An Analysis of Stock Prices of Banking Companies Shares for the Year 2021

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Abstract: **This research paper understands and analyses the fluctuations of stock prices in Banking Sector during the year 2021. 10 banking companies which include 7 public sector and 3 private sectors, namely- Axis Bank, Federal Bank, ICICI Bank, Karnataka Bank, Canara Bank, HDFC Bank, Bank of India, Kotak Mahindra Bank, Bank of Baroda, and IDBI Bank using the closing prices of NIFTY, NSE Stock Exchange are considered for the study. From the data, it is evident that HDFC bank shares are most stable than other bank shares since the coefficient of variation is less and hence, we can choose HDFC Bank for better investment decision.**

Keywords: **Banking sector, NIFTY, NSE, Stock exchange, Stable, Coefficient of variation.**

1. Introduction

Banking plays an important role in the economic growth of the nation. It provides funds to operate the business and it acts as a moderator between the companies and people. Also, finding stock prices of bank is equally important to study the fluctuations of the prices or to take investment decisions.

Stock market plays a significant role in the economy of the country. Stock market brings thousands of marketers to buy and sell shares of public and private companies regulated by SEBI to ensure reasonable trade and transparency in their transactions.

In the Indian market, BSE and NSE are two prominent stock exchange markets. NSE started in the year 1992 and began exchanging from the year 1994.

Stock index or Stock Market index aids to measure the prices of stocks so as to help the stockholders to know and compare the prices and evaluate their market performance. National Stock Exchange (NSE) contains 33 banks out of which 12 are public sector and 21 are private sector banks.

Objectives of the Study:
- To study the stock prices of ten Banks (public & private sector).
- To analyze and interpret the fluctuations of stock prices of Banks in the year 2021.
- To evaluate which Bank's shares are most volatile and which bank's shares are most stable.

2. Review of Literature

Priyadharshini A., have conducted an analysis on stock prices of IT companies in the year 2020, changes and fluctuations that happened in the prices of stocks in the IT sector from Jan 2020 – dec 2020.The study has analyzed the performance of the stocks and have also investigated the factors influencing the fluctuations. Furthermore, the breakout of the COVID-19 pandemic has had an influence on share values, with corporations experiencing a significant drop in their stock prices as a result.

According to Sameer Yadav, stock market plays a major role in the development of economic sector. Stock market is a platform where the investors purchase and sell debentures, shares and bonds etc. Various securities and derivatives can be traded in the stock market without any barriers. Companies are listed in the stock market through public issues. Many investors started investing in the companies to make profit in the stock market. The three largest Indian stock market are BSE, NSE and CSE. Estimation of Volatility is very important in the market which is associated with different people for various reasons.

According to M. Raju, India is experiencing economic growth, and we can see that massive amounts of money are pouring into the Indian market from all over the world in the last few years. Global trade is at a faster rate. India's economy has grown to be worth more than USD 1 trillion, making it the world's ninth most important economy. Affiliations are becoming more involved with transferring their possessions to others. Assets are raised by posting on distant stock exchanges in global marketplaces.

According to K.S Shilpa, Arya Mol, and Dr. A. S. Ambily, before making any investing decisions, every investor should have a thorough understanding of the stock market. Fundamental analysis or technical analysis can be used to analyse the capital market. The purpose of their research was to investigate the fundamental analysis of a few NSE-listed IT companies. The essential parameters in economic analysis are fiscal deficit, GDP, current account deficit and so on.

Adnan Miski, conducted a comparative analysis of financial records between software and biopharmaceutical corporations. This research compares financial records of organizations

whose main concentration is software development. A comparison is made between software companies and biopharmaceutical business to help the reader comprehend the similarities and differences between the two industries. The common example of financial ratios is current ratio, earning per share, return on investments. Both industries share the fact that to develop a marketable produce, high initial investment should be done. Before their product can be marketed, biopharmaceutical businesses must also clear regulatory requirements. This could have a negative impact on them.

