

## **PERFORMANCE EVALUATION OF SELECTED EQUITY MUTUAL FUND SCHEMES IN INDIA**

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### **ABSTRACT**

Mutual fund gives opportunity to investors to make combined investment of money along with a group of investors which is managed by professional managers of investment. Investment is done in securities like stocks, bonds, money market instruments and other assets. Mutual funds are categorized into various categories like money market funds, equity funds, dividend funds, balanced funds, dividend funds etc. Any investment involves risk and return factors by analyzing such factors, one can choose the best investment policy and scheme which can minimize risk i.e, loss of investment and maximize the returns on their investment. For such analysis, evaluation of schemes based on their performance is required. In this context, risk analysis and return analysis of schemes of mutual fund can be made so as to choose the best out of them. This project involves performance evaluation of mutual fund schemes in equity funds. For the evaluation of performance using analysis, techniques like standard deviation method (SD), NAV, SHARPE ratio and BETA values have been used. Interpretation is made by using the same and best scheme is chosen accordingly. This study helps us know how to compare different schemes in mutual fund and which scheme to be chosen by us while investing. Investing in mutual fund or any other involves risk as the future results are uncertain so, evaluation of performance of any selected mutual fund schemes helps us in minimizing the risk.

Key words: Mutual Funds, NAC and Sharpe Ratio

### **1. INTRODUCTION:**

A Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is invested by the fund manager in different types of securities depending upon the objective of the scheme. These could range from shares to debentures to money market instruments. The income earned through these investments and the capital appreciations realized by the scheme are shared by its unit holders in proportion to the number of units owned by them (pro rata). Thus a Mutual Fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed portfolio at a relatively low cost. Anybody with an investible surplus of as little as a few thousand rupees can invest in Mutual Funds. Each Mutual Fund scheme has a defined investment objective and strategy.

Mutual Funds now represent perhaps most appropriate investment opportunity for most investors. As financial markets become more sophisticated and complex, investors need a financial intermediary who provides the required knowledge and professional expertise on successful investing. As the investor always try to maximize the returns and minimize the risk. Mutual fund satisfies these requirements by providing attractive returns with affordable risks.

The basic purpose of the study is to give broad idea on Mutual Funds and analyze various schemes to highlight the diversified investment that Mutual Fund offers to its investors. Through this study one can understand how to invest in Mutual Funds and turn the raw investment into ripen fruits by taking wise decisions, taking the risk factors into account.

Development of infrastructure, increase of financial assets and foreign participation had shown affect on growth of Mutual fund industry. Indian mutual fund industry is a growing sector in financial markets of India. The industry is providing quality products from many years. Mutual fund schemes can be categorized into various funds like the following: Open ended funds, equity funds, balanced funds, money market funds, dividend funds etc.

Following are few of the companies in mutual fund industry:

- ICICI prudential mutual fund
- SBI mutual fund
- Reliance mutual fund
- Axis mutual Fund
- HDFC mutual fund
- TATA mutual fund
- L&T mutual fund
- Baroda mutual fund
- KOTAK mutual fund
- Aditya Birla Sun Life mutual fund
- DSP Blackrock mutual fund
- Quant mutual fund

## **2. LITERATURE REVIEW:**

**Dr. Shantanu Mehta (2012)** in the study, 'Preference of investors for Indian mutual funds and its performance evaluation', the researcher has suggested that investor can plan on mutual fund of diversified schemes like one on equity funds, one on balanced type and third on other vis.vsa. So that, the money will be diversified, risk is reduced and the investor will get excellent profit. And he also suggested not to rely only on NAV for evaluation of schemes and to consider values of standard deviation, Sharpe ratio, Beta, correlation and such values.

**P. Satish and k. Sakthi Srinivasan (2015)** in their study entitled '*Performance evaluation of selected open Ended Mutual Fund Schemes In India: An empirical study*', the researcher has suggested that investors should analyze mutual funds in terms of fund performance before they go for an investment decision.

