



## Research Paper

# A Comparative study on performance of Mutual Funds of select Public and Private sector banks – pre and post pandemic

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## ABSTRACT

The present study is a comparative analysis of the performance in pre and post pandemic situation of select commercial banks in Mutual Funds area. The study considered a sample of three public sector banks and three private sector banks (listed top 3, respectively) for period April-2019 to March-2020 (Pre - Pandemic) and April-2020 to Feb-2021 (Post - Pandemic). Methodology used in the study is to measure the performance of the sample banks using beta coefficient to analyse risk. Correlation coefficient is used to find correlation between the sample banks to NIFTY50, to analyze if the mutual funds are in direction of market or otherwise. Bank NIFTY index is positively influencing almost all sectoral of indices of NSE (Dr.S. Rajamohan, M.Muthukamu,2014). The purpose of the study is to evaluate the performance of select public and private sector banks in Mutual Funds area through beta coefficient. Beta of stocks is positive, it means stocks and market will move in same direction. If  $\beta > 1$ , stock is more volatile (more risky) than the market. If  $\beta < 1$ , stock is less volatile (less risky) than the market, it means stock will not fluctuate more. The study found that HDFC is the best performing bank from the results followed by ICICI and AXIS, in private sector. In public sector SBI is performing better than PNB and BOI.

**KEY WORDS :** Performance of Mutual funds, Beta, Bankex Return on Assets, Return on Equity, Performance measures

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## I. INTRODUCTION

Significance of Banking Industry across the globe is more. Every country relies on its banking industry for its economic welfare. Banking is one of the largest industry which forms the back bone of any economy. The financial system or economic structure of any economy relies on the pillars of its banking industry. When the novel corona virus spread worldwide this year (2020), the global banking system was generally in good fundamental health, with system in tune with the regulations and capitalized well. The Financial institutions responded well and took care to see that the services provided were uninterrupted. The banks rose to the extent of providing extended payment deadlines, working on behalf of government and distribution of financial aid was also undertaken, which were beyond the scope of banks, usually. The performance of banks (European Central Bank,2010) is one of the key areas to assess the economic prosperity, if maintained well in the areas of maintaining solid balance sheet, strong liquidity (Hays et al.2009), significant increase in allowances reserves, and earnings (Chapman et al.2007). The unexpected/unanticipated Pandemic situation left the globe shaken and created drastic changes spreading widely across the globe. Banking sector also had effects of its ripples.

## II. REVIEW OF LITERATURE:

Mutual funds have begun to play an increasingly important role in financial markets, as they gained tremendous popularity, since inception.. The mutual fund performance evaluation literature is extensive but highly controversial. This paper provides a survey of mutual funds performance measures, with use of bank index, to analyze the risk in it. Furthermore, an overview of the literature that has been taken place in the area of mutual fund performance evaluation as well as other related works in mutual fund industry are presented.

Mutual funds, as one professionally managed investment vehicle, have become more and more important in the global capital market. They are generally managed by investment companies and large financial institutions to utilise the notion of pooled contributions

**Jayalakshmi, M., & Palanichamy, V. (2020).** The study tries to evaluate the performance of selected HDFC Mutual fund under growth scheme and compare the scheme return and risk with benchmark index . NAV and the total return of the selected funds along with various tools of study like sharpe, Treynor and Jensen's ratio are used. The study concludes that out of the five mutual funds taken as sample, three funds have performed well and two funds have not performed like their former funds, during the period of study, under the conditions of high volatile market situation . The study concludes that the sharpe and treynor give a positive response to the decision –making process where as Jensen's measure gives the negative response to the same.

**Dr. K.Siva Nageswararao, et.al(2019)** The main objective of the present paper is to analyze the S&P BSE Bankex public sector bank's performance. According to the Reserve Bank of India (RBI), the banking sector in India is well capitalized and regulated and is an important industry to trade in stock market . Banking sector is also considered as mainstay of present businesses. This paper studies the bank performance of public sector banks in S&P BSE Bankex index during the period of ten years i.e. 2010-11 to 2018-19 financial years. The present study analyzed the performance of banking using statistical tools like descriptive statistics, regression analysis and panel data technique. The results showed that liquidity is positively related with net profit margin, return on assets and return on equity variables. Moreover, these dependent variables negatively related with operating efficiency variable, and estimates the correlations between NSE Nifty and Industry sectors in India.

