PERFORMANCE EVALUATION OF SELECTED MUTUAL FUND EQUITY GROWTH SCHEMES IN INDIA: WITH SPECIAL REFERENCE TO INFRA, TECHNOLOGY & BANKING SECTOR

Narinder Kaur[1], Kiran Bala[2]*

[1]Punjabi University School of Business Studies (PUSBS), Guru Kashi Campus, Talwandi Sabo, Bathinda, India
[2]Mata Sundri University Girls College, Mansa, Punjab, India

*Corresponding Author's E-Mail: meetusaggu_79@yahoo.co.in

ABSTRACT

Mutual funds are an essential component of the stock market, which in the latest years has become an investment route for many investors. Mutual funds provide a diverse class of investors with investment choices under varying rates of risk and return. The current research aims to assess the efficiency of Indian sectoral mutual fund equity growth schemes in India (Infrastructure, Banking and Technology) through various performance measurement models like Sharpe, Treynor and Jensen for the period 2010 to 2019. For the present study, 91-day T-Bills return has been taken as a risk-free rate i.e., 7.46 percent p.a. The objective of the study is to analyze the performance of sectoral mutual fund schemes and understand the relationship between sector scheme return and the benchmark return. Kendall's Coefficient of Concordance and Karl Pearson's Coefficient of Correlation have been used. The research result reveals that all chosen schemes performed better than the benchmark return.

Keywords: Capital Market, Risk-Adjusted Return, Sectoral Mutual Funds, Banking Sector, Technology Sector, Infrastructure Sector

INTRODUCTION

Indian Mutual Fund asset management industry has grown immensely in size and does attract the academics, financial community, and investors to invest in various securities. A mutual fund is the popular resources of investment (Babbar & Sehgal, 2018). It is managed through the expertise and qualified professionals that pools the savings from various investors and invest in stocks, bonds, money market instruments and other securities. Compared to other investment vehicles mutual funds give their investors more benefits such as diversification, plethora of schemes, transparency, low cost, liquidity, equity and debt market, tax benefits etc. At present, the Indian mutual fund industry has grown from `5.41 trillion AUM as on 31st July 2008 to `25.48 trillion AUM as on 31st July 2019, i.e., fivefold increase. In mutual funds, more than two thousand schemes are available. Therefore, it is very difficult to decide the best investment schemes as various schemes are available. For that purpose, there is a need for performance evaluation of Indian mutual fund in various fund categories (Arora, 2015).

Sector-specific mutual funds are one of the famous schemes nowadays. There are funds/schemes that invest only in those sectors or industries' securities as indicated in the offer papers, for example infrastructure, banking, FMCG, technology and so on. The return of these funds depends on the performance of the sectors/industries concerned. Although these funds may yield greater yields, they are riskier than diverse funds. Investors must monitor the efficiency of these sectors/industries and must leave at a suitable moment. The paper specifically assesses the efficiency of sector-specific equity mutual fund schemes based on analysis of risk and return.

LITERATURE REVIEW

Many studies have been done on the growth and financial performance of the mutual fund.

Treynor (1965) developed a methodology for assessing the efficiency of a mutual fund which is the proportion of reward to variation. Sharpe (1966) provided a comprehensive performance assessment measure in the form of a variable reward ratio.

Bawa & Brar (2011) made a comparison of public and private sector growth results of ten-year mutual fund schemes in India (2000-2010). The research showed that private sector growth schemes were ahead in providing greater yield for shareholders, so their Assets Under Management (AUM) was much greater than the schemes of the public sector. Also, the development systems in the public sector were the most risk-prone to market differences.

Sharma & Kumar (2013) and Makkar & Singh (2013) carried out a comparative analysis of the financial performance of Indian commercial banks in terms of parameters like capital adequacy, asset quality, management efficiency, earning quality and liquidity.