**Mamta and Satish Chandra (2017)** In their study, 'Performance Evaluation Of Mutual Funds: A study of selected equity diversified mutual funds in India', they have stated that when the performance of mutual funds in terms of average return is considered, 30 percent of the diversified fund schemes have shown higher and superior returns and remaining have shown inferior returns.

**Dr. Madhumathi and Sharad (2018)** in the study, '*Characteristics and performance evaluation of selected mutual funds in India*', has made a statement that, "there is no statistical difference between public sector sponsored, private-sector Indian sponsored and Private-sector foreign sponsored mutual funds in terms of mean return percentage.

## **3. OBJECTIVES OF THE STUDY:**

1. To study the performance of selected mutual fund schemes in mutual fund industry
2. To analyze the performance of selected mutual fund schemes with benchmark.

## **4. RESEARCH METHODOLOGY:**

**Research design:** To evaluate the performance of mutual fund schemes, few of the schemes have been selected randomly and their respective data regarding NAV are obtained from websites.

**Research Process:** This is the process of conducting entire research in such away to solve the research problem. It includes identification of problem conducting the research and interpretation of the data and reporting.

**Data collection:** The objective of the present study can be accomplished by conducting a systematic research to know the effect of Mutual Fund Schemes on the Business.

**Secondary data:** Secondary data is taken from Websites, Yahoo Finance, Text books

**Data Collection:** The work done is totally based on secondary data which has been collected from websites, previous research papers and thesis.

**TOOLS USED:**

1. **Sharpe ratio:**

The Sharpe ratio measures the performance of an investment compared to a risk-free asset, after adjusting for its risk. It is defined as the difference between the returns of the investment and the risk-free return, divided by the standard deviation of the investment.

$$S_a = \frac{E[R_a - R_b]}{\sigma_a}$$

$S_a$  = Sharpe ratio

$E$  = expected value

$R_a$  = asset return

$R_b$  = risk free return

$\sigma_a$  = standard deviation of the asset excess return

**Standard Deviation**

The standard deviation is calculated as the square root of variance by determining each data point's deviation relative to the mean. If the data points are further from the mean, there is a higher deviation within the data set; thus, the more spread out the data, the higher the standard deviation.

$\sigma$  = population standard deviation

$N$  = the size of the population

$x_i$  = each value from the population

$\mu$  = the population mean

$$\sigma = \sqrt{\frac{\sum(x_i - \mu)^2}{N}}$$

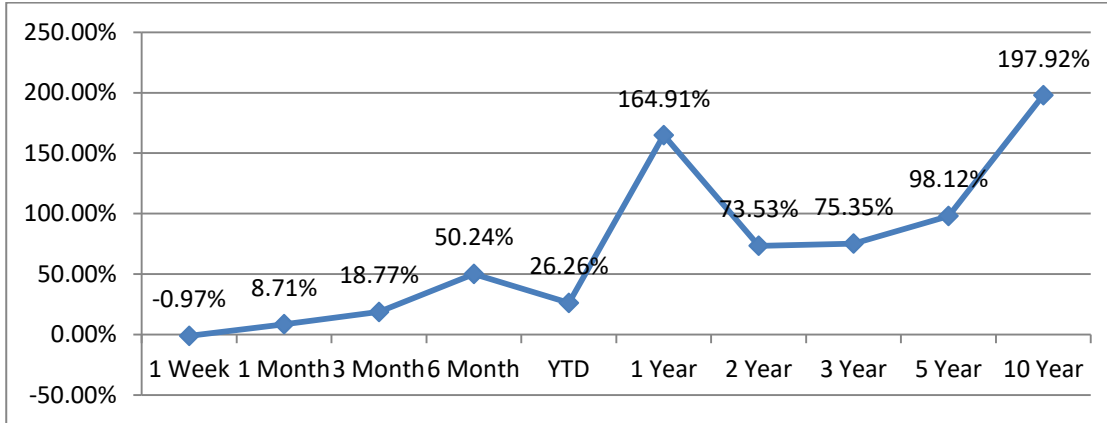
**DATA ANALYSIS: Quant Small Cap Fund(G)**

Fund Details(quant Small Cap Fund) The primary investment objective of the scheme is to seek to generate capital appreciation & provide long-term growth opportunities by investing in a portfolio of Small Cap companies. ... Small Cap Fund - An open ended equity scheme predominantly investing in small cap stocks.