**Suresh A.S., Srinivas Bandi(2019)** In this study, small cap index is used as bench mark. Secondary data is collected for a period of five years from BSE. The study analyzes the risk and return of selected small cap stocks listed on BSE. A comparison of performance of each stock against the bench mark is conducted. In the risk –return analysis, from the select sample companies few have given highest returns during the period of study where as one of the sample bank had lowest return .The Beta of all stocks were positive indicating that all the stocks bear a high risk except one of the sample

**Suresh A.S, 2018,** The study is conducted to analyze the risk -return scenario of Logistics sector using Beta against BSE Sensex, as benchmark. The study is based on secondary data, sample from stocks listed on BSE for five years and a comparison of their performance for is carried out for the study period. The date were collected based on monthly prices of the logistic sector and with the help of monthly prices, annual returns were calculated for a period of five years. The study concludes that shares of Corporate Courier and Cargo limited has given the highest returns during the period of study , while the returns on SKYPAK service specialists limited was negative during the same period. The Beta of all the stocks were more than one, indicating that all the select sample companies carry a higher risk

**Adhav, M. S. M., & Chauhan, P. M. (2015).** In this study an analysis of the performance of mutual fund schemes of selected Indian companies in terms of risk-return relationship to compare the performance of mutual fund schemes of selected Indian companies based on benchmark index and concluded that during the last 5 year the performance of mutual fund of selected Indian companies is superior

**Nagendra Marisetty & Haritha. M (2014)** This study analyses the stimulating power of NSE Nifty on other indices particularly the NSE sectoral indices The economy's performance have a bearing on the returns of industry sector differently and are subject to change over a period of time. Thus, changing pattern of correlations between sectors is vital for investment purpose. The present study approximates the correlations between NSE Nifty and Industry sectors in India.NSE NIFTY monthly average returns for different periods have been correlated with most of the sectoral indexes' monthly average returns. The study attempts to establish Nifty influence on sectoral indices, FMCG and Pharma indexes. The analysis arrives at the conclusion that NIFTY influences more on sectoral indices performance, and FMCG and Pharma indexes are less influenced by other sectoral indexes.

**Dr.S.Rajamohan & Muthukamu .M(2014)** In this study analysis is done to know the performance of various sector shares and stock market indices are used as barometer to do the same.It is observed that the behavioral pattern of one sector has influence on the other sector along with its own behavioral patter of same sector. Generally, the performance of banking sector stocks will influence the performance of other sector stocks too. Hence, an attempt is made in this study to know the nature and extent of influence by banking sector with other sectors during the bull and bear market phase. Pearson correlation coefficient is used to analyse the nature and extent of influence of banking sector on other sectors and it is found that there is a positive correlation.

**..Dr.B.Nimalathan\*; Mr. R. Kumar Gandhi\*\*(2012)** This article focused on the financial performance analysis of mutual fund schemes (equity diversified schemes and equity mid-cap schemes) of selected banks (State Bank of India, Canara Bank- Public Bank, ICICI Bank, HDFC Bank-Private Bank).The objectives of this research work is to analysis the financial performance of selected mutual fund schemes

through the statistical parameters (Standard Deviation, Beta and Alpha) and ratio analysis (Sharpe Ratio, Treynor Ratio, Jensen Ratio, Information Ratio). The results of the research work concern Among the Open ended – Tax Saving schemes, Canara Robeco Equity Diversified is the preferred and ranked top most, at the same time among the Open ended – Midcap schemes, HDFC Capital Builder is the preferred and ranked top through various tools. These research findings useful to the investors in terms of understanding the financial performance of the mutual fund schemes. Also this research finding is useful to the Mutual Fund Company in terms of Behavioral aspects of mutual funds.