Nair (2014) examined mutual fund as an instrument for stabilizing the Indian economy, its total assets management and channeling dispersed savings in India's infrastructural growth. The study concluded that the resources mobilized by Unit Trust of India, financial institutions sponsored by banks and mutual funds from the private sector increased from 0.31 billion rupees in 1973 to 825,24 billion by 2013. The mutual fund asset under management has risen from 1079.46 billion rupees over the past ten years to 7014.43 billion rupees. It further studied that the mutual fund was a strong tool and financing product for mobilizing scattered investor money and channelizing these resources to improving the nation's infrastructure and thus economic development.

Sivaraman & Sundar (2014) analyzed the risk-return parameters of top-performing equity-small/mid-cap, tax planning, and sector funds based on various measures for five years (2007-2012). The study showed that much information about mutual fund was not available publicly. There was no information on fund style or compressive league tables to allow the comparison of mutual funds in the market.

Qamruzzaman (2014) evaluated the performance of 32 growth-oriented mutual fund schemes in Bangladesh for the period of 18 months (1st January 2012 to 30th June 2013) on the basis of monthly returns compared with benchmark returns by using various risk-adjusted performance measures and reported that in terms of volatility, the growth-oriented mutual funds had underperformed. It was also found that mutual funds showed positive returns in contrast with the market return. Further, the fund managers of the mutual funds had poor ability to provide a wide range of products, market timings and selectivity to meet different risks of investors.

Zafar, Chaubey & Ali (2015) studied the performance of 13 public and private sector equity diversified growth mutual fund schemes for one year (2007-2008) by using Sharpe, Treynor, and Jensen ratios. BSE 200 index was taken as a benchmark. 10 years government bond had been taken as the risk-free rate of the return i.e., 7.56%. The study found that Tauras Discovery Growth, ICICI Pru-Growth & Reliance Equity Growth funds were the best funds and Tauras Discovery Growth fund had the highest beta amongst every one of the assets.

Agarwal, Tandon & Raychaudhuri (2015) studied the performance of 16 mutual fund schemes of different sectors (pharma & health, FMCG, banking & finance, and technology sectors) for the period of one year i.e., Nov 2013-Nov 2014 by using statistical tools and performance measurement ratios. The study showed that Reliance Pharma Fund–Direct Plan (G), ICICI Prudential FMCG Fund (G), Reliance Invesco Banking fund–RP(G), Birla Sun Life New Millennium (G) performed well. The volatility of sectoral mutual fund schemes was less than the benchmark index. The study concluded that risk-averse investors preferred sectoral mutual funds. By doing inter-sector analysis, the researcher also examined that pharma and healthcare sector had the best returns for the lowest level of risk.

Bhakar, Banerjee & Bhatnagar (2015) examined the performance of Sectoral Mutual Fund Schemes of Indian companies for the period of 5 years (April 2008–March 2013) by utilizing statistical tools and performance measurement ratios. Equity mutual fund schemes of five sectors i.e. FMCG & Healthcare, Banking & Finance, Technology, Infrastructure, Energy and Power sector were selected. The study concluded that all selected sectoral funds had a positive return and performed well when contrasted with the Sensex return. ICICI Pru FMCG Fund, and UTI Pharma and Healthcare Fund were least unsafe than other plans. Infrastructure, FMCG, Healthcare, and Energy & Power Sector had been protective in contrast with plans of Banking, Finance, and Technology sector. The study also highlighted that FMCG & Healthcare, Energy & Power sector funds offered better returns according to Sharpe and Treynor's Index.

Burlakanti & Chiruvoori (2015) studied the risk-return relationship of growth-oriented schemes of mutual funds for 3 years (2012-2014) by utilizing theoretical parameters suggested by Sharpe and Jensen. The study concluded that the rate of return by investing in mutual funds was higher as compared to other investment options and mutual funds were a better investment avenue to the trade–off between risk and return. The study also disclosed that the Reliance Mutual Fund had a high portfolio return of 0.35%. Axis Equity Fund and Franklin Asian Fund had a low portfolio return of 0.14%. Based on Sharpe strategy, Axis Equity Fund had gotten the first position when contrasted with different plans and Reliance Mutual Fund had gotten the first position according to Jensen.

