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Analyzing Volatility Patterns in the Indian Stock Market: With Special Reference to the Banking and IT Sector

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Abstract
The study delves into the volatility trends within the Indian stock market, with specific attention directed towards the banking and IT sectors. Notably, recent changes in the market have seen errors that have never been seen before, which is very different from the current information environment. This strange behavior has caused a lot of chaos in the market, which is being driven by investors' unexpectedly high levels of optimism. Because of this, there has been a shift from prudent investing to irrational optimism, which has made market swings worse. The study tries to figure out why these changes happen by looking at patterns of instability seen in the BSE Sensex and comparing them with similar trends seen in the banking and IT sectors over a long period of time. Furthermore, the addition of dematerialization to the capital market's rules has made it easier to look at market instability and what it means for market efficiency in a more complex way. In conclusion, this study's results are important for both Indian and foreign buyers, as well as regulatory bodies, because they help them better understand how the Indian stock market works and what its potential is.

Keywords*: Volatility Pattern, Stock Market, Banking Sector, IT Sector, BSE Sensex*

I. Background

The development and maintenance of an economy's expansion depend heavily on the capital market. It provides a stable source of investment in the economy and is an essential and efficient route for firms to allocate and mobilize capital. Tripathy, N. (2011), Bhattacharya B and Mookherjee J (2001), It is vital for mobilizing savings for investments in productive assets, which enhances a nation's long-term growth potential. Belal AR (2001), Consequently, it acts as a primary driving force behind the economy's transformation into a more efficient, inventive, and competitive global marketplace. Venkatraja B. (2014) and Chawla D. (2012) In addition to being a vehicle for allocating resources, capital markets also allow for the diversification of risk in the economy. A strong capital market tends to improve the quality of information because it fosters the adoption of stricter corporate governance regulations and facilitates trade. Tanveer Hasan (2018) asserts that the capital market has played a crucial role in promoting periods of scientific and economic progress throughout history. In 2021, Chen G. and Stan R. Among other things, the funding of capital-intensive enterprises with long gestation periods is made possible by liquid markets. This was definitely true during the industrial revolution of the eighteenth century, and it remains

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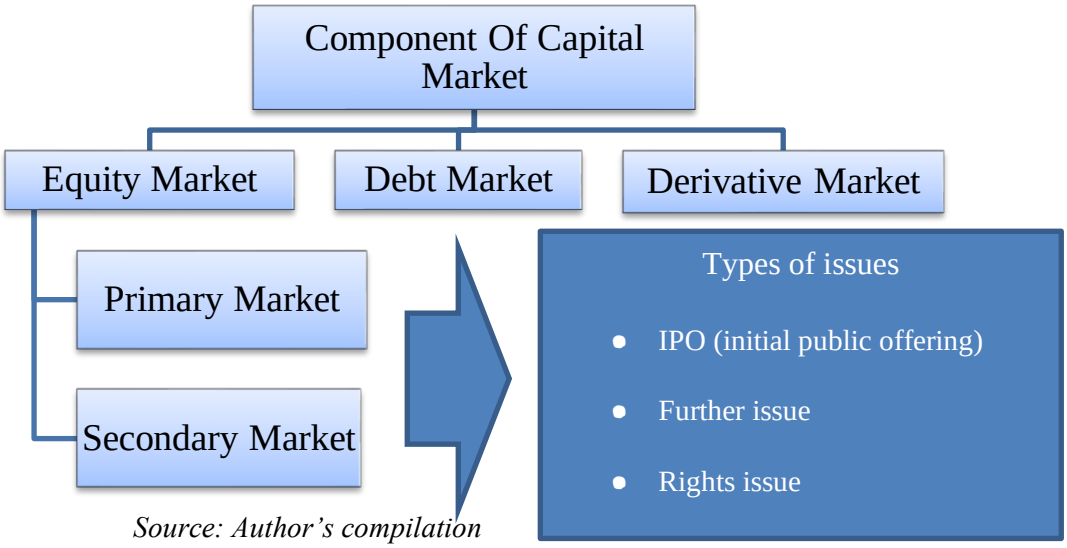
true as we move toward the "New Economy." In 2001, Chaudhuri K. and Koo, K. Encouraging the development of our country requires a robust and diverse capital market. India needs to concentrate on growing its capital market in order to offer alternative sources of funding for companies and more efficiently deploy investor resources. Another great place to get outside cash is the capital market. Chancharoenchai K, Mathur I., DiboogLu S (2005),It used to be believed that the Indian market was too tiny to warrant any attention. But as large amounts of foreign capital have poured into our markets in the last ten years, this perspective has rapidly changed. The Indian market is now perceived by investors throughout the world as a dynamic environment that offers exciting opportunities rather than as a stagnant cosmos.

Capital Market

There are mainly two types of capital market, one is primary market and the other is secondary market. Under the primary market, companies, government, and public sector institutions raise funds for themselves. Along with this, corporations will also be able to raise funds by issuing their new shares to the public through IPO.

