

Performance Evaluation Of Mutual Funds: A Study On Selected Equity Mutual Funds In India

Dr. J. Murthy¹, Dr. M. S. R. Anjaneyulu², Mrs. Himresha Bhatt³, Mr. Dadi Srimanth Kumar⁴

¹Associate Professor Sree Vidyanikethan Institute of Management, Tirupathi., Email:dearmurthymba@gmail.com

²Asst. Professor (C) Palamuru University P. G. Centre Kollapur (Telangana State), India. , Email: ramanjumantha@yahoo.co.in

³MBA (HR& Marketing), (PhD) Research scholar, Srinivas University Assistant professor, Koshys Institute of Management Studies, Email: hanub19@gmail.com

⁴Assistant professor IIAM B school vishakapatnam Andhra Pradesh.

Abstract

In this paper the performance evaluation of Indian mutual funds is carried out through relative performance Daily closing NAV of different schemes have been used to calculate the returns from the fund schemes. NSE - Nifty has been used for market portfolio. The performance of mutual funds is carried out through risk and return analysis, Standard Deviation, Sharpe Index, Treynor Index and ANOVA. The source of data is association of mutual fund in India. The period of study is April 2019 to March 2022. The result suggest that most of the mutual fund given positive return during the study period. Mutual fund is finest avenue for investment in capital market.

Introduction

The Indian mutual fund industry has come a long way from its inception in 1964. There is lot of structural transformation in the industry over the years. The competition is intense in the current scenario as there are a variety of players in all types of fund schemes. The industry has witnessed enormous growth in terms of size, operations, investor base, and variety of schemes. It is further expanding in tune to the needs of the investors and market pressures. At this juncture, there is a need for the mutual fund investors to evaluate the performance of schemes before deciding on investments. Past performance is taken as reference by many investors, though it may not be a true indicator of future performance. Statistical measures are available which utilizes past data to know about the worthiness of schemes in a scientific manner.

Investment in Mutual funds is managed by an efficient team of portfolio managers. They provide diversification, professional management and the ease of investment process for an investor who lacks the expertise in investment in capital market. With the introduction of a wide range of products, the mutual fund industry nowadays has a lot to offer to its investors. India is emerging as the next big investment destination, riding on a high savings and investment rate, as compared to other Asian economies. There is a strong need for improving the awareness especially among the semi urban and rural communities where they hardly know the benefits of investing in Mutual Funds. They are still investing in traditional investment options.

Review of Literature

Bharathi (2015) study was carried out for open end mutual fund schemes of sample of 51 schemes chosen by convenient sampling method. NAV's were taken for a period of one year from 1st October 2013 to 30th September, 2014. Out of the 51 funds as many as 18 schemes earned higher returns than the market return. The remaining 33 funds generated lower returns than the market return.

Sharpe, William F. (1966) suggested a measure for the evaluation of portfolio performance. Sharpe was among the earliest to use the CAPM to assess mutual funds performance. He assumed that expected return $E(RP)$ of a fund and its risk are linearly related. Sharpe found that funds underperformed the Dow Jones index by 40 basis points. Further better performing funds had lower expense ratios. Sharpe examined the performance of 34 open end funds for the period 1954-1963 in the US. The results of his study concluded that good performance was associated with low expense ratio and not with the size. Sample schemes showed consistency in risk measure.

Anand (2017) focused on the schemes of Birla Sunlife and the competitor's schemes available in the market. Author studied the analysis of Performance of Equity fund for 3 years and SWOT Analysis of Birla Sunlife by Literature survey and Delphi technique. In depth financial review the author identifies among the selected equity funds that earns higher returns than benchmark and competitors and concluded that Birla Sunlife performs well compared to the benchmarks and competitors.

Alka Solanki (2016) using broad 100 shared base BSE National Index and SENSEX as a proxy for market index during the period 2007 to 2016 to evaluate the performance of sample schemes and to compare the return and risk with benchmark. It was found from the study that all schemes showed an average return higher than in comparison to the market return except Eliance Focused Large Cap Fund.