RESEARCH METHODOLOGY

The methodology of studies describes the route to be pursued to explore the research proposal to achieve the

study's goals. This research is an effort with the assistance of published information to assess the efficiency of sector-specific growth mutual fund schemes in India.

Need for the Study

The literature review shows that an extensive research is needed to assess the performance of mutual funds through certain performance measurement models for sector-specific schemes initiated by different mutual fund organizations in the current context of changing financial circumstances in the nation and global economic conditions as most of the studies targeted either the equity of the debt and a few related to sector mutual fund schemes. Hence the current research will focus on sector-specific mutual fund schemes.

Objectives

The present research has the following objectives:

- To analyze the performance of selected sector mutual fund schemes using various performance measures.
- To study the relationship of selected sector mutual fund schemes returns with respect to their benchmark return.

Research Hypothesis

Keeping in mind the objectives of the study the following hypotheses are framed:

- H01: There is no significant difference among the performance of selected sectoral funds based on measures suggested by Sharpe, Treynor and Jensen model.

- H11- There is a significant difference among the performance of selected sectoral funds based on measures suggested by Sharpe, Treynor and Jensen model.

- H02- There is no significant relation between selected sectoral fund schemes return with a benchmark return.

- H12- There is a significant relationship between selected sectoral fund schemes return with a benchmark return.

Data Collection

The study is based on secondary data. Quarterly data about the closing net asset value of the selected 17 sectoral schemes have been collected from the websites of Association of Mutual Funds in India and Moneycontrol. The data is also collected from SEBI's Handbook of Statistics, offer documents of various mutual funds, value research online and BSE. 91-day T-Bills return is taken as the risk-free rate.

Scope of the Study

This study is an attempt to evaluate the performance of sector-specific growth mutual fund schemes in India based on secondary data for the period of ten years i.e., from April 2010 to March 2019. To test the hypothesis Kendall's Coefficient of Concordance and Coefficient of Correlation have been applied.

For the study, the following Equity Growth Mutual Fund Schemes have been selected.

Table 1: Equity Sectoral Fund Schemes in Different Sectors

Category	Equity-Sectoral Fund	Sr. No.	Name of The Mutual Fund Scheme	Launch Date of Scheme
Sector Specific Schemes (Growth Schemes-Regular Plan)	Infrastructure Mutual Fund Sector	1.	IDFC Infrastructure Fund	08.03.2011
		2.	L & T Infrastructure Fund – G	27.09.2007
		3.	HDFC Infrastructure Fund – G	10.03.2008
		4.	UTI Infrastructure Fund – G	01.08.2005
		5.	Aditya Birla Sl Infrastructure Fund – G	01.08.2005
		6.	ICICI Pru Infrastructure Fund – G	31.08.2005
		7.	Sundaram Infra Advantage Fund – G	29.09.2005
	Technology Mutual Fund Sector	8.	ICICI Pru Technology Fund – G	28.01.2000
		9.	Franklin India Technology Fund –G	10.08.1998
		10.	Aditya Birla Sunlife New Millennium (Renamed as Aditya Birla SL Digital India Fund - G)	28.01.2000
		11.	Tata Digital India Fund – G	28.01.2015
	Banking and Financial Sector	12.	Reliance Banking Fund – G	28.05.2003
		13.	UTI Banking & Financial Services Fund – G	01.08.2005
		14.	ICICI Pru Banking & Fin Serv Fund - G	22.08.2008
		15.	Sundaram Fin Serv Opp Fund – G	10.08.2008
		16.	SBI Banking & Financial Services Fund – G	26.02.2015
		17.	Tata Banking & Financial Services Fund – G	10.12.2015

Source: www.moneycontrol.com

Benchmark Index Selected for Study

Mutual funds schemes have different objectives and carry different degrees of risk. It is, therefore, necessary to compare each scheme of all the sectors with an appropriate benchmark index. The following benchmark indexes for selected sectors have taken for the study.

