

A Comparative Study Of The Performance Of Top 10 Exchange Traded Funds In India

Merlin K Joseph¹, Jency Francis²

1. Department of Commerce, St. Xavier's college, Thumba, Trivandrum

2. Department of Commerce, K E College Mannanam, Kottayam

Email : merlin22041995@gmail.com (9496740438), jencyroby@gmail.com (9495850515)

Abstract- Mutual Fund (MF) is a trust that pools money from a group of investors (sharing common financial goals) and invest the money thus collected into asset classes that match the stated investment objectives of the scheme. Mutual Funds are a conglomeration of stocks, bonds, securities and even real estate, put together by a smart Fund Manager who hand-picks winners for a winning combination. Exchange Traded Funds (ETFs) are Mutual Funds which can be bought and sold in the stock market, just like any other stocks or shares. Most ETFs track an index. ETFs may be attractive as an investment because of their low costs, tax efficiency, and stock –like features. The primary objective of the present study is to examine the trends and progress of ETFs in India. It also attempts to evaluate the performance of selected funds on the basis of various performance ratios (Sharpe, Treynor, Jensen's alpha etc.), to compare various ETFs performance with the S&P CNX Nifty Index and to rank the mutual funds on the basis of their outstanding performance.

Key words- Mutual Fund, Exchange Traded Fund

I. INTRODUCTION

Mutual Fund is a trust that pools money from a group of investors (sharing common financial goals) and invest the money thus collected into asset classes that match the stated investment objectives of the scheme. The Fund Manager manages the Mutual Fund and uses his investment management skills and necessary research works and ensures much better return than what an investor can manage on his own. The capital appreciation and other incomes earned from these investments are passed on to the investors (also known as unit holders) in proportion to the number of units an investor owns. Mutual Fund was introduced in the year 1963 in India. From an historical point of view, Mutual Funds have been around four hundred years, but they are a relatively new investment phenomenon to the novice investors. Mutual Funds are a conglomeration of stocks, bonds, securities and even real estate, put together by a smart Fund Manager who hand-picks winners for a winning combination.

Exchange Traded Funds (ETFs) are Mutual Funds which can be bought and sold in the stock market, just like any other stocks or shares. As far as investment is concerned, an Exchange Traded Fund is just like a Mutual Fund and as far trading is concerned, an Exchange Traded Fund is just like a stock or equity which can be traded on Stock Exchanges like NSE. Most ETFs track an index. ETFs may be attractive as an investment because of their low costs, tax efficiency, and stock –like features. ETFs are listed on a

recognized stock exchange. Their units can be bought and sold directly on the exchange, through a stockbroker during the trading hours.

ETFs are referred to as passive scheme that fund managers resort to, to avoid risk and offer low cost options to the investors. These funds relay on an arbitrage mechanism to maintain the price at which they trade, in line with the net asset value of their underlying portfolios. As ETFs started growing in India since 2006, the investment industry required performance analysis of their newly available financial asset. Moreover, fund selection also requires investors to analyze returns, volatility and performance of the available funds. Performance of ETFs has been examined on the basis of their return and risk characteristics. Performance measures include average annual return and excess return measured by alpha values, risk measured by standard deviation and risk adjusted return measured by Sharpe ratio. While the concept of ETFs is very much popular in foreign countries, in the Indian markets it is still in the initial growth phase. According to the Association of Mutual Fund in India data, the Indian mutual fund industry has been holding RS.6.75 trillion worth of assets over the past decade. The selection of actively managed funds aims at identifying an investment that is likely to outperform a selected benchmark. In contrast, excess performance is not a focus in choosing Exchange Traded Funds (ETFs). This paper argues that the performance measures of active funds are often not only irrelevant, but may be misleading when being applied to passively managed ETFs.

