



IMPACT OF COVID-19 ON THE PERFORMANCE OF BSE SECTORAL INDICES IN INDIA

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ABSTRACT

Sectoral indices give quick summaries and comparisons for individual industries or sectors. It allows investors to compare a stock's performance to those of various industries. The performance of sectoral indices of the Bombay Stock Exchange (BSE) was examined in this study. As of April 2022, India has 19 indices: S&P BSE Basic Materials, Consumer discretionary goods & services, Energy, fast moving consumer goods, Finance, Healthcare, Industrials, Information Technology, Telecom, Utilities, Auto, Bankex, Capital goods, Consumer Durables, Metal, Oil & Gas, Power, Realty, and Tec. Every index is crucial. Investors, stakeholders, and policymakers put their money in the stock market, particularly in sectoral indexes, to increase their profits. This study examines market performance across the BSE Sectoral Indices during pre and post COVID period. This study concentrated on to identify the impact of covid pandemic on each sector, to measure the relationship between the selected Indices against BSE Sensex. The perspective of investor's decision has changed since COVID pandemic and thus it is relevant to analyse the sectoral indices pre and post pandemic. Thus, this study focuses on sectoral performance in order to identify which has maximize return with minimal risk.

Keywords: Sectoral Indices, Risk, Return, Covid 19, BSE and Optimum Portfolio

INTRODUCTION

Sectoral indices give quick summaries and comparisons for individual industries or sectors. It allows investors to compare a stock's performance to those of various industries. Each trade firm belongs to a certain economic sector, and businesses that offer similar goods or services will be grouped together. Investors can undertake in-depth evaluations of how the economy is running by categorising enterprises and the economy. Sector indices include energy, services, healthcare, consumer products, industrial, materials, utilities, technology & communications, and finance.

Investors who want to pick better stocks to invest in generally use sectoral performance analysis. Normally, investors choose the most promising sectors and analyse the performance of firms inside those sectors to decide which individual stocks will generate greater returns and acquire those stocks. The idea of sectoral efficiency/performance is fundamental in understanding how capital markets function. Investors' investing strategies are influenced by Market Efficiency since there are no undervalued or overpriced stocks in an efficient market. This means that the

stocks will not provide larger returns than expected at a given risk.

The performance of sectoral indices on the Bombay Stock Exchange (BSE) was examined in this study. The BSE Sectoral Indices are the subject of this research. As of April 2022, India has 19 indices: S&P BSE Basic Materials, Consumer discretionary goods & services, Energy, fast moving consumer goods, Finance, Healthcare, Industrials, Information Technology, Telecom, Utilities, Auto, Bankex, Capital goods, Consumer Durables, Metal, Oil & Gas, Power, Realty, and Teck, each of which includes a large number of companies. Every index is crucial. Investors, stakeholders, and policymakers put their money in the stock market, particularly in sectoral indexes, to increase their profits. Because the BSE Sectoral Indices are regarded relevant, this study examines market performance across the BSE Sectoral Indices pre and post COVID.

The perspective of investor's decision have changed since COVID pandemic and thus it is relevant to analyse the sectoral indices pre and post pandemic. Thus this study focuses on sectoral performance pre and post COVID in order to maximize return through minimal risk.

REVIEW OF LITERATURE AND RESEARCH DESIGN

On March 11, 2020, the **World Health Organization (WHO)**¹ proclaimed the COVID-19 virus a worldwide pandemic (**WHO, 2020**), and the pandemic had a significant influence on global financial markets, including stock markets, commodities markets, and debt markets. The oil price war between Saudi Arabia and Russia erupted in the midst of the epidemic, causing an oil market crash and a

concomitant stock market meltdown throughout the world. Needless to say, markets all across the world responded angrily to such news. According to a World Economic Forum study (WEF, 2020), by the end of February 2020, financial market volatility has escalated several NST times owing to investor and trader sell-offs to safeguard their cash. This resulted in a stock market crash, with a market capitalization loss of 30%, which is larger than the worldwide financial crises of 2009. **J Cave, K Chaudhuri, and SC Kumbhakar (2020)**² discovered a negative association between economic growth and banking sector development, however the influence of the same financial sector on economic growth remained positive for a period of time before becoming negative. This made the researcher wonder if the same findings were true during the recent COVID-19 incident.

