

# An Analysis of Share Prices of Agricultural Companies for The Financial Year April 2021 – March 2022

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**Abstract:** Agriculture is one of the important sectors of the economy as it is the primary source of livelihood for 58% of the Indian population. The extreme fluctuations in the share values, influence people's decision-making when it comes to investments. Typically, investors seek out opportunities where EPS is higher and the company is more stable. The research paper analyses and interprets the company's position in terms of stability or volatility by assessing the share prices for the financial year April 2021 – March 2022. The closing share prices of 6 agricultural companies namely – PI Industries, Bharat Rasayan, UPL Ltd, Godrej Agrovet, Bayer Crop Science, and Bombay Burmah are collected from NIFTY, NSE Stock Exchange in this study. The share prices of Bayer CropScience are more stable since the Coefficient of Variation is low and Godrej Agrovet's share prices are more volatile since the variation is more.

**Key Words:** Agricultural Sector, NIFTY, NSE, Coefficient of Variation, stability, volatility.

## INTRODUCTION

Agriculture is one of the important sectors of the economy as it is the primary source of livelihood for 58% of the Indian population. The fast-growing population and the ever-booming need for economic advancement besides food production are some of the elements contributing to growth in the industry. Experiencing various hindrances such as soil degradation, the inadequacy of water supply, and scarcity of land due to urbanization is urging farmers to use agrochemical products to sustain themselves. This sector is one of the most crucial sectors in the country. It has a demand for products such as pesticides, new irrigation techniques, and irrigation among other factors. There is also a chance for innovation with the development of new and well-planned farming techniques and products like pesticides, hybrid seeds, organic fertilizers, and other upcoming products.

BSE and NSE are two well-known stock exchange markets in the Indian market. The NSE was founded in 1992, and trading started in 1994. Stock indexes or stock market indices help to measure the prices of stocks, allowing stockholders to compare prices and evaluate market performance.

## OBJECTIVES OF THE STUDY

- To study the fluctuations between the share prices of the respective companies for a period of 52 weeks.
- To interpret which company's share price is most volatile or stable.

## REVIEW OF LITERATURE

Adnan Miski (2016) has conducted a comparative analysis of the financial records amid the software and biopharmaceutical corporations which specifies the significance of liquidity ratio, earning per share ratio, and profitability ratio.

Supratik Sarkar's (2020) study states the effect of Covid 19 on the stock markets and economy of India and tells the outbreak resulted in the fall in nearly all sectors.

Sajjan Choudary (2020) examines the impact of Covid 19 on the stock market and gives an understanding of fluctuations that occurred in the stock market due to the pandemic.

Amal Jindal, Dr. Bhupinder, PS Chahal, and Dr. Rajeev Prashar (2020) studied the influence of Covid 19 on Indian stock markets which precisely mentioned about the decrease in the prices of Crude oil.

Loveleen Gupta and Rohit Kumar Shrivatsav (2017) have done a factual study of assessing the financial integration amidst the stock market of India and Japan, which declares that the elements such as financial and

economical environment are required for the advancement of the country.

Manamani Sahoo (2020) is a study with the confirmation of changes in the Nifty 50 and mind cap, Nifty 100 mind cap, and Nifty 200 states the impact of Covid 19 on the stock market of India.

M. Raju has done research on the stock market volatility of the Bombay stock exchange and the National stock exchange in the Indian economy.

Sameer Yadav's (2017) paper is a research on the volatility of the stock market in India.

Silpa KS, Arya mol J, and Dr. A S Ambily (2017) have done a basic examination of the chosen IT companies which are listed at NSE and counsel to maintain shares and elude the underratedness.

Swetha S's (2022) paper understands and analyses the fluctuations of the stock prices in banking sectors for the year 2021.

M.S Anjubala's aim of this study is to conduct a thorough, in-depth analysis of the Indian stock market. High levels of volatility in the Indian stock market have paved the way for future growth.

Arun Jethmalani's study explains that risk cannot be measured or quantified, but that risk calculation are based on historical volatility. Risk and rewards are inversely correlated. Investments should be based on an investor's capacity and level of risk tolerance.

James Riedel (1997), conducted an analysis and concluded that economic reforms led to the integration of the capital markets in developing Asian nations.

Bhanu Pant and Dr. Bishnoy examined the weekly and daily returns of five market indexes of Indian stock for random walk behavior.