Figure: I



Source: Author's compilation

Table A: The Current Stock Exchange Scenario

BSE Sensex						
Period	**No. of Companies**	**Demat Securities Traded**	**Demat Turnover (₹ crore)**	**Market Capitalization (₹ crore)**	**Turnover (₹ crore)**	**Average Daily Turnover (₹ crore)**
2010-11	5,067	9,89,804	11,04,050	68,39,084	11,05,027	4,333
2011-12	5,133	6,53,383	6,66,850	62,14,941	6,67,498	2,681
2012-13	5,211	5,63,788	5,43,232	63,87,887	5,48,774	2,195
2013-14	5,336	4,79,951	5,21,664	74,15,296	5,21,664	2,078
2014-15	5,624	8,56,755	8,54,842	1,01,49,290	8,54,845	3,518

2015-16	5,911	7,62,546	7,40,089	94,75,328	7,40,089	2,996
2016-17	5,834	7,07,231	9,98,260	1,21,54,525	9,98,261	4,025
2017-18	5,619	7,71,603	10,82,968	1,42,24,997	10,82,968	4,402
2018-19	5,262	5,18,103	7,75,590	1,51,08,711	7,75,590	3,127
2019-20	5,377	5,73,548	6,60,896	1,13,48,757	6,60,896	2,676
2020-21	5,477	10,45,632	10,45,089	2,04,30,815	10,45,090	4,197
2021-22	5,350	16,22,197	13,38,225	2,64,06,501	13,38,225	5,396
2022-23	5,428	10,34,075	8,12,664	2,82,38,248	8,12,664	4,368

Source: Author's compilation

Role of Capital Market in Economy

It is generally accepted that a country's rate of industrial growth directly affects its economic growth. Capital was not more necessary in the early stages of industrial development. However, the need for finance for industry increased quickly after the industrial revolution. Chen, N, Roll, R., & Ross, A. (1986), Due to the disorganized Indian capital market and lack of specialized financial institutions, the managing agency system supplies the business sector with the foundational financing during the early stages of development.

Since India gained independence, the government's numerous measures have substantially facilitated the capital market. One of the most significant components of the Indian financial system is the capital market. Srinivasan P. (2014), it is the share and debenture market that is available to companies for addressing their needs for long-term finances or assets. In other words, it is concerned with the process of raising cash for long-term investments. Srinivasan P.(2012),These securities are regularly traded; sold and bought at specific prices that are expected to reflect all information pertaining to the companies providing the securities. In this market, various securities and instruments are bought, sold, and traded. Raymond K. (2009), these instruments may have an ownership component, like stocks and preferred shares, or a debt component, like bonds and debentures.

Volatility of Indian Stock Market

Economic growth is crucial for enhancing the standard of living in every country, and stock market volatility measurement is a key component of that growth. Singh D. (2010) the significance of investment in promoting economic growth is emphasized in both the standard classical and neo-classical models. The financial and monetary sectors are crucial in resource mobilization. D. Sudarsana Murthy. (2018), Financial stability is necessary to encourage investment in general. Financial institutions and markets can efficiently mobilize funds, supply liquidity, and allocate investment when the economy is stable. Darrat A. F. (1990), our economy's ability to run efficiently might be considerably improved by the expanding role that the financial sector plays in the efficient distribution of resources at reasonable costs. Ratanapakorn O. (2007), financial markets will allocate resources to their most beneficial uses if they function properly. Raymond K. (2009), financial risks will be priced more properly and taken on by those who are willing to do so. Growth with macroeconomic stability and less financial risks would arise from real economic activity with increasing investments in both quantity and quality.

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Figure: II

Source: Author's compilation

II. Review of Literature

To measure day to day volatility, we can measure it with the help of some financial variables. Financial variables such as stock returns, interest rates, market value etc. can be included. Under this study, an attempt has been made to understand the relationship of the country's major service sector institutions such as IT and banking companies with the help of financial variables with the stock market. For which major literature has been studied.

Khan et al. (2017); Abu-Libdeh H, Harasheh M. (2011) has been examining how the KSE-100 list is affected by the Consumer Producing Index (LCPI), Money supply (LM2), and Industrial Production (LIP). Monthly data from November 1991 to March 2013 were used by the researcher. The study employed the ARDL test. The study's findings demonstrated that all macroeconomic issues had short-term effects on stock returns. On the long run, money supply and industrial production affected stock returns. The stock returns were negatively impacted by the CPI.

lipsa das and R.P. Mahapatra (2017); Patel S (2012) the study is correlation between foreign institutional investors and average BSE indices. The objective of the study is impact of average BSE indices on foreign institutional investor investment behavior. Finding of the study is that there is no significant correlation between the total liquidity and debt. The correlation between BSE Sensex and FIIs investment in equity (0.511) is slightly higher than the correlation between BSE SENSEX and FIIs in debt (0.392) in India.
Naresh kedia (2017); Abu N. (2009); Adam P.(2015) the objective of the study is to examine the relationship between inflation, interest rate, currency exchange rate on the BSE. For the study secondary data is used in for the analysis. The data collected from 2005 to 2014 for the analysis multiple regression

methods. In this study the level of significant is 8% where being greater than 5% show that the regression analysis done on the given data is not strongly associated.

D. Sudarsan Murthy (2018); Ahmed, S. (2008); Alam M. (2009); Ali H. (2014); this study reviews the causes of volatility in Indian stock market and varied aspects of Indian stock exchange intimately. The Collection of secondary data has been conducted from BSE and NSE handbook. In the study measure are adopted to regulate volatility by circuit breaker, increment in market timing. Conclusion of the study is that stock market is that the mitigation of risk through the spreading of investment across multiple entities, which is achieved by the poling of variety of small investment into on out sized bucket.

Tanveer Hasan (2018); Adam P. (2015); Ahmed, S. (2008) the study confirms that forex reserves, interest rates have a positive relationship with stock. The result explains that a unidirectional relationship has been found between stock market capitalization and exchange rate, while no case-to-case relationship has been observed with inflation.
For this study, ADF unit root test was used to test the stationarity of the time series data. Along with this, Johansen's integration test was also applied.

Demir (2019); Ali H. (2014); Al-Sharkas (2004); Aslam W. (2014) some significant macroeconomic factors' effects on the BIST-100 (Borsa Istanbul-100) index were studied. This study tried to determine how certain chosen macroeconomic factors affected the BIST-100 index between 2003 Q1 and 2017 Q4. The findings of the ARDL Bounds Test on the quarterly data revealed that the stock market index is positively impacted by economic growth, domestic currency, portfolio investments, and foreign direct investment, while the index is negatively impacted by interest rates and crude oil prices.