Rashmi Chaudhary (2020)³ examined the BSE 500 and Sensex, as well as eight Bombay Stock Exchange sectoral indices (Auto, Bankex, Consumer Durables, Capital Goods, Fast Moving Consumer Goods, Health Care, Information Technology, and Realty), and discovered that the Indian stock market is more volatile, with a higher positive kurtosis and negative skewness.

Dr. Pramod Kumar Patjoshi and Dr. Girija Nandini (2020)⁴ concentrated on stock market investments since they are hazardous and require investors to anticipate a variety of concerns before investing. These concerns include risk, reward, financial security volatility 19, and liquidity. As a result, the major goal of this study is to examine the risk and returns of the Sensex and several steel sectors on the Bombay Stock Exchange. The risk and return were calculated using the Sensex's

daily closing value and all of the sample firms. The research is based on secondary data. The study's data was compiled from the BSE website during a 10-year period, from January 4, 2010 to December 31, 2019. Various approaches such as correlation, descriptive statistics, and the t test were used to achieve the stated goal in addition to testing the hypothesis. The null hypothesis (that there is no significant difference between Sensex and sample steel firms) is rejected for Tata Steel, Visa Steel, and SAIL after the t test revealed that there is a significant difference between Sensex and sample steel businesses excluding JSW steel.

According to **Rahul Kumar SI and Shishir Kumar Padhan (2020)**⁵ the link between the stock market and other macroeconomic factors has always been dissonant. According to studies, changes in many macroeconomic indicators have an impact on the stock market. Some aspects of the stock market have a favourable influence, while others have a negative impact. This article investigates the influence of five macroeconomic factors on India's BSE S & P index: exchange rate, inflation, interest rate, money supply, and consumer price index. It spans a 60-month period from October 2014 to September 2019. The Descriptive Statistics, Correlation 17 Matrix, and Regression Analysis (Goodness of Fit, Variance Inflation Factor, Coefficient of Determination, and Durbin – Watson d-Statistic) are all tested using the Statistical Package for Social Sciences (SPSS). The findings of the analysis show that S & P BSE value has a positive correlation with all independent variables except Interest Rate, which has a negative correlation with all variables. Money supply and the Consumer Price Index have a positive

relationship with the exchange rate, but a negative relationship with the interest rate. Except for Money Supply and Consumer Price Index, the VIF of all independent factors is within acceptable limits, and the effect of independent variables on the S&P BSE value looks to be quite high.

Sarath Sajan, Dr. Deeja S, and Reny Thomas (2020)⁶, Indians have a long history of being noted for their thrift. Savings and investment are intimately linked, and both contribute to an individual's and a nation's economic stability and progress. The advancement of various economic units, roughly grouped into corporate, government, and household sectors, reflects a nation's economic development. Indians, on average, spend less than their income and save the maximum amount feasible from their monthly income to reduce future risk. The goal of this research is to look at the rates of return on five key securities in various industries, as well as the best portfolio of assets. Every investor's principal goal should be to keep their money safe. The research provides insight into how to choose a firm, invest, and build portfolios. This research aids in the creation of several portfolios that take into account the risk return characteristics of the securities and the market as a whole, and then evaluating them to determine which is the best. Portfolio B clearly outperforms all other portfolios, according to the research. As a result, portfolio B is the greatest choice for the investor.

S. Baranidharan, A. Alex, and N. Dhivya (2019)⁷ investigated the integration and volatility spill over of automobile company stock prices on the BSE SENSEX and BSE AUTO Indexes. Because the critical values of 1%, 5%, and 10% are lower than the Augmented Dickey Fuller test, the study

concluded that there was a highly positive relationship between the BSE SENSEX and BSE AUTO Index and Automobile companies such as APOLLO TYRES, ASHOK LAY, BAJAJ AUTO, MARUTISUZU, MOTHER SUMI, and MRF.