Amanulla S and Kamaiah B, did a study on the Indian stock market and market efficiency with the primary goal of examining market efficiency in a semi-strong form using price integration techniques like cointegration tests.

### RESEARCH METHODOLOGY

In the present study, six agriculture companies' data were gathered from NIFTY, NSE Stock Exchange. The data spans 52 weeks from April 1, 2021, to March 31, 2022. Since one of the goals of this study was to understand and analyze the variations of stock prices of agricultural enterprises during the financial year from April 2021 to March 2022, share prices for each

week have been meticulously examined and precisely analyzed.

#### 1. Analysis

The closing stock prices of 6 agricultural companies have been considered for the study.

The data is analyzed using the formulas below.

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

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

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

$$\text{Mode} = 3\text{Median} - 2\text{Mean}$$

$$\text{Range} = \text{Maximum Value} - \text{Minimum Value}$$

$$\text{Skewness} = \frac{\text{Mean} - \text{Mode}}{\sigma}$$

Table 1- Share prices of PI Industries and Bharath Rasayan

Sl.no	Dates	PI Industries	Bharath Rasayan
1	01-04-2021	2249	9439.15
2	08-04-2021	2517.4	10157.25
3	15-04-2021	2383.15	9997.65
4	22-04-2021	2568.45	9892.6
5	29-04-2021	2571.5	11823.65
6	06-05-2021	2665.1	11765.5
7	13-05-2021	2698.4	12778.75
8	20-05-2021	2588.7	12615.85
9	27-05-2021	2612.75	12121.85
10	03-06-2021	2674.75	12960.75
11	10-06-2021	2838.8	12755.6
12	17-06-2021	2861.5	12663
13	24-06-2021	2824.25	12594.4
14	01-07-2021	2913.25	14072.45
15	08-07-2021	2942.2	13511.05
16	15-07-2021	2958.45	13984.55
17	22-07-2021	3001.95	13368.15
18	29-07-2021	2948.95	13210.35
19	05-08-2021	3230.1	13309.4
20	12-08-2021	3120.85	13249
21	19-08-2021	3183.65	12454.15
22	26-08-2021	3140.8	12057.65
23	02-09-2021	3370.65	12808.75
24	09-09-2021	3408.95	12816.7
25	16-09-2021	3453.8	12596.45
26	23-09-2021	3266.5	12418.45
27	30-09-2021	3179.4	12154.45
28	07-10-2021	3240.5	12409.05
29	14-10-2021	3311.35	12237.5
30	21-10-2021	3136.75	11077.5
31	28-10-2021	2947.05	10580.6
32	04-11-2021	2769.05	10288.8
33	11-11-2021	2750.1	11172.2
34	18-11-2021	2866.55	9968.75
35	25-11-2021	2998.05	10002.5

36	02-12-2021	2950.4	9901.13
37	09-12-2021	2935.45	10526.95
38	16-12-2021	3045	10075.3
39	23-12-2021	2938.55	10250.6
40	30-12-2021	2986.5	11827.5
41	06-01-2022	2955.45	12209.35
42	13-01-2022	2831.85	12635.1
43	20-01-2022	2680.35	12345.05
44	27-01-2022	2371.9	12542.85
45	03-02-2022	2488.75	12968.8
46	10-02-2022	2623.55	13080
47	17-02-2022	2609.75	12784.65
48	24-02-2022	2394.2	11636.6
49	03-03-2022	2472.55	11960.25
50	10-03-2022	2545.05	13652.4
51	17-03-2022	2815.15	12747.85
52	24-03-2022	2753.7	12282.35

