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Critical Analysis of Mutual Fund in India

ABSTRACT

The Indian capital market has been increasing tremendously during last few years. With the reforms of economy, reforms of industrial policy, reforms of public sector and reforms of financial sector, the economy has been opened up and many developments have been taking place in the Indian money market and capital market. During last one decade or so, role of Indian mutual funds industry as a significant financial service in financial market has really been noteworthy. They now play a very significant role in channelizing the saving of millions of individuals into the investment in equity and debt instrument. The main objective of this paper is to examine the importance and growth of mutual funds and evaluate the operations of mutual funds and suggest some measures to make it a successful scheme in India.

1. INTRODUCTION

A mutual fund is a trust that pools the savings of a number of investors who share a common financial goal. It is essentially a diversified portfolio of financial instruments these could be equities, debentures, bonds or money market instruments. The corpus of the funds is then deployed in investment alternatives that help to meet predefined investment objectives. The income earned through these investments and the capital appreciation realized are shared by its unit holders in proportion to the number of units owned by them.

Thus, a mutual fund is a suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost we could make money from a mutual fund in three ways:

- Income is earned from dividends declared by mutual fund schemes from time to time.
- If the fund sells securities that have increased in price, the fund has a capital gain. This is reflected in the price of each unit. When investors sell these units at prices higher than their purchase price, they stand to make a gain.
- If fund holdings increase in price but are not sold by the fund manager, the fund's unit price increases. You can then sell your mutual fund units for a profit. This is tantamount to a valuation gain.

The main objective of investing in a mutual fund scheme is to diversify risk. Though the mutual funds invest in diversified portfolio, the fund managers take different levels of risk in order to achieve the scheme's objectives. Therefore, while evaluating and comparing the performance of the schemes, the returns should be measured taking into account the risks involved in achieving the returns. The future of the mutual fund industry depends on the financial returns made available by the mutual funds to their investors. In general, the equity mutual funds are expected to earn higher returns, vis-à-vis, the risk-free return and return on market portfolio. Further, the funds are expected to earn returns in tune with risk exposure of the portfolio. Higher is the portfolio risk; more will be the expected return by the investors.

Significance of the Study

The impressive growth of mutual funds in India has attracted the attention of Indian researchers, individuals and

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institutional investors during past ten years. A number of empirical studies have been conducted to examine the growth, competition, performance and regulation of mutual funds in India. The Indian mutual fund industry is currently in the phase of consolidation and growth stage of the product life cycle.

The Indian mutual fund industry is no exception and the competition would intensify in the coming years as it happened in other industries. Hence, it is appropriate, relevant and topical to focus our attention as to how the Indian mutual industry would emerge in the coming few years to ascertain what kind of products (mutual fund schemes) would be able to win the investors' confidence and survive in the market place.

This study is focused on evaluations of mutual funds schemes based on various techniques. We have used Sharpe ratio to draw the conclusion of the study.

Objectives of the study

The study aims at analyzing performance of select open-ended equity mutual fund for the Period 1st April 2005 – 31st March 2006. The financial performance, inter-alia, depends mainly upon the investment practices (investment styles) followed by the fund managers.

- To classify the open-ended equity mutual fund schemes into different investment styles.
- To analyze the performance of open-ended equity mutual funds of two dominant investment styles as per the classification adopted.
- To ascertain whether the differences in performance of the two chosen schemes of dominant investment styles are statistically significant.

2. LITERATURE REVIEW

The following paragraphs present the literature review briefly with regard to importance, schemes, types of risk involved, and evaluating parameters of mutual funds:

i) Importance of Mutual Fund

Small investors face a lot of problems in the share market, limited resources, lack of professional advice, lack of information etc. Mutual funds have come, as a much needed help to these investors. Now a day, mutual fund is gaining its popularity due to the following reasons:

- Mutual funds are subject to many government regulations that protect investors from fraud.
- Mutual funds pays top flight professionals to manage their investments. These managers decide what securities the fund will buy and sell.
- An ordinary investor who applies for share in a public issue of any company is not assured of any firm allotment. But mutual funds that subscribe to the capital issue made by companies get firm allotment of shares. Mutual fund latter sells these shares in the same market and to the Promoters of the company at a much higher price. Hence, mutual fund creates the investors confidence.
- Dividends and capital gains are reinvested automatically in mutual funds and hence are not fritted away. The automatic reinvestment feature of a mutual fund is a form of forced saving and can make a big difference in the long run.
- Mutual fund expenses are often no more than 1.5 percent of your investment. Expenses for Index Funds are less than that, because index funds are not actively managed. Instead, they automatically but stock in companies that are listed on a specific index.
- As mutual funds creates awareness among urban and rural middle class people about the benefits of investment in capital market, through profitable and

safe avenues, mutual fund could be able to make up a large amount of the surplus funds available with these people.

- The best mutual funds design their portfolios so individual investments will react differently to the same economic conditions. For example, economic conditions like a rise in interest rates may cause certain securities in a diversified portfolio to decrease in value. Other securities in the portfolio will respond to the same economic conditions by increasing in value. When a portfolio is balanced in this way, the value of the overall portfolio should gradually increase over time, even if some securities lose value.

ii) Schemes of Mutual Fund

Schemes according to Maturity Period

A mutual fund scheme can be classified into ***open-ended*** scheme or ***close-ended*** scheme depending on its maturity period.

An ***open-ended Mutual fund*** is one that is available for subscription and repurchase on a *continuous basis.* These Funds do not have a ***fixed maturity period.*** Investors can conveniently buy and sell units at ***Net Asset Value (NAV)*** related prices, which are declared on a daily basis. The key feature of open-end schemes is liquidity.

A ***close-ended Mutual fund*** has a *stipulated maturity* period e.g. 5-7 years. The fund is open for subscription only during a specified period at the time of launch of the scheme. Investors can invest in the scheme at the time of the initial public issue and thereafter they can buy or sell the units of the scheme on the stock exchanges where the units are listed. In order to provide an exit route to the investors, some close-ended funds give an option of selling back the units to the mutual fund through periodic repurchase at NAV related prices.

Fund according to Investment Objective

A scheme can also be classified as growth fund, income fund, or balanced fund considering its investment objective.

1. Growth / Equity Oriented Scheme: The aim of growth funds is to provide capital appreciation over the medium to long- term. Such schemes normally invest a major part of their corpus in equities. Such funds have comparatively high risks. These schemes provide different options to the investors like dividend option, capital appreciation, etc. and the investors may choose an option depending on their preferences. Growth schemes are good for investors having a long-term outlook seeking appreciation over a period of time.

2. Income / Debt Oriented Scheme: The aim of income funds is to provide regular and steady income to investors. Such schemes generally invest in fixed income securities such as bonds, corporate debentures, Government securities and money market instruments. Such funds are less risky compared to equity schemes. These funds are not affected because of fluctuations in equity markets.

3. Balanced Fund: The aim of balanced funds is to provide both growth and regular income as such schemes invest both in equities and fixed income securities in the proportion indicated in their offer documents. These are appropriate for investors looking for moderate growth. They generally invest 40-60% in equity and debt instruments. These funds are also affected because of fluctuations in share prices in the stock markets. However, NAVs of such funds are likely to be less volatile compared to pure equity funds.

4. Money Market or Liquid Fund: These funds are also income funds and their aim is to provide easy liquidity, preservation of capital and moderate income. These schemes

invest exclusively in safer short-term instruments such as treasury bills, certificates of deposit, commercial paper and inter-bank call money, government securities, etc. Returns on these schemes fluctuate much less compared to other funds.

5. Gilt Fund: These funds invest exclusively in government securities. Government securities have no default risk. NAVs of these schemes also fluctuate due to change in interest rates and other economic factors as are the case with income or debt oriented schemes.