**Kouser, R. and Saba, I. (2012).** The study is a comparison based on performance of Pure Islamic banks, mixed banks (we use this word for all those banks that have their Islamic as well conventional branches) and conventional banks using CAMEL model. It is an appropriate and simple model to evaluate the financial and managerial assessment of institutions. The ratios defined by CAMEL method are analyzed by using ANOVA to investigate any significant difference. The data analysis is done using SPSS. Based on our analysis, we found that Islamic banks have adequate capital and have good asset quality when compared to Islamic branches of conventional banks and conventional banks. Moreover, Islamic banks in general have good management competency in comparison to conventional banks. The earnings of Islamic branches of conventional banks are greater than full-fledge Islamic banks and conventional banks. Finally, it can be concluded that Islamic banks have a developing setup

**Agrawal, Deepak, .(2011)** Since the development of the Indian Capital Market and deregulations of the economy in 1992 there have been structural changes in both primary and secondary markets. Mutual funds are key contributors to the globalization of financial markets and one of the main sources of capital flows to emerging economies. Despite their importance in emerging markets, little is known about their investment allocation and strategies. This article provides an overview of mutual fund activity in emerging markets. It describes about their size and asset allocation. This paper is a process to analyze the Indian Mutual Fund Industry pricing mechanism with empirical studies on its valuation. It also analyzes data at both the fund-manager and fund-investor levels. The study revealed that the performance is affected by the saving and investment habits of the people and the second side the confidence and loyalty of the fund Manager and rewards affects the performance of the MF industry in India.

**Dibin k.k and Alfia Thaha(2017)** This study attempts to find the best investment alternative by doing the risk-return of selected mutual funds and stocks of the period of ten years . The top ten companies are selected on the basis of market capitalization from SENSEX and are compared with two companies each out of the five different Mutual Fund schemes based on CRISIL rating. Two investment opportunities have been analysed and comparing the mutual fund market with the stock market index. The study finds its relevance in current scenario as the recent policy rate cut suggests the RBI has taken an accommodative stand. The findings would help the investors in understanding more about investment.

**Colier, H.W;Mc Gowon,C.B(2010 )**The DuPont system of financial analysis is based on analysis of return on equity which is disaggregated into net profit margin, total asset turnover and equity multiplier. The DuPont system of financial analysis shows the impact of the Asian financial crisis and the restructuring of the banking industry in Malaysia on the financial performance of AFFN Bank and the gradual recovery of AFFIN Bank to return to steady performance over the past eight year.)

### **Objectives(3)**

1. To study the stock movements using/in mutual funds of the select public sector and private sector banks
2. To study the risk quotient through BETA Coefficient, vis-à-vis BANKEX ( Bankex Index)
3. To analyze the correlation between select sample banks and NIFTY.

## **III. MATERIALS AND METHODS**

### **Need for the study**

There have been many studies to evaluate performance measure using sharpe's , treynor, Jensen measure (Aritikis,P.G 2002)(Adhav,M.S.M& Chauhan, P.M(2015) (Dr.B. Nimalathan, Mr .R. Kumar gandhi 2012) and for risk beta and standard deviation(suresh A.S. Srinivas Bandi2019) and NIFTY. Tools in this study are return Beta and Bank Index(Bankex)to evaluate the performance. And correlation to banks and NIFTY. Beta of a stock is positive , it means stocks and market will move in same direction . The Risk is the possibility of incurring loss in a transaction.

Mostly the studies in the above literature have revealed the performance evaluation , using various measures for measuring and risk and return and standard deviation . some studies also made comparative study using Bank index and Nifty, as Bank Nifty index reveals the movement of other sectors including banking sector. In this study, the researcher is enthused to analyze the performance of Mutual funds of select sample banks in both public sector and private sector using Nifty index . Another bench mark used for banking mutual

funds here is the Banking Index , **Bankex** is used to know the performance of mutual funds of select sample banks.

**BANKEX:** Here the performance of the mutual funds of sample banks is bench marked to bankex to compare their performance to that of the bench mark. Bankex is like the reference point .

**Nifty-50:** Another bench mark used for banking mutual funds is nifty 50. Every mutual fund scheme has a corresponding benchmark, which is used to contextualize the returns of the mutual funds, by comparing them with the benchmark returns to judge its performance against the broader market.

