



RESEARCH ARTICLE

Impact of the pandemic (COVID-19) on the financial performance of selected Indian telecommunication sector

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Abstract

Financial performance is an important measure investors use to assess the firm's financial position and health for a given period. It evaluates the company's overall performance and progress and determines its potential future growth, structure, and effectiveness. The COVID-19 pandemic has impacted all industries across the globe. The study examines the impact of the Pandemic (COVID-19) on the financial performance of chosen Indian Telecommunication companies. It evaluates the financial performance during the pre-Covid and post-Covid periods. The study covers Indian firms listed in NSE from the Telecommunications Sector. The study examines the financial performance of five parameters of 10 firms from the Telecommunications sector for two years before the Covid-19 Pandemic and after the Covid-19 Pandemic using paired t-tests. The study will help investors, shareholders, regulators, and policymakers by analysing the Indian Telecommunication sector.

Keywords: Financial Performance, Financial Health, Covid-19, Regulators, and Policymakers.

Introduction

India's telecommunication sector is the biggest and most rapidly expanding network worldwide. The Government policies facilitated the sector's growth potential and increased its demand further. India ranked second in the world's telecommunication market and has a larger subscriber base. The Indian telecommunications services industry includes digital infrastructure, operators, and applications. The increase in cellular phone usage in India has increased employment generation, customer benefits, contribution to Indian GDP, etc.

Telecommunication players, from broadband to mobile to data centre operators, have benefitted from a surge in data and voice traffic due to the COVID-19 Pandemic. As a result, the telecommunication sector has outperformed the

other infrastructure sub-sectors. The Government gave more exemptions to the sector from COVID-19 restrictions, such as stay-at-home orders and quarantine requirements, as it was recognised as an essential service. Some telecommunication companies have been strengthened by the short-term spike in data traffic and increased use of broadband services, as people were working from home and education also went virtual and video conferencing was used to hold meetings and Conferences. *Telecommunications, internet services, broadcasting and cable services, IT and IT-enabled services (ITeS)* were considered essential services and were exempt from the lockdown.

Pandey et al. (2013) studied the financial soundness of the companies, identified key financial characteristics of telecommunication companies, and examined the overall financial efficiency of the selected telecommunication companies.

Verma and Sharma (2013) studied a pre- and post-analysis of the Indian Telecommunication Industry that examines the impact of different mergers on the financial performance of companies before and after mergers in the Indian Telecommunication Sector. Thirty-nine mergers were considered for the study from 2001-2002 to 2007-2008. The comparison was made between three types of mergers: horizontal, vertical, and conglomerate. The result showed that the performance of the firms after the merger during the study period was not affected.

Arkan (2016) interprets financial ratios and the use of ratios in predicting the stock price in emerging markets,

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showing financial analysis for evaluation of the performance of companies and making decisions.

Chen and Shimerda (1981) examined the importance and use of financial ratios and evaluated ratios. They tried to solve the problem of which ratios need to be selected in empirical studies, reconciling their differences and categorizing them by a substantially reduced number of seven essential financial factors as suggested in the literature.

Pervan and Kuvek (2013) examined the financial ratio, which indicates the firm's solvency and helps banks to check the firm's creditworthiness before approving a loan. The study found that financial and non-financial ratios can be used in the prediction of the solvency of a firm.

Rashid (2018) analyses companies' liquidity by using financial ratios analysis. The paper indicates financial ratios that help investors purchase shares based on the company's liquidity ratio.

Musallam (2018) identifies financial ratios that have a relationship or impact on the stock market. The paper analyzed the return of 26 Qatari listed firms and shows whether earnings per share, earnings yield ratio, and dividend yield ratio have a positive and negative impact on the stock market and ratios like market-to-book value ratio, return on assets, return on equity, price to earnings ratio, dividends earnings ratio, and net profit margin have less effect on the stock market.

Duferu (2010) compared and examined the performance of Awash International Bank (AIB) in Ethiopia compared with the industry average concerning liquidity, profitability, credit risk & solvency, and efficiency for 2003-2009. This study found that all results of profitability measures favor the industry average. The results indicate that Awash International Bank was less profitable than the industry average. However, the results also show the AIB is improving considerably over time in these liquidity, efficiency, and risk & solvency measures during the period under the study.

Nissim and Penman (2003) analyze financial statement that distinguishes leverage that arises in financing activities in operations. The analysis yields two leveraging equations, one for borrowing to finance operations and one for borrowing during operations. These leveraging equations explain how the two types of leverage affect book rates of return on equity. The paper concludes that balance sheet line items for operating liabilities are priced differently than those dealing with financing liabilities. The credit facilities for the telecommunication sector can be based on specific decision-making parameters Ramalakshmi et al., (2020) studied the decision-making process that can be applied to the telecommunication sector.

The study's objective is to evaluate the impact of Covid-19 on the financial performance of selected telecommunication companies in India during the pre-and post-Covid period. And also to analyse these companies' liquidity, turnover, solvency, and profitability ratios.

Sources of Data

The research is based on secondary data collected from the financial reports or companies' annual reports of chosen Indian Telecommunication Firms. The company profile and other required data were collected from books, magazines, published papers, articles, and reports. Financial information was collected from Annual reports of Companies, Capital line databases, Articles, Newspapers, and press releases (Alireza et al., 2012; Altman, 1968; Banani et al., 2019; Barnes, 1987; Capon et al., 1990; Cull et al., 2007; Dagilienè et al., 2006; Enyi, 2005; Hasanaj and Kuqi, 2019; Johri & Maheshwari, 2015; Lewellen, 2004; Oshoke & Sumaina, 2015; Prather, 1990; Schönbohm, 2013; Shah & Jan, 2014; Sjahrifa et al., 2018; Zhang, 2016)

Sample Size

The data was collected from 10 companies concerning the Telecommunication Sector listed in Nifty 50. The financial data was collected from the Capitaline databases.

