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Tonoy Dey

Faculty Member, Department of Accounting and Finance Commerce, St. Xavier's College (Autonomous), Kolkata, West Bengal, India

Sudipto Mondal

Faculty Member, Department of Accounting and Finance Commerce, St. Xavier's College (Autonomous), Kolkata, West Bengal, India

Corresponding Author:

Tonoy Dey

Faculty Member, Department of Accounting and Finance Commerce, St. Xavier's College (Autonomous), Kolkata, West Bengal, India

Comparative study of selected pharmaceutical companies in India during pre and in times of COVID-19

Tonoy Dey and Sudipto Mondal

Abstract

The breakout of Coronavirus has had a major impact on the world's economy, with the global growth shrinking to -3.1% in 2020. In India, the GDP growth (inflation adjusted) went in negative figure of -6.60%, causing supply side bottlenecks and weak demand; almost all the industries faced a tough time. This paper attempted to analyze the financial performance of selected Indian Pharmaceutical companies representing the industry with regard to profitability ratios during pre-pandemic period Vs. in times of COVID-19 pandemic since the demand for the products offered by pharma companies soared to a massive height. It was found that on an average, the companies were profitable during the COVID-19 times. By applying statistical testing, it was found that there was no significant difference in the financial performance during both the periods. Hence, the profitability of the sector was unaffected due to the pandemic; in fact, during COVID-19 time, the sector reported better performance.

JEL Classification: G32, L190, M410, M49

Keywords: Pharmaceutical sector, net profit ratio, operating profit ratio, return on asset, return on equity, earnings per share

Introduction

The Pharmaceutical Industry of India has experienced significant growth over the years, and has become a major contributor to the global pharmaceutical market. India has emerged as the top manufacturers of generic drugs that have helped increase the average lifespan tremendously. However, the presence of a strong pharmaceutical industry was experienced when the novel coronavirus hit the globe and all nations were placed under lockdown. To combat the virus, two companies in India, Bharat Biotech and Serum Institute of India, came up with their vaccines, which proved to be crucial in bringing down the infection rate. During the lockdown period, the pharmaceutical sector was witnessing a buzz of activities due to increased demand for medicines leading to higher volumes of production. This paper aims to analyze the profitability of the pharmaceutical industry of India during the pre-COVID-19 period and the period during COVID-19.

Objective

To analyses the financial performances of Indian Pharmaceutical Companies, prior to COVID-19 and during COVID-19.

Research Methodology

Sample Size: Top 10 listed Indian Pharmaceutical Companies based on their respective market capitalization as on 31st March, 2023.

Time Frame: 4 years –

FY 18 – 19 and FY 19 – 20 as Pre COVID-19 time

FY 20 – 21 and FY 21 – 22 as During COVID-19 time.

Data Collection: Secondary source; mainly from the financial statements present in the annual reports of the companies.

Determinants/Financial Indicators: Selected Profitability Ratios

Financial Ratio (Profitability Ratios)	Abbreviation	Formula
Net Profit Ratio (in % age)	NP Ratio	Net Profit (Earnings, After Tax) Net Sales
Operating Profit/Margin Ratio (in % age)	OPM	Operating Profit Net Sales
Return on Asset (in % age)	ROA	Net Profit after Tax + Interest Average Total Assets
Return on Equity (in % age)	ROE	Earnings Available to Equity Shareholders Shareholder's Fund
Earnings Per Share (in ₹)	EPS	Earnings Available to Equity Shareholders Number of Equity Shares Outstanding

Hypotheses

Null Hypotheses

H01: There exists no significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Net Profit Ratio.

H02: There exists no significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Net Operating Profit Ratio.

H03: There exists no significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Return on Assets.

H04: There exists no significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Return on Equity.

H05: There exists no significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Earnings per Share.

Alternate Hypotheses

H11: There exists significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Net Profit Ratio.

H12: There exists significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Net Operating Profit Ratio.

H13: There exists significant difference in Pre and During

COVID-19 financial performance of Pharma Companies with regard to Return on Assets.

H14: There exists significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Return on Equity.

H15: There exists significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Earnings per Share.

Statistical Tests

Independent Sample T – Test – If the data sets are found to follow normal distribution Mann – Whitney U Test – If the data set do not follow normal distribution.

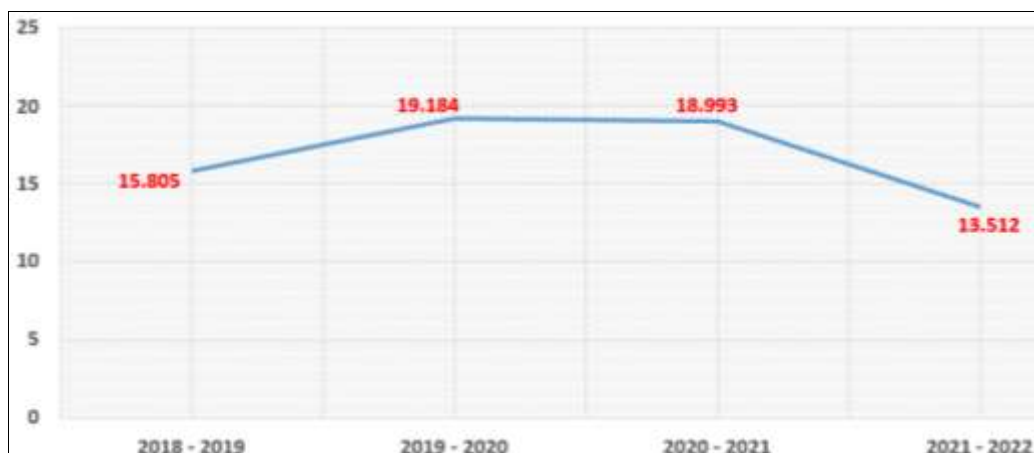
Data Analysis & Interpretation

Data with respect to five financial indicators have being analysed one after the other in this section.