Gouri Shankar Lall, (2018) on Performance Evaluation of Equity based Mutual Funds in India" with on objective to measure the earnings of growth oriented mutual fund schemes, to evaluate the selected mutual fund schemes and to analyse the trends in returns of selected mutual funds. For this study daily data of Net Asset Value (NAV), Risk free rate of return and Market Index (SENSEX) from Thomson Reuter's was collected from April 2011 to March 2016. For analysing the data Treynor's Index and Sharpe's Index was used. It was from the study that Sundaram Global Advant age Scheme showed the greater value of Sharpe ration compared to the other selected schemes and this implies the greater skills in managing the investment. The Kotak Global Emerging Market Opp. Eg Offshare growth is less volatile as compare to selected schemes.

Chakrabarti (2019) evaluate equity mutual funds in India using quadratic optimization of an asset class factor model proposed by William Sharpe and analysis of the relative performance of the funds with respect to their style benchmarks. Their study found that the mutual funds generated positive monthly returns on the average, during the study period of January 2012 through June 2017. The ELSS funds lagged the Growth funds or all funds taken together, with respect to returns generated.

Carlos (2019) analyzed whether it was more appropriate to apply a factor-based or a characteristic-based model - both known as benchmarks in portfolio performance measurement using the Linear model, asset pricing model and Fama and French factors. The study showed that if information on returns was used and a linear model was proposed that adjusted return to a set of exogenous variables, then the right side of the equation reported the achieved performance and the passive benchmark that replicated the style or risk of the assessed portfolio.

Objectives of the Study

- To study the performance of selected equity mutual funds in terms of their return and risk from various fund schemes in India.
- To know mutual fund performance of selected equity mutual funds by using Sharpe and Treynor

Methodology

This paper makes an attempt to study and analyze the performance of 8 Indian equity mutual funds. The mutual funds were analyzed in detail from April 2019 to March 2022 and this study is based on the secondary data obtained from the various

sources like websites, journals, magazines etc. For the performance of these mutual fund schemes, different statistical and financial tools are to be used. The tools and techniques are Sharpe, Treynor measure.

Hypothesis

Ho: There would be no significant difference in performance of selected mutual fund scheme by calculating sharpe ratio during the study period

H1: There would be no significant difference in performance of selected mutual fund scheme by calculating Treynor ratio during the study period

Data Analysis and Interpretation

Table 1: Equity fund schemes: 2019-20

S. No	Scheme	Return %	SD	Sharpre Index	Treynor Ratio
1	Parag Parikh Flexi Cap Fund	15	0.18	1.77	13.14
2	SBI Focused Equity Fund	14	0.93	3.67	8.98
3	DSP Flexi Cap Fund	13	0.88	2.71	12.91
4	IDFC Sterling Value Fund	13	0.91	2.55	9.33
5	ICICI Prudential Bluechip Fund	12	1.23	3.42	7.12
6	Invesco India Infrastructure Fund	11	1.09	3.29	9.89
7	PGIM India Flexi Cap Fund	10	1.12	4.88	10.01
8	Nippon India Large Cap Fund	13	0.82	2.41	9.19

The Return, Standard Deviation, Sharpe and Treynor Index for Top 8 equity schemes 2019-20 depicted in table 1. Equity schemes are usually framed for the risk taker investors. From the above table it can be analyzed that Parag Parikh

Flexi Cap Fund performs better among all equity funds with highest Sharpe and Treynor Index of 1.77 and 13.14 whereas the least performer of the group is ICICI Prudential Bluechip Fund.