Pradhan (2015); Singh P. (2012) this research paper examines the relationship between economic growth and stock market. This study explains the connection of variables like oil price, inflation, interest rate and exchange rate with stock market. In this study, Granger causality long run test has been applied under panel vector autoregressive model. The study includes stock market and economic variables of G20 countries and data has been collected for the period from 1961 to 2012. The result explains that oil price, exchange rate, inflation rate and interest rate have a robust relationship with stock market.

Surbakti et al. (2016); Olweny O. and Kimani D. (2011); Olugbenga A.(2011) in this study used global macroeconomic variables like the Dow Jones index and the gold price while domestic macroeconomic factors are exchange rates, inflation, and interest rates to examine the impact of macroeconomic influences on volatility in stock rates of the Jakarta Composite Index (JCI) before and after the global financial crisis. Using the ARCH-GARCH model, the results revealed that only two variables, the exchange rate and the DJI, had a substantial positive impact on JCI's return. All other variables had no such impact. The study's findings highlighted the fact that macroeconomic variables at both the domestic and global levels have an impact on JCI volatility.

Mugambi and Okech (2016); Ratanapakorn O. (2007); Poornima, S., and Ganeshwari M. (2016) research was done on how stock returns in the listed companies on the Nairobi Securities Exchange were affected by macroeconomic conditions. Secondary data from the Central Bank of Kenya between 2000 and 2015 was used in the study. Correlation analysis, unit root testing, and linear regression models were all utilized in the inquiry to find this connection. In comparison to GDP, research has shown that the exchange rate, interest rates, and inflation have a considerable impact on stock returns. According to the research, the government should pursue a stable macroeconomic environment and little monetary policy involvement.

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III. Research Methodology

Under the research design of this study, the nature of the study has been used as descriptive cum exploratory research. For the study, the impact of IT and banking companies on the stock market in the years before and after Covid19 has been studied. For the study, the data collection method has been chosen as secondary and the time taken is 5 years which is from 2018-19 to 2022-23. On the basis of IT companies TCS Ltd, Infosys Ltd, Wipro Ltd and HCL Technology Ltd and on the basis of banking companies, HDFC, SBI, INDUSIND and ICICI banking companies have been selected. For the study, the data of financial ratios of these IT and banking companies has been included and the returns of BSE Sensex have been included as the stock market.

Collections of Data

The current study's methodology depends extensively on data from numerous secondary sources. In order to include industries where data are readily available, sampling is done. Two sectors are taken into consideration, and five companies are chosen from each chosen industry area in order to make the whole study more empirical. In order to derive analytical findings using the proper tools and methodologies, it is comprised of ten (10) sample companies, five of which are from each of two industries. Four years' worth of data, from 2018–19 to 2022–2023 are taken into consideration for the efficient conduct of the current study project.

A study is conducted on the share price behavior of various corporations within specific industries, such as the banking and IT sectors. Sincere and truthful information is gathered from a variety of sources, including the official websites of the BSE, NSE, SEBI, RBI, Ministry of Finance, Corporate Affairs, and relevant companies, among others. However, in the case of some corporations, information that is not completely disclosed in the stock market directory is sourced from other, deemed reliable sources such as journals, papers, and relevant books. When choosing businesses from various industry groupings, there are requirements that must be followed.

Research Tools and Techniques

Following are the research instruments that have been used for the study:

Multiple Correlations

The relation between two variables can be measured on the basis of percentage as well as on the basis of value between 0 to1. The value 1 confirms that the relationship between two variables is strong and 0 indicates that there is no relationship between the variables. This relationship can be both positive and negative, which expresses the relationship between the variables.

$$R = \frac{\sum_{i=1}^{n}\left((x_i - \bar{x})^2 \cdot (y_i - \bar{y})^2\right)}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2 \cdot \sum_{i=1}^{n}(y_i - \bar{y})^2}}$$

Multiple Regressions

A statistical method for examining the relationship between one dependent variable and several independent variables is multiple regression. Using known values for the independent variables to forecast the value of the single dependent variable is the goal of multiple regression analysis. Weighing each predictor value indicates how much of an impact it has on the final prediction.

$$Y = a + b_1X_1 + b_2X_3 + \cdots + b_nX_n$$

Here Y is the dependent variable, and X1,…,Xn are the n independent variables. In calculating the weights, a, b1,…,bn, regression analysis ensures maximal prediction of the dependent variable from the set of independent variables. This is usually done by least squares estimation.

IV. Objectives of the Study

Following are the key objectives of the study:

- To study the trends of IT and banking sector of India.

- To measure the relationship between stock price and financial ratios of IT and banking sector of India.
- To analyze the volatility pattern of Indian stock market with special reference to IT and banking sector of India.

V. Results and Interpretation

In this paper researcher study that in 2018 to 2023 the services sector and its main companies how to perform. The study based on three objectives trend analysis, multiple correlations, and multiple regressions. In service sector collection of data from banking sector and IT sector on Indian companies. From banking sector data was collected by secondary sources from HDFC, SBI, INDUSIND bank and ICICI bank. The data from IT sector collected through secondary sources.

i. Trend Analysis of Banking Sector for the Period of 2018-19 to 2022-23

If we talk about returns, the banking sector was not seeing much better results before Covid19, while the situation of returns has improved in the few years after Covid19, which reached 20 percent in 2022. According to chart 1, the volatility in returns from 2018 to 2023 has been very high. At the time of Covid19 or return -30 had gone. This effect was seen in almost all the sectors of the country. This condition of the banking sector was being seen in the returns as well as in its share price, which had worked out to 25000 during Covid19. If we talk about the two major variables of the banking sector, then the returns in these five solos have been volatile but the share price has been less volatile in comparison. The share price in 2018 was 22311 which by 2023 will reach around 45657. If we talk about returns, due to its high volatility, it was giving negative returns of up to 40 percent at the time of covid19 with a profit of 10 percent. This return has been seen up to +20 percent after Covid19.