**Data Analysis:** Data Analysis in done using Excel sheet in MS Office calculates the beta value.

**Tools and Technique :** Returns of select sample banks, Bankex Index, NIFTY 50,

**Statistical Tool: To analyze the performance of the mutual funds of the banks to the market with NIFTY 50, correlation coefficient is used .**

**Size:** Mutual funds of three public sector banks and three private sector banks were taken as the sample, on the basis of top performing mutual funds post pandemic.

**Data:**

The data used here is secondary data from the annual reports of the respective sample banks. And from publications of RBI .Monthly open price , close price, high and low are ascertained along with number of trades and spread high –low and close and open

**Performance Evaluation:**

**Other Methods of Evaluation**

1. Rate of return = Dividend Income+ Terminal value-Initial value/ Initial value

2. Performance Measure:

a) Treynor 's Measure:  $\frac{\text{Excess Returns on portfolio p } (R_p - R_f)}{\beta_p}$

b) Sharpe's Measure =Average rate of Return on portfolio p - Average rate of Return on risk free investment

Beta of portfolio p  $\frac{(R_p - R_f)}{\sigma_p}$

c) Jensen's Measure =

Average rate of

Return on portfolio p - (Risk free + portfolio (Average return on market portfolio - Risk free return)).

return beta on market portfolio

<b>Jensen's Measure</b> = $\{R_p - [R_f + \beta_p(R_m - R_f)]\}$
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### Analysis and Interpretation

In this study Beta is used as the risk measure

The purpose of the study is to evaluate the performance of Mutual Funds of select public and private sector banks of India through beta coefficient.

Beta of stocks is positive, it means stocks and market will move in same direction.

If beta > 1, stock is more volatile (more risky ) than the market,

If beta < 1, stock is less volatile (less risky ) than the market, it means stock will not fluctuate more.

Correlation coefficient is found with in banks and also with NIFTY 2019 and NIFTY 2020.

### Beta in Mutual Funds

Investors can know the bench mark index that a fund is reacting to in the market is studied with the Beta ratio. Beta helps in studying the fund's return overtime. Beta ratio helps in knowing the market fluctuations in returns, when you invest in a mutual fund.

Investors invest in Mutual Funds to make valuable returns. While investing in Mutual Funds, informed decisions are to be made, in order to get valuable returns, as expected. Awareness of the returns history and risk factor are equally important. To know the same different ratios can help the prospective investors to assess the risk involved in the Mutual Fund. It is key factor, particularly when one has to choose between various Mutual Funds. Investments in equity , Mutual Funds etc. are assessed against the standard of the market. Alpha, Beta, Standard Deviation , Sharpe Ratio etc are the ratios used generally used to evaluate the risk and return of an investment. Beta denotes the sensitivity of the Mutual Funds towards market movements. Beta is the measure of the volatility of the Mutual Fund portfolio to the market. The tendency of investment's return can be understood by the Beta of the Mutual Fund, from the ups and downs in the market. A beta that is greater than 1.0 indicates that the security's price is theoretically more volatile than the market.

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For instance, a stock's beta is 1.2, the volatility is assumed to be 20% more than the market technology stocks. In general, small cap stocks tend to have higher betas than the market benchmark (Suresh A.S., Srinivas Bandi, 2019). Investors assess the volatility of the market to know how mutual funds perform through Beta, as it indicates sensitivity of the market for Mutual Funds. It predicts funds price movement as well as its volatility. It evaluates an investment's risk factor based on fund's performance so as to enable investor to make an informed judgment. The benchmark index that a fund is reacting to in the market is studied with the Beta ratio. Beta helps in studying the fund's return overtime. Beta ratio helps in knowing the market fluctuations in returns, when you invest in a mutual fund.