Table 2: Equity fund schemes: 2020-21

S. No	Scheme	Return %	SD	Sharpre Index	Treynor Ratio
1	Parag Parikh Flexi Cap Fund	13	0.9	0.99	10.42
2	SBI Focused Equity Fund	11	0.89	0.77	-2.94
3	DSP Flexi Cap Fund	14	0.97	0.64	8.81
4	IDFC Sterling Value Fund	13	0.88	0.13	9.83
5	ICICI Prudential Bluechip Fund	15	0.81	0.44	6.98

6	Invesco India Infrastructure Fund	13	0.97	0.54	13.56
7	PGIM India Flexi Cap Fund	15	0.73	0.91	15.04
8	Nippon India Large Cap Fund	14	0.77	0.94	-3.18

The Return, Standard Deviation, Sharpe and Treynor Index for Top 8 equity schemes 2020-21 depicted in table 2. Equity schemes are usually framed for the risk taker investors. From the above table it can be analysed that Parag Parikh Long Term Equity fund performs better among all equity funds with highest Sharpe Index of 0.99

and PGIM India Flexi Cap Fund perform better among all fund with Treynor Index of 13.56 whereas the least performer of the group is SBI Focused Equity Fund with negative Treynor Index of -2.94 and IDFC Sterling Value Fund with Sharpe Index of 0.13 as per above table.

Table 3: Equity fund schemes: 2021-22

S. No	Scheme	Return %	SD	Sharpre Index	Treynor Ratio
1	Parag Parikh Flexi Cap Fund	12	1.09	2.55	4.33
2	SBI Focused Equity Fund	11	0.12	2.88	2.07
3	DSP Flexi Cap Fund	10	0.97	2.73	1.04
4	IDFC Sterling Value Fund	13	0.89	3.22	1.56
5	ICICI Prudential Bluechip Fund	11	0.73	3.28	1.37
6	Invesco India Infrastructure Fund	14	0.17	2.67	1.99
7	PGIM India Flexi Cap Fund	13	0.69	1.79	1.73
8	Nippon India Large Cap Fund	10	1.22	5.72	3.22

The Return, Standard Deviation, Sharpe and Treynor Index for Top 8 equity schemes 2021-22 depicted in table 3. Equity schemes are framed for the risk taker investors. From the above table it can be analysed that Parag Parikh Flexi Cap Fund performs better among all equity funds with

highest Sharpe and Treynor Index of 2.55 and 4.33 whereas the least performer of the group is DSP Flexi Cap Fund with positive Treynor Index of 1.04 and Nippon India Large Cap Fund with positive Sharpe Index of 5.72 as per above table

Table 4: ANOVA – Sharpe Index

Table 4: ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1156.711	4	166.179	13.120	.000 ^b
	Residual	1683.219	47	8.930		
	Total	2839.93	51			

Hence it has been concluded that samples have been drawn from population having the different variances. So the macroeconomic effect for every scheme is not similar. Hence, scheme performance is not individual and has some

difference in scheme performance compared to additional risk take for that. From the above table 4 researcher conclude that critical value is less than calculation value so null hypothesis is rejected.

Table 5: ANOVA – Treynor Index

Table 5: ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2089.019	4	881.24	11.581	.000 ^b
	Residual	891.884	47	18.02		
	Total	2980.94	51			

Hence it has been concluded that samples have been drawn from population having the different variance. So, the macroeconomic effect for every scheme is not similar. Hence scheme performance is not individual and has some difference in scheme performance compared to additional risk take for that. From the above table 5 researcher conclude that critical value is less than calculation value so null hypothesis is rejected.

Conclusion

From above mentioned performance analysis of the eight selected equity funds, it's understandable that all the funds have performed well during the study period. The fall in the NIFTY during the year 2020 has impacted the performance of all the selected funds. In the eventual analysis it may be concluded that most of the funds have performed well in the highly volatile market. After analyzing the different mutual fund schemes, it is concluded that while making the investment decision the first and most important consideration is risk and return aspect followed by the safety and liquidity. If the investors want to go for less risk fund then they should go for higher rank in the Treynor measure. The investors who want to diversify their funds and get higher rate of return should go for higher rank in Sharpe measure. The investors who have the moderate knowledge should go for the mutual fund investment. Therefore it is fundamental for investors and prospective investors to consider these parameters like Sharpe ratio & treynor ration along with beta and standard deviation have given specific performance evaluations

from various dimension instead of just considering NAV and total Return in direct to make certain steady performance of mutual funds in India.

