Assessing the Return and Risk Performance of Mutual Funds in the Indian Market

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ABSTRACT

Mutual funds is one of the major instruments for wealth creation and wealth saving in the current years. It is a financial instrument which gives positive result and satisfactory return to its investors. The mutual industries in have undergone a most successful phase in the last 15 years. The AUM has shown tremendous growth since inception from Rs. 25 crore in 1965 to Rs. 22,36,717 crore in December 2017. But this tremendous growth in the mutual fund industries in India is still lacking for behind other developed nations. This study examines growth of mutual fund and evaluate the operation of mutual fund schemes considering 6 mutual funds growth schemes i.e. Reliance growth fund, SBI Magnum growth fund, ICICI growth fund, LIC growth fund and Birla sunlife growth fund during this period. This period applying Sharpe Ratio, Treynor Ratio and Jenson Alpha to evaluate performance of mutual funds. In the study we find the Sharpe ratio was positive for the five selected schemes out of six which showed that funds were providing returns greater than risk free rate. Treynor ratio reveled the positive for the all selected schemes which shows over performance of the schemes. Results of Jensen measure reveled that all the selected schemes were showed positive alpha which indicated superiar performance of the schemes.

KEYWORDS: Beta, Jensen Alpha, Mutual funds, Performance evaluation, Sharpe and Treynor ratio.

I. INTRODUCTION

The Indian financial system based on four basic components like Financial Market, Financial Institutions, Financial Service, Financial Instruments. All are play important role for smooth activities for the transfer of the funds and allocation of the funds. The main aim of the Indian financial system is that providing the efficiently services to the capital market. The Indian capital market has been increasing tremendously during the second generation reforms. The first generation reforms started in 1991 the concept of LPG. (Liberalization, privatization, Globalization).

Then after 1997 second generation reforms was started, still the it's going on, its include reforms of industrial investment, reforms of fiscal policy, reforms of ex- imp policy, reforms of public sector, reforms of financial sector, reforms of foreign investment through the institutional investors, reforms banking sectors. The economic development model adopted by India in the post independence era has been characterized by mixed economy with the public sector playing a dominating role and the activities in private industrial sector control measures emaciated form time to time. The last two decades have been a phenomenal expansion in the geographical coverage and the financial spread of our financial system.

The spared of the banking system has been a major factor in promoting financial intermediation in the economy and in the growth of financial savings with progressive liberalization of economic policies, there has been a rapid growth of capital market, money market and financial services industry including merchant banking, leasing and venture capital, leasing, hire.

purchasing. Consistent with the growth of financial sector and second generation reforms its need to fruition of the financial sector. It's also need to providing the efficient service to the investor mostly if the investors are supply small amount, in that point of view the mutual fund play vital for better service to the small investors. The main vision for the analysis for this study is to scrutinize the performance of five star rated mutual funds, given the weight of risk, return, and assets under management, net assets value, book value and price earnings ratio.

Mutual fund is the pool of the money, based on the trust who invests the savings of a number of investors who shares a common financial goal, like the capital appreciation and dividend earning. The money thus collect is then invested in capital market instruments such as shares, debenture, and foreign market. Investors invest money and get the units as per the unit value which we called as NAV (net assets value). Mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in diversified portfolio management, good research team, professionally managed Indian stock as well as

the foreign market, the main aim of the fund manager is to taking the scrip that have under value and future will rising, then fund manager sell out the stock. Fund manager concentration on risk – return trade off, where minimize the risk and maximize the return through diversification of the portfolio. The most common features of the mutual fund unit are low cost.

II. REVIEW OF LITERATURE

A number of studies on performance of mutual fund schemes have been conducted in India and foreign countries. Review of some of the studies is presented in the following discussion.

Ippolito's (1989) results and conclusions were relevant and consistent with the theory of efficiency of informed investors. He estimated that risk-adjusted return for the mutual fund industry was greater than zero and attributed positive alpha before load charges and identified that fund performance was not related to expenses and turnover as predicted by efficiency arguments.

Rich Fortin and Stuart Michelson (1995) studied 1,326 load funds and 1,161 no load funds and identified that, no-load funds had lower expense ratio and so was suitable for six years and load funds had higher expense ratio and so had fifteen years of average holding period. No-load funds offered superior results in nineteen out of twenty-four schemes. He concluded that, a mutual fund investor had to remain invested in a particular fund for very long periods to recover the initial front-end charge and achieve investment results similar to that of no-load funds.

Grubber (1996) attempted to study the puzzle relating to the fast growth of mutual funds inspite of inferior performance of actively managed portfolios. The study revealed that, mutual funds had negative performance compared to the market and provided evidence of persistence of under performance. Sophisticated clientele withdrew money from mutual funds during the period of poor performance, where as mutual funds found money from disadvantaged clientele leading to the faster growth of funds.

Tripathy, Nalini Prava (1996) Identified that the Indian capital market expanded tremendously as aresult of economic reforms, globalization and privatization. Household sector accounted for about 80 percent of country's savings and only about one third of such savings were available for the corporate sector. The study suggested that, mutual fund should build investors confidance the through schemes meeting the diversified needs of investors, speedy disposal of information improved transparency in operation, better customer service and assured benefits of professionalism.

Jayadev (1996) evaluated the performance of two growth-oriented mutual funds namely Mastergain and Magnum express by using monthly returns. Jensen, Sharpe and Treynor measures have been applied in the study and the pointed out that according to Jensen and Treynor measure Mastergain have performed better and the performance of Magnum was poor according to all three measures.

