Performance Analysis of the Index: Nifty 50 & Nifty Next 50

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Abstract : NIFTY 50 is the benchmark index of India, reflecting the overall dynamics of Indian equity market as well as the Indian economy. NIFTY Next 50 is an index that represents the performance of 'next' 50 stocks which come after the top 50 in order of free float market capitalization, subject to index criteria. The paper is the study of the performance of two Index . This is analyzed empirically since the period of April 1, 2001 – March 31, 2018. The main objective of this research is to evaluate the performance of Index. For evaluating the performance of Index , the parameters used are Return, Risk, Sharpe Ratio, Treynor's Ratio, and Jensen Alpha P/E ratio, P/B ratio. This study will aid to identify the difference in the performance of two significant similar passive investment strategies. In this paper the data has been collected from the secondary sources.

Key Words - Index , Nifty 50, Nifty Next 50, Performance, Return, Risk, P/E Ratio.

I. INTRODUCTION

Stocks of NIFTY 50 and NIFTY Next 50 together form the part of the large cap index –'NIFTY 100',where, subject to index criteria, the top 50 stocks based on free-float market cap is represented by NIFTY 50 stocks and 'next 50' stocks is represented by NIFTY Next 50 stocks. NIFTY 50 captures the performance of top 50 blue-chip companies listed at NSE and thus provide a representative benchmark for investments in top large-cap companies in India. The index has a base date of april 22, 1996 and a base value of 1000. NIFTY Next 50 represents companies which are presently below the NIFTY 50 index constituents and may be potential candidates for inclusion in NIFTY 50 in future, subject to index criteria. The index has a base date of November 03, 1996 and a base value of 1000.