Net profit ratio

H01: There exists no significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Net Profit Ratio.

H11: There exists significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Net Profit Ratio.



Source: Author's Compilation

Fig 1: Average NP Ratio

Table 1: NP Ratios

Net profit ratios (in %age)	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Sun Pharma	8.3	26.97	17.02	-0.64
Divis Labs	26	26.36	29.22	33.81
Cipla	15.77	18.97	18.13	19.23
Dr. Reddy's Lab	12.08	24.89	16.46	11.33
Torrent Pharma	16.83	15.57	17.97	14.87
Abott India	12.3	14.54	16.03	16.27
Zydus Life	25.81	23.68	19.85	11.3
Alkem Lab	14.2	19.65	23.77	17.7
Lupin	13.95	6.73	11.55	-1.68
Aurobindo Pharm	12.81	14.48	19.93	12.93

Descriptives

Maximum	26	26.97	29.22	33.81
Minimum	8.3	6.73	11.55	-1.68
Average NP Ratio (in % age)	15.805	19.184	18.993	13.512

Source: Author’s Compilation

The average NP ratio of pharma companies during the COVID-19 period was 16.25%, 1.24% lower than that of pre-COVID-19 period, which was 17.49%. This indicates that the average NP ratio was more stable during the

transitional period of the pandemic. We now present the average NP ratios of the companies for pre and during COVID-19 period:

Table 2: Average NP Ratios

Companies	Average NP ratio pre-COVID-19	Average NP ratio during COVID-19
Sun Pharma	17.64	8.19
Divis Labs	26.18	31.52
Cipla	17.37	18.68
Dr Reddy'sLab	18.49	13.90
Torrent Pharma	16.20	16.42
Abbot India	13.42	16.15
Zydus Life	24.75	15.58
Alkem Lab	16.93	20.74
Lupin	10.34	4.94
Aurobindo Phar	13.65	16.43
Average (%)	17.49	16.25

Source: Author’s Compilation

To test our hypotheses, we first run a test of normality and get the result as shown below:

Table 3: Tests of Normality

Kolmogorov-Smirnov			Shapiro-Wilk			
Statistic	df	Sig.	Statistic	df	Sig.	
Average Net Profit Margin	.302	20	.000	.718	20	.000

a. Lilliefors Significance Correction

As, the level of significance as per Shapiro-Wilk is .000 which is less than 0.05, we can conclude that there exists no normality in the data set.

Since, the data set does not follow normal distribution (and is negatively skewed), therefore, The Mann-Whitney U test was employed to analyse the statistical significance of the financial performance of Pharma Companies during the pre and during COVID-19 periods.

Hypothesis Test Summary			
Null Hypothesis	Test	Sig.	Decision
1 The distribution of Average Net Profit Margin is the same across categories of Period.	Independent-Samples Mann-Whitney U Test	.436 ¹	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.			
¹ Exact significance is displayed for this test.			

Based on the significance value of 0.436, which is higher than the commonly used threshold of 0.05, we conclude that there is no significant difference in the financial performance of Pharma Companies in terms of the Net Profit Ratio between the pre and during COVID-19 periods. Therefore, we accept the null hypothesis, indicating that there is no statistically significant distinction.

Operating profit/margin (OPM) ratio

H₀₂: There exists no significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Net Operating Profit Ratio.

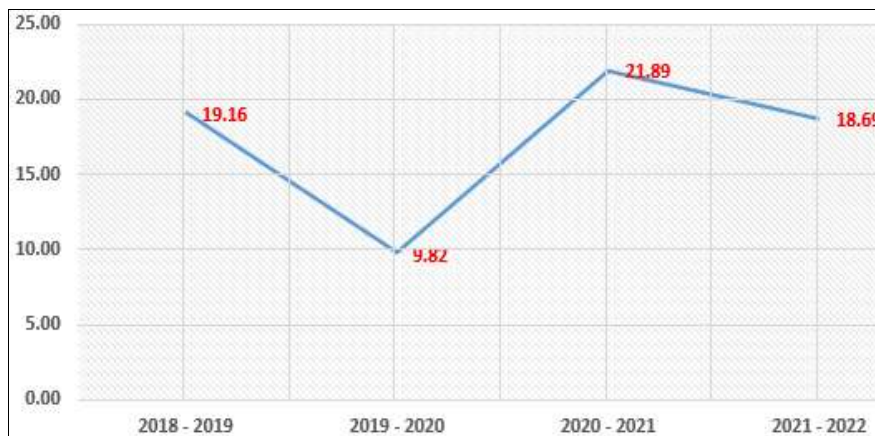
H₁₂: There exists significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Net Operating Profit Ratio.

Table 4: OPM Ratios

OPM in %age	2018 - 019	2019 - 2020	2020 - 2021	2021 - 2022
Sun Pharma	12.6	-74.42	7.56	6.14
Divis Labs	39.82	31.29	38.37	40.9
Cipla	12.75	17.25	23.26	18.9
Dr. Reddy's Lab	14.34	17.63	17.44	12.5
Torrent Pharma	18.61	21.75	25.07	22.48
Abott India	16.05	17.09	20.04	20.81
Zydus Life	22.64	17.18	25.12	23.49
Alkem Lab	16.06	20.46	24.69	18.27
Lupin	22	12.85	14.11	13.97

Aurobindo Pharm	16.72	17.13	23.25	9.41
Descriptives				
Maximum	39.82	31.29	38.37	40.9
Minimum	12.6	-74.42	7.56	6.14
Average OPM (in %age)	19.16	9.82	21.89	18.69

Source: Author's Compilation



Source: Author's Compilation

Fig 2: Average OPM

The average Net Operating Profit Ratio of pharma companies during the COVID-19 period was 5.80% higher than that of pre-COVID-19 period, with an average of 20.29%. This is 5.80% higher than that of pre-COVID-19 period, with an average of 14.49%. The lowest performance

was found in the immediate pre-pandemic time (19-20), but it was boosted to 21.89% in 20-21.