The stock prices have an index to predict future returns. The index can go high or low based on the market. A mutual fund also is driven by the market. Beta in mutual fund show cases how a fund can react to the movement of the stock market. The market has a beta of 1.0, and the Beta ratio in mutual funds indicates how a fund might move based on the market's movements. A beta higher than 1.0 of a fund indicates that it is more volatile than the market's movements. Meanwhile, a beta below 1.0 denotes that investment is less volatile than the market. Investment is as unpredictable as the market if the Beta is 1.0. The beta ratio can help investor to know how high the risk can be when investing in a mutual fund. It helps in making informed judgment. Usually, the following are the performance measures used in terms of risk-return evaluation.

Consolidated Beta values for the period April 2019 To March 2020 of Private and Public sector banks (PRE - PANDEMIC)

Name of the Bank	Beta Value	Name of the Bank	Beta Value
HDFC	0.419606	SBI	0.922154
ICICI	0.967463	BOI	1.017103
AXIS	1.420615	PNB	.626448

A mutual fund also is driven by the market. Beta in mutual fund show cases how a fund can react to the movement of the stock market. The market has a beta of 1.0, and the Beta ratio in mutual funds indicates how a fund might move based on the market's movements. A beta higher than 1.0 of a fund indicates that it is more volatile than the market's movements, indicating more risk.

On the other hand, a beta below 1.0 denotes that investment is less volatile than the market, which indicates less risky. Investment is as unpredictable as the market if the Beta is 1.0.

From the above analysis of Private sector bank, it can be inferred that HDFC banks beta is 0.419606, which is less than 1.0 indicating its volatility is less, indicating risk is less, whereas ICICI with 0.967463 (very close to 1.0), here investment in mutual funds is unpredictable as its beta is close to 1.0. In case of AXIS Bank, beta value showing 1.420615, indicating volatility of stocks is high, thereby risk factor also high.

In case of analysis of public sector banks, PNB bank's volatility is less when compared to SBI and BOI. The lesser the volatility, lesser the risk of mutual funds of the banks. SBI has a beta value of 0.922154, where investment is less volatile, indicating less risky. BOI experiences high volatility with 1.017103 beta value, indicating higher risk when compared to other two public sector banks.

Consolidated Beta values for the period April-2020 to Feb-2021 Private and Public sector banks (POST - PANDEMIC)

Name of the Bank	Beta Value	Name of the Bank	Beta Value
HDFC	0.647816	SBI	1.129871
ICICI	0.912727	BOI	1.155006
AXIS	0.936023	PNB	1.132819

From the above analysis of Private sector bank, it can be inferred that HDFC banks beta is 0.647816, which is less than 1.0 indicating its volatility is less, also risk is less, whereas ICICI with 0.912727, which is less than 1.0 indicating its volatility is less, and also risk is less and the third sample bank being AXIS with a beta value of 0.936023, also indicates less fluctuations in the market.

In case of analysis of public sector banks, all the banks have high volatility, indicating they are risky mutual funds subjected to high volatility that is a beta value being more than 1.0 indicating risk is high. They are SBI (1.129871), BOI (1.155006) and PNB (1.132819).

The investor will be aware of such values before investing in any kind of mutual funds falling in this purview. The higher a fund's beta, the higher its risk. A fund with a low beta will better protect investors during downturns, but they will miss out on some gains during bull markets.