**Table-1 : Performance of Quant Small Cap Fund(G) As of 16/04/2021**

Period Invested for	₹10000 Invested on	Latest Value	Absolute Returns	Annualised Returns	Category Avg	Rank within Category
1 Week	09-Apr-21	9903.50	-0.97%	-	-3.36%	20/40
1 Month	16-Mar-21	10871.20	8.71%	-	-1.15%	27/41
3 Month	15-Jan-21	11876.60	18.77%	-	10.76%	18/41
6 Month	16-Oct-20	15023.50	50.24%	-	40.02%	18/40
YTD	01-Jan-21	12626.30	26.26%	-	14.44%	15/41
1 Year	16-Apr-20	26491.30	164.91%	164.91%	90.25%	6/40
2 Year	16-Apr-19	17353.40	73.53%	31.68%	15.91%	20/37
3 Year	16-Apr-18	17534.80	75.35%	20.57%	4.81%	17/27

5 Year	13-Apr-16	19812.20	98.12%	14.62%	13.73%	13/17
10 Year	15-Apr-11	29792.30	197.92%	11.52%	13.06%	12/14
Since Inception	30-Oct-96	100829.10	908.29%	9.90%	12.47%	26/39



**SIP Returns (NAV as on 16th April, 2021)**

Period Invested for	₹1000 SIP Started on	Investments	Latest Value	Absolute Returns	Annualised Returns
1 Year	16-Apr-20	12000	20488.83	70.74 %	152.6 %
2 Year	16-Apr-19	24000	46520.62	93.84 %	78.98 %
3 Year	16-Apr-18	36000	67679.45	88 %	45.59 %
5 Year	13-Apr-16	60000	111799.55	86.33 %	25.16 %
10 Year	15-Apr-11	120000	262038.39	118.37 %	14.92 %

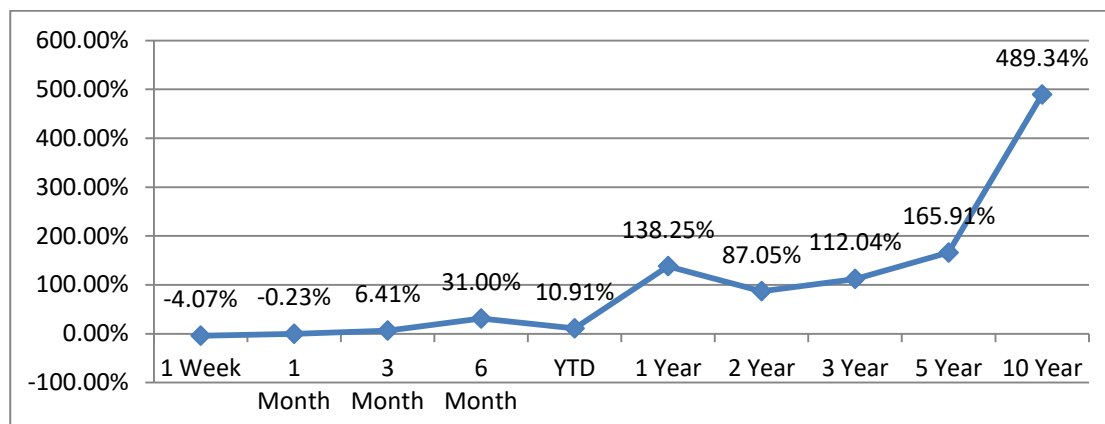
**ICICI Pru Technology Fund(G)**

By **investing** in this **fund**, the investors will get a diversified portfolio of stocks of companies in the **technology** sector. However, on the flip side, the risk of concentration is on the higher side as the asset allocation is made only towards the **technology** sector.