6. Index Fund: Index Funds replicate the portfolio of a particular index such as the BSE Sensitive index, S&P NSE 50 index (Nifty), etc These schemes invest in the securities in the same weightage comprising of an index. NAVs of such schemes would rise or fall in accordance with the rise or fall in the index, though not exactly by the same percentage due to some factors known as "tracking error" in technical terms.

iii) Types of Risk Involved in Mutual Fund

For mutual funds investments, risk would include variability, or period-by-period fluctuations in total return. The value of the scheme's investments may be affected by following factors:

Market Risk: At times the prices or yields of all the securities in a particular market rise or fall due to board outside influences. When this happens, the stock prices of both an outstanding, highly profitable company and a fledgling corporation may be affected. This change in price is due to "market risk".

Inflation Risk: Sometimes referred to as "loss of purchasing power". Whenever the rate of inflation exceeds the earnings on your investment, you run the risk that you will actually be able to buy less, not more.

Credit Risk: In short, how stable is the company or entity to which you lend your money when you invest? How certain are you that it will be able to pay the interest you are promised, or repay your principal when the investment matures?

Interest Rate Risk: Changing interest rates affect both equities and bonds in many ways. Movements in the interest rates influence Bond prices in the financial system. Generally, when interest rates rise, prices of the securities fall and when interest rates drop, the prices increase. Interest rate movements in the Indian debt markets can be volatile leading to the possibility of large price movements up or down in debt and money market securities and thereby to possibly large movements in the NAV.

Investment Risk : In the sectoral fund schemes, investments will be predominantly in equities of select companies in the particular sectors. Accordingly, the NAV of the schemes are linked to the equity performance of such companies and may be more volatile than a more diversified portfolio of equities.

Liquidity Risk: Thinly traded securities carry the danger of not being easily saleable at or near their real values. The fund manager may therefore be unable to quickly sell an illiquid bond and this might affect the price of the fund unfavorably. Liquidity risk is characteristic of the Indian fixed income market.

Changes In Government Policy: Changes in government policy especially in regard to the tax benefits may impact the business prospects of the companies leading to an impact on the investments made by the fund.

iv) Evaluation Parameters

The investors may either directly choose a fund or if his portfolio is substantial, he may hand over this responsibility to an adviser. In either case, he has to be clear in his objectives. *What does he want from the fund?* Before choosing a fund, the investor

o1deviation. In other words high standard deviation means high risk.

Sharpe Ratio: The Sharpe ratio represents trade off between risk and returns. At the same time it also factors in the desire to generate returns, which are higher than those from risk free returns. Mathematically the Sharpe ratio is the returns generated over the risk free rate, per unit of risk. Risk in this case is taken to be the fund's standard deviation. As standard deviation represents the total risk experienced by a fund, the Sharpe ratio reflects the returns generated by undertaking all possible risks. It is thus one single number, which represents the trade off between risks and returns. A higher Sharpe ratio is therefore better as it represents a higher return generated per unit of risk.

Sharpe ratio provides an unbiased look into fund's performance. This is because they are based solely on quantitative measures. However, these do not account for any risks inherent in a funds portfolio. For example, if a fund is loaded with technology stocks and the sector is performing well, then all quantitative measures will give such a fund high marks. But the possibility of the sector crashing and with it the fund sinking is not calculated. In view of these possibilities quantitative tools should be used along with information on the nature of the funds strategies, its fund management style and risk inherent in the portfolio. Quantitative tools can be used for screening but they should not be the only indicator of a fund's performance.

Beta: Beta is a statistical measure that shows how sensitive a fund is to market moves. If the Sensex moves by 25 per cent, a fund's beta number will tell you whether the fund's returns will be more than this or less. The beta value for an index itself is taken as one. Equity funds can have beta values, which can be above one, less than one or equal to one. By multiplying the beta value of a fund with the expected percentage movement of an index, the expected movement in the fund can be determined. Thus if a fund has a beta of 1.2 and the market is expected to move up by ten per cent, the fund should move by 12 per cent (obtained as 1.2 multiplied by 10). Similarly, if the market loses ten per cent, the fund should lose 12 per cent.

When safety of investment is important, a fund with a beta of less than one is a better option. Such a fund may not gain much more than the market on the upside; it will protect returns better when market falls. Essentially, beta expresses the fundamental trade-off between minimizing risk and maximizing return. A fund with a beta of 1 will historically move in the same direction of the market. A beta above 1 is more volatile than the overall market, while a beta below 1 is less volatile. So while you can expect a high return from a fund that has a beta of 2, you will have to expect it to drop much more when the market falls. The effectiveness of the beta depends on the index used to calculate it. It can happen that the index bears no correlation with the movements in the fund.