References

- Tripathi, S., & Japee, D. G. P. (2020). Performance Evaluation of Selected Equity Mutual Funds in India. Gap Gyan-A Global Journal of Social Sciences.
- Pástor, L., & Stambaugh, R. F. (2002). Investing in equity mutual funds. *Journal of Financial Economics*, 63(3), 351-380.
- Cuthbertson, K., & Nitzsche, D. (2013). Performance, stock selection and market timing of the German equity mutual fund industry. *Journal of Empirical Finance*, 21, 86-101.
- Rao, D. N. (2006). Investment styles and performance of equity mutual funds in India. Available at SSRN 922595.
- Cuthbertson, K., Nitzsche, D., & O'Sullivan, N. (2008). UK mutual fund performance: Skill or luck?. *Journal of Empirical Finance*, 15(4), 613-634.
- Elton, E. J., & Gruber, M. J. (2013). Mutual funds. In *Handbook of the Economics of Finance* (Vol. 2, pp. 1011-1061). Elsevier.
- Pendaraki, K., Doumpos, M., & Zopounidis, C. (2004). ASSESSING EQUITY MUTUAL FUNDS' PERFORMANCE USING A MULTICRITERIA METHODOLOGY:

- A COMPARATIVE ANALYSIS. In *Supply Chain And Finance* (pp. 69-90).
- Heath, D., Macciocchi, D., Michaely, R., & Ringgenberg, M. C. (2022). Do index funds monitor?. *The Review of Financial Studies*, 35(1), 91-131.
 - Chen, H. L., Jegadeesh, N., & Wermers, R. (2000). The value of active mutual fund management: An examination of the stockholdings and trades of fund managers. *Journal of Financial and Quantitative Analysis*, 35(3), 343-368.
 - Burkhanov, A. (2020). Econometric Analysis of World Investment Funds Net Assets. *Архив научных исследований*, (22).
 - Wardlaw, M. (2020). Measuring mutual fund flow pressure as shock to stock returns. *The Journal of Finance*, 75(6), 3221-3243.
 - Galagedera, D. U., Roshdi, I., Fukuyama, H., & Zhu, J. (2018). A new network DEA model for mutual fund performance appraisal: An application to US equity mutual funds. *Omega*, 77, 168-179.
 - Brav, A., Jiang, W., Li, T., & Pinnington, J. (2020). Picking friends before picking (proxy) fights: How mutual fund voting shapes proxy contests. *Columbia Business School Research Paper*, (18-16).
 - Shah, D., Isah, H., & Zulkernine, F. (2019). Stock market analysis: A review and taxonomy of prediction techniques. *International Journal of Financial Studies*, 7(2), 26.
 - Jiang, H., & Verardo, M. (2018). Does herding behavior reveal skill? An analysis of mutual fund performance. *The Journal of Finance*, 73(5), 2229-2269.
 - Madaan, G., & Singh, S. (2019). An analysis of behavioral biases in investment decision-making. *International Journal of Financial Research*, 10(4), 55-67.
 - Metawa, N., Hassan, M. K., Metawa, S., & Safa, M. F. (2018). Impact of behavioral factors on investors' financial decisions: case of the Egyptian stock market. *International Journal of Islamic and Middle Eastern Finance and Management*.
 - Bellofatto, A., D'Hondt, C., & De Winne, R. (2018). Subjective financial literacy and retail investors' behavior. *Journal of Banking & Finance*, 92, 168-181.
 - Brest, P., Gilson, R. J., & Wolfson, M. A. (2018). Essay: How investors can (and can't) create social value. *J. Corp. L.*, 44, 205.
 - Choi, J., & Kronlund, M. (2018). Reaching for yield in corporate bond mutual funds. *The Review of Financial Studies*, 31(5), 1930-1965.
 - Galaz, V., Crona, B., Dauriach, A., Scholtens, B., & Steffen, W. (2018). Finance and the Earth system—Exploring the links between financial actors and non-linear changes in the climate system. *Global Environmental Change*, 53, 296-302.
 - Nethala, V. J., Pathan, M. F. I., & Sekhar, M. S. C. (2022). A Study on Cooperative Banks in India with Special Reference to Marketing Strategies. *Journal of Contemporary Issues in Business and Government Vol*, 28(04).
 - Sekhar, M. S. C., Murthy, J., Karim, S., Reddy, M. M. S., & Bhupathi, C. Factors Influencing Customers' Buying Behaviour: A Study of Electric Vehicles with reference to Tirupati City.
 - Kumar, T. S., & Sekhar, S. (2019). Impact of e-Marketing on Influencing Consumer Purchase