**Table-2 : Performance of ICICI Pru Technology Fund(G) As of 16/04/2021**

Period Invested for	₹10000 Invested on	Latest Value	Absolute Returns	Annualised Returns	Category Avg	Rank within Category
1 Week	09-Apr-21	9593.30	-4.07%	-	-1.54%	117/118
1 Month	16-Mar-21	9976.60	-0.23%	-	-0.40%	51/121
3 Month	15-Jan-21	10640.60	6.41%	-	5.13%	44/121
6 Month	16-Oct-20	13100.40	31.00%	-	31.43%	58/114
YTD	01-Jan-21	11090.80	10.91%	-	9.33%	42/121
1 Year	16-Apr-20	23825.10	138.25%	138.25%	61.59%	3/113
2 Year	16-Apr-19	18704.80	87.05%	36.71%	14.62%	3/104
3 Year	16-Apr-18	21203.80	112.04%	28.44%	9.62%	2/88
5 Year	13-Apr-16	26591.30	165.91%	21.55%	13.16%	3/86

10 Year	15-Apr-11	58934.50	489.34%	19.39%	10.94%	2/68
Since Inception	03-Mar-00	110620.00	1006.20%	12.04%	13.39%	74/133



**SIP Returns (NAV as on 16th April, 2021)**

Period Invested for	₹1000 SIP Started on	Investments	Latest Value	Absolute Returns	Annualised Returns
1 Year	16-Apr-20	12000	18326.16	52.72 %	110.24 %
2 Year	16-Apr-19	24000	41344.9	72.27 %	62.44 %
3 Year	16-Apr-18	36000	64486.94	79.13 %	41.75 %
5 Year	13-Apr-16	60000	128516.88	114.19 %	31.02 %
10 Year	15-Apr-11	120000	398713.29	232.26 %	22.7 %

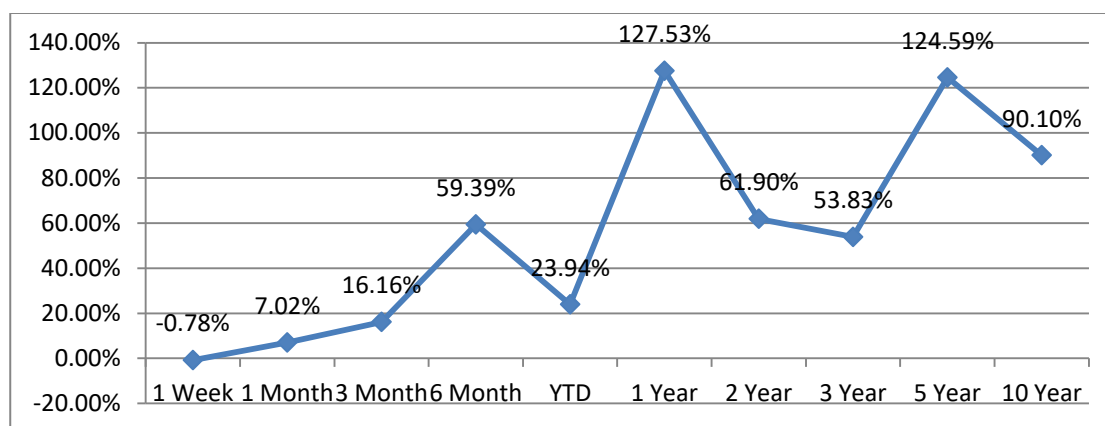
**QUANT INFRASTRUCTURE FUND**

Investors who have advanced knowledge of macro trends and prefer to take selective bets for higher returns compared to other Equity funds. At the same time, these investors should also be ready for possibility of moderate to high losses in their investments even though overall market is performing better.