Dellva, Wilfred L and Olson, Gerard T (1998) studied 568 mutual funds without survivorship bias. The results indicate that, informational competency of funds increased the efficiency, reduced expenses and provided for higher risk-adjusted returns. Redemption fees had positive and significant impact on expenses. International funds had higher expense ratios.

Elango's (2004) analytical results indicate that, private funds had a high positive association between the past and current year NAV compared to public sector. The private sector schemes outperformed public sector in terms of NAV range value, innovative products and in deployment of funds. Public sector funds showed low volatility as against greater variability for private sector indicating low consistency. Student 't' test indicated the existence of a high significant difference between the mean NAV of private sector funds and public sector with a high statistical significance of (-)5.95.

Sanjay Kant Khare (2007) opined that investors could purchase stocks or bonds with much lower trading costs through mutual funds and enjoy the advantages of diversification and lower risk. The researcher identified that, with a higher savings rate of 23 percent, channeling savings into mutual funds sector has been growing rapidly as retail investors were gradually keeping out of the primary and secondary market. Mutual funds have to penetrate into rural areas with diversified products, better corporate governance and through introduction of financial planners.

Debasish (2009) studied the performance of selected schemes of mutual funds based on risk and return models and measures. The study covered the period from April 1996 to March 2005 (nine years). The study revealed

that Franklin Templeton and UTI were the best performers and Birla Sun life, HDFC and LIC mutual funds showed poor performance.

Agarwal (2011) analyzed the Indian Mutual Fund Industry and point out that there has been incredible growth in the mutual fund industry in India, attracting large investments from domestic and foreign investors. Tremendous increase in number of AMCs providing ample of opportunity to the investors in the form of safety, hedging, arbitrage, limited risk with better returns than any other long-term securities has resulted in attracting more investors towards mutual fund investments.

The objectives of this study are Comparative study of mutual funds in India and to measure the performance of mutual funds in India

III. METHODOLOGY AND DATA SOURCES:

Mutual funds help the small and medium size investors to participate in today's complex and modern financial scenario. Investor can participate in the mutual fund by buying the units of the fund. The income earned through these investments and capital appreciations realized by the schemes are shared by its unit holders in proportion to the number of units owned by them.

Equity is a types of mutual fund that invests shareholder money in ownership of public traded business by buying common stock. An equity fund is a mutual fund that invests in stocks. The attributes that make equity funds most suitable for small individual investors are the reduction of risk resulting from a fund's portfolio diversification and relatively small amount of capital required to acquire share of equity.

IV. TOOLS FOR MEASURING PERFORMANCE

An attempt has been made to evaluate the performance of mutual fund schemes. Performance of mutual fund schemes has been evaluated by using the following performance measures.

1. Return
2. Risk
3. Average
4. Standard Deviation
5. Beta
6. The Sharpe Ratio
7. Treynor Ratio
8. Jensen Alpha
9. NAV
10. Benchmark Index

1. Return

This analysis and interpretation is based upon following methodology. Return on a typical investment consists of two components. The basic component is the periodic cash receipts (or income) on the investment, either in the form of interest or dividends. The second component is the change in the price of the asset - commonly called the capital gain or loss. This element of return is the difference between the purchase price and the price at which the asset can be or is sold; therefore, it can be a gain or a loss.

The return has been calculated as under:

Portfolio Return: $R_{it} = NAV_t - NAV_{t-I}$

Where Ffc is difference between net asset values for two consecutive days divided by the NAV of preceding day.

Market Return (Rm)= $M.Indt - M.Indt\text{-}I \;/\; M.Indt\text{-}i$

Where R_{mtis} *the difference between markets indexes of two consecutive days divided by market index for the preceding day.*

2. Risk

Risk is neither good nor bad; rather it is viewed in some context. Risk in holding securities is generally associated with the possibility that realized returns will be less than expected return. The difference between the required rate of return on mutual fund investment and the risk free return is the risk premium.

3. Standard Deviation

Standard deviation is a statistical measure and it is the square root of the arithmetic average of the squared deviations taken from mean. It is used to measure the variation in individual returns from the average expected return over a certain period. Standard deviation is used in the concept of risk of a portfolio of investments. Higher standard deviation leads to greater fluctuation in expected return. The Standard Deviation is a measure of how widely values are dispersed from the average value (the mean).

Standard deviation has been calculated in Ms Excel using the following function: = stdev(range of cells where the periodic returns are calculated)

Standard deviation as a measure of risk is relevant for both debt and equity schemes.

4. Beta

Beta measures the systematic risk. Beta shows how prices of securities respond to the market forces. Beta is calculated by relating the return on a security with return for the market. By convention, market will have beta 1.0. Mutual fund can be said as volatile, more volatile or less volatile. If beta is greater than 1 the stock is said to be riskier than market. If beta is less than 1, the indication is that stock is less risky in comparison to market. If beta is zero then the risk is as same as of the market. Negative beta is rare. A relative measure of the sensitivity return on security is to change in the broad market index return. Beta measure the systematic risk, it shows how prices of securities respond to the market forces. Beta is calculated by relating the return on a security with return for the market. Market will have 1.0, if the beta is greater than 1 than the stock is said to be very riskier than market risk, beta less than 1 than the stock is said to be not that much riskier as compare to the market risk. Beta involved market risk, and market risk involved political risk, inflation risk, and interest rate risk. Market risk is measured by beta, which is another measure of investment risk that is based on the volatility of returns. In contrast to standard deviation, beta measures volatility relative to a relevant baseline rather than to the mean of the asset that is being evaluated. Beta is the appropriate measure of an asset's contribution to your portfolio's risk, as it measures only systematic risk, i.e., market risk.