RESEARCH GAP:

Many research studies and articles have looked into the return performance of global equity market indexes. The leader in Indian equities markets, the Bombay Stock Exchange, has recently developed various indexes, which have been assessed by S&P. The S&P rated BSE indexes returns performance measurement has not been studied. This research attempts to bridge the gap by examining performance measurement tools via Descriptive Statistics, t-test, Anova, Regression, Correlation.

NEED FOR THE STUDY:

The novel Covid-19 pandemic have impacted various industries, business process and created huge downturn in terms of performance of industries. Thus, it is relevant to know the various sectoral indices performance for investors to determine for inclusion of sustainable sectors to construct optimal portfolio with higher return and minimal risk. The study empirically analyses the performance of sectors before covid pandemic and its impact after pandemic on sectoral indices by performing the study related to pre pandemic and post pandemic.

STATEMENT OF THE PROBLEM:

The Covid Pandemic has influenced investors to be precautious among choosing company stock for investment for inclusion in portfolio. Therefore, need arises to

examine which particular sector is safe haven for investors during critical periods as well. Thus, it becomes critical for the investors to choose right sector stocks for future unforeseen contingencies.

OBJECTIVES OF THE STUDY:

1. To analyse the performance of each sectorial index before and after covid.
2. To identify impact of covid pandemic on each sector.
3. To determine weightage of each sector for inclusion in investor optimal portfolio
4. To measure the relationship between the selected Indices against BSE Sensex
5. To assess the extent of volatility among BSE Sectoral Indices
6. To forecast the performance of BSE Sectoral Indices

RESEARCH METHODOLOGY:

Research Design:

The type of research is quantitative empirical study. This study uses secondary data (Secondary data is based on information collected through BSE website, books, articles and journal) which will be analysed using descriptive & inferential research methods and also gives conclusion, findings and suggestions for this study.

Sampling:

The current research examines the performance of BSE sectoral indexes. There were 19 indices indexed in the BSE Sectoral and Industry Index as of April 2022. In this study it was chosen to evaluate all the 19 indices from the BSE Sectoral index based on their market turnover value from 2012 to 2022.

Sources of data:

The sources of data are articles, journal, online blogs, and books are used to collect the information relating to Stock market. Data will be collected from various websites like BSE India, moneycontrol.com, Google Finance, websites.

Tools for Data Analysis: Descriptive Statistics, Correlation Analysis, Multiple

Regression Analysis, t-test, ANOVA (Analysis of Variance)

GRAPH 4.1.1
RISK AND RETURN ANALYSIS OF
SELECTED SECTORIAL INDICES
FOR THE PERIOD OF MAY 2012 TO
MAY 2022



INFERENCE:

- The above graph displays the Annualized average monthly return and risk of BSE indices for the period May 2012 to May 2022.

Every index was badly affected during the period of Covid-19, from the above graph, it is clearly stated that during that period companies' risk is very high compared to the

past with the lowest return. After the period of Covid-19, a few indices recovered immediately, they are Energy, FMCG, Telecom, Utilities, Power, and Oil & Gas. It was found that the return was high for the year 2020-21 in the majority of the indices and low in the year 2019-20 in the majority of the indices. It was found that the risk was uncertainly high in the year 2019-20 in majority of the indices and low in the year 2016-17 in majority of the indices. BSE Consumer Durables has performed well in-terms of returns, followed by BSE Information Technology, BSE Teck, BSE Bankex, BSE Energy,

BSE Finance and BSE Consumer Discretionary has earned good returns during the study period. Consumer Durables has high volatility when compared to rest of the indices.