According to Supratik Sarkar, India has been hurt hard across the board, from banking to tourism, from infrastructure development to rural-urban consumerism. From their research they have found that the pandemic has caused the economy to collapse, but instant framework by advanced economies have ensured one of the quicker recoveries. As a result, we have a unique opportunity to make right decisions and consolidate market in a way this recovery is sustained on strong foundation rather than short term market sentiment.

According to Manamani Sahoo, who has practically investigated the existence of the day of the week effect using closing daily data before and during the COVID-19 health crisis, during covid19 health crisis period is examined and on Mondays a negative return is found. For all indexes, secondary data was used from April 1,2005 to May 14,2020.

According to Sajjan Choudhury, there is a fear that has influenced the mind of consumers by coronavirus which can be noticed in their shopping processes. Their mindset and intentions of purchase has completely changed. In their research they have studied the factors which affect customers in buying a product like purchase intentions. Panic buying in the lockdown and more cases of coronavirus, also many people started panic buying. In order to test the hypothesis, they matched the coronavirus prevalence rates and web enquires by statistical analysis period, as well as conducting correlation studies in India.

According to Amanulla S and Kamaiah B, who conducted a stock market intergradation of India and market efficiency, their main aim was to use price integration methodologies like the cointegration tests to examine market efficiency in a semi strong form. This research also uses a causality test to see if the Indian stock market is an efficient processor of macro-information.

According to Arun Jethmalani, presents a review of risk involved in corporate securities. Risk can be predicted based on the variance returns. In his article he clarifies that risk is neither quantifiable nor measurable but historic volatility is the basis for calculating risk. In fact, risk and returns are proportional. Investments should be made on the ability of investors and the risk that they are ready to bear.

According to "Avijith Banerjee" (1998), "Fundamental analysis" and "Technical analysis" were used to assess the worthiness of selected securities needed for portfolio construction. The most effective period is determined by technical analysis to purchase or sell a stock. Its objective is to minimize the consequences of wrong timing in decision of making investments. He also declared that that the modern

portfolio literature proposes 'beta' value P as the most suitable and justifiable risk of scrip. In order to lower the risks, for constructing a portfolio the securities having low P should be considered.

According to Bhanu Pant and Dr. Bishnoy, in their research they found that the indices of the Indian market did not follow a random walk. They studied behavior of everyday returns and also weekly returns of five market indices of Indian stock for random walk.

According to James Riedel (1997), analyzed that the economic reforms resulted in integration of capital market in Asian developing countries.

According to L.G Gupta, reviewed and published in 1992, that there are wild assumptions in the stock market of India. The overly speculative nature of the Indian stock market is evident in exceptionally high concentrations of market activity in a few shares to the exclusion of the remaining shares,as well as extremely high speculative counter trading velocities. Short term speculation, he believes, might lead to "artificial price" if it is extreme.

According to M.S Anjubala, the long-term investors look for investing in stock market that elsewhere. The largest three stock exchanges are BSE, NSE, CSE in the Indian stock market. Their motive of this study is to analyse the Indian stock market completely in its depth. In Indian stock market, high degree of volatility has resulted to the more development in the future.

According to Peijie Wang (2009), in the field of finance, econometric approaches are becoming more widely used, and this second edition of a well-known text includes the following major topics: in the study of time series models, cointegration, unit roots and some other advances have been made. The GARCH type of time varying volatility model and stochastic volatility technique, Kalman filtering and Markov switching analysis of spectral data etc. The author aims in bringing together diversified topics in a single research-oriented volume.

3. Research Methodology

In this research project, the data collected was through (NSE) national stock exchange of 10 Indian banking companies including both public sector and private sector. The data consists of 52 weeks, from January 6th 2021 to 29th December 2021. Many papers were studied briefly and pandemic impact on share prices can be noticed. Due to pandemic, the falling down of bank valuations can be noticed in every country across the globe. Since to study and analyze and the fluctuations of stock prices of Banks in the year 2021 was one of the objectives of this study, share prices of each week have been carefully examined thoroughly and carefully interpreted. Money control acts as a basis for this research.