ii. Trend analysis of IT Sector for the Period of 2018-19 to 2022-23

If we talk about the share price of IT sector, then in 2018 the market started its work with less than 9576 which have reached 36502 by 2023. The chart 2 present the fluctuation in the share price has been as much as it has been in the returns of the IT sector company. Even at the time of Covid19, the share price has also been able to give more negativity effect. With the help of the chart, one thing can be clearly seen that before Covid19, where the share price was less than 15000, it has reached around 35000 with good growth after covid19. The stock price trend has been normal before Covid19, which has increased more rapidly after 2021. But the trend of returns has been unpredictable due to high volatility in returns.

iii. Multiple Correlation Analysis of IT sector for the Period of 2018-19 to 2022-23

With the help of the tables 1 to 5 presented, it can be said that from 2018 to 2019 a high correlation was found between the financial ratio and share price of the major IT sector company. Talking about the relation between EPS and DPS, it was 0.90726. IT Company in 2020 is not very high, as well as a negative relationship has also been found between these ratios. The normal correlation found between EPS and DPS is 0.64321 in the table. In 2020 to 2021, the correlation between EPS and DPS was 0.985124 whereas between PE and DPS, the correlation between EPS was 0.880132 and 0.9191186 respectively. The correlation between EPS and DPS in 2022 -23 is 0.72745 while the correlation between PE and EPS is found to be 0.64643 which is the normal degree.

iv. Multiple Correlations Analysis of Banking Sector for the Period of 2018-19 to 2022-23

The country's leading banking sector companies based on multiple correlations have been reported in the table through their returns and their financial ratios. The study of the table shows that not only one variable is significantly correlated with each other, but many variables are having their positive effect. If we talk about the tables 6 to 10 the correlation between Key Financial Ratios and Share Prices of banking sector

companies for the period 2018 to 2019, high correlation is found between EPS and DPS with 0.98086. A negative relationship has been found between PE and EPS, DPS. It can be said that between 2019 and 2020, high correlation has been found in EPS and DPS with 0.937711. 2020 to 2021 was completely in the grip of Covid19. The correlation between EPS and DPS was found to be 0.985145 but the correlation between stock market prices was found to be negative. The time of year 2021 to 2022 is going to come back from Covid19. During this period, high correlation is found in EPS and DPS with 0.921646. On the other hand, the correlation between EPS and DPS with PE ratio is 0.952188 and 0.9930098. In the banking sector between 2022 and 2023, high correlation is found between EPS and DPS with 0.85452, while EPS and DPS have a low correlation with PE but in a positive way. This relationship has been 0.33189 and 0.471586.

v. Multiple Regressions Analysis of Banking Sector for the Period of 2018-19 to 2022-23

According to tables 11 to 15 the regression analysis results 2018 -19 to 2022-23 are shown. With the help of the tables, it can be said that the dependent variable share price and the independent variables EPS and DPS have been kept, which shows the value of R- squared with 99% relation. But since p- value is more than 0.5, we rule out the dependency of EPS and DPS. In 2019 and 2020, the regression between share price and DPS is -0.11624 while the coefficient with EPS is 0.021856 where p- value is less than 0.05 due to which it can be said that the change in EPS and DPS of the companies. In 2023, EPS and DPS are affected by the change in share price because the p-value is 0.030428 which is less than 0.05.

Tables 16 to 20 present multiple regression models with stock prices of banking sector as dependent variables and price/book value and P/E as independent variables. According to the tables, a significant relationship has been found between price and P/E ratio in 2018 to 2019, whereas in 2019 to 2020 also a significant relationship can be seen between price and PE ratio due to the P -value being less than 0.05. Talking about 2020 to 2021 and 2021 to 2022, the significant value of P/E has been less than 0.05, as well as no significant relationship can be seen with price/book value ratio in 2021 to 2022. Similarly, no significant relationship has been found between the independent variables and the dependent variable in 2022 to 2023.

vi. Multiple Regression Analysis of IT sector for the Period of 2018-19 to 2022-23

The tables 21 to 25 are show the financial ratio and share price relationship of an IT company between 2018 and 2019. Since the P- value is also more than 0.05, there is no evidence that the dependence of EPS and DPS is in a better form on the share price. In the IT sector between 2020 and 2021, then the change in EPS is due to the change in the share price of the companies because the P-value is 0.084263 which is close to 0.05. Along with this, the dependency of DPS is also seen more in the share price and the sector has got a boost. Under regression analysis, the dependent variable is almost dependent on the independent variable as shown by looking at the p-value. EPS and DPS are affected by the change in share price in 2023. Once the R- squared, it is 91% which indicates high relation. The value of the coefficient is -0.52539 of the share prices and the value of EPS is 0.001964.

According to the study, Table 26 to 30 shows the regression analysis of stock price and price/book value, P/E of IT sector. According to the table, the p- value of price/book value in 2018 to 2019 is 0.04507 which is less than the significant value; hence there is a significant relationship between stock price and price/book value. A significant relationship has been found between stock price and P/E ratio in 2020 to 2021 because the P- value can be seen less than 0.05. Talking about 2021 to 2022 and 2022 to 2023, the P- value of Price / Book Value ratio and P/E ratio has been found to be more than 0.05, which indicates any significant relationship with the stock price.

VI. Managerial Implications

The following are the study's managerial implications:

1. Risk management: By using the study's insights, managers can improve their approaches to managing risks. Managers can detect and reduce risks related to market swings by having a better understanding of the factors that contribute to volatility in the Indian stock market, particularly in the banking and IT sectors.