Benchmark Index | **Sector Mutual Fund**

S&P BSE 100 (Infrastructure Mutual Fund Sector)

S&P BSE Teck (Technology Mutual Fund Sector)

S&P BSE Bankex (Banking & Financial Sector)

Tools & Techniques Used

The following tools & techniques have been used to analyze the performance of the mutual fund.

1. Measurement of Return: A return is representative of profit of mutual fund scheme during a period and usually quoted as a percentage.

In the present study, returns are calculated with the help of quarterly NAV values of sectoral schemes.

For each mutual fund scheme return are computed as under:

For each mutual fund scheme return are computed as under:

$Rp = (\llbracket NAV \rrbracket\_t - \llbracket NAV \rrbracket\_{(t-1)}) / \llbracket NAV \rrbracket\_{(t-1)} *100$

Rp = Quarterly Return on a Scheme

NAV_t = Net Asset Value on last date of current quarter.

$\llbracket NAV \rrbracket\_{(t-1)}$ = Net Asset Value on last date of previous quarter.

Avg.RP = (R_P1+R_P2+R_P3+R_P4)/4

Where RP1, RP2......RP4 are returns for first, second, third and fourth quarters respectively and Avg RP stands for Average Quarterly Return.

2. Karl Pearson's Co-efficient of Correlation: The value of the correlation of co-efficient has been calculated to know the degree of relationship between sector mutual fund schemes return and benchmark index return.

$r = (\sum xy)/\sqrt{(\sum \llbracket x^2 - \sum y^2 \rrbracket)}$

$x = (X - \bar{x})$

$y = (Y - \bar{y})$

3. Kendall's Coefficient of Concordance: It has been applied to know whether any significant association exists among the ranks of the schemes given based on performance measurement models under different sectors over the period. Kendall's W ranges from 0 (no agreement) to 1 (complete agreement). If the test statistics W is 1, then all survey respondents have been unanimous, and each respondent has assigned the same order to mutual fund schemes. If W is 0, then there is no overall trend of agreement among the respondents. Intermediate values of W indicate a greater or lesser degree of unanimity among the various responses.

$W = 12s/(m^2 (n^3 - n))$

Where S represents the sum of squares of the R from $\bar{X}$

m denotes the number of measurement models like Sharpe, Treynor & Jensen

n designate number of schemes i.e., evaluated by respondents.

Performance Measurement Models:

- Sharpe's Performance Model
- Treynor's Performance Model
- Jensen's Performance Model

Sharpe's Performance Model

Nobel Laureate Bill Sharpe (1966) devised a model that depicts the ratio of returns generated by the fund over and above the risk-free rate of return and the total risk associated with it. According to Sharpe, it is the total risk of the fund that the investors are concerned about. So, the model evaluates funds based on reward per unit of total risk. It can be written as:

Sharpe Index $(Sp) = (\llbracket Avg\ R \rrbracket (p) - \llbracket Avg\ R \rrbracket f)/\sigma\_p$

Treynor's Performance Model

Jack Treynor's performance measure is called a reward to volatility ratio based on systematic risk. It is the excess return over the risk–free rate per unit of systematic risk.

$Tp = (\llbracket Avg\ R \rrbracket\_{(p)} - \llbracket Avg\ R \rrbracket f)/\beta\_p$

Jensen's Performance Model

Jenson's performance measure is the excess return of a fund above the risk-adjusted market return where the level of risk is measured by beta. It is also a measure of the manager's contribution to performance due to security selection. A positive alpha indicates that the fund outperformed the market on a risk-adjusted basis and a negative alpha indicates the fund did worse than the market. Alpha is calculated as follows:

$\alpha = R\_p - \{R\_f) + \beta\_p (R\_m - R\_f)\}$

Risk-Free Return

For the present study, 91–days t-bills has been taken as the risk-free rate of return i.e. 7.46% per annum and 1.865% quarterly. It refers to that minimum return on investment that has no risk of losing the investment over which it is earned.