Beta Calculation

$$\beta = \frac{N\Sigma XY - \Sigma X \Sigma Y}{N\Sigma X2 - (\Sigma X)2}$$

Where

N = No of observations

ΣX = Sum of X returns (Here X is market return)

ΣY = Sum of Y returns (Here Y is a particular fund return)

X2 = X * X

ΣXY = Sum of X * Y

5. The Sharpe Ratio

Sharpe Ratio, named after William Sharpe, is a very useful measure of performance that is especially relevant when comparing mutual funds within a category. The Sharpe Ratio is a mutual fund's excess return divided by its standard deviation, where excess return is the actual return less the risk-free rate of return. Although the Sharpe Ratio is computed from historical data, it is the same formula as the slope of the Capital Allocation Line, which is forward- looking. Risk free rate of return can earn by investing in Government secruties. T-Bill Index is a good measure of this risk free return.

The Sharpe ratio formula:

$$= \frac{rp-rf}{\sigma p}$$

Where

r_p = Expected portfolio return

r_f = Risk free rate

ϱ_p = portfolio standard deviation

6. Treynor Ratio

Treynor Ratio, named after Jack Treynor, is another useful measure of performance that is also relevant when comparing mutual funds within a category. The Treynor Ratio is a mutual fund's excess return divided by its beta, where excess return is the actual return less the risk-free rate of return. The Treynor Ratio is a measure of excess return per unit of systematic risk.

The treynor ratio formula

$= \frac{rp-rf}{BP}$

T = Treynor's ratio
r_p = portfolio return
r_f = risk free rate
B_p = portfolio beta

7. Jenson Alpha

The size of the alpha exhibits the stock's unsystematic return and its average return independent of market return. If the fund produces the expected return at the level of risk assumed, the fund would have an alpha equal to zero. A positive alpha indicates that the manager produced return greater than expected for the risk taken. Alpha is calculated by comparing the fund's actual performance with the risk-adjusted expected return.

8. NAV

NAV means the market value of the assets minus the liabilities on the day of valuation. In the other words, it is the amount which the shareholder will collectively get if the fund is dissolved or liquidated.

$$\text{NAV} = \frac{Assets+Accrued\ Income-Liabilities-Accrued\ Liabilities}{Number\ of\ Share}$$

9. Benchmark Index

For this study, broad 50 shares based NSE National Index(NIFTY) has been used as a proxy for market index. Risk-free return has been taken as 6%.

Data Sources

We collet daily NAV, NIFTY index GSEC rate from Bloomberg . The period of study is from 2008 to 2017 .

V. ANALYSIS OF DATA

We have tabulated, analyzed and interpretation the data obtained from the secondary sources .We have adopted the following framework for analysis and interpretation of data for all types of select equity growth funds:

1) Return related analysis and interpretation

For the purpose of carrying out return related analysis and interpretations, we have calculated average return for the study period and then compared with average return on the chosen benchmark index. If the average return is found to be greater than respective average return on the benchmark index, the said fund is to be considered as experiencing superior return than underlying index and vice-versa. This modus-operandi of analysis and interpretation has been used in the present study.

2) Risk related analysis and interpretation

Risk refers to variability in returns, the variation in returns signifies risk associated with a portfolio. Evaluation of managed portfolio can also be carried out on the basis of risk associated with a managed portfolio. Portfolio risk, generally gets measured in terms of standard deviation and beta . Hence, for making evaluation of riskiness of select schemes these three variables are measured and suitable interpretation is drawn thereupon. The details are shown as below.

a) Total Risk analysis and interpretation
b) Systematic Risk analysis and interpretation

3) Risk-adjusted return analysis and interpretation

Risk and return are two important variables to be used in the performance evaluation of portfolio. Portfolio evaluation is said to be incomplete, if such exercise is based only either on returns or on risk. A comprehensive evaluation is to be based on return and risk. Therefore, risk- adjusted return analysis is said to be better way of evaluating portfolio performance. In this context, it is worthwhile to state that, in the lexicon of mutual fund performance evaluation, there is several risk-adjusted performance models evolved and implemented from time to time. Of the various models, we have chosen three important and widely used models for evaluating the performance of mutual funds. These are;

a) Treynor's Index
b) Sharpe's Index
c) Jenson's Index

Above said framework of analysis is applied for all select mutual fund equity growth schemes. This analysis is chronologically arranged in the following way;

Analysis and Interpretation of Mutual fund growth fund Scheme

Analysis and Interpretation

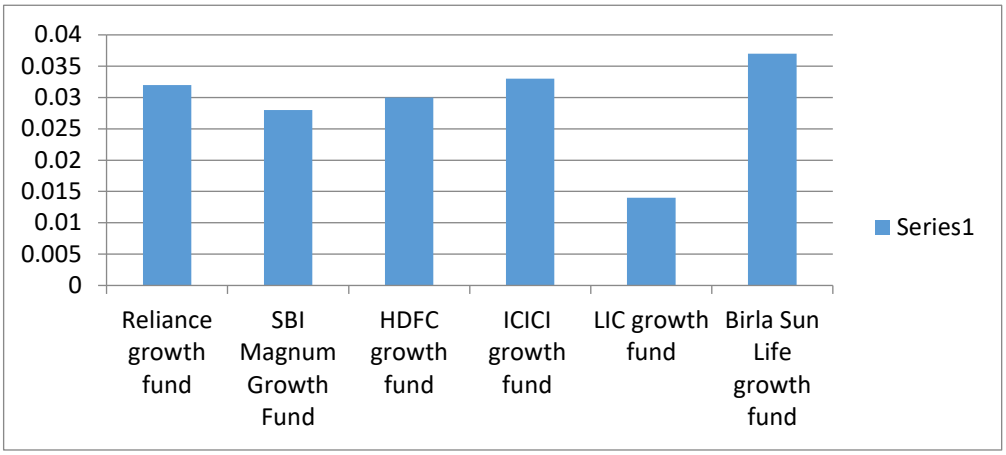
Table-5.1: Return for select schemes of the Equity growth funds and benchmark values