2. Strategic Decision-Making: Managers who are making strategic choices about investments, financial planning, and market entry or exit can find useful information in this study. Managers are better equipped to make decisions that support the aims and objectives of their organizations when they have a thorough understanding of the stock market's potential and efficiency.

3. Investor Relations: Managers can effectively connect with investors by utilizing the study's findings. Managers can assist investors in comprehending the dynamics of the market and helping them make wise investment selections by offering insights into the patterns of volatility in the Indian stock market.

4. Regulatory Compliance: Managers can also benefit from the study's findings by making sure that regulations are followed. Managers may better negotiate regulatory hurdles and steer clear of potential traps by having a thorough understanding of the regulatory framework governing the capital market and how it affects volatility.

5. Strategic Partnerships: Lastly, managers can use the study's results to form partnerships with industry associations, regulators of the market, and other stakeholders. Managers may stay informed about market trends and developments by working with these organizations, which will allow them to modify their strategy as necessary.

The managerial implications of the study emphasize the significance of using knowledge pertaining to volatility patterns in the Indian stock market for the purpose of improving risk management, regulatory compliance, investor relations, and strategic alliances.

VII. Suggestion and Conclusion

On the basis of trend analysis and multiple regression analysis the IT sector is more volatile in comparison to banking sector. Under this, the volatility found in the stocks of banking and IT sector is due to the information of the stock market and foreign investors. The schemes and policies run by the government from time to time can be found in the country's IT sector companies as another good sector of investment. The volatility found in the IT sector will be able to attract the attention of future investors and policy makers.

If we talk about multiple correlations, then during 2018-19 to 2022-23, significant positive correlation has been found with market share between share on dividend and share on earnings. This positive correlation was seen in almost all the years that have been selected for the study. Talking about the banking sector, there has been a strong positive correlation between shares on earnings and shares on dividends, but in the time of Covid19 this result was found to be opposite. Similar situation has also been in the company of IT sector. A strong relationship has been found between the key financial ratios of the IT and banking sector from 2018 to 2020. During the pandemic of 2021 to 2022, negative and low correlation has been found in their correlation. Talking about Multiple Regression, the Dependent Variable between Financial Ratios of Banking Sector, Shares on Earnings and Shares on Dividend has been dependent on the Independent Variable Market Share Price between 2020 to 2021 and 2021 to 2022. Also looking at the IT sector, the dependent variable has been dependent on the independent variable between 2020 and 2021 and 2022 to 2023. It is meant to say that in these years, the shares on earnings and shares on dividend of the company in the IT sector have been affected by the market price of shares of the company. The study found that the financial ratios of major companies in the IT sector and the banking sector, mainly earnings on shares and dividend yields, were strongly influenced by the market price share and the market price share as the main determinant of these ratios. Taiwo M., Abayomi T, Damilare O. (2012), Rigobon, Roberto, and Brian Sack (2004), almost all the time it has been found that the market price of shares has been converging with a strong grip to other variables which reflect the market volatility.

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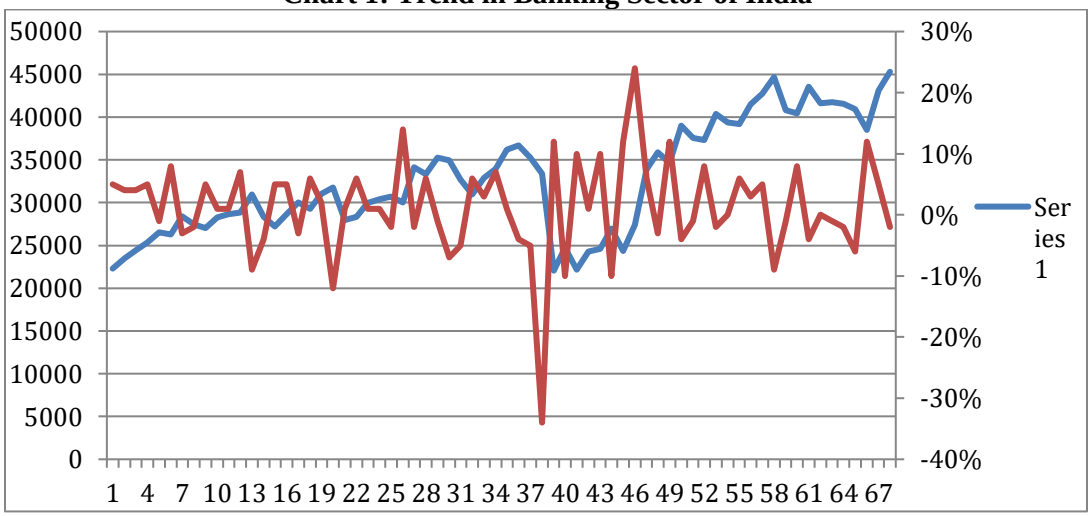
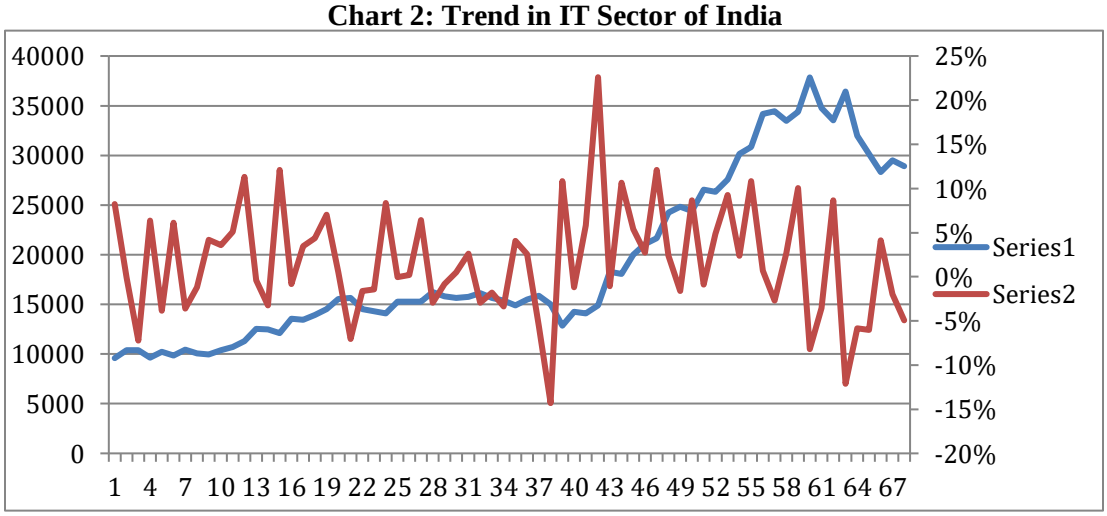
APPENDIXES:

Chart 1: Trend in Banking Sector of India



Source: Author's compilation

Chart 2: Trend in IT Sector of India



Source: Author's compilation

Table 1: Multiple Correlation Analysis of IT Sector (2018-19)

2019	EPS	DPS	PE	PRICE	BV/S	P/SALE	Y.E	P/BV
EPS	1							
DPS	0.90727	1						
PE	-0.1529	-0.2815	1					
PRICE	0.91160	0.82498	-0.5192	1				

BV/S	0.98600	0.96064	-0.2560	0.92102	1			
P/SALE	0.80347	0.51842	-0.2518	0.86733	0.73157	1		
Y.E	-0.3076	0.11877	-0.1806	-0.3265	-0.1603	-0.7533	1	
P/BV	0.91559	0.662293	0.03792	0.851627	0.841903	0.947898	-0.6642	1

Source: Author's compilation

Table 2: Multiple Correlation Analysis of IT Sector (2019-20)

2020	EPS	DPS	PE	PRICE	BV/S	P/SALE	Y.E	P/BV
EPS	1							
DPS	0.64313	1						
PE	-0.0124	0.69049	1					
PRICE	-0.0372	-0.7201	-0.6588	1				
BV/S	0.95606	0.49906	-0.2527	-0.0023	1			
P/SALE	0.91141	0.78494	0.35620	-0.1374	0.75192	1		
Y.E	-0.1917	-0.6873	-0.9352	0.40773	0.09101	-0.573	1	
P/BV	0.82890	0.89799	0.54435	-0.3425	0.64682	0.972722	-0.6999	1

Source: Author's compilation

Table 3: Multiple Correlation Analysis of IT Sector (2020-21)

2021	EPS	DPS	PE	PRICE	BV/S	P/SALE	Y.E	PRICE/BV
EPS	1							
DPS	0.9851	1						
PE	0.8801	0.9191	1					
PRICE	-0.526	-0.377	-0.292	1				
BV/S	0.9537	0.8992	0.8366	-0.736	1			

P/SALE	0.9893	0.9927	0.8662	-0.413	0.900	1		
Y/ EAR.	-0.846	-0.870	-0.987	0.3782	-0.849	-0.8110	1	
PRICE/ BV	0.9823	0.9982	0.9397	-0.383	0.9059	0.9848	-0.89763	1

Source: Author's compilation

Table 4: Multiple Correlation Analysis of IT Sector (2021-22)

2022	EPS	DPS	PE	PRICE	BV/S	P/SALE	YE	PRICE/BV
EPS	1							
DPS	0.92164	1						
PE	0.95218	0.99309	1					
PRICE	-0.8591	-0.8054	-0.7934	1				
BV/S	0.89080	0.89408	0.87589	-0.983	1			
P/S	0.98163	0.83628	0.88719	-0.799	0.81111	1		
YE	-0.6697	-0.7214	-0.6701	0.9383	-0.9334	-0.5596	1	
P/BV	0.97836	0.90810	0.95065	-0.735	0.78935	0.97250	-0.516	1

Source: Author's compilation

Table 5: Multiple Correlation Analysis of IT Sector (2022-23)

2023	EPS	DPS	PE	PRICE	BV/S	P/S	YE	P/BV
EPS	1							
DPS	0.727	1						
PE	0.64643	0.24942	1					
PRICE	0.86191	0.84243	0.73158	1				
BV/S	0.94476	0.88591	0.62339	0.96624	1			

P/SALE	0.98417	0.64034	0.57487	0.75841	0.87677	1		
YE	-0.6427	-0.9488	-0.4035	-0.8970	-0.8576	-0.5128	1	
P/BV	0.96720	0.61173	0.81768	0.87785	0.90823	0.936322	-0.5949	1

Source: Author's compilation

Table 6: Multiple Correlation Analysis of Banking Sector (2018-19)

2019	EPS	DPS	PE	PRICE	BV/S	P/S	YE	P/BV
EPS	1							
DPS	0.98008	1						
PE	-0.7293	-0.7279	1					
PRICE	-0.9657	-0.9239	0.85557	1				
BV/S	0.93475	0.93134	-0.4505	-0.813	1			
P/SALE	0.97142	0.91304	-0.7859	-0.991	0.84686	1		
YE	0.66756	0.60973	-0.9554	-0.835	0.36052	0.78698	1	
P/BV	0.99254	0.95502	-0.6615	-0.949	0.94968	0.970748	0.623833	1

Source: Author's compilation

Table 7: Multiple Correlation Analysis of Banking Sector (2019-20)