Table 2- Share Prices of UPL ltd and Godrej Agrovet

Sl.no.	Dates	UPL ltd	Godrej Agrovet
1	01-04-2021	653.85	517.8
2	08-04-2021	651.65	506.55
3	15-04-2021	607.3	498.95
4	22-04-2021	591.1	494.2
5	29-04-2021	615.8	498.8
6	06-05-2021	633.15	511.65
7	13-05-2021	743.55	528.8
8	20-05-2021	766.9	540.75
9	27-05-2021	819.7	847.7
10	03-06-2021	840.05	563.6
11	10-06-2021	838.6	554.8
12	17-06-2021	834.4	557.45
13	24-06-2021	813.45	616.55
14	01-07-2021	791.6	627.45
15	08-07-2021	814	652.4
16	15-07-2021	836.8	660.65
17	22-07-2021	828	649.85
18	29-07-2021	819.6	658.85
19	05-08-2021	777.3	696.4
20	12-08-2021	777.45	662.95
21	19-08-2021	728	639.9
22	26-08-2021	719.95	624.1
23	02-09-2021	753.75	635.85
24	09-09-2021	757.6	661.45
25	16-09-2021	753.9	656.7
26	23-09-2021	726.9	647.1
27	30-09-2021	707.75	637.75
28	07-10-2021	727.65	629.25
29	14-10-2021	748.75	633.9
30	21-10-2021	717.9	624.5
31	28-10-2021	729.85	593.85
32	04-11-2021	737.5	596.9
33	11-11-2021	764.5	615.45
34	18-11-2021	741.6	582.15
35	25-11-2021	727.15	569.9
36	02-12-2021	698.2	514.65
37	09-12-2021	741.6	535.1
38	16-12-2021	733.5	533.85
39	23-12-2021	754.5	531.75
40	30-12-2021	747.55	519.9
41	06-01-2022	782.7	525.1
42	13-01-2022	841.15	541.15
43	20-01-2022	808.45	523.2
44	27-01-2022	771.6	519.3

45	03-02-2022	773.95	527.3
46	10-02-2022	770.35	507.05
47	17-02-2022	726.65	488.4
48	24-02-2022	632.35	465.7
49	03-03-2022	714.75	499.75
50	10-03-2022	724.15	483.4
51	17-03-2022	761.4	476.85
52	24-03-2022	798.65	460.5

Table 3- Share prices of Bayer CropScience and Bombay Burmah

Sl.no	Dates	Bayer Crop Science	Bombay burmah
1	01-04-2021	5304.75	1145.35
2	08-04-2021	5312.35	1253.15
3	15-04-2021	5138.75	1191.1
4	22-04-2021	5111	1163.15
5	29-04-2021	5280.3	1177.5
6	06-05-2021	5338.4	1165.45
7	13-05-2021	5413.75	1205.3
8	20-05-2021	5390.05	1191
9	27-05-2021	5287.65	1338.75
10	03-06-2021	5297.35	1292.3
11	10-06-2021	5348.05	1301.75
12	17-06-2021	5672.25	1340.85
13	24-06-2021	5623.45	1310.65
14	01-07-2021	5722.6	1318.1
15	08-07-2021	5590.2	1294.1
16	15-07-2021	5917.55	1307.9
17	22-07-2021	5895.95	1267.75
18	29-07-2021	5780.95	1242.95
19	05-08-2021	5888.85	1214.25
20	12-08-2021	5873.7	1157.95
21	19-08-2021	5579.45	1178.25
22	26-08-2021	5289.35	1206.25
23	02-09-2021	5553.4	1223.6
24	09-09-2021	5405.5	1212
25	16-09-2021	5492.95	1184
26	23-09-2021	5408.65	1164.65
27	30-09-2021	5296.6	1146.85
28	07-10-2021	5195.7	1155.4
29	14-10-2021	5246.15	1153.2
30	21-10-2021	5060.4	1111.55
31	28-10-2021	5012.45	1090.25
32	04-11-2021	4771.3	1111.8
33	11-11-2021	4753.55	1111.05
34	18-11-2021	4732.65	1077.5
35	25-11-2021	4723.15	1076.85
36	02-12-2021	4687.65	1018.5
37	09-12-2021	4718.8	1124.15
38	16-12-2021	4740.8	1113.75
39	23-12-2021	4837.6	1052.65
40	30-12-2021	4928	1116.4
41	06-01-2022	4901.8	1086.15
42	13-01-2022	5022.7	1107.15
43	20-01-2022	5037	1106.15
44	27-01-2022	5145.75	1067.05
45	03-02-2022	4989	1094.9
46	10-02-2022	4613.55	1072.2
47	17-02-2022	4493.25	1010.65
48	24-02-2022	4290.3	903.8
49	03-03-2022	4419.6	954.9
50	10-03-2022	4441.75	924.8
51	17-03-2022	4458.25	934.55
52	24-03-2022	4644.95	898.75

Table 4- Measures of central tendency and dispersion of agricultural companies

Column 1	PI Industries	Bharat Rasayan
Mean	2857.5154	12014.25346
Mode	2877.0442	13102.64308
SD	290.28571	1222.773036
CV	10.158675	10.17768636
Median	2864.025	12377.05
Max	3453.8	14072.45
Min	2249	9439.15
Range	1204.8	4633.3
Skewness	-0.067274	-0.890099