Year	Market Return (CNX Nifty)	Asset Management Companies and Schemes					
		Reliance growth fund	SBI Magnum Growth Fund	HDFC growth fund	ICICI growth fund	LIC growth fund	Birla Sun Life growth fund
2008	-0.343	-0.37	0.034	-0.313	-0.304	-0.39	-0.078
2009	-0.233	0.285	-0.011	0.235	0.231	0.242	0.152
2010	0.065	0.061	0.019	0.097	0.066	0.062	0.048
2011	-0.120	-0.137	0.034	-0.101	-0.097	-0.134	-0.052
2012	0.1	0.132	0.046	0.101	0.115	0.102	0.08
2013	0.023	-0.013	0.013	-0.009	0.041	0.025	0.01
2014	0.116	0.183	0.049	0.151	0.137	0.142	0.095
2015	-0.017	0.024	0.024	-0.002	-0.003	-0.011	0.015
2016	0.011	0.011	0.053	0.024	0.039	0.007	0.037
2017	0.102	0.146	0.025	0.126	0.107	0.095	0.072
Average	-0.044	0.032	0.028	0.030	0.033	0.014	0.038
Deviation		0.076	0.072	0.074	0.077	0.058	0.082
Over/Under		over	over	Over	over	over	over
Rank		3	5	4	2	6	1

Source: Compiled from NAV records of respective AMCs.

The table No. 5.1 reveals the year-wise information about the values of holding period returns of select schemes as well as benchmark index. On the basis of these yearly values respective averages are calculated for the study period. It is clear from the above table that, Birla Sun Life growth fund has performed well as compared to other schemes in this category (Excess return of 0.082 percent greater than its counterpart schemes). This is followed by ICICI growth Fund which registered an average excess return of 0.77 percent and Reliance growth fund which registered a marginal average excess return of 0.076 percent and HDFC growth fund registered a marginal excess return of 0.074 and SBI Magnum fund registered an average excess return of 0.072 and LIC growth fund registered a marginal excess return of 0.058.

In the ultimate analysis, it can inferred that, six chosen equity growth fund have succeeded in imitating the performance of underlying index, out of which four are private sector mutual fund industries and two are public sector mutual fund industries. It is proved that private sector mutual fund industries perform better as comparison with public sector mutual fund industries.



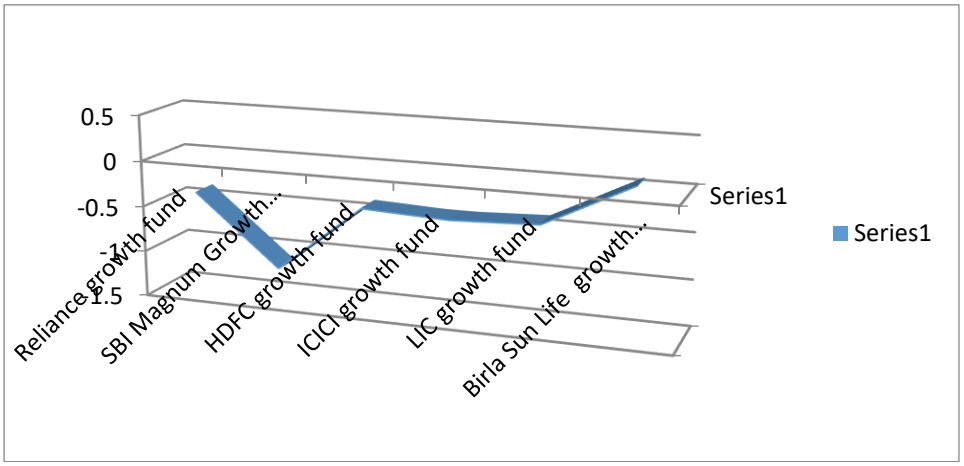
Graph-5.1: Return for select schemes of the Equity growth funds and benchmark values

Risk related analysis and interpretation

Table-5.2:
Standard Deviation for select schemes of the Equity growth funds and benchmark values

Year	S.D Market Return (CNX Nifty)	Asset Management Companies and Schemes					
		Reliance growth fund	SBI Magnum Growth Fund	HDFC growth fund	ICICI growth fund	LIC growth fund	Birla Sun Life growth fund
2008	3.072	-0.384	0.034	-0.316	-0.307	-0.405	-0.082
2009	2.157	1.704	0.446	1.733	1.81	2.157	0.959
2010	1.065	0.968	0.072	0.867	0.909	0.995	0.491
2011	1.346	1.195	0.105	1.132	1.252	1.257	0.607
2012	0.969	0.928	0.104	0.899	0.883	0.901	9.612
2013	1.147	1.027	0.44	1.099	0.976	1.013	0.616
2014	0.807	1.051	0.164	0.951	0.824	0.751	0.434
2015	1.042	1.108	0.189	1.13	0.996	1.041	0.554
2016	0.972	1.098	0.163	1.081	0.899	0.975	0.519
2017	0.582	0.79	0.118	0.714	0.656	0.598	0.326
Average	1.3159	0.9485	0.1835	0.929	0.8898	0.9283	1.4036
Deviation		-0.3674	-1.1324	-0.3869	-0.4261	-0.3876	0.0877
Risk		Less	Less	Less	Less	Less	More
Rank		5	1	4	2	3	6

