an important model of portfolio performance evaluation. The earlier research studies mainly based on risk and return and confined into a single period only. But, Fama's model evaluates portfolio performance on different dimensions namely stock-selection, market-timing, diversification and return for bearing risk. It may be said that the earlier research works on market-timing performances were very poor. In spite of poor performances, little evidence of positive market-timing performances was present. Treynor & Mazuy (1966) which is popularly known as T & M examined the ability of the market forecasting of the investment managers by taking into consideration of 57 sample fund. The study reported

that there was no evidence of statistically significant market-timing performances. Similarly, Henrikson & Merton (1981), hereafter referred to as H&M, evaluated the performances of 116 mutual fund schemes. Finally, the study reported that only three schemes offered statistically significant market-timing performance. EL-Khouri (1993), examined the risk-return relationship by taking into account the data from Amman Stock Exchange. The study reported that the debt equity ratios of the funds were not correlated with required return. Shah & Hijazi (2005), examined mutual fund performance in Pakistan over a period from 1997 to 2004. They considered equity and balanced funds as sample and used Sharpe, Treynor and Jensen differential measures. Their study reported presence of negative Sharpe ratio but on overall basis the Sharpe ratio was 0.47 as compared to the market (0.27). Similarly, the Treynor ratios of all the funds were less than the beta values however on overall basis the Treynor ratio was 0.13. Finally, the study reported that some of the funds had negative alpha but on overall basis the alpha value of the funds industry was found to be 6.03. Kapil Choudhary (2007) examined the performance of 50 equity investments managers in India over a period of eight years started from January 1998 to December 2005. Fama's decomposition theory had been used in this study to measure investment performance. Finally, the study reported that the stock-selection ability of the investment managers was satisfactory but the market-timing performance was absent. However, the risk bearing and diversification performances were positive. G.Artikis evaluated the performance of 30 domestic bond mutual fund managers in Greece over a period from 15/03/1999 to 31/12/2001 by applying Treynor & Mazuy model. The study reported that 90% of the fund managers have the ability to choose under priced securities, 20% of the sample mutual funds have the power to outguess the market at right time and another 20% of the sample mutual funds have the ability to select under priced securities as well as outguess the market at correct time. Similarly, Filippas Psoma (2001) examined the mutual fund performance of 7 Greek equity mutual fund in Greece. Treynor & Mazuy model had been applied in the study. However, the study reported that four mutual funds out of 17 mutual funds exhibited superior market-timing performance. Santos, Costa, Tusi & Silva (2005) examined the mutual fund performance in Brazil over a period from April 2001 to July 2003. For the study purpose, 307 Brazilian stock funds were considered and applied stochastic frontier approach for the identification of the leaders among the Brazilian stock mutual funds. The study reported that the efficiency of a fund increases with the increase of management skills and finally beat the market and also reported that no relationship between fund size and performance were found. Jordan, Jorgensen & Smidira (2004), examined the mutual fund performance over a period from 1995 to 2001 by taking into consideration those funds which were closed to the new investors for new investment. For the study, they collected data from Centre for Research in Security Prices mutual fund data base and finally applied Sharpe, Treynor, Jensen and Fama & French models. Their study reported that those mutual funds closed their doors to the new investors performed well in the 12 months before closing and also found that the performance of funds tended to decline relative to its previous performance after closing. Thanou (2008) evaluated the Greek mutual funds' performance over a period from 1997 to 2005. To examine the mutual fund performance, he selected 17 Greek equity mutual funds from Association of Greek Institutional Investors and ensured continuity and uniformity. For the analysis, he employed risk-adjusted performance measures of Sharpe, Treynor, Jensen and Treynor & Mazuy. For the study, he divided the total periods in three sub-periods and also divided the market in two categories namely up-market condition and down-market condition. In this study monthly return data was considered for analysis and finally the study reported that the ranks were given to all the mutual funds as per various performance measures were almost same and the mutual funds were well diversified. The study also reported non-existence of market-timing ability and finally two mutual funds out-performed the market index. Zakri Y.Bello (2009), examined the performance of 5 categories of U.S. equity mutual funds during the recessions of 1990 and 2001 and during the 12 months after each recession that was identified by the National Bureau of Economic Research (NBER). After analysis of results the study reported that the return performances of all the mutual funds significantly higher during the post recession period of 1990 and also reported that the return performances of the mutual funds during the recession were higher than the market index and after the recession of 1990. Similarly, during the recession of 2001, he reported that the entire samples performances were in declined trend in post-recession period and also observed that only one category fund (small company) had positive return during the recession and the remaining samples were experienced negative return during the recession and after the recession.

IMPORTANCE OF THE STUDY

In Indian financial market different types of mutual fund companies according to their ownership (Public, Indian private & Foreign private) are operating by providing different types of schemes to the investors. In this study Birla Sun Life Mutual Fund company has been selected among so many private companies. This is one of the important competitors among the private competitors that provide to the investors different types of schemes particularly growth type of open-ended schemes has been considered here. Actually, the importance of the study to investigate the performance of this particular type of schemes and provide a basis (information) by which the investors can judge and take decision when they go for mutual fund investment.

STATEMENT OF THE PROBLEM

The research relating to the performance of mutual funds is enormous. A lot of researches are available world-wide. But, the performance of mutual fund relating to recession period is limited. In Indian context the performance of mutual fund during recession is scanty. Therefore, this problem should be addressed on a particular type of open-ended schemes (Growth) of the fastidious private company (Birla Sun Life MF).

OBJECTIVES

The present study seeks to examine the following objectives:

1. To examine the comparative risk-adjusted performances of the open-ended growth schemes before the recession, during the recession and after the after the recession.
2. To examine the persistence and effect of such performances during the recession.
3. To test whether the return performances of pre and post recession periods are better that the recession period.

HYPOTHESES

In this study two hypotheses have been formulated and tested. The first hypothesis as under:

H₀: The return performance of the open-ended growth schemes of Birla Sun Life MF Company in pre-recession period is equal to the return performance of the recession period.

H₁: The return performance of the open-ended growth schemes of Birla Sun Life MF Company in pre-recession period is higher than the return performance of the recession period.

Similarly, the second hypothesis as follows:

H₀: The return performance of the open-ended growth schemes of Birla Sun Life MF Company in post-recession period is equal to the return performance of the recession period.

H_a : The return performance of the open-ended growth schemes of Birla Sun Life MF Company in post-recession period is higher than the return performance of the recession period.

RESEARCH METHODOLOGY

In this study, several methods have been used to evaluate the risk-adjusted performance and the market-timing performance during the up and down market movements under the consideration of capital asset pricing model (CAPM) framework. In this study the risk-adjusted performance measures of Sharpe and Treynor have been applied and rank has been given to each scheme according to their performances and finally, Spearman rank correlation coefficient test has been conducted for comparison purposes. In 1965, Treynor proposed the first risk-adjusted model for the evaluation of portfolio performance. First, he computed the risk premium which is the excess return of mutual fund over the risk-free return and divided the same by the systematic risk component popularly known as beta coefficient of the schemes. The model as under:

$$T_i = \frac{R_i - R_f}{\beta_i} \quad (1)$$

Where, T_i is Treynor ratio of i^{th} scheme, R_i is the daily return of i^{th} scheme, R_f is the risk-free rate of return that has been computed by taking into account the daily yield of seven years Govt. dated securities and β_i is the beta coefficient of i^{th} scheme which is a numerical measure of systematic risk that has been computed simply by running ordinary regression equation (OLS) between scheme's return and market return as dependent and independent variables respectively.