RESULTS & DISCUSSION

Performance evaluation based on different models - for analysis Sharpe, Treynor & Jensen models - have been used and then ranks have been assigned based calculated values to the different schemes under the infrastructure sector. Here the highest ranking is given to the fund with highest Sharpe, Treynor, and Jensen values as shown in table 2:

Table 2: Ranking of Infrastructure Mutual Fund Schemes

Name of the Fund	Sharpe	Rank	Treynor	Rank	Jensen	Rank
IDFC Infrastructure Fund	-0.02	6	-0.20	7	-0.44	6
L & T Infrastructure Fund	0.07	2	0.54	2	0.32	2
HDFC Infrastructure Fund	0.01	5	0.09	5	-0.40	5
UTI Infrastructure Fund	-0.02	6	-0.16	6	-0.63	7
Aditya Birla SL Infrastructure Fund	0.05	3	0.36	3	0.11	3
ICICI Pru Infrastructure Fund	0.02	4	0.15	4	-0.23	4
Sundram Infra Advantage Fund	0.20	1	1.39	1	0.88	1

Table 2 depicts that Sundram Infra Advantage Fund -G has obtained the first rank as per all the measurement models used. It is followed by L&T Infrastructure Fund and Aditya Birla SL Infrastructure Fund.

Table 3: Ranking of Technology Sector Mutual Fund Schemes

Name of the Fund	Sharpe	Rank	Treynor	Rank	Jensen	Rank
ICICI Prudential Technology Fund	0.28	1	2.31	1	1.71	1
Franklin India Technology Fund	0.18	3	1.47	4	0.74	4
Aditya Birla SL Digital India Fund	0.17	4	2.03	2	0.87	3
TATA Digital India Fund	0.19	2	1.55	3	1.50	2

Table 3 shows the ranking of Technology Sector Mutual Fund schemes based on Sharpe, Jensen & Treynor. It can be observed that the rank obtained by ICICI Prudential Technology Fund–G is the same irrespective of measures used and has obtained the first rank overall (Treynor, 1965).

Table 4: Ranking of Banking & Financial Sector Mutual Fund Schemes

Name of the Fund	Sharpe	Rank	Treynor	Rank	Jensen	Rank
Reliance Banking Fund – G	0.21	4	2.47	4	0.82	5
UTI Banking & Financial Services Fund	0.16	5	1.85	5	0.19	6
ICICI Pru Banking & Fin. Serv. Opp. Fund	0.24	3	2.95	2	1.20	3
Sundaram Fin Serv Opp Fund	0.12	6	-8.57	6	1.65	2
TATA Banking & Financial Services Fund	0.41	1	3.60	1	1.15	4
SBI Banking & Financial Services Fund	0.32	2	2.68	3	1.83	1

Table 4 represents that TATA Banking & Financial Services Fund–G has secured the first rank under Sharpe and Treynor measure and SBI Banking & Financial Services Fund has secured the first rank and UTI Banking & Financial Services Fund and has secured the least rank under Jensen measure (Sharpe, 1966).

Testing of Hypothesis

All the models evaluate the performance of mutual fund schemes on a different basis. Therefore, Kendall's Coefficient of Concordance has been used to identify the existence of a significant difference in the ranking of different schemes as per different models. The hypothesis has been tested at a 5% level of significance.