Analysis of Liquidity Ratios of Selected Indian Telecommunication Companies in India for Pre-Covid-Period and Post-Covid-Period

Liquidity ratios determine a business's ability to meet its financial obligations during the short term and maintain its short-term debt-paying ability. A liquidity ratio determines a company's ability to pay its short-term debt obligations. The three main liquidity ratios are current, quick, and cash.

Current Ratio

The current ratio expresses the relationship between Current assets and Current liability. The current ratio examines a firm's short-term financial position or liquidity (Table 1).

Quick Ratio

A quick ratio expresses the relationship between Quick assets and liabilities if an enterprise wants to determine a firm's immediate position or instant debt-paying ability (Table 3).

Interpretatio

The mean of the current ratio and quick ratio two years before Covid 19 and the mean of the current ratio and quick ratio post Covid 19 for 10 Indian Telecommunication Companies are compared to examine if there are any statistically significant changes in the financial performance after Covid 19 using paired sample t-test at a confidence level of 95% {2-tailed} (Table 1). The year of Covid 19 is denoted as 0. Descriptive statistics analysis has also been performed to ascertain the mean difference.

The above Table 2 evident that the mean of the current ratio of selected telecommunication Companies in India during the pre-Covid period is 1.3199 times, and the mean of the current ratio during the post-merger period is 1.4672 times. The mean difference between Pre-covid period and post-Covid period is 0.1473, indicating an increase in the current

Table 1: Showing the current ratio of selected telecommunication companies in india for the pre-covid and post-covid period.

| Sl. No. | Current ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018 -2019 (Covid Period) | 2019-2020 | 2020-2021 | Post-Covid (Mean) |
|---------|-------------------------------------|-----------|-----------|------------------|---------------------------|-----------|-----------|-------------------|
| 1 | Bharti airtel ltd | 0.3604 | 0.5131 | 0.4367 | 0.5151 | 0.6370 | 0.5996 | 0.6183 |
| 2 | Gtl ltd | 0.0717 | 0.0099 | 0.0408 | 0.0061 | 0.0177 | 0.0094 | 0.0135 |
| 3 | Indus tower ltd | 0.7862 | 0.6083 | 0.6973 | 0.7489 | 1.0400 | 1.4393 | 1.2397 |
| 4 | Mahanagar telephone nigram ltd | 2.0411 | 2.1347 | 2.0879 | 1.7399 | 1.3301 | 1.8849 | 1.6075 |
| 5 | Nettlinx ltd | 3.5035 | 3.1761 | 3.3398 | 2.5609 | 2.1113 | 3.7077 | 2.9095 |
| 6 | Quadrant televentures ltd | 0.2322 | 0.2766 | 0.2544 | 0.2582 | 0.2969 | 0.2241 | 0.2605 |
| 7 | Tata communication ltd | 0.7323 | 0.7740 | 0.7532 | 0.7464 | 0.7386 | 0.7103 | 0.7245 |
| 8 | Tata teleservices (maharashtra) ltd | 0.3594 | 0.5311 | 0.4452 | 1.0454 | 0.2619 | 0.9460 | 0.6039 |
| 9 | Tejas network ltd | 4.3351 | 5.3812 | 4.8582 | 4.3337 | 6.8398 | 6.0147 | 6.4272 |
| 10 | Vodafone idea ltd | 0.2003 | 0.3705 | 0.2854 | 0.3523 | 0.2106 | 0.3241 | 0.2673 |

Table 2: Showing the summary of current ratio of selected telecommunication companies in india for pre-covid period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|---------------|-------------------|--------|--------------------|---------|---------|-----------------|
| Current Ratio | Pre Covid Period | 1.3199 | 1.60848 | -0.805 | .442 | Accept |
| | Post Covid Period | 1.4672 | 1.93735 | | | |

*Accept – «Denotes that there is no statistically significant relationship.

*Reject – «Denotes that there is a statistically significant relationship.»

Table 3: Showing the quick ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| Quick ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post-Covid (Mean) |
|-------------|-------------------------------------|-----------|------------------|--------------------------|-----------|-----------|-------------------|
| 1 | Bharti airtel ltd | 0.3594 | 0.5117 | 0.4355 | 0.5134 | 0.6354 | 0.5964 |
| 2 | Gtl ltd | 0.0709 | 0.0099 | 0.0404 | 0.0061 | 0.0177 | 0.0094 |
| 3 | Indus tower ltd | 0.2739 | -0.6035 | -0.1648 | -0.4948 | -0.8465 | 1.0089 |
| 4 | Mahanagar telephone nigram ltd | 2.0283 | 2.1211 | 2.0747 | 1.7277 | 1.3243 | 1.8746 |
| 5 | Nettlinx ltd | 2.4894 | 2.2185 | 2.3539 | 1.8250 | 1.5937 | 2.7269 |
| 6 | Quadrant televentures ltd | 0.2105 | 0.2250 | 0.2178 | 0.2230 | 0.2660 | 0.1964 |
| 7 | Tata communication ltd | 0.7291 | 0.7696 | 0.7494 | 0.7342 | 0.7284 | 0.7049 |
| 8 | Tata teleservices (maharashtra) ltd | 0.3581 | 0.5311 | 0.4446 | 1.0454 | 0.2619 | 0.9460 |
| 9 | Tejas network ltd | 1.7198 | 4.2859 | 3.0028 | 3.6416 | 4.9270 | 4.6371 |
| 10 | Vodafone idea ltd | 0.1960 | 0.3667 | 0.2813 | 0.3522 | 0.2106 | 0.3241 |