**Table-3 : Performance of Quant Infrastructure Fund As of 16/04/2021**

Period Invested for	₹10000 Invested on	Latest Value	Absolute Returns	Annualised Returns	Category Avg	Rank within Category
1 Week	09-Apr-21	9922.50	-0.78%	-	-1.54%	20/118
1 Month	16-Mar-21	10702.40	7.02%	-	-0.40%	14/121
3 Month	15-Jan-21	11615.60	16.16%	-	5.13%	4/121
6 Month	16-Oct-20	15939.40	59.39%	-	31.43%	3/114
YTD	01-Jan-21	12394.20	23.94%	-	9.33%	2/121
1 Year	16-Apr-20	22752.70	127.53%	127.53%	61.59%	4/113
2 Year	16-Apr-19	16189.60	61.90%	27.20%	14.62%	16/104
3 Year	16-Apr-18	15382.60	53.83%	15.42%	9.62%	16/88
5 Year	13-Apr-16	22459.10	124.59%	17.52%	13.16%	15/86
10 Year	15-Apr-11	19010.40	90.10%	6.63%	10.94%	58/68
Since	21-Sep-07	13709.30	37.09%	2.35%	13.39%	127/133

Inception						
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**SIP Returns (NAV as on 16th April, 2021)**

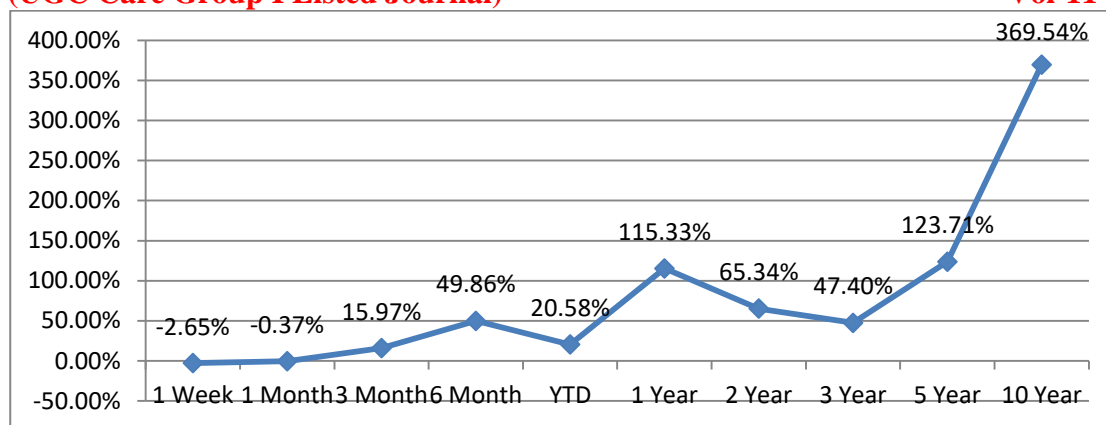
Period Invested for	₹1000 SIP Started on	Investments	Latest Value	Absolute Returns	Annualised Returns
1 Year	16-Apr-20	12000	19681.07	64.01 %	136.54 %
2 Year	16-Apr-19	24000	40318.3	67.99 %	59.06 %
3 Year	16-Apr-18	36000	60840.58	69 %	37.21 %
5 Year	13-Apr-16	60000	106419.77	77.37 %	23.11 %
10 Year	15-Apr-11	120000	265476.09	121.23 %	15.17 %

**KOTAK SMALL CAP FUND**

Investors who are looking to invest money for at least 3-4 years and looking for very high returns. At the same time, these investors should also be ready for possibility of higher losses in their investments.

**Table-3 : Performance of Kotak Small Cap Fund As of 16/04/2021**

Period Invested for	₹10000 Invested on	Latest Value	Absolute Returns	Annualised Returns	Category Avg	Rank within Category
1 Week	09-Apr-21	9734.80	-2.65%	-	-3.36%	12/40
1 Month	16-Mar-21	9963.20	-0.37%	-	-1.15%	12/41
3 Month	15-Jan-21	11596.60	15.97%	-	10.76%	2/41
6 Month	16-Oct-20	14985.60	49.86%	-	40.02%	2/40
YTD	01-Jan-21	12057.90	20.58%	-	14.44%	2/41
1 Year	16-Apr-20	21533.00	115.33%	115.33%	90.25%	2/40
2 Year	16-Apr-19	16534.00	65.34%	28.54%	15.91%	3/37
3 Year	16-Apr-18	14740.40	47.40%	13.79%	4.81%	3/27
5 Year	13-Apr-16	22371.30	123.71%	17.43%	13.73%	3/17
10 Year	15-Apr-11	46954.00	369.54%	16.71%	13.06%	3/14
Since Inception	24-Feb-05	117838.80	1078.39%	16.50%	12.47%	11/39