The table No. 5.2 provides summarized information about year-wise values of standard deviation for select schemes as well as benchmark index. Further, it also provides the information about the resultant average standard deviation of each scheme and corresponding benchmark index. A closure look at the table reveals that Birla sunlife growth fund has highest average value of standard deviation (1.403 percent) followed by Reliance growth fund (0.948 percent), HDFC growth fund (0.929 percent), LIC growth fund (0.928 percent) , ICICI growth fund (0.88 percent)and SBI Magnum growth fund(0.18 percent). Hence, Birla sunlife growth fund is having higher total volatility whereas SBI Magnum growth fund has least total volatility during the study period as measured by Standard Deviation.



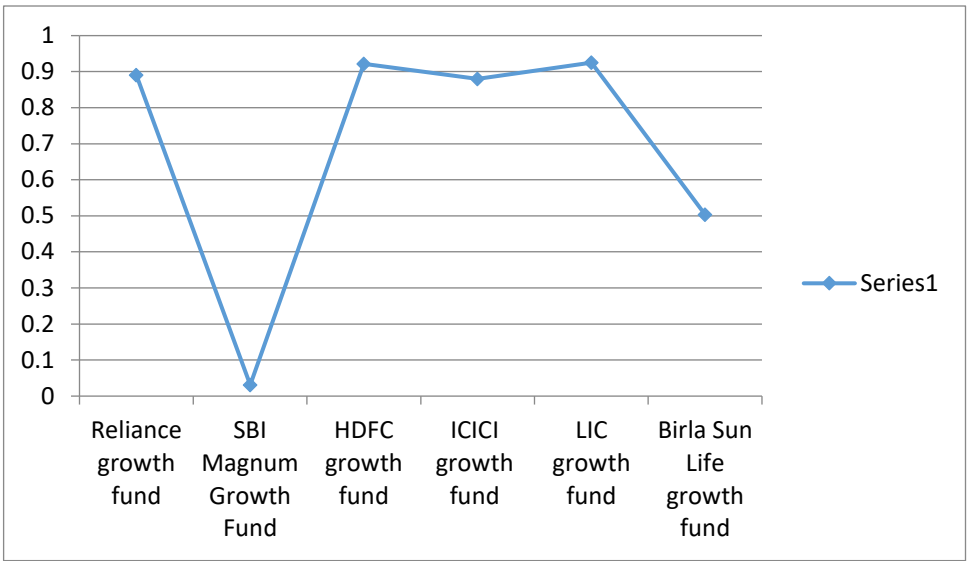
Graph-5.2: Standard Deviation for select schemes of the Equity growth funds and benchmark values

Table-5.3: Systematic Risk (Beta) for select schemes of the Equity growth fund

	Asset Management Companies and Schemes					
	Reliance growth fund	**SBI Magnum Growth Fund**	**HDFC growth fund**	**CICI growth fund**	**LIC growth fund**	**Birla Sun Life growth fund**
2008	0.781	-0.003	0.785	0.917	0.966	0.448
2009	0.738	0.02	0.749	0.833	0.972	0.431
2010	0.818	0.003	0.741	0.837	0.912	0.446
2011	0.824	-0.012	0.814	0.911	0.927	0.441
2012	0.864	0.007	0.884	0.85	0.924	0.692
2013	0.785	0.159	0.907	0.79	0.86	0.509
2014	1.058	0.051	1.109	0.951	0.821	0.52
2015	0.97	0.073	1.044	0.904	0.944	0.521
2016	0.99	0.004	1.059	0.848	0.966	0.513
2017	1.089	0.008	1.13	0.965	0.959	0.511
Average	0.8917	0.031	0.9222	0.8806	0.9251	0.5032
Rank	3	6	2	4	1	5

The table No. 5.3 portrays the information about Beta values of select schemes belonging to Equity growth fund for the study period. It is generally known fact that, higher the value of beta higher will be responsiveness of a given fund to the changes in the market index and vice-versa. A fund having higher beta may do well in a general up-trend whereas may not do so during the down-trend. Hence, a fund with lower beta may not exhibit attractive performance but it may save investors from extreme loss during the down-trend. A beta value of 1.0 of a fund implies neither over responsiveness nor under responsiveness to the changes in the market. A beta value of greater than 1.0 shows more than proportionate responsiveness to the changes in the market; a beta of less than 1.0 shows less than proportionate responsiveness. It is clear from the above table that LIC growth fund has highest beta value of 0.925 showing moderately high responsiveness; SBI Magnum growth has lowest beta value of 0.031 having less responsiveness to the changes in the market; HDFC growth fund has a beta value of 0.922; Reliance growth fund has a beta value of 0.891; ICICI growth fund has a beta value of 0.88; Birla sunlife growth fund has a beta value of 0.503.

Hence, all the schemes having beta values of less than 1.0, perhaps, it can be inferred that, all portfolios are defensive portfolios.