We now present the average OPM ratios of the companies for pre and during COVID-19 period:

Table 5: Average OPM

Companies	Average OPM Ratio Pre- COVID-19	Average OPM Ratio During COVID-19
Sun Pharma	-30.91	6.85
Divis Labs	35.56	39.64
Cipla	15.00	21.08
Dr. Reddy's Lab	15.99	14.97
Torrent Pharma	20.18	23.78
Abbot India	16.57	20.43
Zydus Life	19.91	24.31
Alkem Lab	18.26	21.48
Lupin	17.43	14.04
Aurobindo Phar	16.93	16.33
Average (%)	14.49	20.29

Source: Author's Compilation

To test our hypotheses, we first run a test of normality and get the result as shown below:

Tests of Normality

Kolmogorov-Smirnov		Shapiro-Wilk	
Statistic	df Sig.	Statistic	df Sig.
Average Net Operating Profit Margin	.302 20,000	.718	20,000

Lilliefors Significance Correction

As, the level of significance as per Shapiro-Wilk is .000 which is less than 0.05, we can conclude that there exists no normality in the data set.

Since, the data set does not follow normal distribution (and is negatively skewed), therefore, Mann-Whitney U Test was applied to check the statistical significance.

Hypothesis Test Summary			
	Null Hypothesis	Test	Sig. Decision
1	The distribution of Averagenetoperingprofitmargin is the same across categories of Period.	Independent-Samples Mann-Whitney U Test	.436 ¹ Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.			
¹ Exact significance is displayed for this test.			

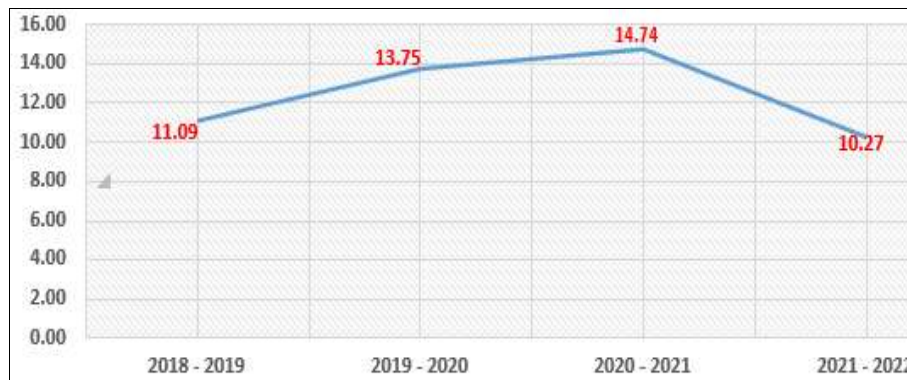
Since the significance value of 0.436 exceeds the threshold of 0.05, the null hypothesis is accepted. Hence, there is no significant distinction in the financial performance of

Pharma Companies, particularly in relation to the Net Operating Profit/Margin Ratio, between the pre and during COVID-19 periods.

Table 6: ROAs

ROA in %age	2018 – 2019	2019-2020	2020 - 2021	2021 - 2022
Sun Pharma	3.09	8.99	6.24	0.57
Divis Labs	17.95	16.65	46.26	24.54
Cipla	10.73	25.06	5.72	12.22
Dr. Reddy's Lab	7.76	16.53	10.68	7.04
Torrent Pharma	11.83	11.39	12.46	10.69
Abott India	16.82	18.47	19.11	20.19
Zydus Life	13.05	10.28	8.81	5.26
Alkem Lab	11.74	15.82	17.33	13.14
Lupin	8.17	3.84	6.11	2.45
Aurobindo Pharm	9.79	10.42	14.69	6.56
Descriptives				
Maximum	17.95	25.06	46.26	24.54
Minimum	3.09	3.84	5.72	0.57
Average ROA (in %age)	11.09	13.75	14.74	10.27

Source: Author's Compilation



Source: Author's Compilation

Fig 3: Average ROA

The average ROA of pharma companies during the COVID-19 period is 12.50%, which is more or less the same as that of pre-COVID-19 period, with a negligible increase of 0.08%. This is due to a sharp fall from 14.74% in 20-21 to 10.27% in 21-22. The average ROA of the pharma companies during the COVID-19 period is 12.50%, which is more or less the same as that of pre- COVID-19 period. We now present the average ROA's of the companies for pre and during COVID-19 period:

Table 7: Average ROA

Companies	Average ROA Pre-COVID-19	Average ROA During COVID-19
Sun Pharma	6.04	3.41
Divis Labs	17.30	35.40
Cipla	17.90	8.97
Dr. Reddy's Lab	12.15	8.86
Torrent Pharma	11.61	11.58
Abbot India	17.65	19.65
Zydus Life	11.67	7.04
Alkem Lab	13.78	15.24
Lupin	6.01	4.28
Aurobindo Phar	10.11	10.63
Average (%)	12.42	12.50

Source: Author's Compilation

To test our hypotheses, we first run a test of normality and

get the result as shown below:

Tests of Normality

Kolmogorov-Smirnov			Shapiro-Wilk			
Statistic	df	Sig.	Statistic	df	Sig.	
Average ROA	.168	20	.143	.860	20	.008

Lilliefors Significance Correction

As, the level of significance as per Shapiro-Wilk is .008 which is less than 0.05, we can conclude that there exists no normality in the data set.