CALCULATION OF BETA VALUES OF SELECT SAMPLE BANKS FOR THE PERIOD - APRIL-2019 TO MARCH-2020 (PRE - PANDEMIC)																				
Month	HDFC	Returns	BETA	ICICI	Returns	AXIS	Returns	SBI	Returns	BOI	Returns	PNB	Returns	BANKEK	Returns					
Apr-19	2315.5	-0.04512	0.419806	407.75	-0.03696	0.967463	756.9	-0.05145	1.420615	310.2	-0.12012	0.922154	88.3	-0.06561	1.017103	84.8	0.051457	0.626448	33328.45	-0.05489
May-19	2424.9	-0.00879		423.4	-0.03168		808.5	0.001052		352.55	-0.02314		94.5	0.048253		80.65	0.013828		35264.03	0.008354
Jun-19	2446.4	0.08642		437.25	0.030035		807.65	0.197583		360.9	0.086885		90.15	0.248615		79.55	0.150398		34971.86	0.069821
Jul-19	2251.8	0.010274		424.5	0.034357		674.4	0.016045		332.05	0.21319		72.2	0.101449		69.15	0.064665		32689.44	0.056211
Aug-19	2228.9	0.816026		410.4	-0.05307		663.75	-0.03053		273.7	0.010336		65.55	0.041303		64.95	0.049273		30949.72	-0.05897
Sep-19	1227.35	-0.00211		433.4	-0.06363		684.65	-0.06977		270.9	-0.13243		62.95	-0.11711		61.9	-0.05352		32889.09	-0.03053
Oct-19	1229.95	-0.03477		462.85	-0.09591		736	-0.00473		312.25	-0.08659		71.3	-0.06061		65.4	-0.00381		33924.81	-0.06262
Nov-19	1274.25	0.001926		511.95	-0.04974		739.5	-0.01923		341.85	0.024423		75.9	0.07736		65.65	0.020202		36190.99	-0.0131
Dec-19	1271.8	0.037611		538.75	0.025117		754	0.033797		333.7	0.047559		70.45	0.039852		64.35	0.063636		36671.5	0.039166
Jan-20	1225.7	0.040846		525.55	0.05947		729.35	0.046789		318.55	0.051667		67.75	0.331041		60.5	0.342952		35289.35	0.056055
Feb-20	1177.6	0.366125		496.05	0.528659		696.75	0.836936		302.9	0.537954		50.9	0.578295		45.05	0.392581		33416.19	0.515472
Mar-20	862	-0.13951		324.5	-0.14583		379.3	-0.14687		196.95	0.034401		32.25	-0.06381		32.35	0		22050.02	-0.10817
CALCULATION OF BETA VALUES OF SELECT SAMPLE BANKS FOR THE PERIOD - APRIL-2020 TO FEB-2021 (POST - PANDEMIC)																				
Month	HDFC	Returns	BETA	ICICI	Returns	AXIS	Returns	SBI	Returns	BOI	Returns	PNB	Returns	BANKEK	Returns					
Apr-20	1001.75	0.053088	0.647816	379.9	0.143933	0.912727	444.6	0.16023	0.936023	190.4	0.187773	1.129871	35.2	0.11746	1.155006	32.35	0.204842	1.132819	24724.52	0.116954
May-20	951.25	-0.10739		332.1	-0.05506		383.2	-0.05732		160.3	-0.10146		31.5	-0.35583		26.85	-0.22734		22135.67	-0.08884
Jun-20	1065.7	0.032005		351.45	0.013116		406.5	-0.05816		178.4	-0.06816		48.9	0.038217		34.75	0.087637		24293.83	-0.01243
Jul-20	1032.65	-0.07402		346.9	-0.12177		431.6	-0.1315		191.45	-0.09757		47.1	-0.1318		31.95	-0.08845		24599.48	-0.08799
Aug-20	1115.2	0.033358		395	0.11299		496.95	0.170671		212.15	0.144283		54.25	0.332924		35.05	0.227671		26972.91	0.107503
Sep-20	1079.2	-0.08809		354.9	-0.09591		424.5	-0.1379		185.4	-0.02034		40.7	0.054404		28.55	0.06729		24354.7	-0.11077
Oct-20	1183.45	-0.17856		392.55	-0.16973		492.4	-0.1822		189.25	-0.22534		38.6	-0.14412		26.75	-0.2003		27388.62	-0.1917
Nov-20	1440.7	0.002749		472.8	-0.11593		602.1	-0.02942		244.3	-0.11083		45.1	-0.07297		33.45	0.012103		33884.04	-0.05585
Dec-20	1436.75	0.033039		534.8	-0.0041		620.35	-0.06503		274.75	-0.02588		48.65	-0.02113		33.05	-0.01048		35888.42	0.035367
Jan-21	1390.8	-0.12103		537	-0.17066		663.5	-0.11575		282.05	-0.28268		49.7	-0.15476		33.4	-0.13918		34662.51	-0.15118
Feb-21	1582.3			647.5			750.35			393.2			58.8			38.8			40835.9	

#### IV. DISCUSSION:

In India , the BSE Sensex and NIFTY are the most common bench marks of large cap funds. Other bench marks are CNX Mid Cap, CNX Small cap, CNX IT, CNX 500, BSE200 and BSE 100. You can compare your funds to the appropriate bench mark to know if it is underperformed or stay at par or outperformed the bench mark.