Graph-5.3: Systematic Risk (Beta) for select schemes of the Equity growth fund

Risk-adjusted return analysis and interpretation

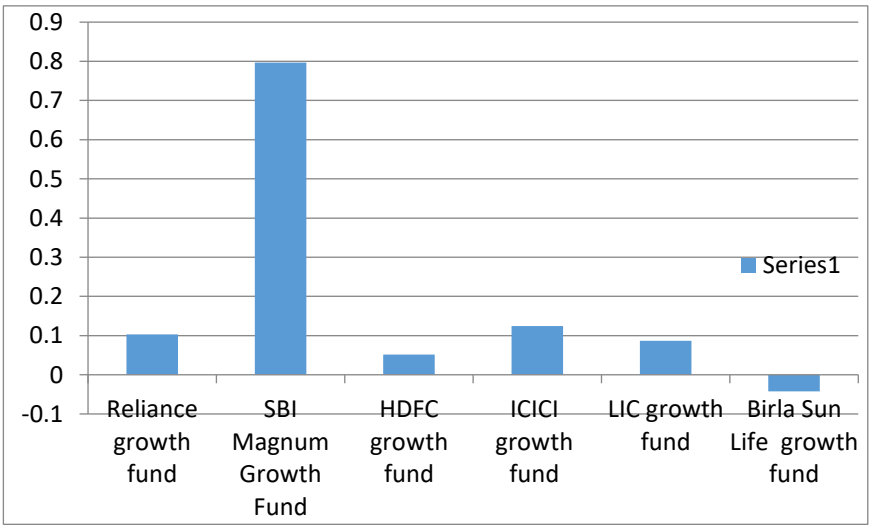
Table-5.4: Sharpe's Values for Select Schemes of the Equity growth fund and benchmark values

Table-5.4: Sharpe's Values for Select Schemes of the Equity growth and benchmark values

Year	Market Return (CNX Nifty)	Asset Management Companies and Schemes					
		Reliance growth fund	SBI Magnum Growth Fund	HDFC growth fund	ICICI growth fund	LIC growth fund	Birla Sun Life growth fund
2008	-0.052	0.489	6.301	0.415	0.396	0.512	-1.259
2009	0.033	0.073	-0.383	0.043	0.085	0.038	-0.008
2010	0.048	0.049	0.078	0.096	0.058	0.048	0.071
2011	-0.112	-0.14	0.035	-0.117	0.102	-0.131	0.137
2012	0.122	0.162	0.616	0.132	0.15	0.133	0.01
2013	-0.014	-0.053	-0.061	-0.46	0.0003	-0.14	-0.049
2014	0.206	0.222	0.61	0.212	0.227	0.256	0.336
2015	-0.01	0.028	0.163	0.003	0.003	-0.004	0.039
2016	0.086	0.077	0.769	0.089	0.124	0.082	0.213
2017	0.1	0.129	-0.158	0.114	0.095	0.084	0.085
Average	0.0407	0.1036	0.797	0.0527	0.12403	0.0878	-0.0425

Deviation		0.0629	0.7563	0.012	0.08333	0.0471	-0.0832
Over / Under		Over	Over	Over	Over	Over	Under
Rank		3	1	5	2	4	6

The table No. 5.4 crystallizes the year-wise information as well as average values of Sharpe's Index both for select schemes and the underlying benchmark index over the period of the study. It is observed from the above table that, all schemes belonging to large cap category (AMCs) have shown on an average mash-up of over performance and underperformance as compared to average performance of benchmark index. However, the extent of performance differs from scheme to scheme. SBI Magnum growth fund, ICICI growth fund, Reliance growth fund, LIC growth fund, HDFC growth fund have shown over performance (0.756 percent, 0.083 percent, 0.062 percent, 0.047 percent, 0.012 percent) respectively; followed by Birla sunlife growth fund has underperformance as compared to benchmark index (-0.083 percent); Hence, one schemes have failed to generate adequate excess return in commensurate with their total risk as compared to benchmark index and five schemes have performed better than the benchmark index. It implies to some extent, Birla sunlife growth fund managers have failed to incorporate appropriate changes into the composition of their portfolio to trim well their performance to the changing conditions in the overall market SBI Magnum growth fund , ICICI growth fund, Reliance growth fund ,LIC growth fund , HDFC growth fund have blockbustered to incorporate adequate changes into the composition of their portfolio. Hence, it is better for fund managers of Birla sunlife growth fund to initiate well informed investment decisions to improve the quality of their funds performance.



Graph-5.4: Sharpe's Values for Select Schemes of the Equity growth and benchmark values

Table-5.5: Treynor's Values for Select Schemes of the Equity growth fund and benchmark values

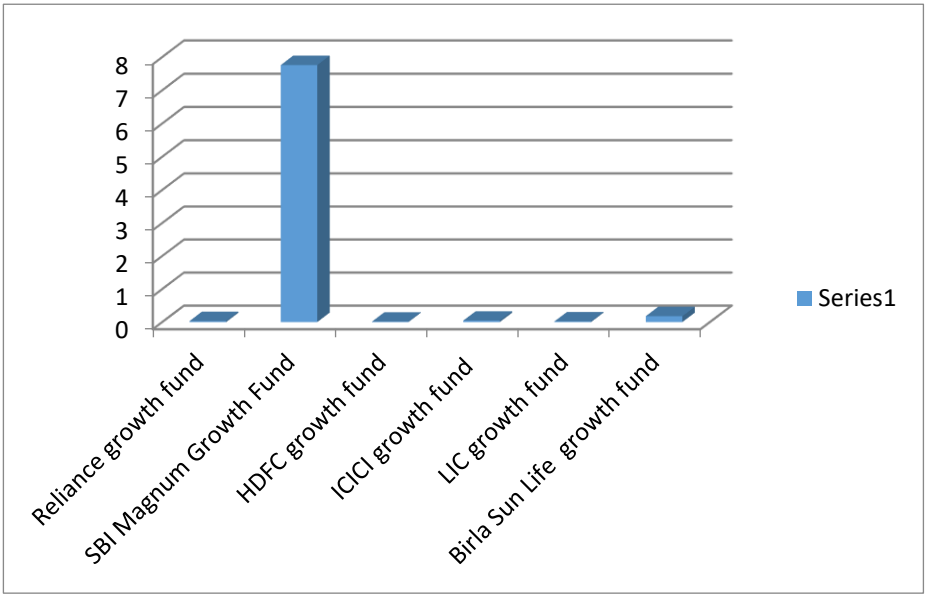
Table-5.5: Treynor's Values for Select Schemes of the Large Cap category and benchmark values