4. Analysis

The closing stock prices of 10 banks (private and public sector) were considered for the analysis.

The following formulas are used to analyse the data.

$$\bar{x} = \frac{\sum x}{n}$$

$$\sigma = \frac{\sqrt{(x - \bar{x})^2}}{n}$$

Coefficient of variation $= \dfrac{\sigma}{\bar{x}} * 100$

Range = Largest value – Smallest value

Table 1
Stock prices of Axis & Federal Bank

Date	Axis Bank	Federal Bank
06-01-2021	667.5	74.2
13-01-2021	691.25	78.88
20-01-2021	680.8	77.95
27-01-2021	663.6	71.8
03-02-2021	736.8	82.2
10-02-2021	745.95	83.7
17-02-2021	784.9	88.15
24-02-2021	754.4	85
03-03-2021	760.75	88.45
10-03-2021	765.55	87.2
17-03-2021	741.9	84
24-03-2021	725	78.3
31-03-2021	703.55	77.1
07-04-2021	691.9	76.65
14-04-2021	671	77.85
21-04-2021	662	72.55
28-04-2021	713	78.1
05-05-2021	718.85	81.1
12-05-2021	706.95	84
19-05-2021	723.6	85.4
26-05-2021	741.3	87.65
02-06-2021	746.1	87.8
09-06-2021	751.45	87.6
16-06-2021	756.75	86.65
23-06-2021	743.95	86.3
30-06-2021	760.5	87.55
07-07-2021	763.95	87.3
14-07-2021	773.25	90.3
21-07-2021	758.6	86.3
28-07-2021	738.8	86.55
04-08-2021	757	90
11-08-2021	761	86.85
18-08-2021	764.8	84.1
25-08-2021	715.45	80.95
01-09-2021	819	83.25
08-09-2021	797.15	83.45
15-09-2021	797.4	84.2
22-09-2021	796.7	81.65
29-09-2021	789.15	82.25
06-10-2021	794	86.85
13-10-2021	804.3	94
20-10-2021	813.8	94.35
27-10-2021	842.2	103
03-11-2021	762.75	102.6
10-11-2021	753.3	102.7
17-11-2021	725	98.25
24-11-2021	695.2	94.45
01-12-2021	681.4	88.75
08-12-2021	701.4	91.45
15-12-2021	720	91.45
22-12-2021	676.6	82.9
29-12-2021	679.7	82.55

Table 2
Stock prices of ICICI & Karnataka bank

Date	ICICI Bank	Karnataka bank
06-01-2021	550.55	63.9
13-01-2021	561	68.95
20-01-2021	554.5	64.45
27-01-2021	593.25	60.7
03-02-2021	627.5	65.45
10-02-2021	638.2	66.25
17-02-2021	664.75	67.9
24-02-2021	646.6	72.2
03-03-2021	633.5	69.75
10-03-2021	630.4	68.65
17-03-2021	603.55	66.35
24-03-2021	580.65	65
31-03-2021	589.75	62.2
07-04-2021	580	63.5
14-04-2021	563.7	62.3
21-04-2021	572.55	60.1
28-04-2021	622.65	62.4
05-05-2021	604.25	63.85
12-05-2021	606.6	68.5
19-05-2021	633.8	67.5
26-05-2021	656.6	72.25
02-06-2021	649.3	64.3
09-06-2021	645.5	65.1
16-06-2021	649	64.15
23-06-2021	634.95	64.4
30-06-2021	640.65	63.05
07-07-2021	654.5	62
14-07-2021	667.55	62.2
21-07-2021	660.1	61.75
28-07-2021	687.25	59.3
04-08-2021	717.3	62.7
11-08-2021	706.95	59.95
18-08-2021	702.1	58.05
25-08-2021	700.15	53.4
01-09-2021	734.85	64.6
08-09-2021	722.7	64.6
15-09-2021	715.9	75.35
22-09-2021	716.8	71.9
29-09-2021	711.6	68.25
06-10-2021	705	71.5
13-10-2021	715.95	71.25
20-10-2021	757.4	73.3
27-10-2021	849	73.5
03-11-2021	805.55	72.05
10-11-2021	784.3	78.9
17-11-2021	771.6	76.3
24-11-2021	772.25	72.05
01-12-2021	732.7	65.1
08-12-2021	758.8	68.75
15-12-2021	759.5	67.05
22-12-2021	735	62.35
29-12-2021	745	61.95