Since, the data set do not follow normal distribution (and is positively skewed), therefore, Mann-Whitney U Test was applied to check the statistical significance.

Hypothesis Test Summary			
Null Hypothesis	Test	Sig.	Decision
1 The distribution of AverageROA is the same across categories of Period.	Independent-Samples Mann-Whitney U Test	.436 ¹	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.			
¹ Exact significance is displayed for this test.			

Since the significance value is 0.436, which is greater than the significance threshold of 0.05, we accept the null hypothesis. This implies that there is no significant

distinction in the financial performance of Pharma Companies, specifically in terms of Return on Assets, between the pre and during COVID-19 periods.

Return on equity (ROE)

H₀₄: There exists no significant difference in Pre and During

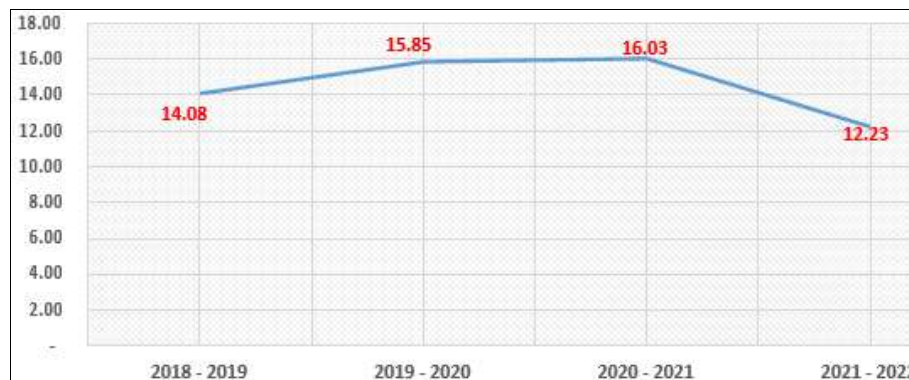
COVID-19 financial performance of Pharma Companies with regard to Return on Equity.

H₁₄: There exists significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Return on Equity.

Table 8: ROE

ROE in %age	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Sun Pharma	3.6	13.16	8.55	-0.41
Divis Labs	19.11	18.76	21.08	25.22
Cipla	11.97	13.32	12.39	13.14
Dr. Reddy's Lab	10.07	19.34	12.87	8.85
Torrent Pharma	18.65	18.33	18.87	15.62
Abott India	22.42	24.38	26.54	28.32
Zydus Life	17.89	12.55	11.58	6.48
Alkem Lab	14.64	20.13	22.1	17.63
Lupin	8.99	4.16	6.78	-1.04
Aurobindo Pharm	13.48	14.38	19.55	8.5
Descriptives				
Maximum	22.42	24.38	26.54	28.32
Minimum	3.6	4.16	6.78	-1.04
Average ROE (in % age)	14.08	15.85	16.03	12.23

Source: Author's Compilation



Source: Author's Compilation

Fig 4: Average ROE

A similar trend in ROE has been found like of ROA whereby the financial performance is being stabilized during 19-20 & 20-21 and thereafter a fall is witnessed.

As shown in table – 2, the average ROE of the pharma companies during COVID-19 period comes to 14.14%,

which is more or less same than that of pre-COVID-19 period registering the average of 15.08%; hence, a negligible decrease of 0.94% can be witnessed.

We now present the average ROE's ratios of the companies for pre and during COVID-19 period:

Table 9: Average ROE

Companies	Average ROE Pre-COVID-19	Average ROE During COVID-19
Sun Pharma	8.38	4.07
Divis Labs	18.94	23.15
Cipla	12.65	12.77
Dr. Reddy's Lab	14.71	10.86
Torrent Pharma	18.49	17.25
Abbot India	23.40	27.43
Zydus Life	15.22	9.03
Alkem Lab	17.39	19.87
Lupin	6.58	2.87
Aurobindo Phar	13.93	14.03
Average (%)	15.08	14.14

Source: Author's Compilation

To test our hypotheses, we first run a test of normality and get the result as shown below:

Tests of Normality

Kolmogorov-Smirnov			Shapiro-Wilk			
Statistic	df	Sig.	Statistic	df	Sig.	
AverageROE	.085	20	.200*	.986	20	.989

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

As the value of significance is 0.989, which is more than 0.05, we can conclude that there exists a normality in the data set.

Since, the data set followed a normal distribution, therefore, applied Independent T- Test to check the statistical significance.

Independent Samples Test

Since the significance value is 0.282, which is greater than the significance threshold of 0.05, we accept the null hypothesis. This means that there is no significant distinction in the financial performance of Pharma Companies, specifically in terms of Return on Equity, between the pre and during COVID-19 periods.

Earnings per share (EPS)

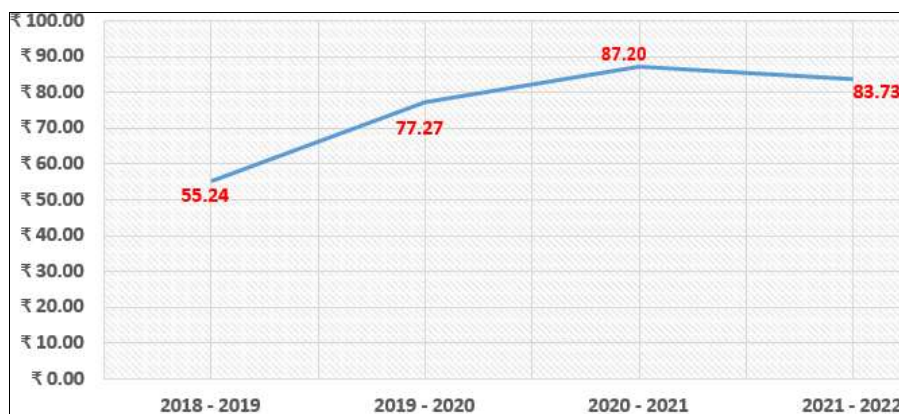
H_{0s}: There exists no significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Earnings per Share.