Table 5: Comparison of Performance Evaluation Models: Infrastructure Sector Mutual Fund

Schemes Name	Rank of Sharpe's Measure	Rank of Treynor's Measure	Rank of Jensen's Measure	Rj	S
IDFC Infrastructure Fund	VI	VII	VI	19	50.98
L & T Infrastructure Fund	II	II	II	6	34.34
HDFC Infrastructure Fund	V	V	V	15	9.86
UTI Infrastructure Fund	VI	VI	VII	19	50.98
Aditya Birla SL Infrastructure Fund	III	III	III	9	8.18
ICICI Pru Infrastructure Fund	IV	IV	IV	12	0.0196
Sundram Infra Advantage Fund	I	I	I	3	78.50
				83	232.86
Kendall's Coefficient of Concordance (w)			0.920		

After the analysis of table 5, it has been found that Kendall's Coefficient of Concordance has the value of 'w' (0.920) is significant. Hence, the null hypothesis

H01 is accepted and it is inferred that the ranking provided by all the measures do not show any difference in the performance of mutual fund schemes.

Table 6: Comparison of Performance Evaluation Models: Technology Sector Mutual Fund

Schemes Name	Rank of Sharpe's Measure	Rank of Treynor's Measure	Rank of Jensen's Measure	Rj	S
ICICI Prudential Technology Fund	I	I	I	3	20.25
Franklin India Technology Fund	III	IV	IV	11	12.25
Aditya Birla SL Digital India Fund	IV	II	III	9	2.25
TATA Digital India Fund	II	III	II	7	0.25
				30	35
Kendall's Coefficient of Concordance (w)	0.778				

Testing the significance in the relationship using Kendall's Coefficient of Concordance show 'w' (0.778) is significant. Hence, the null hypothesis is accepted,

and it is inferred that the ranking provided by all the measures essentially apply the same standard in evaluating the performance of mutual fund schemes.

Table 7: Comparison of Performance Evaluation Models: Banking & Financial Sector Mutual Fund

Schemes Name	Rank of Sharpe's Measure	Rank of Treynor's Measure	Rank of Jensen's Measure	Rj	S
Reliance Banking Fund – G	IV	IV	V	13	6.25
UTI Banking & Financial Services Fund	V	V	VI	16	30.25
ICICI Pru Banking & Fin. Serv. Opp. Fund	III	II	III	8	6.25
Sundaram Fin Serv Opp Fund	VI	VI	II	14	12.25
TATA Banking & Financial Services Fund	I	I	I	3	56.25
SBI Banking & Financial Services Fund	II	III	IV	9	2.25
				63	113.5
Kendall's Coefficient of Concordance (w)	0.720				

Testing the significance in the relationship using Kendall's Coefficient of Concordance show 'w' (0.720) is significant. Hence, the null hypothesis is accepted,

and it is inferred that the ranking provided by all the measures essentially apply the same standard in evaluating the performance of mutual fund schemes.

Table 8: Analysis of Average Quarterly Schemes Return and Benchmark Return

Infrastructure Sector Schemes	Average Quarterly Returns (%)
IDFC Infrastructure Fund	1.70
L& T Infrastructure Fund	2.67
HDFC Infrastructure Fund	2.02
UTI Infrastructure Fund	1.64
Aditya Birla SL Infrastructure Fund	2.44
ICICI Pru Infrastructure Fund	2.06
Sundram Infra Advantage Fund	3.85
Benchmark Index	
S&P BSE 100	2.20

Table 8 reveals the average quarterly returns of infrastructure sector schemes and benchmark index S&P BSE 100. After the analysis of the table, it is observed that Sundram Infra Advantage Fund, Aditya Birla SL Infrastructure Fund & L&T Infrastructure

Fund have generated greater returns than their benchmark index return (2.20%) and ICICI Pru Infrastructure Fund, UTI Infrastructure Fund, HDFC Infrastructure Fund, and IDFC Infrastructure Fund have shown less return than benchmark return.

Table 9: Analysis of Average Quarterly Schemes Return and Benchmark Return

Technology Sector Schemes	Average Quarterly Returns (%)
ICICI Prudential Technology Fund	4.36
Franklin India Technology Fund	3.34
Aditya Birla SL Digital India Fund	3.26
TATA Digital India Fund	3.43
Benchmark Index	
S&P BSE Teck	2.60

Table 9 shows that all Technology Sector Schemes have performed better than its benchmark index S&P BSE Teck. ICICI Pru Technology Fund return is highest among all the schemes.