Investors of ETFs want to buy and sell a diversified bundle of assets with the same return profile as the benchmark which is replicated. Since investing directly into the benchmark is not possible, unlevered, passive ETFs aim to mirror, or track the performance of the benchmark. Therefore the ETFs' performance relative to the benchmark and the competing ETFs is more significant than absolute returns. As selecting the most excellent fund is core for any investor, the efficiency and performance of an ETF is a primary concern. Where traditional mutual funds are judged by how much they outperform their opponents and benchmark, the performance measurement of ETFs is not straightforward, as their aim is not to beat the performance of their underlying benchmark, but to replicate it as close as possible. Since many tools developed for traditional funds fail when being applied to ETFs, standalone measures such as the tracking error and the tracking difference are used to compare the ETF's tracking ability. However, little is known about their consolidation and joint interpretation as one comprehensive ETF performance measure.

SCOPE OF THE STUDY

The present study is intended to help the investors to find out where their funds stand in its return bases and to understand the trend in terms of growth of selected funds. This study also extends its scope by

providing itself as a reference for further works in this field. The study is made only for five years ie.2012-2015. The growing number of Mutual Funds and various schemes in it pose a great difficulty to the investors in choosing one. At the outset all schemes relatively promise higher and similar returns, it is only the actual performance that distinguishes the better scheme from the rest. The evaluation of Mutual Funds has become an important factor now.

SIGNIFICANCE OF THE STUDY

ETFs are essentially index funds that are listed and traded on exchange like stock. An ETF is a basket of stocks that reflects the composition of an index, like Nifty 50 or S&P BSE Sensex. The ETFs trading value is based on the Net Asset Value of the underlying stock that it represents. Today it is noticed that a large number of Mutual Fund Schemes have been floated in the market. It is very difficult for an average investor to examine their performance. Thus it is very important to evaluate the performance of the Mutual Funds so that retail investors can make a valued judgment for selecting the Mutual Funds Schemes for their investment purposes.

STATEMENT OF THE PROBLEM

ETF might be a better investment option than either individual stocks or a mutual fund. So it is essential for every investor to know about the trends and progress of exchange traded funds in India. And this study evaluates the performance of exchange traded funds in India. Aims to answer a few questions in this respect:

- What is the performance of ETFs in context to their risk and return incurred during the period of study?
- Whether the ETFs have outperformed the market or not?
- Which ETF is performing well, and which are below the expectations level?

So, the problem is stated as **“A comparative study of the performance of top 10 Exchange Traded Funds in India”**.

OBJECTIVES OF THE STUDY

The primary objective of the present study is to evaluate the performance of selected mutual funds in India. The specific objectives set are as follows

1. To examine the trends and progress of ETFs in India

2. To evaluate the performance of selected funds on the basis of various performance ratios (Sharpe, Treynor, Jensens alpha)
3. To compare various ETFs performance with the S&P CNX Nifty Index, to give rankings of mutual funds by their outstanding performance.

DATA AND METHODOLOGY

DATA COLLECTION

Data has been collected from secondary data only. The financial performance of the selected ETFs has been collected from the records of Association of Mutual Funds in India (AMFI), official website of Mutual Fund Companies, Research Publications, SEBI Manuals, etc.

PERIOD OF STUDY

The study has been conducted for a period of 5 years i.e., from 1st January 2012 to 31st December 2016.

SAMPLE SIZE

There are 35 Exchange Traded Funds in India. Data with regard to all the parameters selected for the evaluation of performance are available only for 10 ETF which were operating between the periods of 2012 – 2016. Hence, the study is made only for leading 10 ETFs. The Funds belong to growth category. Ten Financial intermediaries were considered from financial services sector to analyze the performance evaluation of ETFs of the companies, the name of the companies were given below.