Similarly, in 1966 William Sharpe proposed an alternative risk-adjusted performance measure where beta coefficient was replaced by the standard deviation which is a numerical measure of total risk of the i^{th} scheme. The ratio popularly known as reward to variability ratio which as under:

$$S_i = \frac{R_i - R_f}{\sigma_i} \quad (2)$$

Where, S_i is the Sharpe ratio and σ_i is the standard deviation of the i^{th} scheme which is a numerical of total risk of the i^{th} scheme, computed as under:

$$\sigma_i = \sqrt{\frac{\sum R_i^2}{n} - \left(\frac{\sum R_i}{n}\right)^2} \quad (3)$$

It measures the return earned per unit of total risk and compared it to the Treynor index. From these two models it is assumed that if the mutual fund invests money in the same market and evaluates the performance of the mutual fund and found that the performance rankings on both the methods are identical then it may be concluded from this happening that the total risk of the mutual fund has been abolished or diversified then the Sharpe ratio will convert to Treynor ratio in this situation. In this research paper, Jensen portfolio performance measure has been applied to evaluate the stock-selection ability of the mutual fund managers in a statistically significant way. The model as under:

$$R_i = \alpha_i + \beta_i(R_m) + e_i \quad (4)$$

Where, R_i is the daily return of i^{th} mutual fund scheme, R_m is the daily return of the market index, β_i is the beta coefficient, α_i is the intercept of i^{th} scheme in this model which is popularly known as Jensen measure that indicates the managers' forecasting ability in a volatile market. The managers' market forecasting ability can be judged by α value which is produced by the mutual fund scheme itself. It is argued that a statistically positive significant α value of a mutual fund scheme indicates superior stock-selection ability of the managers. Similarly, a negative α value gives picture on inferior quality of stock-selection ability of the managers. Moreover, in this study market-timing ability of the mutual fund manager has been examined. A fund manager having superior market-timing ability can easily predict or forecast the market movement and adjust his/her portfolio accordingly. It may be said that when the market is upward rising the market return exceeds the risk free return and similarly, when the market is downward sloping generally opposite scenario is occurred. At that time the risk-free return exceeds market return ($R_f > R_m$). In this situation, an efficient mutual fund manager changes his/her portfolio composition according to the risk profile. In up market the mutual fund manager shift his/her high risk securities with the expectation of earning higher return than the market return and switching to low risk securities with the fear of loss at the time of down market movement. As a result, the systematic risk composition of his/her portfolio will be changed overtime. To predict the market-timing ability of the Indian private mutual fund company like Birla Sun Life Mutual Fund Company Treynor and Mazuy model has been applied which is quadratic (parabolic) regression equation model that separates the effects of stock-selection skill of the manager and market-timing ability of the manager. In this study the model has been estimated after including the error term into the model as under:

$$R_i - R_f = \alpha_i + \beta_i(R_m - R_f) + \gamma_i (R_m - R_f)^2 + e_i \quad (5)$$

Where, $R_i - R_f$ is the excess return over the risk-free rate of i^{th} scheme, γ_i is the gamma coefficient, a numerical measure of market-timing ability of the mutual fund manager. It is a non negative term. It is assumed that a statistically significant gamma value indicates superior market-timing ability of the manager and a negative gamma value represents inferior market-timing ability of the manager.

Finally, the persistence of scheme's return has been examined in this study during the pre and post recession periods. During the up-market period it is expected that the return of the mutual fund scheme's will increase and during the recession period the return of the mutual fund scheme will tend to reduce and thereafter in correction period it will again try to make up the loss that has been occurred in recession period. In this volatile market situation it has been examined whether the mutual fund managers are able to maintain the persistence of 'NAV' performance or not. To examine this issue, autoregressive model (AR_1) has been applied. In autoregressive model, only daily NAV of mutual fund scheme has been considered as dependent variable and regressed with the one day lagged value of the former variable as independent variable. The model as under:

$$NAV_d = \alpha_i + \beta_i(NAV_{d-1}) + e_i \quad (6)$$

Where, NAV_d is the daily NAV of the i^{th} mutual fund scheme, α_i is the intercept term of i^{th} mutual fund scheme, β_i is the beta coefficient of i^{th} mutual fund scheme, NAV_{d-1} is the one day lagged NAV of the i^{th} mutual fund scheme and e_i is the error term with zero mean and constant standard deviation.

From this model it may be said that if the coefficient (β_i) of independent variable (Here, one day lagged value of dependent variable) is statistically significant then it may be argued that in volatile market situation the mutual fund managers are able to maintain the persistence in NAV performance and opposite will be happened if the lagged coefficient is statistically insignificant. But, before applying this AR_1 model, first of all simple regression equation has been formulated because the entire periods have been divided in three sub periods namely pre-recession (2007), during recession (2008) and post-recession (2009) for the

examination of persistence in return separately. Hence, the first regression model has been formulated by taking into account the daily NAV of pre-recession period as dependent variable that has been regressed with daily NAV of recession period as independent variable. The model as under:

$$NAV_{2007} = \alpha_i + \beta_i(NAV_{2008}) + e_i \tag{7}$$

Where, NAV_{2007} is the daily NAV of the i^{th} mutual fund scheme in the year 2007, α_i is the intercept term, β_i is the beta coefficient, NAV_{2008} is the NAV of i^{th} mutual fund scheme during the recession, e_i is the error term with zero mean and constant standard deviation.

Similarly, the second regression equation has been formulated by taking into consideration the daily NAV of recession period as dependent variable that has been regressed with the daily NAV of post recession period as independent variable. The regression equation as under:

$$NAV_{2008} = \alpha_i + \beta_i(NAV_{2009}) + e_i \tag{8}$$

After applying these models it has been found that the beta coefficient of both the models are statistically insignificant that indicates no persistence in NAV performance but it has also been observed that the autocorrelation exist in the error terms which has been provided by the 'd' statistic (Durbin-Watson). Therefore, the simple regression models are not relevant in this regard. To overcome this problem auto regressive model has been formulated that has been shown in equation six. But, before applying this model into time series data, auto-correlation test has been conducted and found from the 'd' statistic that no auto-correlation exist in one period lagged time series data and finally the model has been applied to examine the persistence of mutual fund performance.

Finally, 'z' test has been applied to test whether the return performance of the open-ended growth schemes of Birla Sun Life MF Company in pre and post recession periods is higher than the return performance of the recession period or not. The 'z' value has been computed and tested at 5% level of significance as under:

$$z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\sigma_{s1}^2}{n_1} + \frac{\sigma_{s2}^2}{n_2}}} \tag{9}$$

Where, \bar{x}_1 = Average return of the open-ended growth schemes of Birla Sun Life MF Company in pre-recession period and post recession, \bar{x}_2 = Average return of the open-ended growth schemes of Birla Sun Life MF Company during the recession period, σ_{s1} = standard deviation of return in pre-recession period, σ_{s2} = Standard deviation of return during the recession period.