Table 3
Stock prices of Canara bank & HDFC Bank

Date	Canara bank	HDFC bank
06-01-2021	137.3	1448.8
13-01-2021	145.85	1494
20-01-2021	143.5	1504.95
27-01-2021	138.75	1471.5
03-02-2021	156.15	1581.4
10-02-2021	161.45	1621.75
17-02-2021	168.45	1621.75
24-02-2021	165	1650
03-03-2021	167	1595.7
10-03-2021	162.8	1575.35

17-03-2021	158.2	1538.65
24-03-2021	154.7	1506.45
31-03-2021	155.45	1549
07-04-2021	153	1456.5
14-04-2021	139.3	1437.2
21-04-2021	133.05	1429.5
28-04-2021	143.6	1478.7
05-05-2021	147.85	1409
12-05-2021	155.7	1408.9
19-05-2021	152.25	1478
26-05-2021	152.15	1489
02-06-2021	164.4	1511.05
09-06-2021	162.2	1501.65
16-06-2021	155.9	1494.15
23-06-2021	154.2	1497.4
30-06-2021	156	1508.95
07-07-2021	155.1	1545.1
14-07-2021	153.75	1507.35
21-07-2021	149.25	1454
28-07-2021	150.4	1436.85
04-08-2021	159.45	1474.75
11-08-2021	154.55	1518.7
18-08-2021	158.5	1564.75
25-08-2021	156.7	1564.6
01-09-2021	161.2	1597.5
08-09-2021	161.15	1580.45
15-09-2021	162.05	1554.7
22-09-2021	159	1551
29-09-2021	171.95	1606.9
06-10-2021	183.4	1626.4
13-10-2021	189.5	1648
20-10-2021	197.3	1700
27-10-2021	203.65	1665
03-11-2021	229.6	1610
10-11-2021	244.05	1570
17-11-2021	226.5	1543.8
24-11-2021	218.95	1536.45
01-12-2021	207.5	1507
08-12-2021	215.2	1555.6
15-12-2021	217.4	1520
22-12-2021	202.25	1455.9
29-12-2021	199.4	1461.15

Table 4
Stock prices of Kotak Mahindra & Bank of India

Bank of India	Kotak Mahindra bank	Bank of India
06-01-2021	52.45	1978.5
13-01-2021	56.75	1912
20-01-2021	54.85	1895
27-01-2021	50.65	1823.05
03-02-2021	54.85	1882.35
10-02-2021	61.8	1961.85
17-02-2021	84.65	2022.4
24-02-2021	90.1	1953.95
03-03-2021	84.85	1908.95
10-03-2021	79.05	1998.75
17-03-2021	72.6	1917.05
24-03-2021	80.95	1807.45
31-03-2021	70.6	1781
07-04-2021	69.75	1810
14-04-2021	71	1730
21-04-2021	66.5	1735
28-04-2021	68.45	1823.95
05-05-2021	70.75	1786.65
12-05-2021	74.5	1759
19-05-2021	82.7	1757
26-05-2021	77.75	1763
02-06-2021	79.3	1796
09-06-2021	83.45	1812.35
16-06-2021	80.5	1781