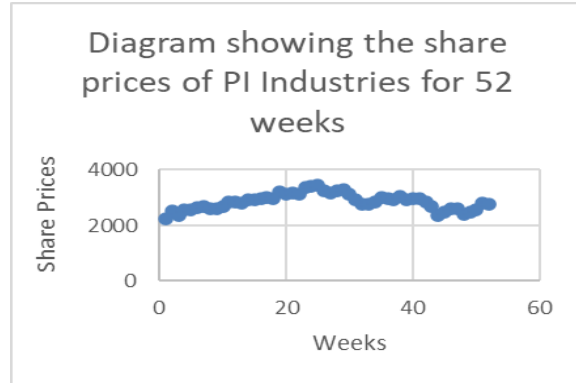


Table 5- Measures of central tendency and dispersion of agricultural companies

Column 1	UPL Ltd.	Godrej Agrovet
Mean	747.6635	573.9971154
Mode	741.6	520.380769
SD	62.11553	75.52145028
CV	8.307954	13.15711321
Median	751.25	556.125
Max	841.15	662.95
Min	607.3	460.5
Range	233.85	202.45
Skewness	0.097616	0.709949

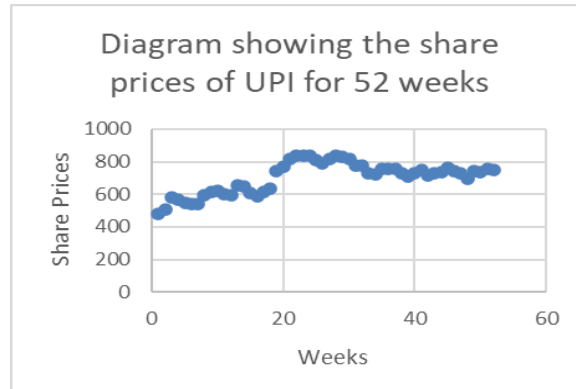
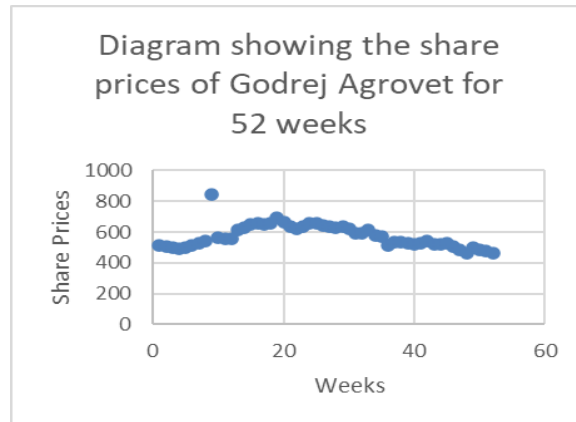
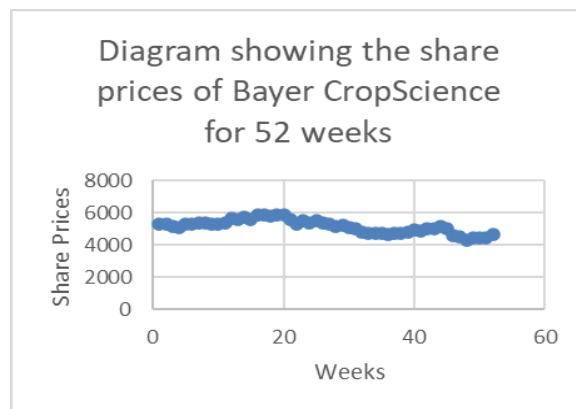
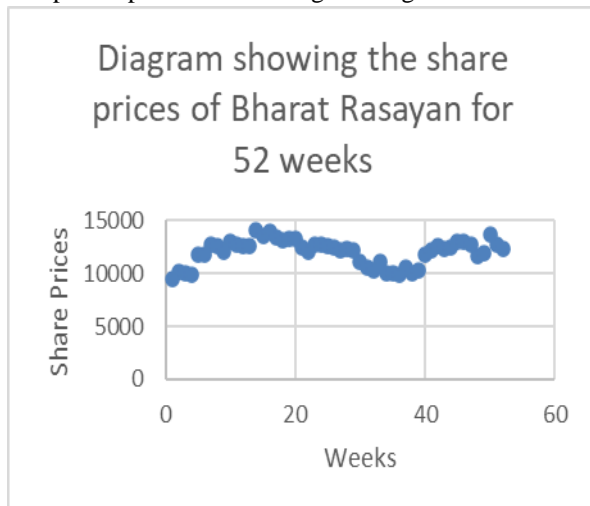