RESULTS & DISCUSSION

The risk-adjusted performance of 25 open-ended growth schemes of Birla Sun Life Mutual Fund company has been presented in table one (Tab.1). The performances have been divided in three non-overlapping sub periods namely pre recession period (2007), during the recession period (2008) and post recession period (2009). Then Sharpe and Treynor ratios have been computed in three sub periods and analysed the performances. It has been found from the table that the Sharpe ratio of all the open-ended growth schemes of Birla Sun Life Mutual Fund Company is founds to be positive and then rank has been given to each scheme according to their performances. The first rank has been given to Birla top 100-growth option whose Sharpe ratio is 0.9450 and the last rank has been given to Birla index fund-plan A (Dividend) whose Sharpe ratio is 0.0954 and so on in between two ranks in the year 2007. It has also been found that 13 schemes out of 25 schemes have out-performed the market index positively according to the Sharpe measure and those schemes offered to the investors' abnormally higher rate of return than the market index. Similarly, in the same way Treynor ratio has been computed of all the open-ended growth schemes of Birla Sun Life Mutual Fund Company during the pre recession period for the examination of risk-adjusted performance. It has been observed from the table that the beta values of the open-ended growth schemes of Birla Sun Life Mutual Fund Company are found to be positive and statistically significant except six schemes. After computation of risk-adjusted Treynor ratio, rank has been given to each scheme. It has been observed from the table that first rank has been given to Birla Sunlife basic industries fund-plan A (dividend) whose Treynor ratio has been found to be 11.6609 and followed by Birla Sunlife basic industries fund-plan B (growth) whose Treynor ratio is 10.0117 and then Birla Sunlife buy India fund-plan A (dividend) whose Treynor ratio is seen to be 8.8620 and so on that ranges between 0.9487 and 11.6609. Then it has also been observed that 12 schemes out of 25 schemes have out-performed the Treynor market index positively and generally offered to the investors' higher rate of return than the other schemes. It has also been observed from the table that the average return of the open-ended growth schemes of Birla Sunlife Mutual Fund Company is found to be 3.3496 and the average standard deviation (a measure of unsystematic risk) and also the average beta (a measure of systematic risk) of the open-ended growth schemes of Birla Sunlife Mutual Fund Company are 6.2881 and 0.6824 respectively. Along with these, the stock-selection ability of the manager has been examined in the year 2007 (pre recession period) that has been shown in Table one (Tab.1). It is generally assumed that the statistically significant α value represents superior stock-selection performance of the mutual fund managers. Hence, this issue has been examined here. It has been observed that 19 schemes out of 25 schemes offered positive α values and the remaining schemes offered negative α values during the pre recession period. However from this happening it may not be said that the managers of 19 schemes are superior. The superiority of the managers can be judged if they provide statistically significant α value which is possible by applying the strategy of superior stock picking ability. Here, it has been found that only four schemes out of 25 schemes are statistically significant at 5% level and the managers of those schemes offered to the investors' generally higher return than the other schemes and said to be superior in respect of stock picking ability. The average stock-selection ability of the manager has been found to be 1.0369 during the pre recession period (2007).

TABLE 1: RISK-ADJUSTED PERFORMANCE IN PRE-RECESSION PERIOD (2007)

Sl.No	Scheme Name	Sharpe Ratio	Rank	Treynor Ratio	Rank	Jensen Alpha	t-statistic
1	Birla Dividend yield plus-plan A (D)	0.4017	17	3.8558	16	0.361	0.243
2	Birla Dividend yield plus-plan B (G)	0.6145	9	7.3489	4	2.006	1.173
3	Birla Index fund-plan A (Dividend)	0.0954	25	0.9487	25	-2.994	-0.902
4	Birla Index fund-plan B (Growth)	0.5517	11	3.3587	19	0.228	0.569
5	Birla India gen next fund-divid option	0.4034	16	3.6776	18	0.275	0.179
6	Birla India gen next fund-growth option	0.6621	8	5.2183	12	1.336	1.194
7	Birla India opport. Fund-plan A (D)	0.3614	20	2.8222	23	-0.238	-0.262
8	Birla India opport. Fund-plan B (G)	0.3464	22	2.5814	24	-0.416	-0.494
9	Birla infrastructure fund-plan A (D)	0.7586	6	5.2352	11	1.778	2.031**
10	Birla infrastructure fund-plan B (G)	0.7698	5	5.5470	8	1.959	1.879
11	Birla midcap fund-plan A (Dividend)	0.5391	12	4.2726	14	0.823	0.583
12	Birla midcap fund-plan B (Growth)	0.8231	2	6.3451	6	2.521	1.996**
13	Birla MNC fund-plan A (Dividend)	0.4291	15	3.8451	17	0.302	0.298
14	Birla MNC fund-plan B (Growth)	0.3793	18	2.8500	22	-0.234	-0.283
15	Birla Sunlife buy India Fund-plan A(D)	0.6141	10	8.8620	3	2.426	1.262
16	Birla Sunlife buy India Fund-plan B(G)	0.5291	13	5.7297	7	1.248	0.862
17	Birla Sunlife basic india fund planA (D)	0.7913	3	11.6609	1	3.963	1.829
18	Birla Sunlife basic india fund planB (G)	0.4755	14	10.0117	2	3.652	0.971
19	Birla Sunlife equity fund-planA(D)	0.3591	21	5.0860	13	0.890	0.428
20	Birla Sunlife equity fund-planB(G)	0.6895	7	5.3415	10	1.731	1.314
21	Birla Sunlife frontline equ. fund-plA(D)	0.3730	19	4.0181	15	0.499	0.247
22	Birla Sunlife frontline equ. fnd-plB(G)	0.7760	4	5.4741	9	1.706	2.029**
23	Birla sunlife new mille fund-planA(D)	0.2525	24	3.1095	20	-0.029	-0.018
24	Birla sunlife new mille fund-planB(G)	0.2549	23	3.0783	21	-0.045	-0.028
25	Birla Top100-Growth Option	0.9450	1	6.5174	5	2.114	3.460**