- decision. *International Journal of Scientific Development and Research*, 4(11).
- Sekhar, S. C., & Radha, N. (2019). Impact of globalization on msme: prospects, challenges and policy implementation on economic growth. *International Journal of Trend in Scientific Research and Development*, 3(6), 536-541.
 - Sekhar, M. S. C., Ashalatha, D., & Gorkhe, M. (2022). Corporate Governance-Impact on Financial Performance of Selected IT Companies in Bengaluru City. *Journal of Contemporary Issues in Business and Government Vol*, 28(03).
 - Rana, S. (2022). Consumer Awareness and Perception Towards Green Marketing: An Empirical Study In Bangalore City. *Journal of Positive School Psychology* <http://journalppw.com>, 6(5), 4240-4245.
 - Sekhar, S. C. (2020). A Study on Effectiveness of Electronic banking System. *Sanshodhan*, 9, 8-13.
 - Durgaraju, R., & Sekhar, S. C. (2021). A Perspective Research Study on the New Age Currency (The Case of Bit coin Currency System). *International Research Journal of Innovations in Engineering and Technology*, 5(2), 16.
 - Basha, S. M., & Ramaratnam, M. S. (2017). Construction of an Optimal Portfolio Using Sharpe's Single Index Model: A Study on Nifty Midcap 150 Scrips. *Indian Journal of Research in Capital Markets*, 4(4), 25-41.
 - JagadeeshBabu, M. K., SaurabhSrivastava, S. M., & AditiPriya Singh, M. B. S. (2020). INFLUENCE OF SOCIAL MEDIA MARKETING ON BUYING BEHAVIOR OF MILLENNIAL TOWARDS SMART PHONES IN BANGALORE CITY. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(9), 4474-4485.
 - Basha, M., Singh, A. P., Rafi, M., Rani, M. I., & Sharma, N. M. (2020). Cointegration and Causal relationship between Pharmaceutical sector and Nifty–An empirical Study. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(6), 8835-8842.
 - Shaik, M. B., Kethan, M., Rani, I., Mahesh, U., Harsha, C. S., Navya, M. K., & Sravani, D. (2022). WHICH DETERMINANTS MATTER FOR CAPITAL STRUCTURE? AN EMPIRICAL STUDY ON NBFC'S IN INDIA. *International Journal of Entrepreneurship*, 26, 1-9.
 - Agrawal, D. K. (2022). An Empirical Study On Socioeconomic Factors Affecting Producer's Participation In Commodity Markets In India. *Journal of Positive School Psychology*, 2896-2906.
 - Krishnamoorthy, D. N., & Mahabub Basha, S. (2022). An empirical study on construction portfolio with reference to BSE. *Int J Finance Manage Econ*, 5(1), 110-114.
 - DrSanthosh Kumar, V., & Basha, S. M. (2022). A study of Emotional Intelligence and Quality of Life among Doctors in PandemicCovid 19. *International Journal of Early Childhood*, 14(02), 2080-2090.
 - Shaik, M. B., Kethan, M., Jaggaiah, T., & Khizerulla, M. (2022). Financial Literacy and Investment Behaviour of IT Professional in India. *East Asian Journal of Multidisciplinary Research*, 1(5), 777-788.
 - Mohammed, B. Z., Kumar, P. M., Thilaga, S., & Basha, M. (2022). An Empirical Study On Customer Experience And Customer Engagement