23-06-2021	79.75	1765
30-06-2021	80.7	1743.55
07-07-2021	76.95	1768.55
14-07-2021	77	1752.25
21-07-2021	73.95	1732
28-07-2021	71.45	1706
04-08-2021	75	1752.4
11-08-2021	68	1818.9
18-08-2021	67.8	1797
25-08-2021	65.3	2052
01-09-2021	66.7	2010.65
08-09-2021	58.8	1966.2
15-09-2021	57.4	2025
22-09-2021	56.1	2201
29-09-2021	55.75	2094.95
06-10-2021	58.4	2127.7
13-10-2021	60.4	2080
20-10-2021	61.15	2061.7
27-10-2021	64.7	2014
03-11-2021	63.8	2111
10-11-2021	65.8	2095.8
17-11-2021	60.8	2081
24-11-2021	60.35	2024.5
01-12-2021	55.3	1985.4
08-12-2021	55.2	1968
15-12-2021	56.6	1881.55
22-12-2021	51.95	1770.15
29-12-2021	52	1780

Table 5
Stock prices of Bank of Baroda & IDBI bank

Date	Bank of Baroda	IDBI Bank
06-01-2021	67.65	32.1
13-01-2021	76	32.65
20-01-2021	80.35	29.75
27-01-2021	75.45	28.1
03-02-2021	78.8	30.4
10-02-2021	81.1	30.4
17-02-2021	85.5	31.3
24-02-2021	90.3	30.8
03-03-2021	86.9	36.7
10-03-2021	81.9	39.45
17-03-2021	79	38.85
24-03-2021	75.1	40.6
31-03-2021	75.45	39.2
07-04-2021	75.55	38.5
14-04-2021	69.25	36.65
21-04-2021	65.75	34.75
28-04-2021	68.15	36.15
05-05-2021	72.95	39.5
12-05-2021	79.9	39.8
19-05-2021	78.2	40.3
26-05-2021	82.3	39.1
02-06-2021	81.85	39.4
09-06-2021	86.2	40.4
16-06-2021	87	39.3
23-06-2021	83.65	40.9
30-06-2021	88.05	38.7
07-07-2021	86.45	37.95
14-07-2021	85.1	38.65
21-07-2021	80.5	37.95
28-07-2021	80.2	38.8
04-08-2021	83.85	39
11-08-2021	81	39.5
18-08-2021	79.6	42.45
25-08-2021	76.5	39.45
01-09-2021	78.75	50.55
08-09-2021	80.5	48.35
15-09-2021	81.85	64.1
22-09-2021	80.15	39.3

29-09-2021	82	46.1
06-10-2021	85.75	47.8
13-10-2021	89.15	62.85
20-10-2021	93.15	58.1
27-10-2021	103.7	54.5
03-11-2021	104.35	57
10-11-2021	108	55.9
17-11-2021	98.85	53.15
24-11-2021	95.25	50.35
01-12-2021	88.25	46.45
08-12-2021	92.9	49.3
15-12-2021	93.05	53.6
22-12-2021	81.85	47.5
29-12-2021	81.45	48.35

Table 6
Measures of central tendency and dispersion of banking companies

Column 1	Axis bank	Federal bank
Mean	740.2154	85.7035
S. D.	44.2185	6.9573
C.V.	5.9737	8.1179
Max.	842.2	103
Min.	662	71.8
Range	180.2	31.2

Table 7
Measures of central tendency and dispersion of banking companies

Column 1	ICICI BANK	Karnataka bank
Mean	671.6067	66.1779
S. D.	71.2647	5.0597
C.V.	10.6111	7.6456
Max.	849	78.9
Min.	550.55	53.4
Range	298.45	25.5

Table 8
Measures of central tendency and dispersion of banking companies

Column 1	Canara bank	HDFC bank
Mean	168.6913	1531.0625
S. D.	26.7542	68.9484
C.V.	15.8599	4.5033
Max.	244.05	1700
Min.	133.05	1408.9
Range	111	291.1

Table 9
Measures of central tendency and dispersion of banking companies

Column 1	Bank of India	Kotak Mahindra bank
Mean	67.6135	1895.4327
S. D.	10.5487	133.5264
C.V.	15.6015	7.0446
Max.	90.1	2201
Min.	50.65	1706
Range	39.45	495