Exhibit 1: Representation of NIFTY Next 50 stocks from NIFTY 100
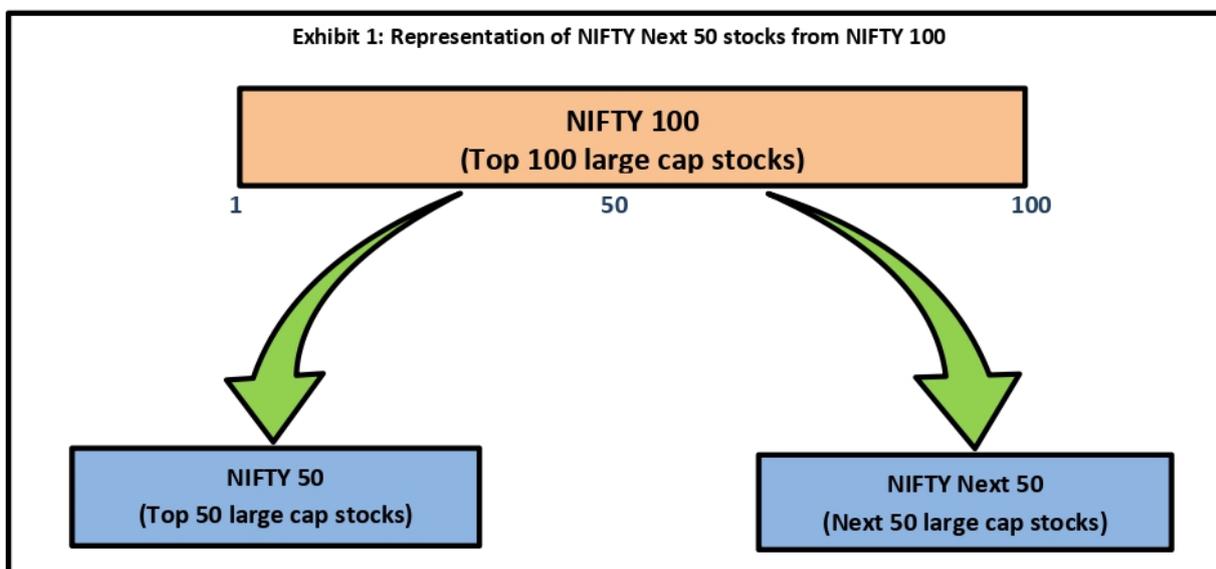
Source : Nifty Next 50 White Paper Series
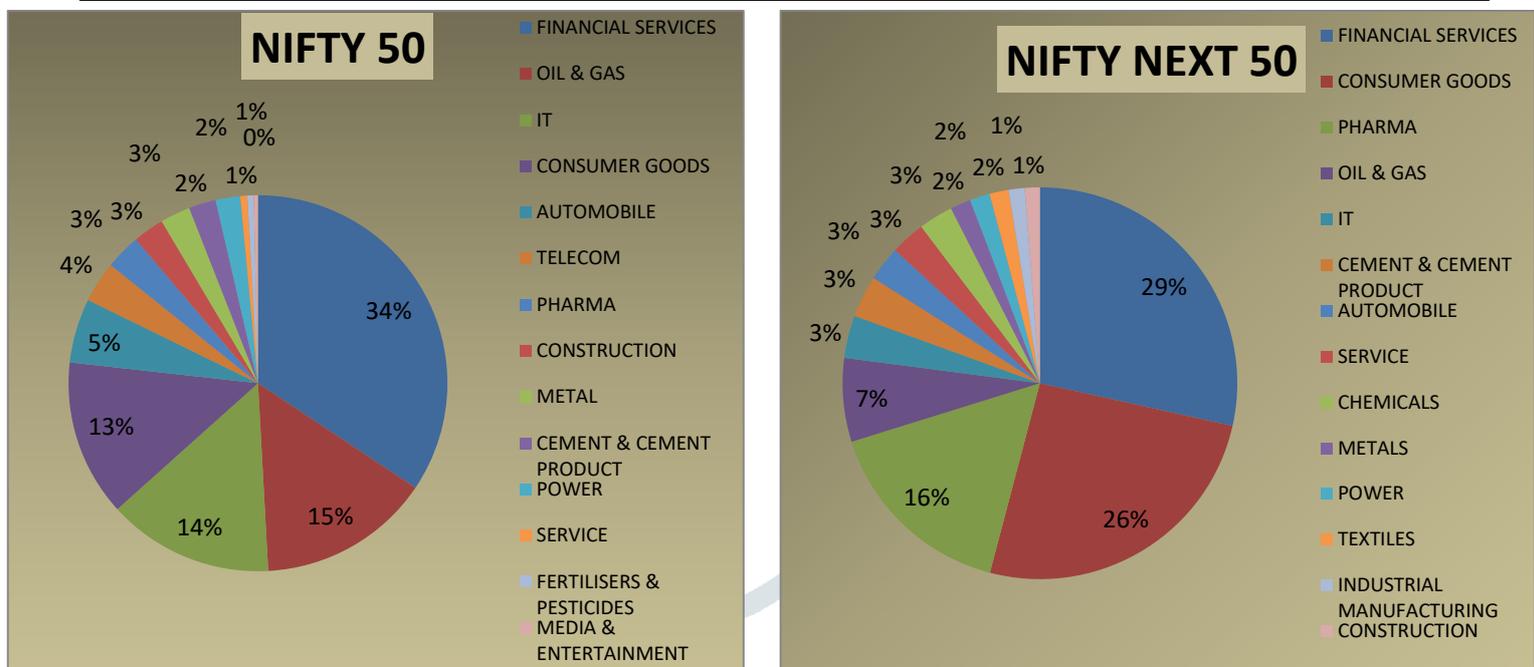
Source : Author Calculation based on secondary data
*Portfolio diversification as on March 31, 2018

NIFTY 50 & NIFTY Next 50 has a well-diversified portfolio across sectors with top 5 sectors weighted 82.29% & 80.58% exposure respectively. Both index in all has exposure to 14 sectors with 11 sectors in NIFTY 50 & 10 sectors in NIFTY NEXT 50 having individual weight lesser than 10% each. This makes a well-diversified index strategy which may appeal to proponents of 'investment diversification'.