#### Index Funds

The Index funds serve the purpose of providing information to the investors intending to invest for a long term, with less risk involved in such investment. Index funds success depends on their low volatility. Number of mutual funds in India use BSE Indices . In India, for promoting Index Funds, NSE Indices's indices are used by number of popular mutual funds. NIFTY subsequently launched 50 more on December 24, 1996 with a base date of November 4, 1996 and base value of 1,000 points, representing 50 companies from Nifty 100 after excluding the constituents of Nifty 50. The index is well diversified with less concentration exposure to any one particular sector and covers variety of sectors. The Nifty next 50 is rebalanced on half-yearly basis.

#### NIFTY

The S&P CNX Nifty is the prime index on the National Stock Exchange of India Ltd. The index tracks the behavior of a portfolio of blue-chip companies, the largest and most liquid Indian securities. It includes 50 of the approximately 1430 companies listed on the NSE, captures approximately 65% of its float-adjusted market capitalization, and is a true reflection of the Indian stock market. The S&P CNX Nifty covers 21 sectors of the Indian economy and offers investment managers exposure to the Indian market in one efficient portfolio. The index has been trading since April 1996 and is well suited for benchmarking index funds and index-based derivatives.

In this study, NSC NIFTY monthly average returns for public and private sector banks have been correlated with NIFTY index's monthly average returns. The NSE Nifty Index indicates the behavior of a portfolio of top market capitalization companies, the largest and most liquid Indian stocks. The index is well studied for bench marking , index funds, and index-based derivatives. NSE Nifty influences is very high on other indices, especially NSE sectoral indices. Performance of the economy influences industry sector returns differently and changes overtime periods. Thus, changing the pattern of correlations between sectors is vital for investment purposes. The present study estimates the correlations between NSE Nifty and Industry sector in India.( Nagendra and Haritha, 2014). Most of the studies in the above literature have revealed the information that the stocks of banking sector is playing a dominant role in the market movement and influence the performance of stocks of other sectors too. But no study has been conducted so far by considering the index of banking sector as a base to compare the nature and extent of relationship with the index of other sectors. Hence in this paper, the researcher has taken this topic to know the nature and extent of influence by the banking sector with select sample banks with index of NSE

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CALCULATION OF CORRELATION VALUES OF SELECT SAMPLE BANKS FOR THE PERIOD - APRIL-2019 TO MARCH-2020 (PRE - PANDEMIC)							
	HDFC19	ICICI19	AXIS19	SBI19	PNB19	BOI19	NIFTY19
HDFC19	1	0.889681	0.398441	0.565883	-0.257033	-0.34792	0.930575
ICICI19	0.889681	1	0.171518	0.300793	-0.463435	-0.481614	0.812426
AXIS19	0.398441	0.171518	1	0.717514	0.634058	0.63946	0.640522
SBI19	0.565883	0.300793	0.717514	1	0.212676	0.131071	0.720359
PNB19	-0.257033	-0.463435	0.634058	0.212676	1	0.892618	0.017677
BOI19	-0.34792	-0.481614	0.63946	0.131071	0.892618	1	-0.076324
NIFTY19	0.930575	0.812426	0.640522	0.720359	0.017677	-0.076324	1

  

CALCULATION OF CORRELATION VALUES OF SELECT SAMPLE BANKS FOR THE PERIOD - APRIL-2020 TO FEB-2021 (POST - PANDEMIC)							
	HDFC20	ICICI20	AXIS20	SBI20	PNB20	BOI20	NIFTY20
HDFC20	1	0.840365	0.740781	-0.036624	0.560764	0.500049	0.957359
ICICI20	0.840365	1	0.961862	-0.021351	0.549192	0.672946	0.801465
AXIS20	0.740781	0.961862	1	0.188751	0.328661	0.741891	0.702648
SBI20	-0.036624	-0.021351	0.188751	1	-0.759028	0.277051	-0.097176
PNB20	0.560764	0.549192	0.328661	-0.759028	1	0.156098	0.61421
BOI20	0.500049	0.672946	0.741891	0.277051	0.156098	1	0.569425
NIFTY20	0.957359	0.801465	0.702648	-0.097176	0.61421	0.569425	1