Source: www.amfiindia.com, www.bseindia.org, www.rbi.org.in

** 5% level of significance.

In 2008, when the entire world economy was turning into financial crisis (specially US economy) in the form of recession, at that time the world's biggest stock exchanges were moving into down ward sloping not only that the effect of worldwide recession suddenly entered into the Indian economy and for that the Indian leading stock exchanges were turning into down ward movement. In that volatile situation what happened in Birla Sun life Mutual Fund Company of its open-ended growth schemes that issue has been discussed here. The risk-adjusted performance results have been presented in table two (Tab.2). It has been found from the table that the computed Sharpe ratios of the open-ended growth schemes of Birla Sun life Mutual Fund Company are negative but in spite of negative performances rank has been given to each scheme. According to such performances the first rank has been given to Birla Dividend yield plus-plan B (G) whose Sharpe ratio is found to be -0.2455 and the second rank has been posted to Birla Dividend yield plus-plan A (Dividend) and followed by Birla MNC fund-plan A (Dividend), Birla MNC fund-plan B (G) and so on and finally the Sharpe ratio ranges between -0.2455 and -0.7114. It has already been said earlier that the computed Sharpe ratios of all the open-ended growth schemes are negative because this time period is related (2008) to financial recession and its effect came into the Indian stock market and for that reason the market return of BSE sensitive index has come down to negative and finally the bad effect of recession had come into the open-ended growth schemes of Birla Sunlife Mutual Fund Company in terms of negative return. In the eye of investors the computed Sharpe, performance measures are totally unsatisfactory and it has also been observed that the returns of all the schemes are negative during the recession (2008) period. But, in spite of negative return the schemes which have outperformed the market index are identified and found that nine schemes out of twenty-five schemes have beat the market index negatively although this happening is not good signal to the investors. Similarly, the Treynor ratio has been computed of the open-ended growth schemes of Birla Sunlife mutual fund Company during the recession period (2008) in order to examine the risk adjusted performance that has been presented in table two (Tab.2). It has been from the table that the computed Treynor ratios of all the open-ended growth schemes of Birla Sunlife Mutual Fund Company are found to be negative. In spite of negative performance, rank has been given to each scheme and found that Birla Sunlife Dividend yield plus-plan B(G) has the highest Treynor ratio (-3.5604), Birla Sunlife Dividend yield the Treynor ratios and the market Treynor ratios of all the open-ended schemes are negative during the recession period (2008). But, having negative Treynor ratios, nine schemes have beat the market index negatively. Moreover, in this study the stock-selection performances of the open-ended growth schemes of Birla Sunlife Mutual Fund Company have been examined and found that all the schemes have negative alpha (α) values that represent inferior quality of stock-selection skills of the managers.

TABLE 2: RISK-ADJUSTED PERFORMANCE IN RECESSION PERIOD (2008)

Sl. No	Scheme Name	Sharpe Ratio	Rank	Treynor Ratio	Rank	Jensen Alpha	t-statistic
1	Birla Dividend yield plus-plan A (D)	-0.2519	2	-3.8181	2	-1.226	-0.567
2	Birla Dividend yield plus-plan B (G)	-0.2455	1	-3.5604	1	-1.00	-0.475
3	Birla Index fund-plan A (Dividend)	-0.3469	6	-4.4651	5	-1.421	-0.740
4	Birla Index fund-plan B (Growth)	-0.3480	7	-4.7645	6	-1.681	-0.787
5	Birla India gen next fund-dividend option	-0.4165	12	-11.276	24	-3.892	-1.540
6	Birla India gen next fund-growth option	-0.3616	10	-7.3052	13	-2.894	-1.261
7	Birla India opportunity Fund-plan A (D)	-0.7114	25	-13.213	25	-5.279	-2.516
8	Birla India opportunity Fund-plan B (G)	-0.7022	24	-11.233	23	-4.888	-2.525
9	Birla infrastructure fund-plan A (D)	-0.5220	18	-7.1870	12	-3.441	-1.554
10	Birla infrastructure fund-plan B (G)	-0.5250	19	-7.3621	14	-3.412	-1.664
11	Birla midcap fund-plan A (Dividend)	-0.5114	15	-7.9177	18	-3.780	-1.497
12	Birla midcap fund-plan B (Growth)	-0.4654	14	-7.5305	16	-3.389	-1.376
13	Birla MNC fund-plan A (Dividend)	-0.2909	3	-4.1365	3	-1.476	-0.852
14	Birla MNC fund-plan B (Growth)	-0.2912	4	-4.1857	4	-1.507	-0.860
15	Birla Sunlife buy India Fund-plan A(D)	-0.3804	11	-5.2167	9	-2.032	-1.158
16	Birla Sunlife buy India Fund-plan B(G)	-0.3611	9	-5.1157	8	-1.975	-1.029
17	Birla Sunlife basic India fund plan A (D)	-0.5866	21	-7.6845	17	-3.698	-2.043
18	Birla Sunlife basic India fund plan B (G)	-0.5216	17	-7.0023	11	-3.233	-1.666
19	Birla Sunlife equity fund-plan A (D)	-0.5180	16	-8.1897	20	-3.572	-1.726
20	Birla Sunlife equity fund-plan B (G)	-0.5379	20	-8.1909	21	-3.590	-1.846
21	Birla Sunlife frontline equity fund-pl A (D)	-0.4338	13	-7.3897	15	-3.125	-1.383
22	Birla Sunlife frontline equity fund-pla B (G)	-0.3526	8	-4.9604	7	-1.885	-1.024
23	Birla sunlife new mille fund-plan A (D)	-0.6456	23	-7.9742	19	-3.727	-2.769
24	Birla sunlife new mille fund-plan B (G)	-0.6099	22	-10.511	22	-4.276	-2.200
25	Birla Top100-Growth Option	-0.3053	5	-6.2548	10	-2.542	-0.913

Source: www.amfiindia.com, www.bseindia.org, www.rbi.org.in

What happened after the recession (2009) that has been discussed here? The risk-adjusted performance measures of the open-ended growth schemes of Birla Sunlife Mutual Fund Company have been presented in table three (Tab.3). It has been observed from the table that the average monthly return of all the open-ended growth schemes are positive and the standard deviation are also positive, finally, the computed Sharpe ratios of the open-ended growth schemes are positive. According to the Sharpe ratio (R/V ratio) rank has been given to each scheme in descending order. The first rank has been given to Birla infrastructure fund-plan A (dividend) (1.2050), Birla index fund-plan A (dividend) (1.1150) and so on. The ranks values of the schemes ranges between 0.3731 and 1.4334 in the year 2009. From the table it has been found that all the schemes have beaten the market index (Sharpe market index) positively. From this happening it may be said that all the schemes have offered to the investors' abnormally higher return during the post-recession (correction) period (2009). Similarly, Treynor ratios have been computed of all the open-ended growth schemes of Birla Sunlife Mutual Fund Company for examining the performances. It has been found from the Treynor ratios of all the schemes that eleven schemes have the positive performers and remaining are not. The reason behind negative Treynor ratio is negative beta value. Although, rank has been given to each scheme according to the Treynor ratio in descending order and found that Birla India opportunities fund-plan A (Dividend) is the highest performer whose Treynor ratio is found to be 280.3889. The second highest rank has been given to Birla Sunlife frontline equity fund-plan A (Div) at a Treynor ratio of 85.0621 and so on. The ranks are ranges between -158.6471 and 280.3889. It has been observed that three (3) schemes out of 25 schemes have outperformed the market index positively and expected that the schemes have offered to the investor's abnormally higher return than the others. It has also been found that eight schemes (8) which have negative Treynor ratios have beaten that market index negatively and found that the computed market Treynor ratios of those are found to be negative and also lower than the aforesaid (8) Treynor ratios in post-recession period. In addition to this selectivity performance of the open-ended Birla Sunlife mutual fund schemes has been examined during the post recession period. Generally it is expected that the statistically significant Jensen alpha represents superior selectivity performance of the managers. This issue has been examined here. It has been observed from the table that alpha values of the open-ended schemes found to be positive not only that but also statistically significant during the post recession period. From this happening it may be said that the managers of those open-ended schemes are efficient in stock-selection activity.