II. *LITERATURE REVIEW*

Prashanta Athma and Raj Kumar (2011) tried to evaluate the performance of ETFs and Index Funds in India. The study was based on secondary data and covering a period of five years i.e. from 2005 to 2009. Net Asset Value, Risk, Return, Expenses Ratio, Tracking Error, Reward to Variability and Differential Return were used as a measure to evaluate performance. The statistical tools like Standard Deviation, Beta, Alpha, R-squared and Sharpe Ratio were used for data analysis. After data analysis it was established that ETFs have given a better opportunity for the small investors in terms of a spread portfolio with a small amount of money, low expense ratio, reduced tracking error, lower risk and volatility as compared to Index Funds. Thus, concluding that ETFs are a better form of investment when compared with index funds.

Swati Garg and Y. P. Singh (2013) associated the performance of ETFs and Index Funds. Five ETFs and Index Funds tracking the same benchmark indices has been analyzed in this study over a period of three years ranging from June 2006 to December 2009. The analysis exhibits that over long term investment horizon ETFs perform better in terms of their imitation strategy, tracking ability and performance effectiveness. However, it was evident from the study that short term investors face a disadvantage from investing in ETFs.

P.Mishra and G.Singh (2016) attempted to make an intra-class performance evaluation of some Indian index funds. Graphical interpretations were used along with statistical tools like R-square and tracking error values. Two models of tracking error have been working to test empirically the performance of the selected index funds. Empirical results revealed that out of selected index funds, SBI Nifty Index fund outperformed the other six index funds during the period under study. SBI Nifty Index fund was also able to limit the tracking error to an acceptable limit.

S. Narend (2014) presents a comparative study of the performance of ETFs and index funds. The study has done empirically since the period of their respective initiation till July 2013. The study used three parameters for the analysis of the performance such as active returns, tracking error and Jensen's alpha. The analysis shows that ETFs are performing good compare to the index mutual funds

Falguni Pandya (2016) analyzes the index fund and measuring tracking error. The has trying to check the tracking error odf different index fund and its respective passive portfolio. The study use descriptive statistics. Study found that Nifty and banking index based funds found to be having lowest tracking error; while Gold ETFs didn't perform better in terms of mean return whereas, international ETFs found to be most efficient.

III. *OBJECTIVES OF THE STUDY*
1. To study about the performance of Nifty 50 & Nifty Next 50 Index
2. To evaluate the risk adjusted return of Nifty 50 & Nifty Next 50 Index
3. To study and analyze Risk-Returns relationship.

IV. *DATA COLLECTION & RESEARCH METHODOLOGY*

This paper makes an attempt to comparative study and analyzes the performance evaluation of two Index. For this study SENSEX 30 has been used as a benchmark index. In the study of monthly yield on 91-day Treasury bills have been used as risk-free rate i.e. 7%. These funds were analyzed in detail from the period of of April 1, 2001 – june 30, 2020 and this study is based on the secondary data obtained from the various sources like NSE website, BSE website,other website, journals, magazines etc. For the performance of these funds, different statistical and financial tools are used. The tools and techniques are P/E ratio, P/B ratio, Average return, standard deviation, alpha, beta, correlation, Sharpe, Treynor, and Jenson measure.

FINANCIAL RATIO :

1 Average Return : The average return is the simple mathematical average of a series of returns generated over a period of time. The numbers are added together into a single sum, and then the sum is divided by the count of the numbers in the set.

2 P/E Ratio : The price-to-earnings ratio (P/E ratio) is the ratio for valuing a company/Index that measures its current share price relative to its earnings per share. The P/E ratio shows what the market is willing to pay today for a stock based on its past or future earnings. A high P/E could mean that a stock's price is high relative to earnings and possibly overvalued

3 P/B Ratio : price-to-book ratio compare a firm's market capitalization to its book value. It's calculated by dividing the company's stock price per share by its book value per shares (BVPS). It is considered to be more stable than P/E ratio in a volatile market.

4 Dividend Yield : The dividend yield, expressed as a percentage, is a financial ratio (dividend/price) that shows how much a company pays out in dividends each year relative to its stock price.