TABLE 4.2.1
COMPARISON OF BSE BASIC MATERIAL PANDEMIC RETURN (MARCH-2020 TO MAY-2022) AND BEFORE PANDEMIC RETURNS (DEC-2017 TO FEB-2020)

H0: There is no significant difference in the returns of selected index during pre and post covid
H1: There is a significant difference in the returns of selected index during pre and post covid

BASIC MATERIAL			CONSUMER DISCRETIONARY			INDUSTRIALS			INFORMATION TECHNOLOGY		
1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)
Mean	-0.1171932	2.32111332	Mean	-0.255528	1.7052233	Mean	-0.1338972	2.0439545	Mean	1.224836	2.0218471
Standard Deviation	27.361328	6.4912724	Standard Deviation	28.244399	38.892391	Standard Deviation	27.4238224	71.782614	Standard Deviation	33.932331	61.824944
Person Correlation	0.0182434	0.27	Person Correlation	-0.1972138	0.27	Person Correlation	-0.0398835	0.27	Person Correlation	0.2812473	0.27
Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0
t Stat	-1.8882158	2.8	t Stat	-1.7238813	2.8	t Stat	-0.1712284	2.8	t Stat	0.9338458	2.8
P(T<=t) one-tail	0.02946124	0.00250322	P(T<=t) one-tail	0.0313922	0.00250322	P(T<=t) one-tail	0.5708792	0.00250322	P(T<=t) one-tail	0.0809613	0.00250322
1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792
P(T<=t) two-tail	0.05792247	0.00500644	P(T<=t) two-tail	0.0627844	0.00500644	P(T<=t) two-tail	1.1417584	0.00500644	P(T<=t) two-tail	0.1619226	0.00500644
1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469

ENERGY			FAST MOVING CONSUMER GOODS			TELECOM			UTILITIES		
1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)
Mean	0.2424872	2.4578438	Mean	0.1142611	1.1228713	Mean	0.204131	0.204131	Mean	0.19146	1.1228713
Standard Deviation	40.529734	11.232565	Standard Deviation	10.910394	17.364127	Standard Deviation	40.529734	11.232565	Standard Deviation	31.788447	70.88173
Person Correlation	-0.9478962	0.27	Person Correlation	-0.2117821	0.27	Person Correlation	-0.208814	0.27	Person Correlation	0.143333	0.27
Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0
t Stat	-4.3157381	2.8	t Stat	-0.3854839	2.8	t Stat	-0.889797	2.8	t Stat	-0.3854839	2.8
P(T<=t) one-tail	0.0002746	0.00250322	P(T<=t) one-tail	0.3515461	0.00250322	P(T<=t) one-tail	0.3822117	0.00250322	P(T<=t) one-tail	0.6127787	0.00250322
1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792
P(T<=t) two-tail	0.0005492	0.00500644	P(T<=t) two-tail	0.5871322	0.00500644	P(T<=t) two-tail	0.7714254	0.00500644	P(T<=t) two-tail	0.2255574	0.00500644
1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469

FINANCE			HEALTH CARE			BANKEX			CAPITAL GOODS		
1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)
Mean	0.2229413	0.1461238	Mean	0.1188813	1.0212713	Mean	0.1188813	1.0212713	Mean	0.1188813	1.0212713
Standard Deviation	24.88881	38.148224	Standard Deviation	0.1188813	1.0212713	Standard Deviation	0.1188813	1.0212713	Standard Deviation	0.1188813	1.0212713
Person Correlation	0.1649792	0.27	Person Correlation	0.1188813	0.27	Person Correlation	0.1188813	0.27	Person Correlation	0.1188813	0.27
Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0
t Stat	-0.2194943	2.8	t Stat	-0.4992919	2.8	t Stat	-0.2194943	2.8	t Stat	-0.2194943	2.8
P(T<=t) one-tail	0.4188281	0.00250322	P(T<=t) one-tail	0.3712642	0.00250322	P(T<=t) one-tail	0.4188281	0.00250322	P(T<=t) one-tail	0.4188281	0.00250322
1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792
P(T<=t) two-tail	0.8376562	0.00500644	P(T<=t) two-tail	0.7425284	0.00500644	P(T<=t) two-tail	0.8376562	0.00500644	P(T<=t) two-tail	0.8376562	0.00500644
1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469