TABLE 3: RISK-ADJUSTED PERFORMANCE IN POST RECESSION PERIOD (2009)

Sl. No	Scheme Name	Sharpe Ratio	Rank	Treynor Ratio	Rank	Jensen Alpha	t-statistic
1	Birla Dividend yield plus-plan A (D)	0.5905	15	22.1506	7	4.068	4.312**
2	Birla Dividend yield plus-plan B (G)	0.7997	8	11.9056	12	4.313	4.803**
3	Birla Index fund-plan A (Dividend)	1.1150	3	-95.9000	23	5.559	6.921**
4	Birla Index fund-plan B (Growth)	0.4371	22	19.2765	9	4.407	2.562**
5	Birla India gen next fund-divid option	0.3731	25	35.4389	4	2.282	4.905**
6	Birla India gen next fund-growth option	0.3996	23	-13.7167	13	3.859	6.255**
7	Birla India opport. Fund-plan A (D)	0.9551	5	280.3889	1	5.295	5.757**
8	Birla India opport. Fund-plan B (G)	0.4771	19	12.1287	11	4.764	2.001**
9	Birla infrastructure fund-plan A (D)	1.2050	2	-22.5353	16	5.677	10.132**
10	Birla infrastructure fund-plan B (G)	1.4334	1	-44.3611	20	6.412	8.744**
11	Birla midcap fund-plan A (Dividend)	0.8707	6	-103.6212	24	6.423	4.713**
12	Birla midcap fund-plan B (Growth)	0.5205	18	-30.6014	17	7.981	2.766**
13	Birla MNC fund-plan A (Dividend)	0.4457	21	40.2354	3	4.489	2.993**
14	Birla MNC fund-plan B (Growth)	0.7644	9	-45.6889	21	6.046	4.677**
15	Birla Sunlife buy India Fund-plan A(D)	0.8295	7	18.4257	10	4.128	5.926**
16	Birla Sunlife buy India Fund-plan B(G)	0.4529	20	-158.6471	25	5.608	2.705**
17	Birla Sunlife basic india fund planA (D)	1.0089	4	-22.3367	15	4.491	10.916**
18	Birla Sunlife basic india fund planB (G)	0.5620	16	22.0788	8	5.091	2.810**
19	Birla Sunlife equity fund-planA(D)	0.5579	17	24.8211	6	4.290	3.740**
20	Birla Sunlife equity fund-planB(G)	0.6692	13	-32.9733	18	5.305	4.121**
21	Birla Sunlife frontline equ. fund-plA(D)	0.7478	10	85.0621	2	5.130	4.482**
22	Birla Sunlife frontline equ. fnd-plB(G)	0.7241	11	-44.0306	19	5.893	4.551**
23	Birla sunlife new mille fund-planA(D)	0.6500	14	-5.6714	22	4.124	6.509**
24	Birla sunlife new mille fund-planB(G)	0.7089	12	-17.7290	14	5.307	6.226**
25	Birla Top100-Growth Option	0.3993	24	26.5056	5	4.310	2.657**

Source: www.amfiindia.com, www.bseindia.org, www.rbi.org.in

** 5% level of significance.

After individual year-wise analysis, a comparative analysis has been done here. It has been found from the tables that the average monthly return of the schemes during the pre-recession period, recession period and post-recession period are 3.3496, -5.9823 and 5.0991 respectively. Here, it may be concluded from this happening that during the recession period the average monthly return of the growth schemes of Birla Sunlife Mutual Fund Company is found to be negative than the pre-recession (3.3496) and post recession (5.0991) period and also said that the average monthly return of the open-ended growth mutual fund schemes during the post-recession period is higher than the pre-recession period. It has been found from the risk perspective that the average unsystematic risk of the open-ended growth schemes of the Birla Sunlife Mutual Fund Company during the recession period is 8.5352 which is comparatively higher than the pre-recession period (6.2881) as well as post-recession (3.5934) period. During the recession period the investors' who have invested their savings into those schemes have taken maximum risk than the pre and post-recession periods and ultimately burnt their hands in the form of negative return. On the other hand, during the post-recession period the investors' have got maximum return (5.0991) in respect of minimum risk (3.5934) than the pre-recession return (3.3496) against risk (6.2881). It has also been noticed that the average market return during the recession period is found to be negative (-5.4533). But, during the pre-recession (2007) and post-recession (2009) periods the average market return is found to be positive (3.4493 and 5.4939) and here also the average market return during the post-recession period is highest than the pre and during recession periods. Similarly, in case of alpha (intercept), the highest average alpha (5.0110) value has been observed in post-recession (2009) period and the lowest in recession (2008) period which is negative and in between two periods the alpha value of the pre-recession period (2007) is positive. Furthermore, it has also been observed that during the pre-recession (2007) period 13 schemes out of 25 schemes have beaten the market index positively according to the Sharpe index. Moreover, during the post-recession period all the schemes have out-performed the market index positively as per Sharpe index. But, during the recession period none of them have beaten the market index according to the Sharpe and Treynor indices.

In this study market-timing performance has been examined by applying the Treynor & Mazuy model and the result has been presented in table four (Tab.4). It has been observed from the table that market-timing performances of all the open-ended mutual fund schemes during the pre-recession (2007) period have been found very poor. Most of the schemes have performed negative market-timing performance although four (4) of them have positive market-timing performances and only one scheme out of four has shown superior market-timing performances. Similarly, the market-timing ability of the mutual fund manager has been examined during the recession period (2008) and observed from the table that except one scheme, all the remaining schemes have negative market-timing performances and there is non-existence of superior market-timing performance.

Along with this, the market-timing performances of the open-ended Birla Mutual fund schemes have been examined during the post-recession (2009) period. It has been found from the table that 12 schemes out of 25 schemes have positive market-timing performances and the remaining schemes have negative market-timing performances. The market-timing performances of the schemes have been found very poor and the managers failed to offer superior market-timing performance during the post-recession period. Further, a comparative analysis has been made among the market-timing performances. It has been observed from the table that in post-recession period (2009) twelve schemes have offered positive market-timing performance as compared to the pre (4) as well as during the recession (1) periods. The number of positive performer is the lowest in recession period. But, one scheme has revealed superior market-timing performance in pre-recession period where superior market-timing performance is absent in recession and post-recession periods. The Birla Top-100-growth option has acquired superior market-timing performance. But, in overall sense the market-timing performances of all the open-ended schemes of Birla Sunlife Mutual Fund Company of all the years have been found to be negative.