**SIP Returns (NAV as on 16th April, 2021)**

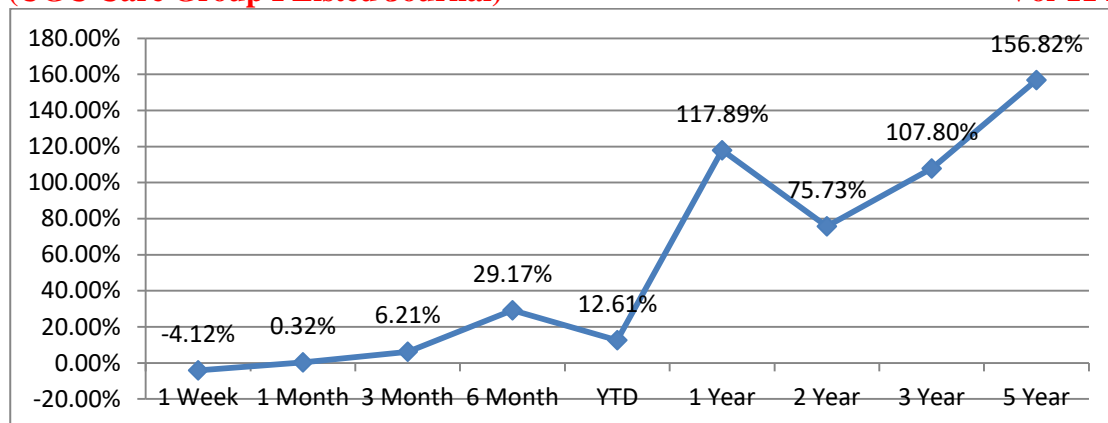
Period Invested for	₹1000 SIP Started on	Investments	Latest Value	Absolute Returns	Annualised Returns
1 Year	16-Apr-20	12000	18561.68	54.68 %	114.75 %
2 Year	16-Apr-19	24000	39098	62.91 %	55 %
3 Year	16-Apr-18	36000	59017.92	63.94 %	34.87 %
5 Year	13-Apr-16	60000	101830.81	69.72 %	21.28 %
10 Year	15-Apr-11	120000	333456.22	177.88 %	19.4 %

**Tata Digital India Fund**

Investors who have advanced knowledge of macro trends and prefer to take selective bets for higher returns compared to other Equity funds. At the same time, these investors should also be ready for possibility of moderate to high losses in their investments even though overall market is performing better.

**Table-5 : Performance of Tata Digital India Fund As of 16/04/2021**

Period Invested for	₹10000 Invested on	Latest Value	Absolute Returns	Annualised Returns	Category Avg	Rank within Category
1 Week	09-Apr-21	9588.30	-4.12%	-	-1.54%	118/118
1 Month	16-Mar-21	10031.90	0.32%	-	-0.40%	44/121
3 Month	15-Jan-21	10620.90	6.21%	-	5.13%	46/121
6 Month	16-Oct-20	12916.90	29.17%	-	31.43%	60/114
YTD	01-Jan-21	11261.40	12.61%	-	9.33%	33/121
1 Year	16-Apr-20	21789.10	117.89%	117.89%	61.59%	5/113
2 Year	16-Apr-19	17573.40	75.73%	32.51%	14.62%	7/104
3 Year	16-Apr-18	20780.20	107.80%	27.58%	9.62%	3/88
5 Year	13-Apr-16	25681.70	156.82%	20.71%	13.16%	4/86
Since Inception	28-Dec-15	26478.60	164.79%	20.15%	13.39%	18/133