Table 4: Showing the summary of quick ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|-------------|-------------------|--------|--------------------|---------|---------|-----------------|
| Quick Ratio | Pre Covid-Period | .9436 | 1.10873 | -0.857 | .414 | Accept |
| | Post Covid Period | 1.1071 | 1.46153 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

ratio post-COVID-19. (Table 3) The *p-value* ($p = 0.442 > 0.05$) with *t-value* (-0.805) obtained through calculations infers that there is no statistical significance in the current ratio of Pre-covid and post-Covid period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The above Table 4 shows that the mean quick ratio of selected telecommunication companies in India during the pre-COVID period is 0.9436 times, and the Mean Quick ratio of Selected Telecommunication Companies in India during the post-merger period is 1.1071 times. The mean difference

between pre-Covid period and post-Covid period is 0.1635, indicating an increase in the quick ratio post-Covid 19. The *p-value* ($p = 0.414 > 0.05$) with *t-value* (-0.857) obtained through calculations infers that there is no statistical significance in the quick ratio of pre-Covid and post-Covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

Based on the data above, it can be interpreted that the average liquidity ratios of Indian Telecommunication Companies have fluctuated post-COVID-19 even though they are statistically insignificant. It is noticeable that Bharti Airtel, Mahanagar Telephone Nigam, Netlinx, Quadrant, Tata Communication, and Tata Tele Maharashtra companies have increased current ratios post-COVID-19. This indicates companies are trying to balance their short-term liability with short-term assets and improving their asset management techniques.

Thus, selected telecommunication companies do not have adequate liquidity, except for Indus Tower, Mahanagar Telephone Nigam, Netlinx, and Tejas Network, which have an adequate amount of short-term assets to cover their short-term liabilities.

Analysis of Turnover Ratio of Selected Indian Telecommunication Companies during the Company's for Pre Covid-Period and Post-Covid Period

«Turnover ratio signifies the efficient utilization of the company's assets and resources. It measures the relationship between a company's sales or revenues relative to the value of its assets. It helps investors determine the companies' efficiency in using their assets to generate sales. The higher

the asset turnover ratio, the more efficiently a company generates revenue from its assets. Conversely, a company with a lower turnover ratio indicates it is not using its assets to generate sales efficiently».

Inventory Turnover Ratio

The inventory Turnover ratio indicates the company's inventory management efficiency and the rate at which the stock is converted into cash (Tables 5 and 6).

Debtors Turnover Ratio

Debtor Turnover Ratio indicates the rate at which the debtor turnover generates cash (Tables 7 and 8).

Creditor Turnover Ratio

The creditor turnover ratio shows the company's short-term liquidity and indicates companies' ability to pay off its suppliers (Tables 9 and 10).

Fixed asset turnover ratio

The fixed asset turnover ratio shows how efficiently a company generates sales from its existing fixed assets (Tables 11 and 12).

Working capital turnover ratio

The working capital turnover ratio shows the company's efficiency in using its working capital to increase sales and growth (Tables 13 and 14).

Interpretation

The above table evident that the Inventory turnover ratio, Debtors Turnover Ratio, Creditors Turnover Ratio, Fixed Asset Turnover Ratio, and Working Capital Turnover Ratio

Table 5: Showing the inventory turnover ratio of selected telecommunication companies in india for pre covid-period and post-covid period

| Inventory turnover ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post-Covid (Mean) |
|---------------------------------------|-----------|------------|------------------|--------------------------|------------|-------------|-------------------|
| 1 Bharti airtel ltd | 623.5963 | 1018.2676 | 820.9320 | 775.7070 | 821.5141 | 353.0050 | 587.2595 |
| 2 Gtl ltd | 224.3843 | 0.0000 | 112.1922 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 3 Indus tower ltd | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 4 Mahanagar telephone nigam ltd | 149.0715 | 138.2827 | 143.6771 | 122.9087 | 111.1774 | 83.1766 | 97.1770 |
| 5 Netlinx ltd | 8.6750 | 8.5850 | 8.6300 | 9.6150 | 11.5500 | 10.0550 | 10.8025 |
| 6 Quadrant televentures ltd | -24.5238 | 38.8664 | 7.1713 | 26.6086 | 32.6434 | 54.4867 | 43.5651 |
| 7 Tata communication ltd | 640.3944 | 641.6878 | 641.0411 | 272.5529 | 194.8594 | 245.3716 | 220.1155 |
| 8 Tata teleservices (maharashtra) ltd | 1268.9167 | 10301.9263 | 5785.4215 | 27188.0000 | 0.0000 | 0.0000 | 0.0000 |
| 9 Tejas network ltd | 3.6987 | 3.1265 | 3.4126 | 3.6769 | 2.0862 | 1.9412 | 2.0137 |
| 10 Vodafone idea ltd | 973.1895 | 1437.0027 | 1205.0961 | 19396.3333 | 65918.4800 | 208557.0000 | 137237.7400 |

Table 6: Showing the summary of inventory turnover ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|--------------------------|------------|------------|--------------------|---------|---------|-----------------|
| Inventory Turnover Ratio | Pre Covid | 872.7574 | 1777.15548 | -0.946 | .369 | Accept |
| | Post Covid | 13819.8673 | 43365.00732 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

of Selected Pharmaceutical Companies have no statistically significant changes in the financial performance after Covid 19 and the Null hypothesis is accepted based on the *p-value*.