2020	EPS	DPS	PE	PRICE	BV/S	P/SALE	YE	P/BV
EPS	1							
DPS	0.93771	1						
PE	-0.8663	-0.7866	1					

PRICE	0.25297	-0.0988	-0.284	1				
BV/S	0.96995	0.90239	-0.722	0.26837	1			
P/SALE	0.86895	0.83777	-0.990	0.14963	0.72257	1		
YE	0.93764	0.78674	-0.942	0.49188	0.86076	0.90679	1	
P/BV	0.93459	0.80183	-0.965	0.440384	0.84215	0.937085	0.99685	1

Source: Author's compilation

Table 8: Multiple Correlation Analysis of Banking Sector (2020-21)

2021	EPS	DPS	PE	PRICE	BV/S	P/S	YE	P/BV
EPS	1							
DPS	0.36759	1						
PE	-0.52056	0.34561	1					
PRICE	0.75952	-0.32047	-0.71378	1				
BV/S	0.94030	0.03182	-0.71211	0.92799	1			
P/SALE	0.00564	0.81034	0.80996	-0.51376	-0.30984	1		
YE	0.75013	-0.32163	-0.86021	0.97047	0.92905	-0.6317	1	
P/BV	-0.02222	0.84743	0.78887	-0.57659	-0.34865	0.99298	-0.6691	1

Source: Author's compilation

Table 9: Multiple Correlation Analysis of Banking Sector (2021-22)

2022	EPS	DPS	PE	PRICE	BV/S	P/SALE	YE	P/BV
EPS	1							
DPS	0.92164	1						
PE	0.95218	0.57457	1					

PRICE	0.63242	0.58357	0.2544	1				
BV/S	0.86302	0.11446	0.4134	0.96198	1			
P/SALE	0.54447	0.54732	0.98497	-0.2921	-0.5411	1		
YE	-0.3145	0.3446	-0.9934	-0.1969	0.01230	0.2475	1	
P/BV	0.34569	0.6758	0.95367	0.5467	-0.5647	-0.5678	-0.5647	1

Source: Author's compilation

Table 10: Multiple Correlation Analysis of Banking Sector (2022-23)

2022	EPS	DPS	PE	PRICE	BV/S	P/SALE	YE	P/BV
EPS	1							
DPS	0.85075	1						
PE	0.33189	0.47158	1					
PRICE	0.59273	0.08146	-0.0594	1				
BV/S	0.76000	0.31545	-0.1137	0.95118	1			
P/SALE	0.24246	0.44732	0.99099	-0.1924	-0.2411	1		
YE	-0.3145	-0.3488	-0.9766	-0.0979	0.00790	-0.9478	1	
P/BV	0.20169	0.51019	0.94212	-0.3704	-0.3703	0.97507	-0.8540	1

Source: Author's compilation

Table 11: Regression Analysis of Banking Sector for the Year 2018-19 (P versus EPS, DPS)

Multiple R	**0.974339**
R Square	0.949336
Adjusted R Square	0.848008
Standard Error	0.067592
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	0.244416	0.050264	4.862652	0.12912
EPS	-0.00712	0.005373	-1.32588	0.411379
DPS	0.015358	0.032145	0.47778	0.71625

Source: Author's compilation

Table 12: Regression Analysis of Banking Sector for the Year 2019 -20 (P versus EPS, DPS)

Multiple R	**0.999918**
R Square	0.999835
Adjusted R Square	0.999506
Standard Error	0.006358
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-0.12473	0.004771	-26.1415	0.02434
EPS	0.021056	0.000272	77.50732	0.00821
DPS	-0.11624	0.001543	-75.3549	0.00844

Source: Author's compilation

Table 13: Regression Analysis of Banking Sector for the Year 2020- 21(P versus EPS, DPS)

Multiple R	**0.996322**
R Square	0.992657
Adjusted R Square	0.977972
Standard Error	0.506373
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-2.18733	0.516982	-4.23095	0.147756
EPS	0.144567	0.013132	11.00919	0.057668
DPS	-1.89246	0.251491	-7.52497	0.084108

Source: Author's compilation

Table 14: Regression Analysis of Banking Sector for the Year 2021- 22 (P versus EPS, DPS)

Multiple R	**0.576032**
R Square	0.331813
Adjusted R Square	-1.00456
Standard Error	0.105984
Observations	4

	Coefficients	***SE***	***t Stat***	***P-value***
CONSTANT	-0.40194	0.157565	-2.55097	0.237839
EPS	0.002573	0.005635	0.456613	0.727311
DPS	-0.02485	0.035437	-0.70138	0.610612

Source: Author's compilation

Table 15: Regression Analysis of Banking Sector for the Year 2022- 23 (P versus EPS, DPS)

Multiple R	**0.999262**
R Square	0.998525
Adjusted R Square	0.995576
Standard Error	0.022457
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-0.95362	0.045612	-20.9072	0.030427
EPS	0.039046	0.001506	25.93431	0.024535
DPS	-0.11197	0.005345	-20.9488	0.030366

Source: Author's compilation

Table 16: Regression Analysis of Banking Sector for the Year 2018-19 (P versus PRICE/BV, PE)

Multiple R	**0.996915**
R Square	0.99384
Adjusted R Square	0.981521
Standard Error	0.023534
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	0.158746	0.056926	2.78864	0.219197
P/BV	-0.06426	0.009858	-6.51865	0.046906
PE	0.004004	0.001036	3.863683	0.161232

Source: Author's compilation

Table 17: Regression Analysis of Banking Sector for the Year 2019-20 (P versus PRICE/BV, PE)

Multiple R	**0.698663**
R Square	0.48813
Adjusted R Square	-0.53561
Standard Error	0.354319
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-2.20629	2.625419	-0.84036	0.555086

P/BV	0.502664	0.56355	0.89196	0.536315
PE	0.44678	0.45788	0.78457	0.05689

Source: Author's compilation

Table 18: Regression Analysis of Banking Sector for the Year 2020-21 (P versus PRICE/BV, PE)