Table 10: Analysis of Average Quarterly Schemes Return and Benchmark Return

Banking Sector Schemes	Average Quarterly Returns (%)
Reliance Banking Fund – G	4.32
UTI Banking & Financial Services Fund	3.68
ICICI Pru Banking & Fin. Serv. Opp. Fund	4.84
Su ndaram Fin Serv Opp Fund	3.23
TATA Banking & Financial Services Fund	4.31
SBI Banking & Financial Services Fund	5.78
Benchmark Index	
S&P BSE Bankex	3.53

Table 10 exhibits that all funds except Sundaram Fin Serv Opp Fund have generated greater returns then their benchmark index and returns from all the schemes are positive. SBI is the best performer in terms of return among all the schemes.

Hypothesis Testing

To test the relationship between scheme, return and benchmark return Karl Pearson's Coefficient of Correlation has been used.

- H02- There is no significant relation between selected sectoral fund schemes return with a benchmark return.

- H12- There is a significant relationship between selected sectoral fund schemes return with a benchmark return.

Correlation - Matrix

Table 11: Analysis of Relationship of Sectoral Schemes Return and Their Respective Benchmark Return

Correlations				
Name of Schemes			**Fund Return**	**Benchmark Return**
Infrastructure Mutual Fund Schemes	Schemes Return	Pearson Correlation	1	0.874[**]
		p-value		0.000
Benchmark Index	S&P BSE 100 Return	Pearson Correlation	0.874[**]	1
		p-value	0.000	
Technology Mutual Fund Schemes	Schemes Return	Pearson Correlation	1	0.921[**]
		p-value		0.000
Benchmark Index	S&P BSE Teck Return	Pearson Correl ation	0.921[**]	1
		p-value	0.000	
Banking & Financial Mutual Fund Schemes	Fund Return	Pearson Correlation	1	0.796**
		p-value		0.000
Benchmark Index	S&P BSE Bankex Return	Pearson Correlation	0.796**	1
		p-value	0.000	
** Correlation is significant at the 0.05 level (2-tailed)				

Table 11 represents the Coefficient of Correlation for S & P BSE 100 return fund and return for Infrastructure schemes has come out to be 0.874, Correlation between Technology Sector Schemes and S&P BSE Teck return is 0.921 & Correlation between Banking & Financial Mutual Fund Schemes and S&P BSE Bankex return has come out to be 0.796, which is significant at 0.05 level with p-value 0.000, hence there is a significant positive relation between benchmark return and returns of sectoral mutual fund schemes return.

Findings of the Study:

- It has been found that all the sectoral schemes have performed well than their respective benchmark return.

- In respect of the Infrastructure Sector, Sundaram Infra Advantage Fund–G has obtained the first rank as per all the measurement models used.

- In Technology Sector, it implies that ICICI Prudential has obtained the first rank overall.

- TATA Banking & Financial Service Fund in the banking sector has secured the first rank under Sharpe, Treynor & Jensen measures.

- Kendall's Coefficient of Concordance has indicated that the ranking provided by all the measures essentially apply the same standard in evaluating the performance of mutual fund schemes.

- It has been noted that Sundram Infra Advantage Fund, Aditya Birla SL Infrastructure Fund & L&T Infrastructure Fund, all Technology sector schemes, and Banking Sector Schemes except Sundaram Fin Serv Opp Fund have generated excess returns than their respective benchmark index return.

- Karl Pearson's Correlation result indicated that there is a positive significant relation between selected sector mutual fund schemes return for their benchmark return.

CONCLUSION

The present study has been conducted by taking three sectors and a few mutual funds schemes in each sector. Further studies can be conducted for a longer duration on a larger sample comprising other sectors and the larger number of mutual funds from all the chosen sectors.

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