The above table evident that the pre-covid and post-covid mean of the inventory turnover ratio of selected Telecommunication Companies in India is 872.7574 times

and 13819.8673 times, respectively. The mean difference between the pre-COVID and post-COVID Covid Periods is 12947.1099, indicating an increase in the inventory turnover ratio post-COVID-19. The *p-value* ($p = -0.946 > 0.05$) with *t-value* (-.369) obtained through calculations infers that there is no statistical significance in the inventory turnover

Table 7: showing the debtor turnover ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| | Debtor turnover ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|----|-------------------------------------|-----------|-----------|------------------|--------------------------|------------|-----------|--------------------|
| 1 | Bharti airtel ltd | 18.6387 | 15.5582 | 17.0984 | 15.8648 | 19.0148 | 24.4109 | 21.7128 |
| 2 | Gtl ltd | 8.4319 | 25.5123 | 16.9721 | 515.4118 | 21540.0000 | 4419.2000 | 12979.6000 |
| 3 | Indus tower ltd | 24.5598 | 23.0463 | 23.8031 | 16.5383 | 14.6890 | 6.6517 | 10.6704 |
| 4 | Mahanagar telephone nigam ltd | 6.0204 | 5.3879 | 5.7041 | 4.0225 | 2.6177 | 1.9815 | 2.2996 |
| 5 | Nettlinx ltd | 2.9480 | 1.8906 | 2.4193 | 2.1985 | 2.7824 | 2.6393 | 2.7108 |
| 6 | Quadrant televentures ltd | 10.4012 | 13.6968 | 12.0490 | 11.9364 | 9.5685 | 8.5317 | 9.0501 |
| 7 | Tata communication ltd | 6.2828 | 6.0509 | 6.1669 | 5.5809 | 5.5082 | 5.8597 | 5.6839 |
| 8 | Tata teleservices (maharashtra) ltd | 10.4402 | 9.7118 | 10.0760 | 10.3333 | 10.2136 | 10.4397 | 10.3267 |
| 9 | Tejas network ltd | 2.7456 | 2.2770 | 2.5113 | 2.0055 | 0.7828 | 1.4696 | 1.1262 |
| 10 | Vodafone idea ltd | 28.9673 | 25.6927 | 27.3300 | 17.7162 | 14.0617 | 14.9795 | 14.5206 |

Table 8: Showing the summary of debtor turnover ratio of selected telecommunication companies in india for pre-covid period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|-----------------------|------------|-----------|--------------------|---------|---------|-----------------|
| Debtor Turnover Ratio | Pre Covid | 12.4130 | 8.70838 | | | |
| | Post Covid | 1305.7701 | 4101.77050 | -.998 | .345 | Accept |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 9: Showing the creditor turnover ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| | Creditor turnover ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|----|-------------------------------------|-----------|-----------|------------------|--------------------------|------------|-----------|--------------------|
| 1 | Bharti airtel ltd | 4.0641 | 3.4400 | 3.7521 | 3.3308 | 5.4932 | 3.9400 | 4.7166 |
| 2 | Gtl ltd | 8.4319 | 25.5123 | 16.9721 | 515.4118 | 21540.0000 | 4419.2000 | 12979.6000 |
| 3 | Indus tower ltd | 1.7190 | 1.4601 | 1.5896 | 1.7069 | 1.4751 | 2.4597 | 1.9674 |
| 4 | Mahanagar telephone nigam ltd | 8.0178 | 10.1280 | 9.0729 | 9.3088 | 6.5097 | 3.9392 | 5.2244 |
| 5 | Nettlinx ltd | 23.5156 | 15.9879 | 19.7518 | 19.0778 | 5.3225 | 3.3298 | 4.3261 |
| 6 | Quadrant televentures ltd | -1.9563 | 10.8750 | 4.4594 | 8.9257 | 8.3809 | 15.4690 | 11.9250 |
| 7 | Tata communication ltd | 3.5175 | 3.7580 | 3.6378 | 3.5162 | 3.4647 | 3.3341 | 3.3994 |
| 8 | Tata teleservices (maharashtra) ltd | 7.4473 | 21.3014 | 14.3744 | 4.8284 | 17.6173 | 9.9595 | 13.7884 |
| 9 | Tejas network ltd | 5.0911 | 5.6402 | 5.3657 | 4.7999 | 4.2092 | 4.8845 | 4.5469 |
| 10 | Vodafone idea ltd | 4.0969 | 3.4731 | 3.7850 | 3.2399 | 4.8353 | 3.4922 | 4.1638 |

Table 10: Showing the summary of creditor turnover ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|-------------------------|------------|-----------|--------------------|---------|---------|-----------------|
| Creditor Turnover ratio | Pre Covid | 8.2760 | 6.45527 | | | |
| | Post Covid | 1303.3658 | 4102.61226 | -.999 | .344 | Accept |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

ratio of pre-Covid and post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The Mean Debtor Turnover Ratio of Selected Telecommunication Companies in India during the pre-covid & post-covid

periods is 12.4130 times and 1305.7701 times. The Mean Difference between the pre-covid and post covid period is 1293.3571, indicating an increase in the debtor turnover ratio post-covid 19. The *p-value* ($p = 0.345 > 0.05$) with t-value (-0.998) obtained through calculations infers that there is no

Table 11: Showing the fixed assets turnover ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| | <i>Fixed assets turnover ratio</i> | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|----|-------------------------------------|-----------|-----------|------------------|--------------------------|-----------|-----------|--------------------|
| 1 | Bharti airtel ltd | 0.5356 | 0.4414 | 0.4885 | 0.4022 | 0.3694 | 0.4502 | 0.4098 |
| 2 | Gtl ltd | 12.3532 | 11.9363 | 12.1447 | 2.7742 | 2.7363 | 2.9116 | 2.8239 |
| 3 | Indus tower ltd | 1.0501 | 1.1835 | 1.1168 | 1.2802 | 1.0043 | 0.4388 | 0.7216 |
| 4 | Mahanagar telephone nigam ltd | 0.3390 | 0.3028 | 0.3209 | 0.2793 | 0.2357 | 0.2219 | 0.2288 |
| 5 | Nettlinx ltd | 4.9223 | 1.4802 | 3.2013 | 1.7296 | 3.9098 | 3.7278 | 3.8188 |
| 6 | Quadrant televentures ltd | 0.8677 | 1.8845 | 1.3761 | 2.6449 | 3.0538 | 3.4148 | 3.2343 |
| 7 | Tata communication ltd | 1.6123 | 1.5534 | 1.5829 | 1.4638 | 1.3368 | 1.4844 | 1.4106 |
| 8 | Tata teleservices (maharashtra) ltd | 0.3623 | 2.2062 | 1.2843 | 1.7787 | 1.2058 | 1.2572 | 1.2315 |
| 9 | Tejas network ltd | 9.4986 | 10.0335 | 9.7660 | 9.0831 | 4.9655 | 4.7437 | 4.8546 |
| 10 | Vodafone idea ltd | 0.4634 | 0.3549 | 0.4092 | 0.2086 | 0.2419 | 0.2505 | 0.2462 |