TABLE 4: MARKET-TIMING PERFORMANCE DURING RECESSION, PRE-RECESSION AND POST RECESSION PERIODS

Sl. No	Scheme Name	2007	2008	2009	All Years
		β_i	β_i	β_i	β_i
1	Birla Dividend yield plus-plan A (D)	-0.037 (-1.435)	-0.015 (-0.794)	-0.009 (-1.304)	-0.015 (-3.102)
2	Birla Dividend yield plus-plan B (G)	-0.046 (-1.537)	-0.016 (-0.897)	0.012 (1.951)	-0.011 (-2.089)
3	Birla Index fund-plan A (Dividend)	0.047 (0.744)	-0.034 (-2.504)	0.003 (0.406)	-0.016 (-2.053)
4	Birla Index fund-plan B (Growth)	0.005 (0.703)	-0.024 (-1.383)	-0.005 (-0.395)	-0.017 (-3.060)
5	Birla India generati next fund-dividend option	0.015 (0.439)	-0.026 (-1.243)	-0.003 (-0.729)	-0.013 (-2.206)
6	Birla India generatio next fund-growth option	-0.022 (-1.123)	-0.013 (-0.644)	-0.005 (-0.014)	-0.014 (-2.524)
7	Birla India opportunity Fund-plan A (D)	-0.008 (-0.448)	-0.024 (-1.397)	-0.009 (-1.279)	-0.015 (-2.698)
8	Birla India opportunity Fund-plan B (G)	-0.015 (-0.997)	-0.018 (-1.114)	0.003 (0.157)	-0.008 (-1.196)
9	Birla infrastructure fund-plan A (D)	-0.015 (-0.948)	-0.008 (-0.400)	-0.001 (-0.135)	-0.021 (-3.636)
10	Birla infrastructure fund-plan B (G)	-0.020 (-1.088)	-0.025 (-1.484)	0.003 (0.503)	-0.021 (-3.669)
11	Birla midcap fund-plan A (Dividend)	-0.009 (-0.323)	-0.012 (-0.525)	0.003 (0.241)	-0.017 (-2.539)
12	Birla midcap fund-plan B (Growth)	-0.038 (-1.866)	-0.017 (-0.778)	0.020 (0.901)	-0.018 (-2.134)
13	Birla MNC fund-plan A (Dividend)	-0.034 (-2.167)	-0.022 (-1.563)	0.001 (0.097)	-0.014 (-3.034)
14	Birla MNC fund-plan B (Growth)	-0.020 (-1.396)	-0.022 (-1.564)	-0.001 (-0.102)	-0.016 (-3.248)
15	Birla Sunlife buy India Fund-plan A (D)	-0.039 (-1.136)	-0.026 (-1.967)	0.009 (1.825)	-0.016 (-3.111)
16	Birla Sunlife buy India Fund-plan B (G)	-0.011 (-0.597)	-0.016 (-0.974)	0.019 (1.250)	-0.014 (-2.171)
17	Birla Sunlife basic India fund plan A (D)	-0.052 (-1.373)	-0.019 (-1.273)	-0.002 (-0.628)	-0.024 (-4.202)
18	Birla Sunlife basic India fund plan B (G)	-0.103 (-1.643)	-0.013 (-0.762)	0.010 (0.670)	-0.018 (-2.177)
19	Birla Sunlife equity fund-plan A (D)	-0.046 (-1.267)	-0.010 (-0.539)	-0.004 (-0.389)	-0.014 (-2.406)
20	Birla Sunlife equity fund-plan B (G)	-0.034 (-1.514)	-0.020 (-1.197)	-0.001 (-0.140)	-0.017 (-2.954)
21	Birla Sunlife frontline equity fund-plan A (D)	-0.007 (-0.187)	-0.014 (-0.705)	-0.010 (-1.159)	-0.015 (-2.355)
22	Birla Sunlife frontline equity fund-plan B (G)	-0.027 (-2.058)	-0.020 (-1.327)	0.005 (0.502)	-0.017 (-3.354)
23	Birla sunlife new millennium fund-plan A (D)	-0.044 (-1.595)	-0.014 (-1.232)	-0.008 (-1.794)	-0.019 (-4.318)
24	Birla sunlife new millennium fund-plan B (G)	-0.045 (-1.668)	-0.018 (-1.066)	0.009 (1.505)	-0.015 (-2.555)
25	Birla Top100-Growth Option	0.021 (2.284**)	0.011 (0.450)	-0.016 (-1.300)	-0.011 (-1.713)

Source: www.amfiindia.com, www.bseindia.org, www.rbi.org.in

** 5% level of significance

After brief analysis of risk-adjusted performance of the open-ended schemes of Birla Sunlife Mutual Fund Company, persistence of return performance has been examined during the pre-recession, recession and post-recession periods that has been presented in table five (Tab.5) in this study. First of all, year-wise persistence of return performance of each open-ended mutual fund schemes of Birla Sunlife Mutual Fund Company has been examined. It has been found from the depicted result that all the open-ended mutual fund schemes have failed to depict a consistent return performance in the pre-recession (2007) period. Similarly, the results are same for recession and post-recession periods of the open-ended mutual fund schemes of Birla Sunlife Mutual Fund Company. From the above it may be said that there is no difference among the three periods in respect of persistence of return performance. However, the persistence of return performance on the basis of a single year may not be justified. Most of the time, the past daily observation of return performance may not be a predictor of future return performance of that particular year. Unfortunately, the events are same in this study. Therefore, the daily observations of all the years have been considered. It has been found from the table that the beta values of the lagged variables of six open-ended mutual fund schemes have been found statistically

significant and the remaining schemes failed from the above happenings. The past return performance of six open-ended mutual fund schemes have reflected their consistency or persistence in return performances of all the periods as well as in future. The names of the schemes are Birla India Opportunities fund-plan B (Growth), Birla Infrastructure fund-plan A (Dividend), Birla Infrastructure fund-plan B (Growth), Birla Mid cap fund-plan A (Div), Birla Sunlife Basic industries fund-plan A (Dividend) and Birla Sunlife Equity fund-plan A (Dividend).

TABLE 5: CONSISTENCY OF RETURN PERFORMANCE

Sl.No	Scheme Name	β	t	α	T
1	Birla Dividend yield plus-plan A (D)	-0.055	-0.307	0.829	0.638
2	Birla Dividend yield plus-plan B (G)	0.123	0.686	1.413	0.995
3	Birla Index fund-plan A (Dividend)	0.170	0.981	-0.033	-0.019
4	Birla Index fund-plan B (Growth)	0.228	1.308	0.661	0.426
5	Birla India generation next fund-dividend option	0.005	0.030	-0.322	-0.263
6	Birla India generation next fund-growth option	0.094	0.532	0.656	0.427
7	Birla India opportunity Fund-plan A (D)	0.109	0.617	-0.364	-0.258
8	Birla India opportunity Fund-plan B (G)	0.422	2.608**	-0.127	-0.090
9	Birla infrastructure fund-plan A (D)	0.389	2.363**	0.292	0.194
10	Birla infrastructure fund-plan B (G)	0.380	2.293**	0.553	0.381
11	Birla midcap fund-plan A (Dividend)	0.450	2.811**	0.223	0.149
12	Birla midcap fund-plan B (Growth)	0.295	1.724	1.090	0.620
13	Birla MNC fund-plan A (Dividend)	0.219	1.250	0.418	0.355
14	Birla MNC fund-plan B (Growth)	0.303	1.766	0.558	0.473
15	Birla Sunlife buy India Fund-plan A (D)	0.149	0.843	0.489	0.392
16	Birla Sunlife buy India Fund-plan B (G)	0.245	1.417	0.662	0.472
17	Birla Sunlife basic India fund plan A (D)	0.468	2.941**	0.065	0.048
18	Birla Sunlife basic India fund plan B (G)	0.111	0.625	1.285	0.663
19	Birla Sunlife equity fund-plan A (D)	0.340	2.001**	-0.058	-0.044
20	Birla Sunlife equity fund-plan B (G)	0.311	1.808	0.652	0.459
21	Birla Sunlife frontline equity fund-plan A (D)	0.229	1.323	0.251	0.180
22	Birla Sunlife frontline equity fund-plan B (G)	0.220	1.249	1.083	0.792
23	Birla sunlife new millennium fund-plan A (D)	0.126	0.712	-0.688	-0.541
24	Birla sunlife new millennium fund-plan B (G)	0.183	1.046	-0.315	-0.253
25	Birla Top100-Growth Option	0.118	0.659	0.796	0.554