Table 10
Measures of central tendency and dispersion of banking companies

Column 1	Bank of Baroda	IDBI Bank
Mean	83.1625	42.1298
S. D.	8.793	8.5708
C.V.	10.5733	20.3439
Max.	108	64.1
Min.	65.75	28.1
Range	42.25	36

The scatter diagram plots for all the banks are given from fig. 1 to fig. 10.
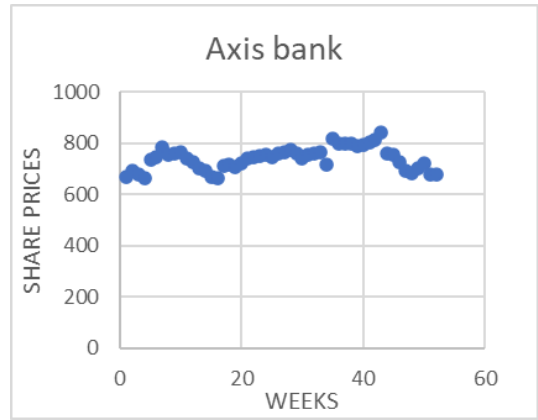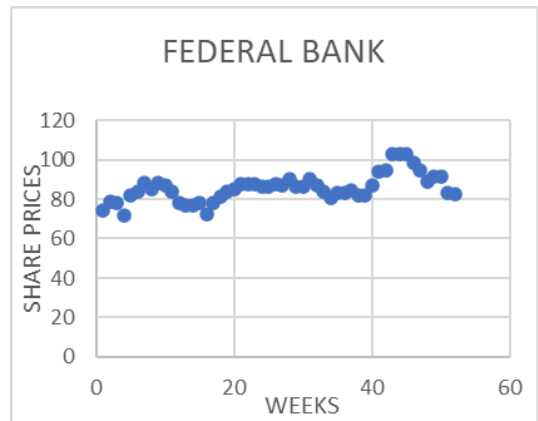

Fig. 1. Weeks vs. Share Price (Axis bank)

Fig. 2. Weeks vs. Share Price (Federal bank)
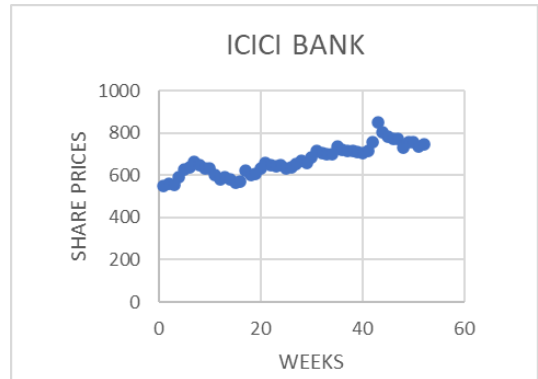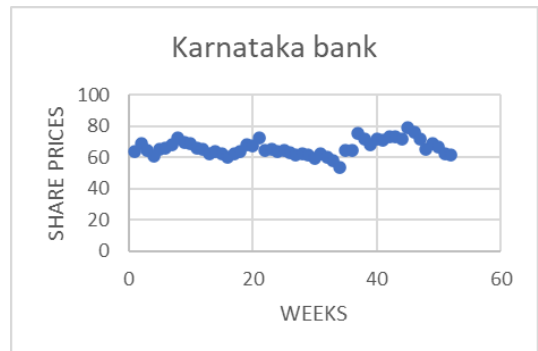