1. HDFC
2. FRANKLIN
3. ICICI
4. DSP BLACK ROCK
5. UTI
6. SBI
7. CANARA
8. TATA

9. PRINCIPLE**10. LIC****TOOLS OF ANALYSIS**

Mean

Standard deviation (SD)

Sharpe ratio $(R_p - R_f) / (\text{annualized standard deviation})$ Treyner's ratio $(R_p - R_f) / (\text{Beta of the fund})$ Jensen's alpha ratio $R_f + \beta * (R_m - R_f)$

Beta

Compounded Annual Growth Rate (CAGR) $(\text{closing value} / \text{opening value})^{(1/n)} - 1$

PACF (Partial Autocorrelation Function)

STANDARD DEVIATION

Standard deviation is a measure of the dispersion of a set of data from its mean. It is calculated as the square root of variance by determining the variation between each data point relative to the mean. If the data points are further from the mean, there is higher deviation within the data set. The greater the standard deviation of a security, the greater the variance between each price and the mean, indicating a larger price range.

SHARPE RATIO

It shows the return to variability. Higher the ratio better would be the performance of the fund in terms of the returns for the risk taken. While Sharpe ratio takes σ in the denominator. Total risk is considered in Sharpe ratio. The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk. Subtracting the risk-free rate from the mean return, the performance associated with risk taking activities can be isolated.

TRAYNORS RATIO

The Treynor ratio, also known as the reward-to-volatility ratio, is a metric for returns that exceed those that might have been gained on a risk-less investment, per each unit of market risk. Treynors ratio considers β as the denominator. Only systematic risk is considered in Traynors ratio. Higher ratio indicates better performance.

JENSEN ALPHA RATIO

The Jensen's measure is a risk-adjusted performance measure that represents the average return on a portfolio or investment above or below that predicted by the capital asset pricing model (CAPM) given the portfolio's or investment's beta and the average market return. Jensen's alpha is a measure of a security's excess return with respect to the expected return given by the Capital Asset Pricing Model. Investors are looking for assets or portfolios with positive alphas, as it signals positive abnormal return. An asset with a positive alpha has a higher return than the risk-adjusted return estimated by the CAPM. Computations of Jensen's alpha are based on realized returns.

BETA

Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta is used in the Capital Asset Pricing Model, which calculates the expected return of an asset based on its beta and expected market return. Beta is also known as the Beta Coefficient.

COMPOUNDED ANNUAL GROWTH RATE

The compound annual growth rate (CAGR) is the mean annual growth rate of an investment over a specified period of time longer than one year. To calculate compound annual growth rate, divide the value of an investment at the end of the period by its value at the beginning of that period, raise the result to the power of one divided by the period length, and subtract one from the subsequent result. With inconsistent annual growth, CAGR may be used to give a broader picture of an investment's progress.

LIMITATIONS OF THE STUDY

- Only ten ETFs are taken for the study, thus the sample size is very small it limits the study.
- Only three ratios are used for analyzing the performance of the various Funds.
- The study is limited to five years i.e. 2012-2015

II. REVIEW OF LITERATURE

Gayathri and P.Bhuvaneswari (2009)¹ this paper examines the performance of ETFs listed on NSE from 2005 to year by comparing the returns and risk of the ETFs with the return and risk of the index. Sharpe ratio and Treynor ratio were used. The result showed that NIFTY BeES was the best performer.

B Phaniswara Raju and K Mallikarjuna Rao (2009)² made a study on —Market Timing Ability of Selected Mutual Funds in India: A Comparative Study” and they analyzed the market timing ability of selected fund managers, which is a vital aspect in the success of a mutual fund. In order to measure the market timing ability of the fund managers, two important models, namely, Treynors and Mazuy and Heriksson and Merton, have been used with BSE sensex and NSE Nifty as market proxies.

Benchmark Funds Asset Management Company (2008)³ research department did research in early 2008 on the topic of “Myth of Eternal Alpha”. It has often been argued that individual active fund managers are consistently able to exploit anomalies and aberrations that may exist in the market and while considering out performance/ under performance one should look at longer periods.

Gallagher and Segara (2004)⁴ this study examines the performance and trading characteristics of exchange-traded funds (ETFs) in Australia. They investigate the ability of index oriented (classical) ETFs to track underlying equity benchmarks on the Australian Stock Exchange, and provide a comparison of the tracking error volatility between these types of market-traded instruments and equity index funds operated off-market. The authors find that classical ETFs closely track their respective indices, but they note that ETFs in Australia have not faced the same degree of acceptance in comparison to the reception of ETFs in other markets.