Source: www.amfiindia.com, www.bseindia.org, www.rbi.org.in

** 5% level of significance.

Again, the persistence of NAV performance of the selected mutual fund schemes has been examined in this study. First of all, year-wise persistence of NAV performance of each mutual fund scheme has been examined. It has been observed from the analysis that all the open-ended schemes of Birla Sunlife Mutual Fund Company have shown a good persistence in NAV performance in pre-recession period (2007). Similarly, all the open-ended mutual fund schemes have revealed a satisfactory persistence in NAV performance in post-recession (2009) period that is same as above. It is a year-wise examination of persistence of NAV performance of the open-ended mutual fund schemes of Birla Sunlife Mutual Fund Company. But, when an investor goes for investment in the open-ended mutual fund schemes of Birla Sunlife Mutual Fund Company, will obviously examine historical NAV performance. The investor should not consider of a particular year for the examination of NAV performance. The investor must consider a series of years. Hence, the persistence of NAV performance of the open-ended mutual fund schemes of Birla Sunlife Mutual Fund Company has been presented in table six (Tab.6). It has been observed from the table that the beta (β) values of the lagged variables (nav_{t-1}) of all the open-ended mutual fund schemes of Birla Sunlife Mutual Fund Company are positive and statistically significant. From this favourable picture, it may be said that the investor can invest in other scheme of Birla Sunlife Mutual Fund Company on the basis of past performance.

TABLE 6: PERSISTENCE OF NAV PERFORMANCE

Sl.No	Scheme Name	β	t	ei	D-W (d)
1	Birla Dividend yield plus-plan A (D)	0.822	9.829**	0.8344	2.115
2	Birla Dividend yield plus-plan B (G)	0.815	10.834**	4.1878	1.924
3	Birla Index fund-plan A (Dividend)	0.871	9.506**	1.9209	1.547
4	Birla Index fund-plan B (Growth)	0.876	10.902**	4.1952	1.578
5	Birla India generati next fund-dividend option	0.927	13.753**	1.1143	1.928
6	Birla India generatio next fund-growth option	0.890	11.815**	1.2699	1.791
7	Birla India opportunity Fund-plan A (D)	0.970	18.563**	1.4717	1.656
8	Birla India opportunity Fund-plan B (G)	0.948	15.756**	3.6783	1.475
9	Birla infrastructure fund-plan A (D)	0.926	14.450**	1.2652	1.378
10	Birla infrastructure fund-plan B (G)	0.909	14.050**	1.2552	1.334
11	Birla midcap fund-plan A (Dividend)	0.933	15.533**	2.2414	1.124
12	Birla midcap fund-plan B (Growth)	0.890	13.173**	7.2816	1.473
13	Birla MNC fund-plan A (Dividend)	0.894	13.383**	3.8263	1.570
14	Birla MNC fund-plan B (Growth)	0.872	13.930**	7.7416	1.495
15	Birla Sunlife buy India Fund-plan A (D)	0.876	11.601**	1.4083	1.789
16	Birla Sunlife buy India Fund-plan B (G)	0.859	11.311**	2.3488	2.037
17	Birla Sunlife basic India fund plan A (D)	0.922	13.732**	3.0084	1.308
18	Birla Sunlife basic India fund plan B (G)	0.847	9.712**	8.6494	1.927
19	Birla Sunlife equity fund-plan A (D)	0.925	13.336**	5.6381	1.445
20	Birla Sunlife equity fund-plan B (G)	0.906	12.966**	17.6087	1.521
21	Birla Sunlife frontline equity fund-plan A (D)	0.902	13.060**	1.7255	1.578
22	Birla Sunlife frontline equity fund-plan B (G)	0.883	12.760**	4.5277	1.627
23	Birla sunlife new millennium fund-plan A (D)	0.977	19.742**	1.0971	2.076
24	Birla sunlife new millennium fund-plan B (G)	0.967	17.834**	1.2901	1.941
25	Birla Top100-Growth Option	0.855	10.593**	1.4257	1.683

Source: www.amfiindia.com, www.bseindia.org, www.rbi.org.in

** 5% level of significance.

Finally, the formulated hypotheses have been tested at 5% level of significance. The first hypothesis has been formulated as under:

Sample 1 (pre-Recession Period; 2007)

$$\bar{x}_1 = 3.3496$$

$$\sigma_{s1} = 6.2881$$

$$n_1 = 25$$

Here, the calculated 'z' value is found to be 3.1478. As, H_a is one sided, therefore, one tailed test has been applied that is $R:z > 1.96$.

The observed value of 'z' is 3.1478 that falls in the acceptance region at 5% level of significance. So, H_0 has been rejected at 5% level. From here, it may be said that the return performance of the open-ended growth schemes of Birla Sunlife Mutual Fund Company in pre-recession period is higher than the recession period.

Similarly the second test has been conducted as under:

Sample 2 (Recession Period; 2008)

$$\bar{x}_2 = -5.9823$$

$$\sigma_{s1} = 8.5352$$

$$n_2 = 25$$

Sample 1 (pre-Recession Period; 2009)

$$\bar{x}_1 = 5.0991$$

$$\sigma_{s1} = 3.5934$$

$$n_1 = 25$$

Sample 2 (Recession Period; 2008)

$$\bar{x}_2 = -5.9823$$

$$\sigma_{s1} = 8.5352$$

$$n_2 = 25$$

Here, the calculated 'z' value is found to be 4.5695. As, H_a is one sided, therefore, one tailed test has been applied that is $R:z > 1.96$.

The observed value of 'z' is 4.5695 that falls in the acceptance region at 5% level of significance. So, H_0 has been rejected at 5% level. From here, it may be said that the return performance of the open-ended growth schemes of Birla Sunlife Mutual Fund Company at post-recession period is higher than the recession period.