3. RESEARCH METHODOLOGY

The research methodology adopted for the study is described below:

i) Scope of the study

The scope of the study is limited to open-ended equity schemes in India for the period 1st April 2005 - 31st March 2006. Researchers studied the performance of mutual funds over a long period of time, usually spanning over a period of five to ten years to ascertain the long-term and sustainable financial performance of the funds. The reason for adopting a shorter span of time (one year) for this study is due to the following reasons:

- A large number of mutual fund schemes have been initiated during the last two to three years.
- The Mutual Fund industry in India registered impressive growth during the

year 2005-06 due to the bullish trend of the Indian stock market and most of the schemes had reported impressive growth in their Net Asset Values.

- The India stock market has done exceptionally well, particularly during the year 2005-06 and the stock market had gained 5,000 points in a span of 10 months (in 205 trading sessions BSE 30 had risen from 7,000 to 12,000 during the period 20$_{th}$ June 2005 to 20th April 2006).

(The major reason for adopting relatively shorter span is that it would facilitate studying the short-term and transient effects of style factors on fund performance).

***Secondary Data*:** The major sources of secondary data are as given below:

- Net Asset Values (NAVs) on the opening and closing day of each of the 12 months of the study period (1st April 2005 to 31st March 2006) of the 21 open-ended equity growth plans and 21 open-ended equity dividend plans were collected from the websites of the concerned AMCs and AMFI.
- Monthly Bombay Stock Exchange 100 National Index values (herein after referred to as 'BSE 100 Index') have been drawn from Bombay Stock Exchange directory for the study period to compute market return. The BSE 100 Index is proxy for the market return in our study and accounts for approximately 75 percent of market capitalization, hence may be considered as proxy for market portfolio.

Primary Data: The study has been carried out entirely on the basis secondary sources and hence there was no need of primary data to be collected.

4. PERFORMANCE ANALYSIS

Sharpe ratio (risk adjusted performance measure) were computed in order to compare the performance of growth and dividend plans and the results are summarized below:

i) Computation of Risk Adjusted Performance Measure (Sharpe's ratio)

Risk adjusted performance measure in the form of Sharpe ratio has been computed for the 21 Growth plans and is presented below in (Table 1). The range of excess returns over risk-free return per unit of total risk is wide ranging and ranges from –31.58 to 76.23 signifying the fact that the risk-return profile of the Growth plans varies widely.

Risk adjusted performance measure in the form of Sharpe ratio has been computed for the 21 Dividend plans and is presented below in (Table 2). The range of excess returns over risk-free return per unit of total risk is wide ranging and ranges from –87.82 to 64.26 signifying the fact that the risk-return profile of the Growth plans varied widely.

If we compare the Sharpe ratios of Growth plans and the corresponding Dividend plans (Table 2), we can clearly observe that 18 Growth plans out of 21 (approximately 90%) had better risk adjusted excess returns highlighting the fact that Growth plans are likely to reward the investors more for the extra risk they are assuming.

ii) Hypothesis testing

The following statistical tests were conducted to ascertain whether Growth plans outperformed the Dividend plans and also to ascertain the correlation between the returns of the Growth plans and Dividend plans and the results are presented below:

Pearson's correlation coefficient: Pearson's correlation coefficient for the monthly compounded returns of the 21 Growth plans and 21 Dividend Plans was computed and the correlation coefficient was found to be moderate (0.5290).