**SIP Returns (NAV as on 16th April, 2021)**

Period Invested for	₹1000 SIP Started on	Investments	Latest Value	Absolute Returns	Annualised Returns
1 Year	16-Apr-20	12000	17668.52	47.24 %	97.77 %
2 Year	16-Apr-19	24000	39023.62	62.6 %	54.76 %
3 Year	16-Apr-18	36000	61097.91	69.72 %	37.54 %
5 Year	13-Apr-16	60000	125226.01	108.71 %	29.92 %

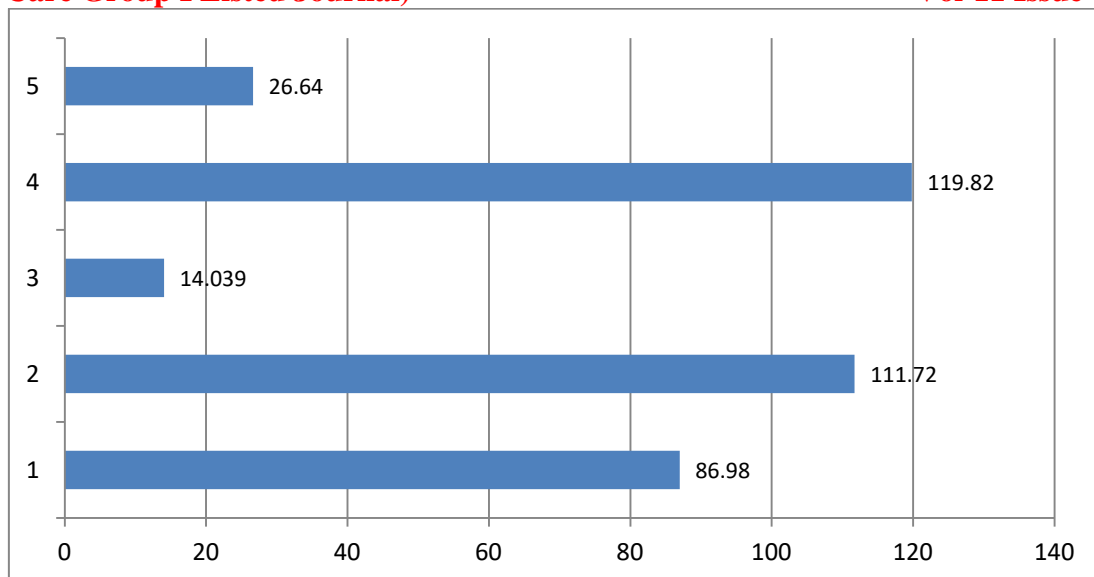
**DATA ANALYSIS:**

**Table 6 : Standard deviation and Sharpe Ratio**

Scheme	NAV As on 07-04-2021	SD	Sharpe
Quant small cap fund	86.98	30.17	0.56
ICICI Prudential Technology Fund	111.72	22.91	1.08
Quant Infrastructure fund	14.039	27.65	0.52
Kotak small cap fund	119.82	29.12	0.55
Tata Digital India Fund	26.64	23.11	1.10

*Source: Computed from secondary data collected from funds India and mutual fund India website.*





**NAV:**

The Net Asset Value (NAV) is the funds per share market value. It is the price by which an investor buys or sells fund in market place. NAV helps us analyze the number of units that can be returned on an investment. The lesser the NAV of funds, it returns the more number of units.

In the above graph:

- In equity funds, Tata Digital India Fund has lesser NAV (26.64) i.e it provides more number of units in return.
- Whereas, Quant Infrastructure fund has higher NAV (119.82) i.e, it provides less number of units in return.

**a) Sharpe value:**

The Sharpe ratio is used for evaluating risk adjusted performance of mutual fund. It tells the investor about the extra return the investor will receive on holding a risky asset.

It helps the investor to know about funds that can earn better returns when the risk taken is high. The higher the ratio the higher are the returns and risk of the investment.