FINDINGS

The findings of the study are given below:

1. According to the Sharpe ratio 13 schemes out of 25 have out-performed the market index. Similarly, in Treynor ratio, 12 schemes have crossed the market index in pre-recession period.
2. Only four schemes have provided statistically significant stock-selection performance on pre-recession period (2007).
3. At the time of recession the computed Sharpe and Treynor ratios are found to be negative.
4. According to the Sharpe and Treynor ratios nine schemes have out-performed the market index during the recession period.
5. The statistically stock-selection performance is found to be negative in recession period.
6. In post-recession period all the schemes have out-performed the market index as per Sharpe ratio.
7. According to the Treynor ratio three schemes have crossed the market index.
8. All the schemes have offered statistically significant Jensen alpha in post-recession period.
9. The average return is highest in post-recession period. Similarly, the diversifiable risk is maximum in recession period.
10. The market-timing performance in recession period is statistically insignificant. However, in pre-recession period only one scheme has offered statistically significant market-timing ability. Again, the statistically significant market-timing performance is absent in post-recession period.
11. Here, the schemes have failed to maintain consistency in return in three periods (pre, post and the recession periods).
12. The consistency in NAV performance is satisfactory in pre and post recession periods.
13. The statistically significant return performance in pre and post recession periods are higher than the recession period.

RECOMMENDATIONS/SUGGESTIONS

The present study is related with the mutual fund performance of a particular growth type of open-ended mutual fund schemes of Birla Sunlife Mutual Fund Company in pre, post and the recession periods. Actually, the investors go for mutual fund investment with the expectation of earning a rate which is higher than the risk-free rate with a lower degree of expected risk. Therefore, the mutual fund managers take all the responsibilities of the invested capital on behalf of the investors. But, the market condition cannot be controllable because it is totally volatile. The managers can take some measures (selectivity, market-timing, diversification etc) from its effect for the protection on behalf of investors. The investors have no knowledge about capital market. Therefore, they keep trust on the managers. We have found that the return provided by the schemes is satisfactory in pre and post recession periods but unsatisfactory in the recession period. But, this effect is temporary not permanent. Therefore, the investors invest in mutual fund for a long period of time for capital appreciation and steady consistency in return and along with this the mutual fund managers apply their secret skills like stock-selection ability, correct market-timing, proper diversification and so on by which the managers can meet up investors expectation and managers will get higher financial benefits and prestige in the society. Therefore, they will try to achieve those opportunities.

CONCLUSIONS

After brief analysis of result the study has reached to the conclusion. According to the results different conclusions have been made in this regard. It may be concluded from table one that in pre-recession period all the schemes have positive Sharpe ratios as well as positive Treynor ratios. In addition to these, only four schemes have superior stock-selection ability and one scheme has superior market-timing ability in pre-recession (2007) period. Similarly, in recession period (2008) the Sharpe ratios as well as the Treynor ratios of all the open-ended schemes of Birla Sunlife Mutual Fund Company have found to be negative and also inferior stock-selection ability has been observed. It may be concluded that in recession period the risk premiums of all the schemes are negative because of down market movement as a result, the Sharpe ratios as well as the Treynor ratios have turned into negative and that's why there was no evidence of superior market-timing ability. It has been observed from the post-recession (2009) period that the Sharpe ratios of all the schemes are found to be positive but the Treynor ratios of eleven schemes are found to be positive and the remaining are not. It has been found that the positive market-timing performers of post-recession period are higher than the pre and recession periods, one scheme has statistically significant market-timing ability. Finally, it may be concluded that the consistency of NAV performance of pre, post and recession periods have no significant differences. In a nutshell, it may be concluded that the results are quite same in pre and post recession periods. But, in recession period the results are different from the above periods. The result is same only in case of persistence in NAV performance. Therefore, it may be concluded that in case of mutual fund investment in India the investors' will not be drastically losers. So, there is no reason of loss in mutual fund investment. It may be argued that the recession period is the golden time for mutual fund investment but the investment decision should be taken carefully because the mutual fund investment is subject to market risk, there is no guarantee of return and the past performance may or may not be occurred in future.

SCOPE FOR FURTHER RESEARCH

There is a lot of possibility for the upgrading in the research for the appraisal of the mutual fund performances. The study is limited to a particular type of open-ended mutual fund schemes (growth) of a selected private mutual fund company (Birla Sunlife mutual fund Company). In the same way the performance of all types of schemes of different companies could be possible not only recession periods but also throughout the years. Various multi-criteria decision models can be applied for the evaluation of mutual fund performances. Here three factor, four factor and Fama's decomposition models can be applied for evaluation of overall performances of the mutual fund schemes.

REFERENCES

1. Choudhary., (2007), "The components of investment performance of fund managers: Evidence from Indian capital market" *Abhigyan*, pp.16-27.
2. El Khouri and Ritab (1993), "Risk-return relationship: Evidence from Amman stock exchange" *Yarmouk University, The Middle East business and economic review*, 5:2.
3. Fama (1972), "Components of investments performance" *The Journal of Finance*, Vol. XXVII, No.3, pp.551-567.
4. Filippas N.D., and Christine, Psoma., (2001), "Equity mutual fund managers performance in Greece", *Journal of managerial finance*, Vol.27, No.6, pp.68-74.
5. G.Artikis. (2004), "Bond mutual fund managers' performance in Greece", *Journal of managerial finance*, Vol.30, No.10, pp. 1-6.
6. Henrikson and Merton (1981), "On market-timing and investment performance-II, statistical procedures for evaluating forecasting skills" *The Journal of Business*, pp.513-533.
7. Jensen (1968), "The performance of mutual funds in the period 1945-1964" *The Journal of Finance*, Vol.23, pp.389-416.
8. Jordan., Jorgensen., and Smolira., (Winter 2003/2004), "The performance of mutual funds that close to new investors", *The journal of investment consulting*, Vol.6. No.2.
9. Santos., Tusi.,Costa., and Silva.,(2005)"Evaluating Brazilian mutual funds with stochastic frontiers", www.economicsbulletin.com/volume13/EB-05M20002A.pdf.
10. Shah and Hijaji (Winter 2005), "Performance evaluation of mutual funds in Pakistan" *The Pakistan Development Report*, 44: 4 part II, pp.863-876.
11. Sharpe (1966), "Mutual fund Performance Evaluation", *The Journal of Business*, Vol.39, pp.119-138.
12. Thanou (2008), "Mutual fund evaluation during up and down market conditions: The case of Greek equity mutual funds" *International Research journal of Finance and economics*, Vol.13, pp. 84-93.
13. Treynor (1965), "How to rate management of investment funds" *Harvard Business Review*, Vol.43 (1), pp. 63-75.
14. Treynor and Mazuy (1966), "Can mutual fund outguess the market" *Harvard Business Review*, pp.131-136.
15. Y.Bellow (2009), "The performance of U.S. Domestic equity mutual funds during recent recessions" *Global journal of Finance & Banking*, Vol.3, No.3, pp. 1-7.

REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Commerce, Economics and Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue as well as on the journal as a whole, on our E-mail info@ijrcm.org.in for further improvements in the interest of research.

If you have any queries please feel free to contact us on our E-mail infoijrcm@gmail.com.

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Co-ordinator

ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

Our Other Journals