Table 12: Showing the summary of fixed assets turnover ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|-----------------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Fixed Assets Turnover Ratio | Pre Covid | 3.1691 | 4.22286 | 1.212 | .256 | Accept |
| | Post Covid | 1.8980 | 1.66231 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 13: Showing the working capital turnover ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| | <i>Working capital turnover ratio</i> | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|----|---------------------------------------|-----------|-----------|------------------|--------------------------|-----------|-----------|--------------------|
| 1 | Bharti airtel ltd | -3.2585 | -3.2732 | -3.2659 | -3.0380 | -2.3632 | -2.9729 | -2.6680 |
| 2 | Gtl ltd | -0.1770 | -0.1383 | -0.1577 | -0.0292 | -0.0289 | -0.0300 | -0.0295 |
| 3 | Indus tower ltd | -6.6275 | -9.3099 | -7.9687 | -15.3605 | 144.3897 | 6.2130 | 75.3013 |
| 4 | Mahanagar telephone nigam ltd | 1.1694 | 0.9209 | 1.0451 | 0.8482 | 0.7651 | 0.4763 | 0.6207 |
| 5 | Nettlinx ltd | 0.8971 | 0.8053 | 0.8512 | 0.9127 | 1.7495 | 1.6733 | 1.7114 |
| 6 | Quadrant televentures ltd | -1.0645 | -1.1545 | -1.1095 | -1.1770 | -1.5563 | -1.2110 | -1.3836 |
| 7 | Tata communication ltd | -10.9892 | -11.9517 | -11.4704 | -10.3216 | -9.1350 | -9.2049 | -9.1700 |
| 8 | Tata teleservices (maharashtra) ltd | -2.6474 | -1.4046 | -2.0260 | 10.1092 | -0.6419 | -43.7593 | -22.2006 |
| 9 | Tejas network ltd | 1.6604 | 0.9820 | 1.3212 | 1.0304 | 0.5076 | 0.6771 | 0.5924 |
| 10 | Vodafone idea ltd | -3.2603 | -4.6850 | -3.9726 | -1.7560 | -0.7390 | -1.4265 | -1.0828 |

Table 14: Showing the summary of working capital turnover ratio of selected telecommunication companies in india for the pre-covid-period and post-covid period

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|--------------------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Working Capital Turnover Ratio | Pre Covid | -2.6753 | 4.20143 | -.782 | .454 | Accept |
| | Post Covid | 4.1691 | 26.00706 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

statistical significance in the debtor turnover ratio of pre-covid and post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The mean creditors turnover ratio of selected telecommunication companies in India during the pre-covid & post-covid periods is 8.2760 times and 1303.3658 times. The mean difference between the pre-covid and post covid periods is 1295.0898, indicating an increase in the creditors turnover ratio post-covid 19. The *p-value* ($p = 0.344 > 0.05$) with t-value (0.-999) obtained through calculations infers that there is no statistical significance in the creditors turnover ratio of pre-covid and post-covid period of selected telecommunication companies in India, and Null is accepted based on the *p-value*.

The mean fixed assets turnover ratio of selected telecommunication companies in India during the pre-covid & post-covid periods is 3.1691 times and 1.8980 times. The Mean Difference between the pre-covid and post covid periods is 1.2711, indicating a decrease in the fixed assets turnover ratio post-covid 19. The *p-value* ($p = 0.256 > 0.05$) with t-value (1.212) obtained through calculations infers that there is no statistical significance in the Fixed Assets Turnover Ratio of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The mean working capital turnover ratio of selected telecommunication companies in India during the pre-covid period was -2.6753 times, and the mean working capital

Table 15: Showing the debt-equity ratio of selected telecommunication companies in India for the pre-covid period and post-covid period

| <i>Debt To Equity Ratio</i> | 2016-2017 | 2017-2018 | <i>Pre-Covid (Mean)</i> | <i>2018-2019 (Covid Period)</i> | 2019-2020 | 2020-2021 | <i>Post -Covid (Mean)</i> |
|---------------------------------------|-----------|-----------|-------------------------|---------------------------------|-----------|-----------|---------------------------|
| 1 Bharti Airtel Ltd | 1.5905 | 1.6011 | 1.5958 | 1.7562 | 1.9214 | 2.7613 | 2.3414 |
| 2 Gtl Ltd | -0.0213 | -0.0220 | -0.0217 | -0.0212 | -0.0233 | -0.0261 | -0.0247 |
| 3 Indus Tower Ltd | 0.0180 | 0.0000 | 0.0090 | 0.0004 | 0.3417 | 1.3589 | 0.8503 |
| 4 Mahanagar Telephone Nigam Ltd | -4.5056 | -2.6878 | -3.5967 | -2.0289 | -1.7149 | -1.5956 | -1.6552 |
| 5 Netlinx Ltd | 0.3852 | 0.5978 | 0.4915 | 0.6699 | 0.6160 | 0.4582 | 0.5371 |
| 6 Quadrant Televentures Ltd | -0.8946 | -0.7913 | -0.8430 | -0.7683 | -0.7975 | -0.7161 | -0.7568 |
| 7 Tata Communication Ltd | 5.7878 | 17.8783 | 11.8330 | -54.6446 | -9.7105 | 98.6801 | 44.4848 |
| 8 Tata Teleservices (Maharashtra) Ltd | -2.7450 | -1.0276 | -1.8863 | -1.1319 | -0.9666 | -1.0627 | -1.0146 |
| 9 Tejas Network Ltd | 0.4747 | 0.0020 | 0.2383 | 0.0009 | 0.0258 | 0.0193 | 0.0226 |
| 10 Vodafone Idea Ltd | 2.2260 | 2.1269 | 2.1765 | 2.1119 | 4.5725 | -0.7685 | 1.9020 |