Statistical Tools :
1 Standard Deviation : The total risk (market risk, security-specific risk and portfolio risk) of a fund is measured by Standard Deviation(SD). The standard deviation tells us how much the return on a fund is deviating from the expected returns based on its historical performance. In other words can be said it evaluates the volatility of the fund. The standard deviation of a fund measures this risk by measuring the degree to which the fund fluctuates in relation to its average return of a fund over a period of time. A higher SD number indicates that the fund is more volatile and, it is riskier than a fund with a lower SD.

2 Beta β : Beta is a measure of the volatility of a particular fund in comparison to the market as a whole, that is, the extent to which the fund's return is impacted by market factors. Beta is calculated using a statistical tool called _regression analysis.' By definition, the market benchmark index of Sensex and Nifty has a beta of 1.0.Conservative investors should focus on mutual funds schemes with low beta. Aggressive investors can opt to invest in mutual fund schemes which have higher beta value for higher returns taking more risk

3 Sharpe's Performance Index :The Sharpe ratio is most extensively used for the calculation of risk-adjusted return. This ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk. Sharpe ratio evaluates risk and returns together to help the investors to choose the investment that generates a higher return but the optimal risk is taken. Mathematically, shape ratio is represented as the difference between the average return of a portfolio and the risk of free invest divided by standard deviation.
$S(P) = (Rp – Rf) / σ(p)$
Where, Rp = Average return of the portfolio, Rf = Risk free rate and σ = Standard deviation of portfolio

4 Treynor's Performance Index :The Treynor ratio has similarities with the Sharpe ratio. The Treynor ratio utilizes beta and the ratio is based on the principle that risk intrinsic to the entire market (represented by beta). Treynor ratio is the difference between the average return of a fund and the risk-free investment divided by the beta. The risk premium depends on the systematic risk assumed in a portfolio.
$Tn(P) = (Rp – Rf) / β(p)$
Where, Rp = Average return of the portfolio, Rf = Risk-free rate and β = Measure of systematic risk

5 Jensen's Performance Index : The risk-adjusted performance measure known as the Jensen's measure, that denotes the average return portfolio or investment above or below that projected by CAPM (capital asset pricing model) given the portfolio's or investment's beta and the average market return. In this measure, a definite standard is set and against that the performance is measured, so it is mentioned as a measure of absolute performance. The standard is based on the manager's predictive ability.
Jensen's Alpha = Total Portfolio Return – Risk Free Rate – [Portfolio Beta × (Market Return – Risk Free Rate)]

6 Correlation : is a statistic that measures the degree to which two securities move in relation to each other and is expressed numerically by the correlation coefficient. The correlation coefficient's values range between -1.0 and 1.0. A perfect positive correlation means that the correlation coefficient is exactly 1.

V. *ANALYSIS AND INTERPRETATION*

PARTICULAR	NIFTY 50	NIFTY NEXT 50	SENSEX (Benchmark)
Average Return	17.2	27.26	18.17
P/E Ratio*	24.66	34.65	23.78
P/B Ratio*	3.42	3.34	3.05
Dividend Yield*	1.29	1.16	1.22
Std. Deviation	31.01	54.29	33.12
Beta	0.93	1.51	1
Sharpe Ratio	0.33	0.37	0.33
Treynor Ratio	10.91	13.43	11.17
Jenson (Alpha)	-0.24	3.41	0
Correlation	0.996	0.917	1