Dr. S. Rajamohan and M. Muthukamu,(2014) in their paper “Bank Nifty Index and Other sectoral Indices of NSE – A Comparative Study”, made an attempt to know the nature and extent of influence by banking sector with other sectors using correlation coefficient technique and considered the index of banking sector as a base to compare the nature and extent of relationship with index and mutual fund performance of the select sample banks.

In the present paper, the researcher has taken this topic to know the nature and extent of influence by the banking sector index of NSE and BANKEX in both sectors of bank. from the data analysis, we can summarize that the correlation of Axis Bank is much lower when compared to HDFC and ICICI. The above table establishes correlation between all the three banks with themselves and also with Nifty19. we estimate our correlation coefficient using the NIFTY Index and summarize all the correlations so that each observation contains the summary statistics of the various calculated values.

A correlation close to one or equal to one reveals a strong relationship between the variables. It means if a particular bank's correlation is close to the NIFTY Index, it means that those stocks are moving along the market, on the other hand if the bank's correlation coefficient seems far away from Nifty Index, it represents that the bank's stock and the said Index are moving in opposite direction. This analysis facilitates inter bank and intra bank comparison to understand if the stocks are moving in the direction of market or away from market. Here, SBI has negative correlation, with other banks in the **post pandemic situation**, NIFTY 20, indicating the mutual funds are moving in same direction as the market (-0.097176), and other public and private sector banks have positive correlation though some are more and some are less correlated from their values. Here, the HDFC correlation with Nifty 20 is 0.957359, ICICI is 0.801465, AXIS 0.702648.

In the pre **pandemic situation** with relevance to NIFTY19, as benchmark the performance of HDFC is 0.930575, ICICI is 0.812426 and AXIS is 0.640522, indicating the Beta value less than one is less volatility and less in risk as well

### V. CONCLUSION :

From the above study –“A Comparative study of performance of mutual funds of select banks - pre and post covid - we find from the above results that in private sector, HDFC(0.930575) is performing better than other two private sector. ICICI(0.812426) and AXIS(0.640522), in Pre –Pandemic scenario.

Public sector banks analysis, SBI(0.720359) performance is better when compared to PNB(0.017677) and BOI(-0.076324).

This indicates the performance of banks with benchmark NIFTY.

In the post pandemic scenario, we find the results as following

In private sector HDFC(0.957359), is performing better than other two private sector banks ICICI(0.801465) and AXIS(0.702648) with benchmark as NIFTY Index.

where as public sector bank have SBI(-0.097176), is showing negative value indicating its performance it is not performing well when compared to its contemporary banks PNB(0.61421), and BOI(0.56942)

### Limitation

1. The study confines to those sample banks which were top 1,2,3 in respective sectors at the time of selection of sample.

(time period from march 2019- February 2020, pre covid and post covid scenario)

2. The market indices(NIFTY) and BANKEX taken as benchmark index to analyse the banks Mutual funds performance, in the conditions of uncertainty. So, Results may reflect market condition then.

### **Scope for further Research:**

There is good scope for further research in this particular topic. As there is second wave of pandemic, any curious researcher can probe into performance of banks in the second wave time visa vis the Market Index and Bankex to make a comparative study. Performance evaluation can be done using either CAMELS method (Ayadi et al,1998, Hays et al,2009), ROE and ROA (Avkiran,1997) (Lindblom, Von Koch,2002) (Chapman et al ,2007) also can be done using financial ratios covering three types of ratios likei) traditional measures of performance economic measures of performanceeiii) market based measures of performance. This can be carried out with more number of banks say 5-6 also, for period , March 2020-2021. Here, author used correlation coefficient for analysis , there author can use either correlation co-efficient and regression too

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