Table 16: Showing the summary of debt- equity ratio of selected telecommunication companies in India for pre covid-period and post-covid period

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|-------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Debt-Equity Ratio | Pre Covid | .9997 | 4.14749 | | | |
| | Post Covid | 4.6687 | 14.04511 | -1.137 | .285 | Accept |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 17: Showing the proprietary ratio of selected telecommunication companies in India for the pre-covid period and post-covid period

| <i>Proprietary ratio</i> | 2016-2017 | 2017-2018 | <i>Pre-Covid (Mean)</i> | <i>2018-2019 (Covid Period)</i> | 2019-2020 | 2020-2021 | <i>Post -Covid (Mean)</i> |
|---------------------------------------|-----------|-----------|-------------------------|---------------------------------|-----------|-----------|---------------------------|
| 1 Bharti airtel ltd | 0.3617 | 0.3518 | 0.3567 | 0.3258 | 0.2963 | 0.2268 | 0.2616 |
| 2 Gtl ltd | 1.0219 | 1.0226 | 1.0223 | 1.0217 | 1.0243 | 1.0270 | 1.0257 |
| 3 Indus tower ltd | 0.9449 | 0.9623 | 0.9536 | 0.9571 | 0.7286 | 0.3993 | 0.5639 |
| 4 Mahanagar telephone nigam ltd | -0.2210 | -0.4547 | -0.3378 | -0.8540 | -1.3225 | -1.5885 | -1.4555 |
| 5 Netlinx ltd | 0.7143 | 0.5274 | 0.6208 | 0.5176 | 0.5425 | 0.5730 | 0.5577 |
| 6 Quadrant televentures ltd | -14.5109 | 14.7008 | 0.0949 | 9.7217 | 12.9938 | 9.4719 | 11.2328 |
| 7 Tata communication ltd | 0.1059 | 0.0374 | 0.0716 | -0.0133 | -0.0853 | 0.0078 | -0.0388 |
| 8 Tata teleservices (maharashtra) ltd | -0.5730 | -27.9138 | -14.2434 | -7.4853 | 31.1916 | -15.6661 | 7.7628 |
| 9 Tejas network ltd | 0.6765 | 0.9970 | 0.8368 | 0.9978 | 0.9743 | 0.9805 | 0.9774 |
| 10 Vodafone idea ltd | 0.3027 | 0.3066 | 0.3047 | 0.3027 | 0.0399 | -0.2390 | -0.0995 |

turnover ratio during the post-covid period was 4.1691 times. The working capital turnover ratio has increased post-covid 19.

The *p-value* ($p = 0.454 > 0.05$) with *t-value* (-.782) obtained through calculations infers that there is no statistical significance in the Working capital turnover ratio of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

Analysis of Solvency Ratio of Selected Indian Telecommunication Companies in India for Pre Covid-Period and Post-Covid Period

«Solvency ratio indicates the company's long-term ability to pay off debt obligation. Solvency shows the company cash flow is enough to meet its long-term liability».

There are two aspects of solvency.

- Ability to pay the principal amount when due
- Regular payment of interest

Debt- Equity Ratio

Shows a company's financial leverage. Debt equity ratio indicates the level of debt financing used in a business. It

shows the contribution rate of owners and creditors of the company (Tables 15 and 16).

Proprietary ratio or equity ratio

Proprietary ratio indicates the relationship between shareholders' funds and the firm's total assets. This ratio helps to determine the long-term solvency of a firm (Tables 17 and 18).

Interest coverage ratio

Measures the firm's ability to make contractual interest payments is very low. It shows the company's adequacy to pay off its debt obligation and to survive unforeseen events. The interest coverage ratio is an important factor in the return on shareholders' capital (Tables 19 and 20).

Interpretation

The pre-covid and post-covid mean of debt- equity ratio of selected telecommunication companies in India is 0.9997 times and 4.6687 times, respectively. The Debt- Equity Ratio has increased post-covid 19. The *p-value* ($p = 0.285 > 0.05$) with *t-value* (-1.137) obtained through calculations infers that there is no statistical significance in the Working capital turnover ratio of pre-covid and post-covid period of

Table 18: Showing the summary of proprietary ratio of selected telecommunication companies in india for pre covid-period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|-------------------|------------|---------|--------------------|---------|---------|-----------------|
| Proprietary ratio | Pre Covid | -1.0320 | 4.66206 | -1.303 | .225 | Accept |
| | Post Covid | 2.0788 | 4.05596 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 19: Showing the interest coverage ratio of selected telecommunication companies in india for pre-covid period and post-covid period