Table 1 - Computation of Sharpe's Ratio for Equity Growth Plans

Sl. No.	Growth Plans	Monthly Compounded Return of the Plan (R_p)	Monthly average risk free Return (R_f)	Standard Deviation of the return of the plan	Sharpe Ratio
1	ABN AMRO Opportunities Fund	5.15	0.5	0.061	76.23
2	ABN AMRO Equity Fund	3.85	0.5	0.06	55.83
3	Birla Advantage Fund	3.9	0.5	0.054	62.98
4	Birla India Opportunities Fund	3.28	0.5	0.0516	53.88
5	BOB Growth Fund	4.06	0.5	0.0601	59.23
6	DSP Merrill Lynch Opportunities Fund	4.05	0.5	0.0608	58.39
7	Escorts Opportunities Fund	1.43	0.5	0.0337	27.6
8	Fidelity Equity Fund	4.6	0.5	0.0564	72.7
9	Franklin India Bluechip Fund	3.73	0.5	0.06	53.83
10	HDFC Capital Builder Fund	3.44	0.5	0.0547	53.75
11	ING Vysya Equity Fund	3.04	0.5	0.0555	45.77
12	JM Equity Fund	3.75	0.5	0.0556	58.45
13	LIC Mutual Fund	2.61	0.5	0.0583	36.19
14	Principal Equity Fund	3.39	0.5	0.0584	49.49
15	Prudential ICICI Dynamic	4.62	0.5	0.0695	59.28
16	Reliance Equity Opportunities Fund	4.6	0.5	0.0638	64.26
17	Sahara Growth Fund	1.01	0.5	0.0891	5.72
18	SBI MGLT Fund	0.32	0.5	0.0057	-31.58
19	Sundaram Growth Fund	4.1	0.5	0.0607	59.31
20	Tata Equity Opportunities Fund	3.34	0.5	0.063	45.08
21	UTI Dynamic equity Fund	1.48	0.5	0.0742	13.21

Table 2 - Computation of Sharpe's Ratio for Equity Dividend Plans

Sl. No.	Growth Plans	Monthly Compounded Return of the Plan (R_p)	Monthly average risk free Return (R_f)	Standard Deviation of the return of the plan	Sharpe Ratio
1	ABN AMRO Opportunities Fund	3.73	0.5	0.07	46.14
2	ABN AMRO Equity Fund	1.50	0.5	0.0864	11.57
3	Birla Advantage Fund	0.56	0.5	0.0589	1.02
4	Birla India Opportunities Fund	1.15	0.5	0.0861	7.55
5	BOB Growth Fund	4.070	0.5	0.0602	59.30
6	DSP Merrill Lynch Opportunities Fund	2.33	0.5	0.0763	23.98
7	Escorts Opportunities Fund	0.74	0.5	0.0331	7.25
8	Fidelity Equity Fund	3.42	0.5	0.0640	45.63
9	Franklin India Bluechip Fund	2.96	0.5	0.0621	39.61
10	HDFC Capital Builder Fund	1.67	0.5	0.0787	14.87
11	ING Vysya Equity Fund	- 1.00	0.5	0.1242	- 12.08
12	JM Equity Fund	1.71	0.5	0.0771	15.69
13	LIC Mutual Fund	1.18	0.5	0.0669	10.16
14	Principal Equity Fund	3.39	0.5	0.0585	49.40
15	Prudential ICICI Dynamic	3.54	0.5	0.0809	37.58
16	Reliance Equity Opportunities Fund	4.60	0.5	0.0638	64.26
17	Sahara Growth Fund	3.66	0.5	0.0593	53.29
18	SBI MGLT Fund	0.00	0.5	0.0057	- 87.72
19	Sundaram Growth Fund	3.34	0.5	0.0630	45.08
20	Tata Equity Opportunities Fund	0.49	0.5	0.0664	- 0.15
21	UTI Dynamic equity Fund	0.40	0.5	0.0882	- 1.13

F-Test (one tailed test): **0.3753** signifying a low probability of the variances of the returns of Growth plans and Dividend Plans.

Student's t-test (1 – tailed test) :

μ1 = Mean returns of the population of Equity Growth Plans

μ2 = Mean returns of the population of Equity Dividend Plans

H0: μ1 = μ2 (Null Hypothesis: There is no difference in the mean returns of Equity Growth plans and Equity Dividend plans.

H1: μ1 > μ2 (Alternate Hypothesis: The Mean returns of the Equity Growth Plans returns of Equity Growth plans are greater than the Mean returns of Equity Dividend plans.