METAL			POWER			CONSUMER DURABLES		
1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)
Mean	-0.8978406	0.39200113	Mean	2.79761159	-0.97441267	Mean	1.0212713	1.0212713
Standard Deviation	47.2513781	117.01807	Standard Deviation	77.4828725	27.6820113	Standard Deviation	0.1188813	1.0212713
Person Correlation	0.14921481	0.27	Person Correlation	0.09807123	0.27	Person Correlation	0.1188813	0.27
Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0
t Stat	-2.0492407	2.8	t Stat	2.23892925	2.8	t Stat	-2.0492407	2.8
P(T<=t) one-tail	0.0248248	0.00250322	P(T<=t) one-tail	0.0088148	0.00250322	P(T<=t) one-tail	0.0248248	0.00250322
1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792
P(T<=t) two-tail	0.0496496	0.00500644	P(T<=t) two-tail	0.0176296	0.00500644	P(T<=t) two-tail	0.0496496	0.00500644
1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469

REALTY			TECK		
1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)	1-Test: Paired Two Sample for Means	Before Pandemic Returns (Dec17-Feb20)	Pandemic Returns (Mar20-May2022)
Mean	-0.1962036	2.24287562	Mean	0.84841246	2.33749664
Standard Deviation	64.4770411	34.274204	Standard Deviation	14.4484982	34.0084843
Person Correlation	-0.2018181	0.27	Person Correlation	0.1248148	0.27
Hypothesized Mean Difference	0	0	Hypothesized Mean Difference	0	0
t Stat	-1.7778813	2.8	t Stat	-0.8981800	2.8
P(T<=t) one-tail	0.21146144	0.00250322	P(T<=t) one-tail	0.1488127	0.00250322
1-Critical one-tail	1.70561792	1.70561792	1-Critical one-tail	1.70561792	1.70561792
P(T<=t) two-tail	0.42292288	0.00500644	P(T<=t) two-tail	0.2976254	0.00500644
1-Critical two-tail	1.95253469	1.95253469	1-Critical two-tail	1.95253469	1.95253469

According to the above data it is found that the returns before the pandemic was found to be –lesser than the returns of the index after the pandemic for the following indices BSE Material, BSE Consumer, BSE Industrial, BSE Utilities, BSE Metal, and BSE Power. And for these sectors the difference is significant based on p-value. And for the other sectors the returns are high after the pandemic but those differences are not significant based on the p-value. Only one sector which is very badly affected and failed to recover after the pandemic period is BSE Power.

COMPARISON OF ALL THE 19 INDICES USING ANOVA FOR THE PERIOD MAY-2012 TO MAY-2022

Time Period(ROWS):

H0: There is no significant difference in the returns across the time periods

H1: There is a significant difference in the returns across the time periods

Sectorial Index Returns (COLUMNS):

H0: There is no significant difference in the returns across the sectors

H1: There is a significant difference in the returns across the sectors

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	393.0788569	9	43.67543	24.8412626	2.17E-26	1.938083286
Columns	11.79907728	18	0.655504	0.37283101	0.990973	1.667863178
Error	284.8252738	162	1.758181			
Total	689.703208	189				

INFERENCE:

It is evident from the result that for the period May 2012 to May 2022, the year 2020-21 has outperformed well in terms of return with a sum of 80.48, average of 4.23 and variance of 3.18, the performance was good because the returns was high during this period. Followed by the years 2014-15 with sum returns of (39.04), 2016-17 with sum returns of (37.36) and so on. The least performed years by the Indices during this period were 2019-20 with a negative sum return of -23.97, followed by the years 2018-19 (-4.49) and 2015-16 (-3.18).

When compared to overall 19 BSE Indices Consumer Durables has outperformed well in-terms of returns, followed by Information Technology, Teck, Bankex, Energy, Finance, and Consumer Discretionary. The least performed Indices

for the said period was Telecom followed by Metal, Oil and Gas, Utility and Power. Thus it is understood that those invested on Indices like Consumer Durables followed by IT, Teck, Banks, Energy and finance grabbed good returns during this period than compared to those indices which didn't perform well.