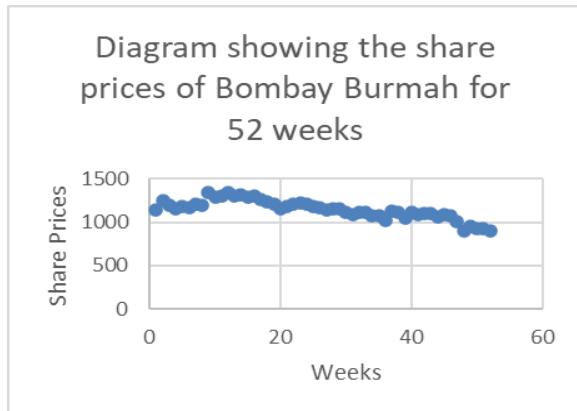
Table 6- Measures of central tendency and dispersion of agricultural companies

Column 1	Bayer CropScience	Bombay Burmah
Mean	5155.382692	1147.480769
Mode	5352.009616	1167.938462
SD	427.7708409	110.7047518
CV	8.297557455	9.647634608
Median	5220.925	1154.3
Max	5895.95	1340.85
Min	4290.3	898.75
Range	1605.65	442.1
Skewness	-0.037661	-0.184795



The scatter diagram plots for all agricultural companies presented from fig. 1 to fig. 6.





#### Interpretation

Table 1 shows the closing share prices of PI Industries and Bharat Rasayan.

Table 2 shows the closing share prices of UPL Ltd. And Godrej Agrovet.

Table 3 shows the closing share prices of Bayer CropScience and Bombay Burmah.

From table 4 of PI Industries, we can interpret that it has a maximum value of Rs. 3453.8 on 16-09-2021 and a minimum value of Rs. 2249 on 01-04-2021, the range of PI Industries' share price is Rs. 1204.8. The coefficient of variation is 10.158675 % and the data is negatively skewed.

From table 4 of Bharat Rasayan, we can interpret that it has a maximum value of Rs. 14072.45 on 01-07-2021 and a minimum value of Rs. 9439.15 on 01-04-2021, the range of Bharat Rasayan share price is Rs.4633.3. The coefficient of variation is 10.17768 % and the data is negatively skewed.

From table 5 of UPL ltd, we can interpret that it has a maximum value of Rs. 841.15 on 13-01-2022 and a minimum value of Rs. 607.3 on 15-04-2021, the range of UPL Ltd share price is Rs.233.85. The coefficient of variation is 8.307 % and the data is positively skewed.

From table 5 of Godrej Agrovet, we can interpret that it has a maximum value of Rs. 662.95 on 12-08-2021 and a minimum value of Rs. 460.5 on 24-03-2022, the range of Godrej Agrovet share price is Rs. 202.45. The coefficient of variation is 13.15711 % and the data is positively skewed.

From table 6 of Bayer CropScience, we can interpret that it has a maximum value of Rs. 5895.95 on 22-07-2021 and a minimum value of Rs. 4290.3 on 24-02-2022, the range of Bayer CropScience share price is

Rs. 1605.65. The coefficient of variation is 8.2975 % and the data is negatively skewed.

From table 6 of Bombay Burmah, we can interpret that it has a maximum value of Rs. 1340.85 on 17-16-2021 and a minimum value of Rs. 898.75 on 24-03-2022, the range of Bayer CropScience share price is Rs.442.1. The coefficient of variation is 9.6476 % and the data is negatively skewed.

#### FINDINGS AND SUGGESTIONS

In these 6 Agriculture Companies, we can see the extreme fluctuations in share values, which undoubtedly influence people's decision-making when it comes to investments. Typically, investors seek out opportunities where EPS is higher and the company is more stable.

People tend to invest less in those companies when there is a sudden surge or reduction in their share prices. It's acceptable for those numbers to slightly grow or drop.

#### CONCLUSION

The share prices of Bayer CropScience are more stable since the coefficient of variation is lower. Godrej Agrovet's share prices are volatile since the coefficient of variation is higher. Therefore it is advised to invest in Bayer CropScience as the share prices are consistent.

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