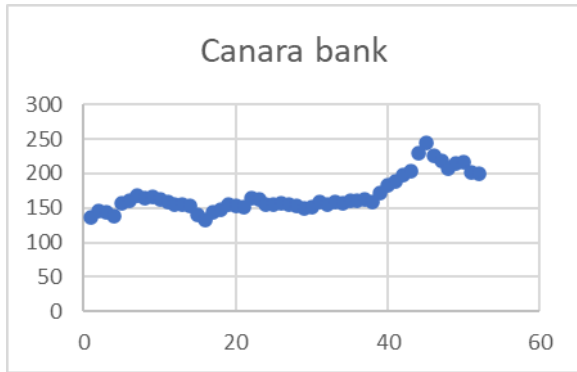Fig. 3. Weeks vs. Share Price (ICICI bank)
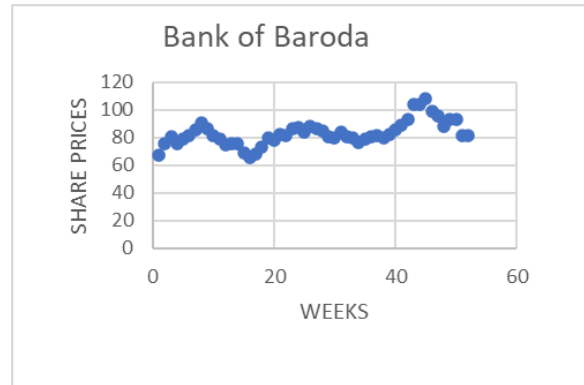

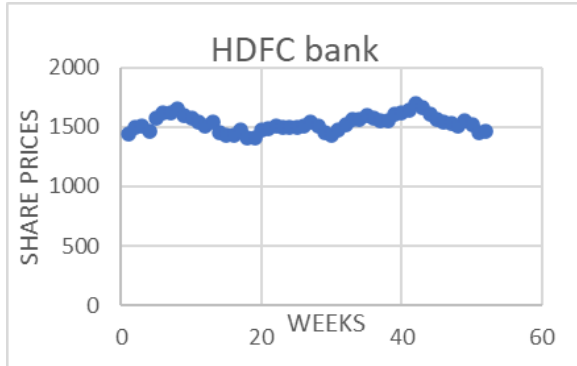
Fig. 4. Weeks vs. Share Price (Karnataka bank)
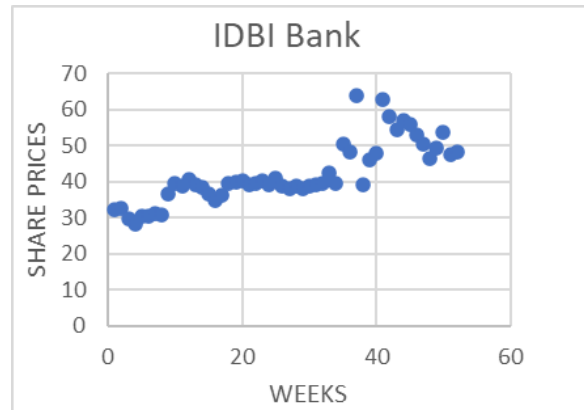
Fig. 5. Weeks vs. Share Price (Canara bank)

Fig. 6. Weeks vs. Share Price (HDFC bank)

Fig. 7. Weeks vs. Share Price (Bank of India)
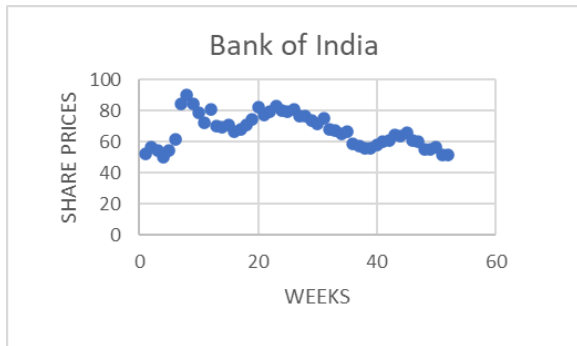

Fig. 8. Weeks vs. Share Price (Kotak Mahindra bank)

Fig. 9. Weeks vs. Share Price (Bank of Baroda)

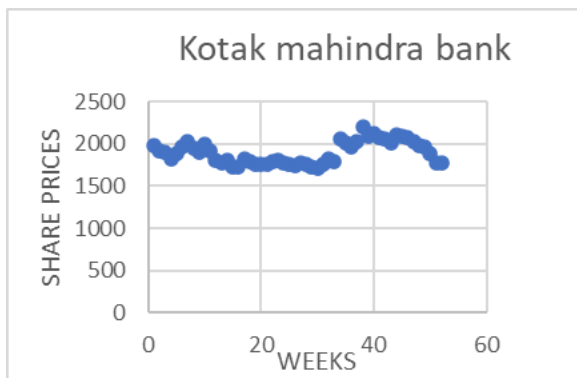
Fig. 10. Weeks vs. Share Price (IDBI bank)