H_{1s}: There exists significant difference in Pre and During COVID-19 financial performance of Pharma Companies with regard to Earnings Per Share.

Table 10: EPSs

EPS in ₹	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Sun Pharma	3.4	13.4	8.92	-0.4
Divis Labs	50.2	51.71	73.63	111.07
Cipla	23.45	28.72	30.57	36.63
Dr. Reddy's Lab	76.85	176.88	131.46	97.58
Torrent Pharma	44.05	55.46	67.24	58.59
Abott India	211.93	279.04	324.04	375.86
Zydus Life	15.65	13.8	14.42	8.38
Alkem Lab	66.9	105.75	140.93	128.9
Lupin	33.89	15.99	27.65	-4.16
Aurobindo Pharm	26.11	31.96	53.13	24.83
Descriptives				
Maximum	211.93	279.04	324.04	375.86
Minimum	3.4	13.4	8.92	-4.16
Average EPS in ₹	55.24	77.27	87.20	83.73

Source: Author's Compilation



Source: Author's Compilation

Fig 5: Average EPS**Table 11: Average EPS**

Companies	Average EPS Pre-COVID-19	Average EPS During COVID-19
Sun Pharma	8.40	4.26
Divis Labs	50.96	92.35
Cipla	26.09	33.60
Dr. Reddy's Lab	126.87	114.52
Torrent Pharma	49.76	62.92
Abbot India	245.49	349.95
Zydus Life	14.73	11.40
Alkem Lab	86.33	134.92
Lupin	24.94	11.75
Aurobindo Pharm	29.04	38.98
Average	₹ 70.39	₹ 90.63

Source: Author's Compilation

We now present the average EPS of the companies for pre and during COVID-19 period: To test our hypotheses, we first run a test of normality and get the result as shown below:

Tests of Normality

Kolmogorov-Smirnov			Shapiro-Wilk			
Statistic	df	Sig.	Statistic	df	Sig.	
Average EPS	.212	20	.019	.752	20	.000

a. Lilliefors Significance Correction

As, the level of significance as per Shapiro-Wilk is .000 which is less than 0.05, we can conclude that there exists no normality in the data set.

Since, the data set do not follow normal distribution (and is positively skewed), therefore, Mann-Whitney U Test was applied to check the statistical significance.

Hypothesis Test Summary			
Null Hypothesis	Test	Sig.	Decision
1 The distribution of AverageEPS is the same across categories of Period.	Independent-Samples Mann-Whitney U Test	.796 ¹	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.			
¹ Exact significance is displayed for this test.			

Given a significance value of 0.796, which is higher than the commonly used threshold of 0.05, we accept the null hypothesis. Therefore, there is no significant distinction in the financial performance of Pharma Companies, specifically regarding Earnings Per Share, between the pre and during COVID-19 periods.

Conclusion

The analysis revealed that the financial performance of the pharmaceutical sector was improved due to the outbreak of coronavirus. All financial indicators reported a trend whereby the profitability of the industry was improved (except for the NP ratio registering a slight downfall by 1.05%). Upon analyzing the annual reports of our sample companies, it was found that all companies reported a growth in operating income, mainly the sales figure, in the COVID-19 year. However, just the year after the breakout

Annexures

Annex A: Relevant Financial Datas from the Annual Report of the Companies

Accounting Figures in ₹ (Crores)	SUN PHARMA				DIVIS LABS			
	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22
Net Sales (products + services)	9783.29	11906.74	12570.3	15518.5	4737.22	5207.32	6687.55	8719.22
Revenue from Operations	10303.21	12531.93	12803.21	15585.98	4879.66	5310.57	6798.61	8879.82
Purchases	1196.85	12274.1	1199.63	1248.6	0	0	0	0
Changes in Inventory	-251.3	138.6	214.84	183.18	-244.22	-94.1	-100	-449.99
Cost of Material Consumed	2727.71	3201.71	3809.11	4584.97	2082.05	2182.66	2365.5	3439.79
Other Direct Expenses	1090.34	1025	984.6	1240.71	328.87	358.21	416.35	510.56
Gross Profit	5019.69	-4732.67	6362.12	8261.04	2570.52	2760.55	4005.7	5218.86
Net Profit (after tax)	816.6	3211.14	2139.7	-99.99	1332.65	1372.71	1954.72	2948.54
Operating Profit (EBIT)	1203.31	-8860.89	949.79	952.7	1680.15	1629.49	2566.03	3565.91
Operating Income	10303.21	12531.93	12803.21	15585.98	4879.66	5310.57	6798.61	8879.82
Operating Expenses	8546.95	20831.26	11266.61	13283.78	3030.7	3495.13	3977.93	5003.36
Cost of Goods Sold	4763.6	16639.41	6208.18	7257.46	2166.7	2446.77	2681.85	3500.36
Administrative Expense	3783.35	4191.85	5058.43	6026.32	864	1048.36	1296.08	1503
Depreciation & Amortization	552.95	561.56	586.81	1349.5	168.81	185.95	254.65	310.55

of the pandemic, slowdown or dampening impact was noticed on the profitability of the sector. From statistical testing it was proved that there had been no significant differences in Pre and During COVID-19 financial performance of Pharma Companies with regard to the selected financial ratios.