| Interest Coverage Ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|---------------------------------------|-----------|-----------|------------------|--------------------------|-----------|-----------|--------------------|
| 1 Bharti Airtel Ltd | 3.5155 | 3.2976 | 3.4066 | 3.1686 | 0.7463 | 2.1292 | 1.4378 |
| 2 Gtl Ltd | -2.2254 | -47.5796 | -24.9025 | -25.6281 | -2.3168 | 1.4414 | -0.4377 |
| 3 Indus Tower Ltd | 100.3071 | 80.0065 | 90.1568 | 68.2892 | 14.6722 | 8.9237 | 11.7980 |
| 4 Mahanagar Telephone Nigam Ltd | -0.2608 | -0.2730 | -0.2669 | -0.4002 | -0.3875 | 0.2604 | -0.0636 |
| 5 Netlinx Ltd | 3.9375 | 2.0410 | 2.9892 | 2.8832 | 2.6860 | 2.5259 | 2.6060 |
| 6 Quadrant Televentures Ltd | 12.5354 | -1.5644 | 5.4855 | 0.0334 | 0.8578 | -1.4031 | -0.2727 |
| 7 Tata Communication Ltd | 9.4320 | 5.6363 | 7.5342 | 6.3902 | 5.8237 | 9.4901 | 7.6569 |
| 8 Tata Teleservices (Maharashtra) Ltd | -0.2171 | -4.9332 | -2.5752 | 0.6846 | -1.2777 | -0.1709 | -0.7243 |
| 9 Tejas Network Ltd | 5.6966 | 13.5216 | 9.6091 | 13.5365 | -19.7345 | 25.2324 | 2.7490 |
| 10 Vodafone Idea Ltd | 2.8523 | 1.8749 | 2.3636 | 0.9928 | -2.2172 | -0.1443 | -1.1807 |

Table 20: Showing the summary of interest coverage ratio of selected telecommunication companies in India for pre-covid-period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|-------------------------|------------|--------|--------------------|---------|---------|-----------------|
| Interest Coverage Ratio | Pre Covid | 9.3800 | 29.96396 | .836 | .425 | Accept |
| | Post Covid | 2.3569 | 4.22790 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

selected telecommunication companies in India, and Null is accepted based on the *p-value*.

The mean proprietary ratio of selected telecommunication companies in India is -1.0320 times and 2.0788 times during the pre-covid & post-covid periods. The Proprietary ratio has increased post-covid 19. The *p-value* ($p = 0.225 > 0.05$) with t-value (-1.303) obtained through calculations infers that there is no statistical significance in the Proprietary ratio of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The Mean of Interest Coverage Ratio of Selected Telecommunication Companies in India during the Pre-Covid & Post-Covid Periods is 9.3800 times and 2.3569 times. The Interest Coverage Ratio has decreased Post Covid 19. The *p-value* ($p = .425 > 0.05$) with t-value (0.836) obtained through calculations infers that there is no statistical significance in the Interest Coverage Ratio of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

Profitability Ratio

«The long-term survival of a business enterprise depends on its satisfactory income. Evaluating a company's past profit may give investors, creditors, and others a better understanding of decision-making. The profitability position also affects the liquidity position, which is also vital to creditors».

Gross Profit Ratio

Expresses the relationship of Gross profit to Net sales (Tables 21 and 22).

Net Profit Ratio

Expresses the relationship between net profit to sales (Tables 23 and 24).

Operating Cost Ratio

Operating cost establishes the relationship between operating cost and sales (Tables 25 and 26).

Operating Profit Ratio

The operating Profit ratio establishes the relationship between Operating cost and sales (Tables 27 and 28).

Return on Capital Employed/ ROI

ROI measures the overall profitability. Capital employed refers to long-term funds supplied by the lenders and owners of the firms (Tables 29 and 30).

Return on Asset

Shows the percentage of profit a company earns to its total assets. It shows the company's ability to earn profits before leverage (Tables 31 and 32).

Return on Equity Capital

Establishes the relationship between the net profit available to equity shareholders and the amount of capital they invest (Tables 33 and 34).

Earnings per share

Earnings per share shows what companies make from its share of their stock and is used to estimate corporate value. EPS shows how much investors are willing to buy companies' shares at that price (Tables 35 and 36).

Table 21: Showing the Gross Profit Ratio of Selected Telecommunication Companies in India for the Pre-Covid Period and Post-Covid Period

| | Gross Profit Ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|----|-------------------------------------|-----------|-----------|------------------|--------------------------|-----------|-----------|--------------------|
| 1 | Bharti Airtel Ltd | 0.2880 | 0.2724 | 0.2802 | 0.2428 | -0.1899 | 0.2581 | 0.0341 |
| 2 | Gtl Ltd | -54.9050 | -86.7030 | -70.8040 | -187.4230 | -11.8477 | 22.8277 | 5.4900 |
| 3 | Indus Tower Ltd | 77.9891 | 71.1246 | 74.5568 | 67.6584 | 75.1743 | 54.5015 | 64.8379 |
| 4 | Mahanagar Telephone Nigam Ltd | -61.5033 | -77.5343 | -69.5188 | -114.3555 | -166.7233 | -112.8399 | -139.7816 |
| 5 | Nettlinx Ltd | 19.7895 | 16.1578 | 17.9736 | 26.6019 | 6.1966 | 5.8291 | 6.0128 |
| 6 | Quadrant Televentures Ltd | 143.3585 | -70.7321 | 36.3132 | -24.7737 | -3.4027 | -62.5976 | -33.0002 |
| 7 | Tata Communication Ltd | 18.9136 | 11.6381 | 15.2759 | 14.5888 | 14.6320 | 22.9380 | 18.7850 |
| 8 | Tata Teleservices (Maharashtra) Ltd | -57.7396 | -498.2087 | -277.9742 | -38.3667 | -326.5287 | -175.1490 | -250.8388 |
| 9 | Tejas Network Ltd | 12.5893 | 22.3140 | 17.4516 | 23.9804 | -15.7525 | 14.1739 | -0.7893 |
| 10 | Vodafone Idea Ltd | 19.5751 | 6.7538 | 13.1644 | -9.8128 | -83.2800 | -49.1390 | -66.2095 |

Table 22: Showing the Summary of the Gross Profit Ratio of Selected Telecommunication Companies in India for Pre Covid-Period and Post-Covid Period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|--------------------|------------|----------|--------------------|---------|---------|-----------------|
| Gross Profit Ratio | Pre Covid | -24.3281 | 99.50368 | .999 | .344 | Accept |
| | Post Covid | -39.5460 | 92.44616 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Dividend per share

Dividend per share indicates the per share dividend the shareholders will get. It indicates the percentage of equity share earnings distribute as Dividends to equity shareholders (Tables 37 and 38).