Interpretation:

From the table 6 of Axis Bank, we can say that it has a maximum value of Rs 842.2 on 27-10-2021, and minimum stock price of Rs 662 on 21-04-2021. also, the range of the Axis bank stock price is Rs 180.2. The coefficient of variation is 5.9737 %.

From the table 6 of Federal Bank we can say that it has a maximum value of Rs 103 on 27-10-2021, and minimum stock price of Rs 71.8 on   21-01-2021. also, the range of the federal bank stock price is Rs 31.2. The coefficient of variation is 8.1179 %.

From the table 7 of ICICI Bank, we can say that it has a maximum value of Rs 849 on 27-10-2021, and minimum stock price of Rs 550.55 on   6-01-2021. also, the range of the ICICI bank is Rs 298.45. The coefficient of variation is 10.6111 %.

From the table 7 of Karnataka Bank, we can say that it has a maximum value of Rs 78.9 on 10-11-2021, and minimum stock price of Rs 53.4 on   25-08-2021. also, the range of the Karnataka bank is Rs 25.5. The coefficient of variation is 7.6456 %.

From the table 8 of Canara Bank, we can say that it has a maximum value of Rs 244.05 on 10-11-2021, and minimum stock price of Rs 133.05 on   21-04-2021. also, the range of the Canara bank is Rs 111. The coefficient of variation is 15.8599 %.

From the table 8 of HDFC Bank, we can say that it has a maximum value of Rs 1700 on 20-10-2021, and minimum stock price of Rs 1408.9 on   12-05-2021. also, the range of the HDFC bank is Rs 291.1. The coefficient of variation is 4.5033 %.

From the table 9 of Bank of India, we can say that it has a maximum value of Rs 90.1 on 24-02-2021, and minimum stock price of Rs 50.65 on 27-01-2021. also, the range of the bank of India is Rs 39.45. The coefficient of variation is 15.6015 %.

From the table 9 of Kotak Mahindra Bank, we can say that it has a maximum value of Rs 2201 on 22-09-2021, and minimum stock price of Rs 1706 on 28-07-2021. also, the range of the Kotak Mahindra bank is Rs 495. The coefficient of variation is 7.0446 %.

From the table 10 of Bank of Baroda, we can say that it has a maximum value of Rs 108 on 10-11-2021, and minimum stock price of Rs 65.75 on 21-04-2021. also, the range of the bank of Baroda is Rs 42.25. The coefficient of variation is 10.5733 %.

From the table 10 of IDBI Bank, we can say that it has a maximum value of Rs 64.1 on 15-09-2021, and minimum stock price of Rs 28.1 on 27-01-2021. also, the range of the IDBI bank is Rs 36. The coefficient of variation is 20.3439 %.

From the computation of statistical data of 52 week of shares of 10 banking companies from the website, we can say that HDFC BANK shares which has coefficient of variation of 4.5033% is the most stable company and therefore many can choose this company while making investment decisions who look for stability in share prices. Also, IDBI BANK which has coefficient of variation of 20.3439% is the most volatile company.

A. Findings and Suggestions

We can observe the drastic fluctuation of share prices in these 10 banks, which evidently affect the people to make investment decisions. Usually, people look to invest where EPS is more and also when the company is stable.

When there is sudden increase or decrease in these share prices, people tend to invest less in those companies. Slight increase or decrease in those values is acceptable.

5. Conclusion

The share prices of HDFC Bank are more stable since the coefficient of variation is less. IDBI bank share prices are more volatile since the coefficient of variation is more. It is therefore advisable to invest in HDFC Bank as the share prices are more stable.

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