Kostovetsky (2003)⁵ compares ETFs and index funds, demonstrating that the main differences among them are related to management expenses, transaction fees and tax efficiency. He also suggests that the tracking error’s comparison between ETFs and index funds is difficult because of the lack of a true benchmark for comparison.

III. ANALYSIS

SHARPE RATIO AT A GLANCE

FUND	SHARPE RATIO
------	--------------

	16	15	14	13	12
HDFC	13.28	-4.95	41.83	.08	17.92
FRANKLIN	7.56	-28.1	457.4	-16.02	175.74
UTI	7.25	-5.51	23.69	-1.89	19.20
SBI	-45.6	-1.31	33.97	3.25	25.82
LIC	-20.6	-14.7	25.13	1.14	15.95
CANARA	-38.9	-2.22	36.16	-4.42	18.15
TATA	-37.5	-1.09	40.06	-1.25	22.06
PRINCIPLE	14.74	-4.92	25.57	-1.44	25.45
ICICI	48.63	-5.97	36.12	2.32	21.12
DSP	.80	-2.51	351.57	-9.17	17.78

TREYNORS RATIO AT A GLANCE

FUND	TREYNORS RATIO				
	16	15	14	13	12
HDFC	13.03	-30.2	193.0	.31	55.70
FRANKLIN	4.82	-33.49	1227	-110	207
UTI	5.95	-33.96	94.7	-6.94	313
SBI	-199.4	-9.14	-3022	-66.1	-95.3
LIC	13.94	63.7	-53.45	10.7	-57.8
CANARA	-39.59	-10.9	124.46	-14.9	69.8
TATA	-61.00	-11.13	-308.6	-12.4	38.6

PRINCIPLE	10.53	-30.58	95.30	-2.71	986
ICICI	51.13	-40.73	159.3	8.74	323
DSP	1.36	-14.49	182.3	39.7	401

JENSENS RATIO AT A GLANCE

FUND	JENSENS RATIO				
	16	15	14	13	12
HDFC	5.61	5.07	13.78	6.16	780.13
FRANKLIN	5.88	5.18	6.92	5.50	527.63
UTI	5.59	4.94	11.71	5.72	530.23
SBI	5.22	5.57	6.76	5.20	745.09
LIC	5.07	32.1	42.50	5.06	750.62
CANARA	4.96	5.61	15.34	4.97	740.60
TATA	5.12	5.59	1.35	-4.57	199.06
PRINCIPLE	5.87	5.04	12.56	6.33	553.44
ICICI	5.99	4.93	-9.63	6.77	527.73
DSP	-52.6	5.50	11.77	6.90	541.23

IV.FINDINGS AND CONCLUSION**FINDINGS**

- ❖ The kurtosis of 10 mutual funds revealed that the distribution for NAV is platykurtic.
- ❖ Mean NAV of all the funds is high in 2016 except for UTI.