Source : Author Calculation based on secondary data
*as on March 31, 2018

Yearwise Return of Nifty 50 & Nifty Next 50
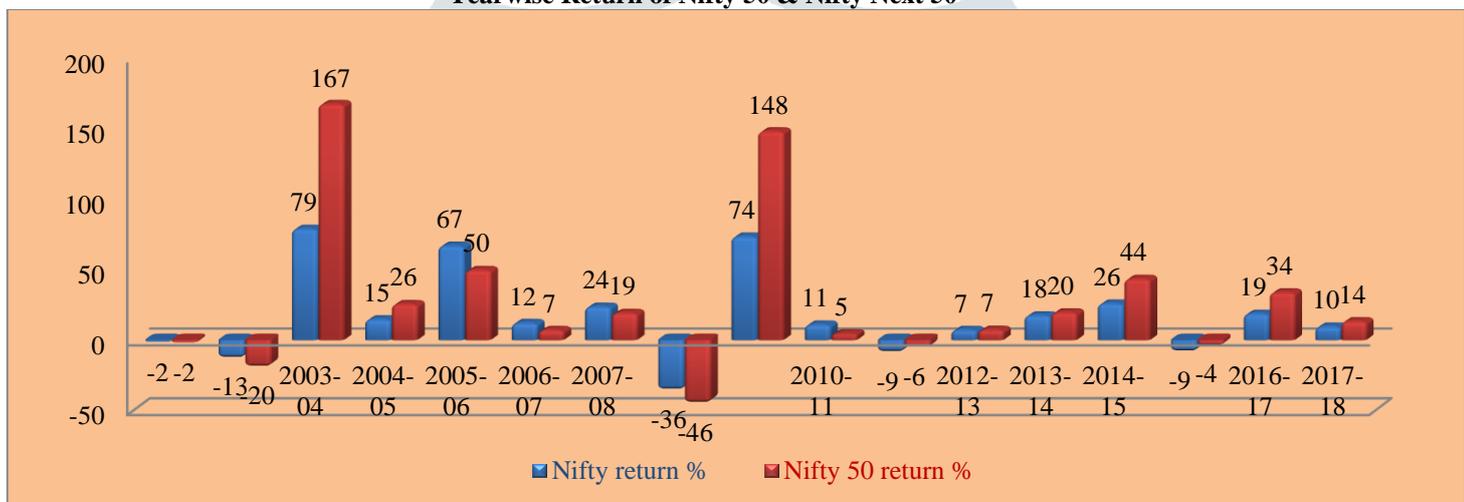
Source : Author calculation

> ➢ On an average every year Nifty Next 50 gives a higher returns with compare to Nifty 50. It is give 10.06% more return to every year.
> ➢ On the basis of P/E ratio with compare to benchmark Sensex 30, Nifty 50 & Nifty Next 50 both are overvalued.
> ➢ P/B ratio show the stability of the company in the volatility market. Nifty 50 is a less Volatile to the Nifty Next 50.
> ➢ Standard Deviation (SD) of the Nifty is very less compare to benchmark , while SD of Nifty Next 50 is high. Which means volatility of Nifty Next 50 is very high.
> ➢ Results shows Nifty Next 50 have a high Beta With compare to Nifty 50 and benchmark. Beta measures the sensitivity of a fund to the market index, higher the beta indicates the fund has risen more than the market's returns, lower the beta indicates the lesser the market return.
> ➢ Above table shows Nifty Next 50 have a higher sharpe ratio. It means Nifty Next 50 take less risk with compare to Nifty 50 to generate same return.
> ➢ Results shows Among 3 index Nifty Next 50 have a highest treynor ratio, which means portfolio is a more suitable investment. It's a higher risk higher return situation.
> ➢ Threw more positive a Jonson alpha the healthier for investors. Above result shows Nifty Next 50 have a high alpha. It means, is capable to Beat the Market very easily.
> ➢ Correlation of the both fund have a highly positive. So both index are capable to give positive return if the benchmark give positive return and vise versa.

VI. *CONCLUSION*

This research paper attempt to investigate the performance analysis of two index. The result of the present study found that Nifty 50 is less volatile and less risky with compare to Nifty Next 50 , but it is not able to beat the return of benchmark. It has a negative alpha. On ther side Nifty Next 50 is a high volatile index and is able to beat the benchmark return. So the final result of this study is if the investor are want to take some calculated risk, they are able to earn higher return to benchmark. In this situation investor have to choose a Nifty Next 50. In long term horizon , both fund are capable to beat the inflation rate and generate alpha.

VII. *REFERENCES*

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