The obtained p-values for the rows are lesser than 0.05. Accept H1, it states that there is a significant difference in the returns of the selected sectors across the time period. Whereas, the p-value for columns is greater than 0.05, the difference in the returns of the sectorial indices are not significant.

FORECASTING THE RETURNS OF THE SELECTED INDICES FOR THE NEXT THREE YEARS:

PROJECTED RETURNS OF THE SELECTED INDICES								
YE AR	MATE RIAL	CONSUME R DISCRETIO NARY	ENER GY	FMC G	FINA NCE	HEALT H CARE	INDUSTR IALS	IT
202 3	1.7442	0.9028	2.3305	0.8225	0.8951	0.6186	1.4551	1.666 0
202 4	1.8116	0.8311	2.5187	0.8298	0.8400	0.5339	1.4925	1.660 2
202 5	2.6872	0.7593	2.7068	0.8371	0.7850	0.4492	1.5298	1.584 7
YE AR	TELEC OM	UTILITIES	AUT O	BAN KEX	CAPI TAL GOOD S	CONSU MER DURAB LES	METAL	OIL & GAS
202 3	0.9694	2.4821	0.5109	1.1273	1.1105	1.8676	2.0414	1.184 311
202 4	1.0511	2.7744	0.4115	1.1039	1.0915	1.8939	2.2381	1.243 375
202 5	1.1328	3.0667	0.3122	1.0806	1.0726	1.9202	2.4349	1.302 439
YE AR	POWE R	REALTY	TECK					
202 3	2.7342	2.6968	1.3721					
202 4	3.0746	3.0390	1.3729					
202 5	3.4150	3.3813	1.3736					

It was found that, the forecasted returns for BSE BASIC MATERIAL, ENERGY, FMCG, INDUSTRIALS, TELECOM, UTILITIES, CONSUMER DURABLES, METAL, OIL & GAS, POWER, REALTY, TECK Indices for the period 2023, 24 and 25 are increasing in nature. It was found that, the forecasted returns for CONSUMER DISCRETIONARY, FINANCE, HEALTHCARE, IT, AUTO, BANKEX, and CAPITAL GOODS Indices for the period 2023, 24 and 25 are decreasing in nature.

SUGGESTIONS BASED ON FINDINGS:

- The study found that BSE Consumer Durables has performed well in-terms of returns, followed by BSE Information Technology, BSE Teck, BSE Bankex, BSE Energy, BSE Finance and BSE Consumer Discretionary has earned good returns during the study period, so it is advised to investors to invest in this particular Indices to earn good returns in future with minimal risk.

- The study provides evidence that BSE Consumer Durables has high volatility when compared to rest of the indices. So, Investors can invest in BSE Consumer Durables sector in order to earn abnormal profits in future.
- It is advised to investors to be careful before investing or choosing to invest in following indices BSE Telecom, BSE Metal, BSE Oil and Gas, BSE Utility and BSE Power as they provide lower returns during the study period.
- Investors should have certain knowledge regarding stock market before investing, because of covid situation there's been huge price fluctuations, thus IOT is advised to investors to be aware, updated with the market information and finally to invest there investment for a better return by avoiding risk.
- 2020-21 has marked a good overall return when compared to rest of the period, since investors have started investing in varied sector and grabbed good amount of return during this period, thus it is advised to investors to have a knowledge about market and indices in order to earn good returns.

CONCLUSION:

The current study uses monthly data to give a thorough examination of the effects of sectoral indices of the Bombay Stock Exchange of India during a ten-year period from May 2012 to May 2022. The risk and return for the BSE sectoral indexes discussed above are assessed to be at a moderate level. They are also directly connected to and integrated with the sectoral indices at the same time. In the

majority of analyses, risk and return play a big role in determining any financial decisions.

An investor should continually keep an eye on the market and refresh his portfolio by choosing the best stocks to invest in at any given moment. As investors become more knowledgeable about the stock market, the securities industry is expanding significantly. There are several insights into the stock market. However, as technology advances and investment obstacles are removed, the stock markets will demonstrate this in the future. Future developments will lead to the integration of the Indian stock market with the global stock market.