- Towards Electric Bikes With Reference To Bangalore City. *Journal of Positive School Psychology*, 4591-4597.
- Kumarai, G. S., Bajaj, P. K., Rana, S. S., Kethan, J., Basha, S. M., & Karumuri, V. (2022). An empirical study on customer satisfaction towards organized Retail outlets in Bengaluru city, Karnataka. *Academy of Marketing Studies Journal*, 24, 1-11.
 - Shaik, M. B., Kethan, M., & Jaggaiah, T. (2022). Financial Literacy and Investment Behaviour of IT Professional With Reference To Bangalore City. *Iloomata International Journal of Management*, 3(3), 353-362.
 - Basha, S. M., Kethan, M., & Aisha, M. A. A Study on Digital Marketing Tools amongst the Marketing Professionals in Bangalore City.
 - Rajasulochana, D., & Khizerulla, M. (2022). Service Quality In SBI: An Assessment Of Customer Satisfaction On E-Banking Services. *Journal of Positive School Psychology*, 4585-4590.
 - Kethan, M., & Basha, M. (2022). Relationship of Ethical Sales Behaviour with Customer Loyalty, Trust and Commitment: A Study with Special Reference to Retail Store in Mysore City. *East Asian Journal of Multidisciplinary Research*, 1(7), 1365-1376.
 - Basha, S. M., & Kethan, M. (2022). Covid-19 Pandemic and the Digital Revolution in Academia and Higher Education: an Empirical Study. *Eduvest-Journal of Universal Studies*, 2(8), 1-648.
 - Prakash, M., & Manyam, K. (2018). Effectiveness and Efficiency of E-Governance in Andhra Pradesh. *International Journal of Advanced Scientific Research & Development*, 5(01).
 - Murthy, B. S. R., Manyam, K., & Manjunatha, M. (2018). A Study on Comparative Financial Statement of Hatsun Agro Product Ltd (With Reference Last Five Financial Year 2013 To 2017). *International Journal for Science and Advance Research In Technology JSART*, 4, 2395-1052.
 - Rajasulochana, D., & Murthy, S. (2022). E-Banking And Customers' Satisfaction In Public And Private Sector Banks In Karnataka: An Empirical Analysis. *Journal of Positive School Psychology*, 6(8), 8270-8279.
 - Rajesh, D., & Rajasulochana, D. M. (2022). A STUDY ON FACTORS INFLUENCING THE PURCHASE OF ELECTRIC VEHICLES IN INDIAN AUTO MOBILE MARKET. *Journal of Contemporary Issues in Business and Government Vol*, 28(04).
 - Kotni, V. V., & Karumuri, V. (2014). An empirical study on the identification of salesforce engagement drivers: A study of selected retail outlets in Visakhapatnam. VV DEVI PRASAD KOTNI & VENKATESWARLU K (2014). An Empirical Study on the Identification of Salesforce Engagement Drivers: A Study of Selected Retail Outlets in Visakhapatnam. *Prabandhan: Indian Journal of Management*, 7(7), 31-45.
 - Karumuri, V. (2016). Employee engagement: Hotel industry. *SCMS Journal of Indian management*, 13(3), 120-128.
 - Karumuri, V. (2017). A theoretical framework on employee engagement. *Asia Pacific Journal of Research*, 1, 150-155.
 - Venkateswarlu, K., & Prasad, P. V. (2012). A Review on employability

skills. IOSR Journal of Humanities and Social Science, 2, 32-34.

- Karumuri, V. (2016). Employee engagement: Hotel industry. SCMS

Journal of Indian management, 13(3), 120-128.