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Employee Benefit Expense	1571.34	1702.77	1798.45	2000.78	530.72	608.36	808.68	926.55
Other Indirect Cost	2212.01	2489.08	3259.98	4025.54	333.28	440	487.4	576.45
EBIT (1-t) [for ROA]	1150.12	3419.9	2415.78	240.98	1332.95	1378.2	1954.92	2948.75
Interest Expense	333.52	208.76	276.08	340.97	0.3	5.49	0.2	0.21
Average Total Assets	37252.97	38062.23	38704.58	42250.14	7423.98	8277.145	4225.7	12015.82
Earnings to Equity holders	816.6	3211.14	2139.7	-99.99	1332.65	1372.71	1954.72	2948.54
Preference Dividend	0	0	0	0	0	0	0	0
Equity Shareholders' Fund	22843.61	24396.22	25040.16	24587.95	6973.31	7316.69	9271.57	11691.35

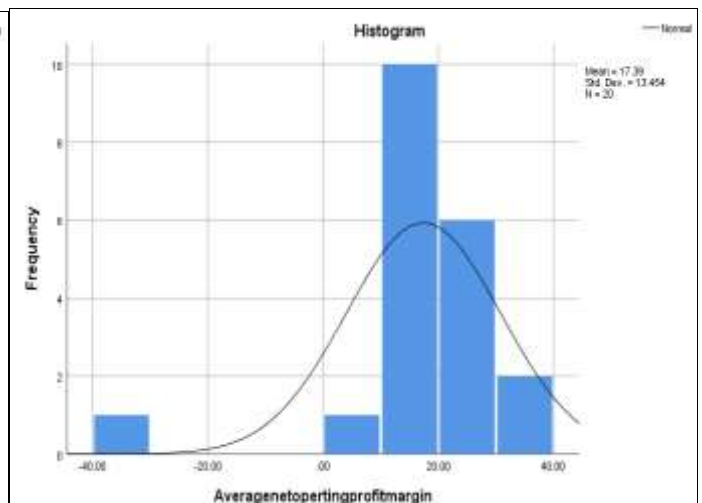
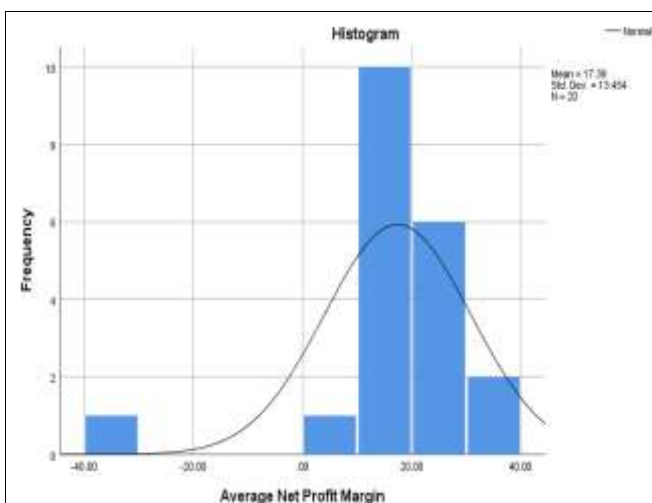
Accounting Figures in ₹ (Crores)	CIPLA				Dr. REDDY'S LAB			
	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22
Net Sales (products + services)	11974.92	12220.22	13610.02	15378.36	10572.9	11803	13281.4	14315.3
Revenue from Operations	11968.44	12659.15	13900.58	13091.79	10622.5	11850.4	13349.1	14405.2
Purchases	1259.21	1363.12	1847.85	2850.85	868.6	1117.2	1252.3	2057.1
Changes in Inventory	136.7	-43.08	-9.93	-528.4	66	-99.9	-395.6	-389.6
Cost of Material Consumed	3112.25	2999.17	3262.29	2767.79	2103.2	2556.5	3266.3	3378.4
Other Direct Expenses	859.16	875.99	831.83	916.21	720	774.7	291.3	858.9
Gross Profit	6607.6	7025.02	7677.98	9371.91	6815.1	7454.5	8867.1	8410.5
Net Profit (after tax)	1888.41	2318.17	2468.28	2957.93	1277.3	2937.7	2186.4	1623.2
Operating Profit (EBIT)	1526.71	2107.51	3165.45	2906.46	1516.1	2080.4	2316.8	1789.6
Operating Income	11968.44	12659.15	13900.58	13091.79	10622.5	11850.4	13349.1	14405.2
Operating Expenses	9872.01	9951.86	10179.02	9725.32	8325.8	8980.8	10197.3	11801.3
Cost of Goods Sold	5367.32	5195.2	5932.04	6006.45	3757.8	4348.5	4414.3	5904.8
Administrative Expense	4504.69	4756.66	4246.98	3718.87	4568	4632.3	5783	5896.5
Depreciation & Amortization	569.72	599.78	556.11	460.01	780.6	789.2	835	814.3
Employee Benefit Expense	1839.84	1911.08	2038.88	1729.16	1931.9	2030.2	2270.1	2434.6
Other Indirect Cost	2664.85	2845.58	2208.1	1989.71	2636.1	2602.1	3512.9	3461.9
EBIT (1-t) [for ROA]	1905.38	2318.22	2481.8	2957.98	1294.5	2953.3	2196	1623.2
Interest Expense	16.97	0.05	13.52	0.05	17.2	15.6	9.6	0
Average Fixed Assets	17756.89	9250.685	43369.4	24206.4	16673.9	17861.65	20552.7	23062.6
Earnings to Equity holders	1888.41	2318.17	2468.28	2957.93	1277.3	2937.7	2186.4	1623.2
Preference Dividend	0	0	0	0	0	0	0	0
Equity Shareholders' Fund	15781.91	17402.96	19927.56	22513.55	12684.1	15191.9	16983.7	18336.2