		Asset Management Companies and Schemes					
Year	**Market Return (CNX Nifty)**	**Reliance growth fund**	**SBI Magnum Growth Fund**	**HDFC growth fund**	**ICICI growth fund**	**LIC growth fund**	**Birla Sun Life growth fund**
2008	-0.16	-0.241	64.772	-0.167	-0.132	-0.215	0.23
2009	0.073	0.17	-8.2	0.1004	0.085	0.084	0.149
2010	0.051	0.058	1.484	0.112	0.063	0.053	0.078

2011	-0.151	-0.204	-0.295	-0.163	-0.14	-0.178	-0.189
2012	-0.151	0.174	-9.007	0.134	0.156	0.13	0.141
2013	0.118	-0.069	-0.169	-0.055	0.004	-0.017	-0.06
2014	-0.017	0.22	1.935	0.181.	0.197	0.234	0.28
2015	0.116	0.032	0.42	0.003	0.003	-0.005	0.41
2016	0.084	0.086	28.91	0.091	0.132	0.082	0.215
2017	0.058	0.093	-2.251	0.072	0.064	0.052	0.54
Average	0.0021	0.0319	7.7599	0.0141556	0.0432	0.022	0.1794
Deviation		0.0298	7.7578	0.0120556	0.0411	0.0199	0.1773
Over / Under		Over	Over	Over	Over	Over	Over
Rank		4	1	6	3	5	2

Source: Compiled from NAV records of respective AMCs

The table No. 5.6 exhibit the year-wise information as well as average values of Treynor's Index both for select schemes and the underlying benchmark index over the period of the study. It is surprising to observed from the above table that, all schemes belonging to large cap category (AMCs) have on an average overperformed as compared to average performance of benchmark index. However, the extent of overperformance differs from scheme to scheme, wherein, SBI Magnum growth (7.757 percent) has shown more extent of overperformance; followed, Birla sun life growth fund (0.177 Percent), ICICI growth fund (0.041), Reliance growth fund (0.029),LIC growth fund(0.047), HDFC growth fund(0.012. Hence, all schemes have able to generate sufficient return in commensurate with their systematic risk as compared to bench mark index.



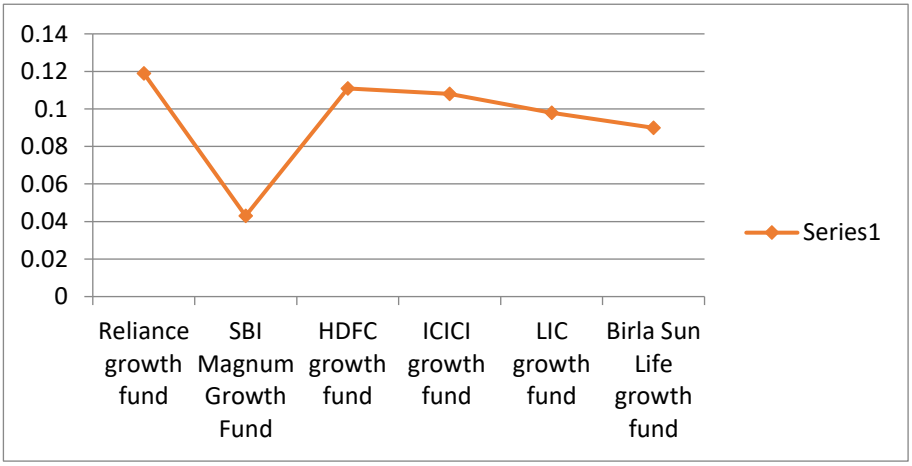
Graph-5.5: Treynor's Values for Select Schemes of the Equity growth fund and benchmark values

Table-5.6: Jensen's Alpha Values for Select Schemes of the Equity growth fund

Year	Asset Management Companies and Schemes					
	Reliance growth fund	**SBI Magnum Growth Fund**	**HDFC growth fund**	**ICICI growth fund**	**LIC growth fund**	**Birla Sun Life growth fund**

2008	-0.273	0.4	-0.218	-0.254	-0.356	0.132
2009	0.137	-0.326	0.09	0.105	0.149	-0.067
2010	0.087	-0.007	0.118	0.094	0.094	0.05
2011	0.298	0.025	0.261	0.268	0.308	0.167
2012	0.255	0.081	0.226	0.236	0.231	0.185
2013	-0.076	-0.064	-0.069	-0.021	-0.035	-0.059
2014	0.407	0.156	0.381	0.348	0.339	0.257
2015	0.02	0.036	-0.007	-0.006	-0.014	0.018
2016	0.169	0.198	0.182	0.195	0.164	0.189
2017	0.169	-0.062	0.153	0.117	0.105	0.035
Average	0.1193	0.0437	0.1117	0.1082	0.0985	0.0907
Over / Under	Over	Over	Over	Over	Over	Over
Rank	1	6	2	3	4	5