In the above equity funds, Tata digital India Fund has higher Sharpe value (1.10) and Quant Infrastructure fund has lesser Sharpe value (0.52).

**Table 7 : Performance of Selected Mutual Funds**

Fund name	1W	1M	3M	6M	1Y	3Y	5Y	Since inception
Quant Small Cap Fund	5.35	5.53	18.15	41.94	182.63	19.15	13.98	9.80
ICICI Prudential Technology Fund	4.52	5.99	8.38	34.74	154.73	29.92	21.87	12.11
Quant Infrastructure Fund	4.23	6.16	16.96	51.52	142.77	14.52	17.45	2.54
Kotak Small Cap Fund	1.81	0.61	17.29	48.18	133.85	14.24	18.33	16.65

Tata Digital India Fund	4.83	6.45	9.36	33.26	129.89	29.36	20.84	20.41
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From the above table it can be depicted that the performance of Mutual Fund of *Tata Digital India* has gained *highest performance* i.e., 20.84% growth during the last 5 years, whereas the performance of mutual fund of *Quant Small Cap Fund* has *least growth* i.e., 13.98 during the last 5 years.

### **FINDINGS**

- Mutual fund sector plays significant role in financial market.
- Mutual fund's assist promoters & entrepreneurs to rise capital and it assist investors to get higher returns.
- Mutual fund's are the fastest growing sector in India and it has huge opportunities in India.
- It promotes savings.
- It also contributes to economic growth of the country, by rising finance.
- Economical, social, environmental, technological. Natural, political, geo graphical factors can affect the share markets and mutual funds.
- Equity mf gave higher returns than debt, hybrid schemes.

### **SUGGESTIONS:**

- Only NAV value of any fund do not provide us much analysis while investing in any fund scheme. So, it is better for any investor to consider Sharpe, Beta and any such like values while making an investment decision. Since NAV only gives information about number of units that can be returned but no returns on investment.
- It is better to make both risk and return analysis of fund schemes instead of only one analysis. This help investor in making profitable decision while investing in any funds.
- It is good for any investor to make investment in different categories of mutual fund instead of only one segment. This helps the investor in minimizing the risk as funds are diversified among different categories of mutual fund.
- Analyzing and evaluating assets before investing in them helps investor in minimizing risk and having better profits on their investment.
- After carefully observation by data analysis I suggesting that investing in mutual funds is very profitable
- All five mutual funds companies are very good but fluctuations in stock market are common. Hence, fluctuations in mutual funds are also common.
- Basing on my analysis I suggesting that investing in ICICI mutual funds very profitable that too in close ended funds
- Investing in close ended schemes is wise option, if investing in close ended scheme not possible than go to open ended scheme is better.

### **Other Suggestions:**

- Mutual funds gave higher returns so it is better to invest in mf rather than chits& banks.
- If government introduces mutual funds in 10<sup>th</sup> class so that all students can easily understand & invest in mf it will help to increasing financial resources.
- If government & media create awareness among people especially in rural areas, it helps to increasing financial resources and people can improve their savings.
- Investing in mutual funds is wise option for 1<sup>st</sup> time investor, students, people who does not have awareness on share market.
- Investing in best schemes assist in getting higher returns so investors can invest in best schemes

### **CONCLUSION:**

This study evaluates random fund schemes that have been selected from different company mutual funds. It analyzes and evaluates the selected fund schemes on the basis of their risk and return factors. Risk analysis and return analysis have been made separately both on equity funds and debt funds and interpretation is done on them accordingly. Tools like standard deviation, NAV, Sharpe and Beta values have been used to make risk analysis on the selected fund schemes. Past 1 year return values have been considered and analysis is made on returns over those selected funds. It is also seen that investing in only one category can have higher risk. From the selected schemes, it is observed that Tata Digital India Fund of equity funds has shown more returns and it also has higher risk when seen by Sharpe value. But, Quant fund is observed to have less risk. This indicates an investor not to consider only one parameter while assessing any fund scheme and making an investment decision.

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