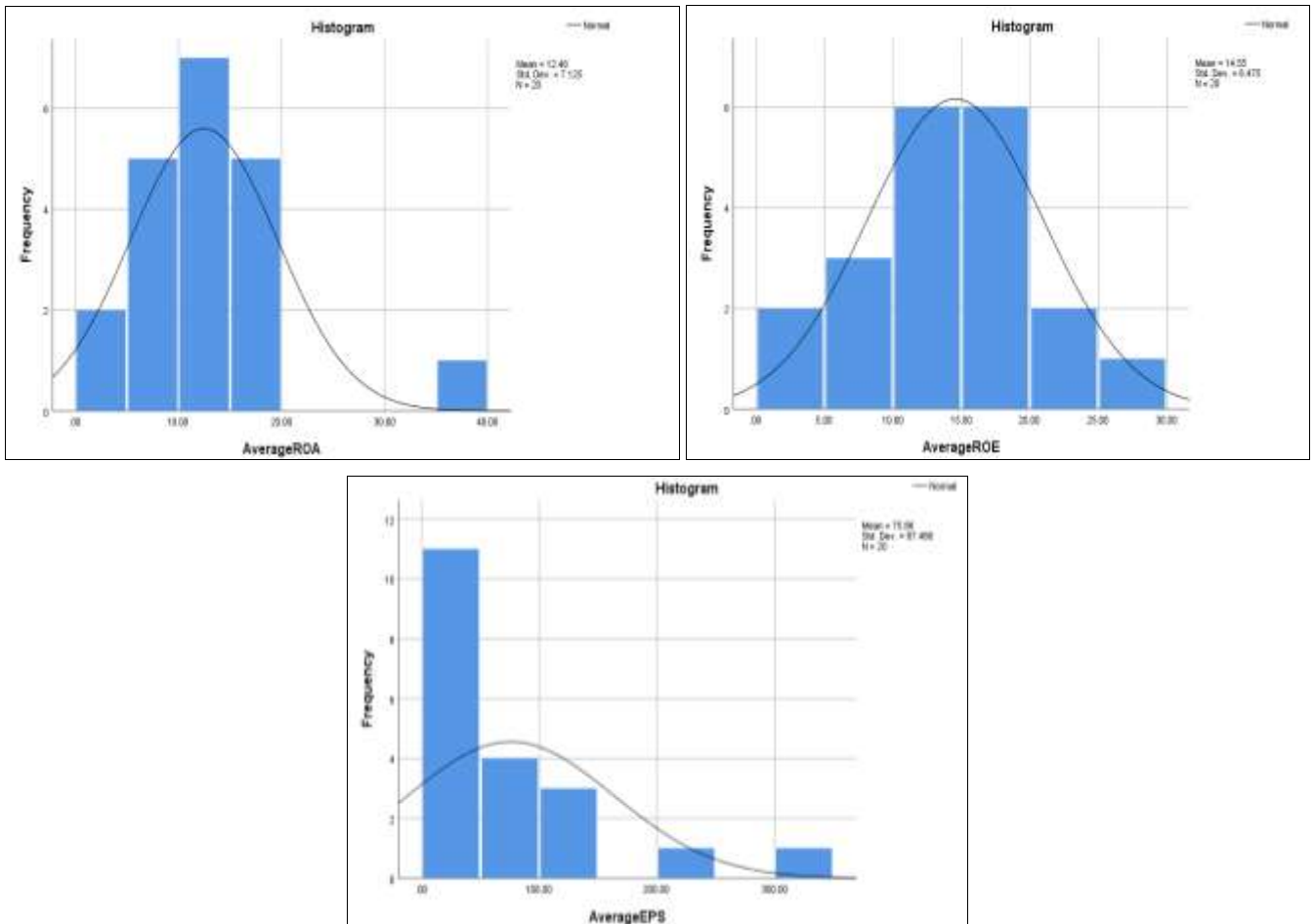
Accounting Figures in ₹ (Crores)	ABOTT INDIA				TORRENT PHARMA			
	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22
Net Sales	3662.31	4077.58	4307.59	4910.3	5556.72	6025.93	6333.04	6665.96
Revenue from Operations	3678.6	4093.14	4310.02	4919.27	5762.48	6168.44	6450.83	6742.32
Purchases	1684.38	1802.64	2040.6	2184.03	342.76	341.32	398.99	397.24
Changes in Inventory	-2.18	61.24	-104	-22.28	-4.97	-56.83	-150.14	-18.34
Cost of Material Consumed	406.4	451.75	454.32	495.46	1206.95	1352.96	1420.82	1528.6
Other Direct Expenses	18.13	22.54	19.89	24.88	233.47	212.3	210.92	234.14
Gross Profit	1555.58	1739.41	1896.78	2228.21	3778.51	4176.18	4452.45	4524.32
Net Profit (after tax)	450.33	592.93	690.69	798.7	935.12	938.51	1137.85	991.45
Operating Profit (EBIT)	587.82	696.88	863.33	1021.62	1034.13	1310.33	1587.49	1498.33
Operating Income	3678.6	4093.14	4310.02	4919.27	5762.48	6168.44	6450.83	6742.32
Operating Expenses	3073.86	3336.66	3388.56	3831.55	4149.45	4251.45	4253.5	4641.56
Cost of Goods Sold	2106.73	2338.17	2410.81	2682.09	1778.21	1849.75	1880.59	2141.64
Administrative Expense	967.13	998.49	977.75	1149.46	2371.24	2401.7	2372.91	2499.92
Depreciation & Amortization	16.92	59.6	58.13	66.1	578.9	606.66	609.84	602.43
Employee Benefit Expense	435.58	476.1	492.65	579.46	1014.06	1061.76	1097.12	1097.93
Other Indirect Cost	531.55	522.39	485.1	570	1357.18	1339.94	1275.79	1401.99
EBIT (1-t) [for ROA]	450.49	599.04	705.95	814.12	1413.61	1363.13	1472.88	1224.74
Interest Expense	0.16	6.11	15.26	15.42	478.49	424.62	335.03	233.29
Average Total Assets	2678.545	3243.875	3693.645	4032.285	11946.17	11969.9	11822.76	11456.8
Earnings to Equity holders	450.33	592.93	690.69	2819.79	935.12	938.51	1137.85	991.45
Preference Dividend	0	0	0	0	0	0	0	0
Equity Shareholders' Fund	2008.58	2431.7	2602.16	2819.79	5015.27	5120.97	6030.1	6345.42