N1= sample size of Equity Growth Plans = 21

N2 = sample size of Equity Dividend Plans = 21

Degrees of Freedom = N1 + N2 – 2 = 40

S1 = Standard deviation of the sample of Equity Growth Plans = 1.28

S2 = Standard deviation of the sample of Equity Dividend Plans = 1.57

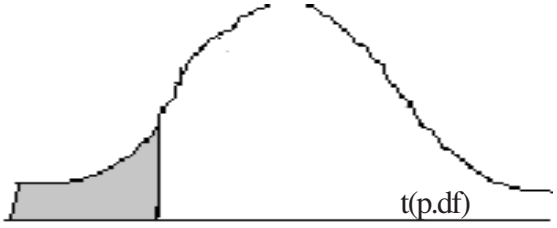
X1 = Mean of the sample of Equity Growth Plans =3.32

X2 = Mean of the sample of Equity Dividend Plans =2.07

The value of test statistic 't' is 4.0699: The critical values of t* for right tail test at different levels of significance (a) for 40 degrees of freedom are as given below:

Table 3:Critical Values of t-distribution at different confidence levels

t- distribution with right tail probabilities



df		
0.4	0.25	0.1
0.05	0.025	0.01
0.005	0.0005	

More than 30 degree of freedom

0.253347	0.67449	1.281552
1.644854	1.95996	2.32635
2.57583	3.2905	

Comparing the test statistic (t) value of 4.0699 with the critical values of t* at different confidence levels (á) provided in the above table**,** the test static t (4.0699) is greater than the critical value of t* at all confidence levels and falls in the rejection region leading to the rejection of Null Hypothesis and acceptance of Alternate Hypothesis implying that *Equity Growth funds provide higher returns than that of Equity Dividend funds.*

5. SUGGESTION TO MAKE INDIAN MUTUAL FUND MORE EFFECTIVE

As mutual fund has entered into the Indian Capital market, growing profitable enough to attract competitors, there is need to take some strategy to bring more confidence among investors for which mutual fund would be able to project the image successfully. The followings are some of the suggestions: -

- Market risk refers to the possibilities that investing in a mutual fund can earn a negative return also it is not always great (positive) returns.
- Invest in mutual funds but do it alignment with your risk profile. This indicates your capacity to take risks and the amount of risk you can tolerate (ability to sleep well during turbulent markets). Accordingly. Allocate your savings to various investment avenues (asset allocation).
- Steps should be taken for funds to make fair and truthful disclosures of information to the investors, so that subscribers know what risk they are taking by investing in fund.
- Mutual fund in India, uniform coordinated regulations by a single agency would be formed which would provide the shelter to the investors.

- Rendering their operations more transparent and providing better services can restore investor's confidence in mutual funds.
- Due to operations of many mutual funds, there will be need for appropriate guidelines for self-regulation in respect of publicity/advertisement and inter-scheme transactions within each mutual fund.
- The investors are not willing to invest in mutual fund unless a minimum return is assured, it is very essential to create in the mind of the investors that mutual funds are market instruments and associated with market risk hence mutual fund could not offer guaranteed income.
- The growth of mutual fund tends to increase the shareholdings in good companies, give rise the fear of destabilizing among industrial group, hence introduction of non voting shares and lowering the debt-equity ratio help to remove these apprehension.

6. CONCLUSION

With the structural liberalization policies no doubt Indian economy is likely to return to a high grow path in few years. Hence mutual fund organizations are needed to upgrade their skills and technology regarding myths, benefits, various schemes, evaluating parameters and growth prospective of mutual funds in India. The Sharpe ratios of Growth plans and the corresponding Dividend plans stand testimony to the relatively better performance of Growth plans as 18 Growth plans out of 21 (approximately 90%) had better risk adjusted excess returns highlighting the fact that Growth plans are more likely to reward the investors for the extra they are assuming.

The statistical tests in terms of F-test and t-Test further corroborate the significant performance differences between the Growth plans and Dividend plans. Therefore, It can be said that despite few problems, the recent changes in the mutual funds industry in India has really favored its amazing growth and in conclusion it can be said that in times to come, mutual funds will continue to be a significant resource moralizer in the India financial market.

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