- ❖ Mean NAV shows an increasing trend over the years. It can be inferred that the performance of the fund is increasing over the years.
- ❖ For all the funds except LIC the maximum NAV value is high during the year 2016.
- ❖ Most of the funds outperformed the market except LIC and FRANKLIN in terms of absolute return in different years of the study.
- ❖ In the year 2016 all the funds can give a return more than the market return.
- ❖ Standard deviation of the entire fund is less than the market standard deviation in 2016 and standard deviation of all the funds is very high while comparing market standard deviation in 2014.
- ❖ The performance of the various funds was in the same direction as that of the market as evidenced by the beta values. DSP was aggressive with high beta value of 0.595 in the year 2016.
- ❖ All selected mutual fund companies have positive return during 2012 to 2016. ICICI mutual fund has performed well.
- ❖ ICICI has better performance in 2016 on the basis of Sharpe ratio, Treynors ratio and Jensen ratio.
- ❖ Some funds such as LIC, SBI, CANARA and TATA show a negative Sharpe ratio and Treynors ratio in 2016.
- ❖ During the year 2016 and 2014 Jensen ratio of all the funds was positive value except DSP and ICICI.
- ❖ LIC has the lowest beta (-0.2362) i.e. LIC is moving in the opposite direction from stock market in 2015.
- ❖ In 2015 all mutual fund shows a negative Sharpe ratio and in the case of Treynors ratio, all funds except LIC shows a negative value which means LIC could perform well even though the return was negative.
- ❖ Jensen ratio of all funds shows a positive value in 2015.
- ❖ In the year 2014 the best outperforming fund is HDFC comparing with BSE Sensex.
- ❖ Beta is less than 1 in the case of all selected funds.
- ❖ FRANKLIN has the highest Sharpe ratio and Treynors ratio in the year 2014. This means FRANKLIN has better performance in 2014.
- ❖ Jensen ratio is negative for 2 funds namely LIC and TATA in 2013.
- ❖ During the year 2013 Sharpe ratio and Treynors ratio is negative for all the funds except HDFC, ICICI, and DSP which has positive values.
- ❖ Sharpe ratio and Jensen ratio of all funds shows a positive value in 2012.

- ❖ In the case of Treynors ratio all funds show a positive value except HDFC, SBI, LIC and CANARA in 2012.
- ❖ The PACF indicated a high correlation (1) for lag 1 for all the Funds i.e. the NAV of all these funds on a particular day depends upon the NAV of the previous day.
- ❖ In all the years' beta values of all the selected mutual fund is less than 1. In some years, LIC, TATA, DSP, CANARA, HDFC and SBI shows negative beta which indicate an inverse relationship to the market.
- ❖ Out of the selected ETFs, the CAGR of NAVs for the last five years is high for ICICI (19.45%) and the least for LIC with a CAGR of 11.99%.
- ❖ While comparing with S&P BSE SENSEX, all funds offered a growth rate greater than the Index.

SUGGESTIONS

- Most of the Mutual Funds have shown a negative alpha value which shows that the fund managers fail to forecast appropriate security prices in times, which results in poor performance. It is suggested that the Mutual Funds should strengthen their R& D department to have better future projections.
- Mutual Funds must ensure not only good performance over the market, but also consistency in their return.

CONCLUSION

The ETFs are one of the best investment sources available for Indian small investors to make an investment, if thoroughly assessed it may give big returns with little savings. The performance ratios including Sharpe, Treynor's and Jensen's are very much helpful for the evaluator to assess the fund's performance. While comparing the various EFFs in the present study we can conclude that all the funds are subject to risk but can provide more return and growth than the market or any other investment scheme. By wisely choosing and investing in profitable funds, the investor can maximize the gains subject to a certain level of risk.

V. REFERENCE

- ¹ Swati Garg (2014) "The Performance and Trading Characteristics of Exchange Traded Funds in India: An Empirical Study", The International Journal of Business & Management, Vol 2 Issue 4, April 2014, pp.70-78.

² Swati Garg & Dr. Y. P. Singh (2013) — AN EMPIRICAL COMPARISON OF ETFS AND INDEX FUNDS PERFORMANCE IN INDIA|| International Journal of Applied Financial Management Perspectives © Pezzottaite Journals Volume 2, Number 3, July – September“ 2013.

³ Prof. Dr. S. Kevin(2013) —A Study of the relation between market index, index futures and index ETFs: A Case study of India|| Rev.i ntegr. Bus. Econ. Res.Vol 2(1).

⁴ Dr. Kaushal Bhatt(2012), Exchange Traded Funds (ETFs): A Rising Investment Avenue, Vol.1 Issue 5 Finance.

⁵ P. Krishna Prasanna(2012) —Performance of Exchange-Traded Funds in India —International Journal of Business and Management; Vol.7, No. 23; 2012.