Accounting Figures in ₹ (Crores)	ZYDUS LIFE				ALKEM LAB			
	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22
Net Sales	6207	5967.7	7436.7	7590	5631.36	6434.8	7088.08	8710.06
Revenue from Operations	6492.7	6347.4	7790.4	7981.9	5714.09	6677.08	7219.68	8829.81
Purchases	390.6	97.9	153.3	288.1	688.09	748.38	919.79	1077.04
Changes in Inventory	-72.7	-15.5	-148.3	-46.9	86.56	-33.69	-301.29	-360.9
Cost of Material Consumed	1830	1838.3	2346.4	2629	1497.22	1799.87	2046.52	2849.75
Other Direct Expenses	384.5	402.2	419.4	68.5	175.11	174.39	163.48	207.7
Gross Profit	3674.6	3644.8	4665.9	4651.3	3184.38	3745.85	4259.58	4936.47
Net Profit (after tax)	1602.1	1412.9	1476.2	857.9	799.84	1264.42	1685.08	1541.25

Operating Profit (EBIT)	1405.3	1025.2	1868	1783.2	904.64	1316.81	1750	1591.38
Operating Income	6492.7	6347.4	7790.4	7981.9	5714.09	6677.08	7219.68	8829.81
Operating Expenses	4737.6	4893.3	5471.3	6063.8	4668.38	5173.43	5270.75	7019.45
Cost of Goods Sold	2532.4	2322.9	2770.8	2938.7	2446.98	2688.95	2828.5	3773.59
Administrative Expense	2205.2	2570.4	2700.5	3125.1	2221.4	2484.48	2442.25	3245.86
Depreciation & Amortization	349.8	428.9	451.1	134.9	141.07	186.84	198.93	218.98
Employee Benefit Expense	974.5	1077.4	1147.3	1204.9	960.09	1066.76	1158.72	1434.49
Other Indirect Cost	1230.7	1493	1553.2	1920.2	1261.31	1417.72	1283.53	1811.37
EBIT (1-t) [for ROA]	1686	1553.7	1543.2	952.2	827.78	1296.8	1722.62	1573.09
Interest Expense	83.9	140.8	67	94.3	27.94	32.38	37.54	31.84
Average Total Assets	12917.4	15111.3	17507.55	18101.8	0	0	0	0
Earnings to Equity holders	1602.1	1412.9	1476.2	857.9	799.84	1264.42	1685.08	1541.25
Preference Dividend	0	0	0	0	0	0	0	0
Equity Shareholders' Fund	8956.5	11260.2	12744.5	13240.5	5465.21	6280.44	7625.75	8743.66

Accounting Figures in ₹ (Crores)	LUPIN				AUROBINDO PHARMACY			
	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22	FY: 18 - 19	FY: 19 - 20	FY: 20 - 21	FY: 21 - 22
Net Sales	11938.7	12934.53	15622.18	11250.07	11031.56	10805.83	10901.02	11258.48
Revenue from Operations	12257.89	13266.48	15823.68	11287.14	11356.32	11025.66	11055.93	11771.67
Purchases	14.25	5.51	26.09	16.81	1347.05	1482.77	1522.95	1892.74
Changes in Inventory	-289.8	-229.53	2.99	45.51	-147.23	-28.72	-81.86	-242.38
Cost of Material Consumed	6455.3	6747.55	7215.14	5783.93	2693.08	2753.22	2741.22	2816.9
Other Direct Expenses	823.15	1128.01	1189.87	991.76	806.73	967.85	842.8	943.99
Gross Profit	4935.8	5282.99	7188.09	4412.06	6331.93	5630.71	5875.91	5847.23
Net Profit (after tax)	1529.73	1872.47	3112.91	1454.71	1538.83	727.55	1258.62	-188.7
Operating Profit (EBIT)	1996.26	2215.27	3632.43	1058.14	2426.48	1388.86	1538.53	1573.33
Operating Income	12257.89	13266.48	15823.68	11287.14	11356.32	11025.66	11055.93	11771.67
Operating Expenses	9848.6	10580.73	11703.25	9813.74	8503.54	9118.05	9014.57	9684.15
Cost of Goods Sold	7002.9	7651.54	8434.09	6838.01	4699.63	5175.12	5025.11	5411.25
Administrative Expense	2845.7	2929.19	3269.16	2975.73	3803.91	3942.93	3989.46	4272.9
Depreciation & Amortization	413.03	470.48	488	415.26	426.3	518.75	502.83	514.19
Employee Benefit Expense	1362.77	1561.47	1735.42	1600.04	1515.42	1703.22	1698.56	1918.16
Other Indirect Cost	1482.93	1367.72	1533.74	1375.69	2288.49	2239.71	2290.9	2354.74
EBIT (1-t) [for ROA]	1660.65	1963.82	3138.87	1469.91	1567.7	774.21	1299.24	542.17
Interest Expense	130.92	91.35	25.96	15.2	28.87	46.66	40.62	730.87
Average Total Assets	16967.28	18837.65	21361.78	22394.97	0	0	0	0
Earnings to Equity holders	1529.73	1872.47	3112.91	1454.71	1538.83	727.55	1258.62	-188.7
Preference Dividend								
Equity Shareholders' Fund	11350.62	13025.56	15924.61	17117.34	17117.27	17473.2	18565.57	18150.19





Annex- B: Detailed Test of Normality for Various Financial Indicators