Multiple R	**0.999069**
R Square	0.998139
Adjusted R Square	0.994418
Standard Error	0.254904
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-7.62044	0.904978	-8.42058	0.07525
P/BV	0.209602	0.038095	5.502076	0.114456
PE	75.21362	4.641219	16.20558	0.039234

Source: Author's compilation

Table 19: Regression Analysis of Banking Sector for the Year 2021-22 (P versus PRICE/BV, PE)

Multiple R	**0.968468**
R Square	0.93793
Adjusted R Square	0.813789
Standard Error	0.032302
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-0.18411	0.081047	-2.27165	0.263995
P/BV	0.056073	0.019976	2.807049	0.017869
PE	-0.01764	0.00458	-3.85131	0.161728

Source: Author's compilation

Table 20: Regression Analysis of Banking Sector for the Year 2022-23 (P versus PRICE/BV, PE)

Multiple R	**0.939763**
R Square	0.883154
Adjusted R Square	0.649462
Standard Error	0.199896
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-1.04933	0.645831	-1.62477	0.351235
P/BV	-1.01172	0.36874	-2.74373	0.222502
PE	0.205211	0.081219	2.526648	0.239919

Source: Author's compilation

Table 21: Regression Analysis of IT Sector for the Year 2018-19 (P versus EPS, DPS)

Multiple R	**0.969376**
R Square	0.939689
Adjusted R Square	0.819067
Standard Error	0.059521
Observations	4

	Coefficients	***SE***	***t Stat***	***P-value***
CONSTANT	0.107502	0.063365	1.69654	0.339073
EPS	0.002519	0.001411	1.784653	0.325148
DPS	0.005317	0.003435	1.548241	0.365091

Source: Author's compilation

Table 22: Regression Analysis of IT Sector for the Year 2019-20 (P versus EPS, DPS)

Multiple R	**0.909861**
R Square	0.827847
Adjusted R Square	0.483542
Standard Error	0.007195
Observations	4

	Coefficients	***SE***	***t Stat***	***P-value***
CONSTANT	0.204222	0.00766	26.65995	0.023868
EPS	0.000229	0.000171	1.340401	0.408051
DPS	-0.00091	0.000415	-2.19106	0.272577

Source: Author's compilation

Table 23: Regression Analysis of IT Sector for the Year 2020-21 (P versus EPS, DPS)

Multiple R	**0.976609**
R Square	0.953765
Adjusted R Square	0.861296
Standard Error	0.057935
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	**1.049767**	**0.139765**	**7.510951**	**0.084263**
EPS	**-0.02444**	**0.005835**	**-4.18799**	**0.149217**
DPS	**0.022951**	**0.006002**	**3.823988**	**0.162834**

Source: Author's compilation

Table 24: Regression Analysis of IT Sector for the Year 2021-22 (P versus EPS, DPS)

Multiple R	**0.859824**
R Square	0.739297
Adjusted R Square	0.217891
Standard Error	0.196976
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	0.893778	0.250842	3.563107	0.174189
EPS	-0.00579	0.00983	-0.58932	0.66098
DPS	-0.00122	0.01762	-0.06897	0.956161

Source: Author's compilation

Table 25: Regression Analysis of IT Sector for the Year 2022-23 (P versus EPS, DPS)

Multiple R	**0.917438**
R Square	0.841692
Adjusted R Square	0.525077
Standard Error	0.096412
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-0.52539	0.113089	-4.64576	0.134973
EPS	0.001964	0.002151	0.913129	0.528888
DPS	0.00372	0.004709	0.78998	0.574355

Source: Author's compilation

Table 26: Regression Analysis of IT Sector for the Year 2018-19 (P versus PRICE/BV, PE)

Multiple R	**0.981185**
R Square	0.962725
Adjusted R Square	0.888174

Standard Error	0.046793
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	0.315503	0.145148	2.173668	0.274499
P/BV	0.065083	0.015093	4.31214	0.04507
PE	-0.03234	0.012813	-2.52395	0.240152

Source: Author's compilation

Table 27: Regression Analysis of IT Sector for the Year 2019-20 (P versus PRICE/BV, PE)

Multiple R	**0.659149**
R Square	0.434477
Adjusted R Square	-0.69657
Standard Error	0.013042
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	0.217848	0.02037	10.69454	0.059355
P/BV	8.44E-05	0.003295	0.025604	0.983704
PE	-0.00093	0.001242	-0.74889	0.590787

Source: Author's compilation

Table 28: Regression Analysis of IT Sector for the Year 2020-21 (P versus PRICE/BV, PE)

Multiple R	**0.432148**
R Square	0.186752
Adjusted R Square	-1.43974
Standard Error	0.24298
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	0.38803	0.7134	0.543916	0.682861
P/BV	-0.04753	0.134813	-0.35259	0.784196
PE	0.018769	0.085133	0.22047	0.031855

Source: Author's compilation

Table 29: Regression Analysis of IT Sector for the Year 2021-22 (P versus PRICE/BV, PE)

Multiple R	**0.795705**
R Square	0.633146

Adjusted R Square	-0.10056
Standard Error	0.233662
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	1.393416	1.073087	1.298512	0.417781
P/BV	0.008886	0.090206	0.098504	0.937492
PE	-0.03217	0.064324	-0.50008	0.704791

Source: Author's compilation

Table 30: Regression Analysis of IT Sector for the Year 2022-23 (P versus PRICE/BV, PE)

Multiple R	**0.878179**
R Square	0.771199
Adjusted R Square	0.313597
Standard Error	0.115907
Observations	4

	Coefficients	*SE*	*t Stat*	*P-value*
CONSTANT	-0.55827	0.38486	-1.45057	0.384241
P/BV	0.022403	0.02206	1.015576	0.49508
PE	0.0009	0.017997	0.050029	0.468177

Source: Author's compilation

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