The table No. 5.6 narrates the information about year wise values of alpha for each select scheme as well as their average value during the study period. Alpha is an index of management skills of fund managers. Though, all select schemes fund managers have experienced positive alphas the extent of positively is highest in case of Reliance growth fund (0.119 percent), followed by HDFC growth fund (0.111 percent); ICICI growth Fund (0.108 percent); LIC growth fund (0.098 percent) , Birla sunlife growth fund (0.0907) and SBI Magnum growth (0.043 percent). A positive alpha implies superior returns due to superior management skills and negative alpha implies inferior management skills as compared to the market. From the results shown in the above table, one can infer that, on an average, all schemes have fared well. Hence, one can say that, fund manager's managerial skills required for investment or disinvestment decision making is good.



Graph-5.6: Jensen's Alpha Values for Select Schemes of the Equity growth fund

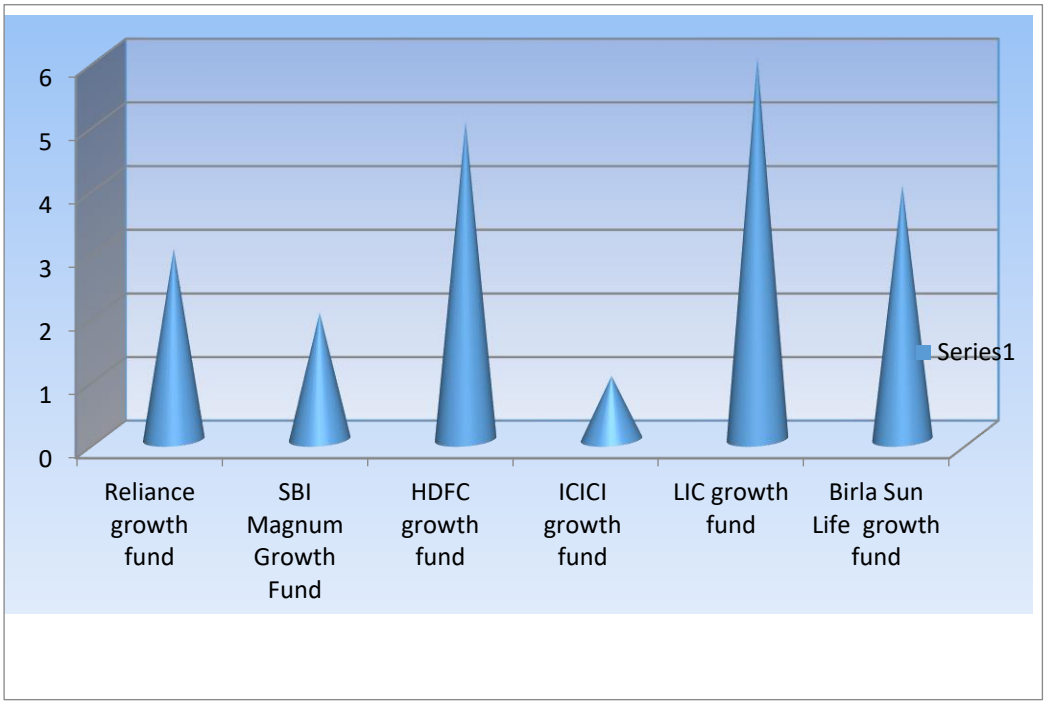
Table-5.7: Overall Ranking of all select Equity growth fund

Models	**RANKING**						**TOTAL**
	Reliance growth fund	**SBI Magnum Growth Fund**	**HDFC growth fund**	**ICICI growth fund**	**LIC growth fund**	**Birla Sun Life growth fund**	
Return	**3**	**5**	**4**	**2**	**6**	**1**	
Risk ( )	5	1	4	2	3	6	
Sharpe's	3	1	5	2	4	6	
Treynor's	4	1	6	3	5	2	

Jensen's	1	6	2	3	4	5	
TOTAL	16	14	21	12	22	20	
RANK	3	2	5	1	6	4	

Source: Compiled from respective tables.

The table No. 5.7 indicates the overall ranking of all chosen Large cap schemes during the study period. From the above table, it is clear that ICICI growth fund has placed at first position (1st Rank), followed by SBI Magnum growth fund has placed at second position (2nd Rank); Reliance growth fund has placed at the third position(3rd Rank) ; Birla sunlife growth fund has placed at the fourth position(4th Rank); HDFC growth fund has placed at the fifth position(5th Rank) and LIC growth fund growth fund has placed at the sixth position(6th Rank).



VI. CONCLUSION

This study creates awareness that the mutual funds are worth investment practice. The various schemes of mutual funds provide the investors with a wide range of investments options according to his risk bearing capacities and interest. Besides they also give a hand return to the investors. The paper analyses various schemes of Different Companies. For tking a decision to invest in mutual funds the evaluation plays very vital role. The ranking given to the mutual funds to arouse interest the investment by investors to the respective funds. For the purpose of ranking the performance of various mutual funds the methods such as sharpe , Treynor, and Jensen have applied to the various funds in different schemes. It is hoped that the rank provided for the mutual fund in this chapter explains relative performance of the schemes.

By comparing all the selected schemes we find ICICI growth fund is placed rank 1, SBI magnum growth fund is rank 2, Reliance growth fund is rank 3 , Birla sunlife growth fund is rank 4, HDFC growth fund is rank 5 and LIC growth fund is rank 6.

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