Price earnings ratio

This ratio is the market price of shares expressed as a multiple of EPS and guides investors to decide whether to buy company shares (Tables 39 and 40).

DISCUSSION

The Mean Gross Profit Ratio of Selected Telecommunication companies in India during the Pre-Covid & Post-Covid period is -24.3281 times and -39.5460 times. The Gross Profit Ratio has decreased Post Covid 19. The *p-value* ($p = .999 > 0.05$) with *t-value* (.344) obtained through calculations infers that there is no statistical significance in the Gross Profit Ratio of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

Table 23: Net profit ratio of telecommunication companies in India

| | <i>Net Profit Ratio</i> | 2016-2017 | 2017-2018 | <i>Pre-Covid (Mean)</i> | <i>2018-2019 (Covid Period)</i> | 2019-2020 | 2020-2021 | <i>Post -Covid (Mean)</i> |
|----|-------------------------------------|-----------|-----------|-------------------------|---------------------------------|-----------|-----------|---------------------------|
| 1 | Bharti Airtel Ltd | 4.4427 | 2.6422 | 3.5425 | 2.0890 | -36.2134 | -12.2883 | -24.2508 |
| 2 | Gtl Ltd | -0.5835 | -0.8842 | -0.7339 | -1.8952 | -0.1395 | 0.2072 | 0.0339 |
| 3 | Indus Tower Ltd | 45.1460 | 37.6624 | 41.4042 | 36.5328 | 48.9204 | 27.0813 | 38.0008 |
| 4 | Mahanagar Telephone Nigam Ltd | -98.8779 | -120.1901 | -109.5340 | -162.4654 | -227.5103 | -177.3613 | -202.4358 |
| 5 | Nettlinx Ltd | 13.2105 | 4.3257 | 8.7681 | 14.9515 | 3.3120 | -2.6599 | 0.3260 |
| 6 | Quadrant Televentures Ltd | 113.4570 | -87.1499 | 13.1535 | -32.1130 | -10.1732 | -69.0439 | -39.6085 |
| 7 | Tata Communication Ltd | 6.9830 | -1.8442 | 2.5694 | 0.4229 | -0.5098 | 7.3313 | 3.4108 |
| 8 | Tata Teleservices (Maharashtra) Ltd | -87.1827 | -526.7293 | -306.9560 | -52.2706 | -344.6202 | -191.3161 | -267.9682 |
| 9 | Tejas Network Ltd | 10.6308 | 14.2065 | 12.4186 | 16.3542 | -60.7159 | 7.1288 | -26.7936 |
| 10 | Vodafone Idea Ltd | -1.1235 | -14.7396 | -7.9316 | -39.3716 | -164.3288 | -105.4369 | -134.8828 |

Table 24: Average net profit ratio of selected telecommunication companies in India

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Net profit ratio | Pre Covid | -34.3299 | 103.62072 | 1.998 | .077 | Accept |
| | Post Covid | -65.4168 | 101.38901 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 25: Showing the operating cost ratio of selected telecommunication companies in india for the pre-covid period and post-covid period

| | <i>Operating Cost Ratio</i> | 2016-2017 | 2017-2018 | <i>Pre-Covid (Mean)</i> | <i>2018-2019 (Covid Period)</i> | 2019-2020 | 2020-2021 | <i>Post -Covid (Mean)</i> |
|----|-------------------------------------|-----------|-----------|-------------------------|---------------------------------|-----------|-----------|---------------------------|
| 1 | Bharti Airtel Ltd | 106.8990 | 109.6002 | 108.2496 | 115.1449 | 156.4490 | 108.2917 | 132.3703 |
| 2 | Gtl Ltd | 148.3904 | 106.0784 | 127.2344 | 121.2554 | 113.5237 | 113.2829 | 113.4033 |
| 3 | Indus Tower Ltd | 28.7229 | 35.0103 | 31.8666 | 37.1554 | 28.5377 | 50.6912 | 39.6145 |
| 4 | Mahanagar Telephone Nigam Ltd | 186.2068 | 199.7743 | 192.9905 | 240.7042 | 292.5989 | 238.4230 | 265.5110 |
| 5 | Nettlinx Ltd | 110.0526 | 118.7659 | 114.4093 | 88.2039 | 160.6624 | 119.9491 | 140.3057 |
| 6 | Quadrant Televentures Ltd | -11.2599 | 241.5427 | 115.1414 | 199.2105 | 177.3290 | 234.6630 | 205.9960 |
| 7 | Tata Communication Ltd | 138.5552 | 143.2491 | 140.9022 | 136.7820 | 136.1670 | 124.8208 | 130.4939 |
| 8 | Tata Teleservices (Maharashtra) Ltd | 193.7623 | 633.7055 | 413.7339 | 185.3852 | 468.9034 | 314.7347 | 391.8191 |
| 9 | Tejas Network Ltd | 89.6448 | 82.6620 | 86.1534 | 80.1537 | 121.3730 | 89.6278 | 105.5004 |
| 10 | Vodafone Idea Ltd | 132.6186 | 149.7470 | 141.1828 | 170.2703 | 225.5370 | 186.1957 | 205.8664 |

Table 26: Showing the summary of the operating cost ratio of selected telecommunication companies in India for the pre-covid period and post-covid period

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|----------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Operating Cost Ratio | Pre Covid | 147.1864 | 102.33940 | -2.118 | .063 | Accept |
| | Post Covid | 173.0881 | 99.46246 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

The Mean Net profit ratio of Selected Telecommunication companies in India during the period is -34.3299 times and -65.4168 times. The Net profit ratio has decreased post-covid 19. The *p*-value ($p = 1.998 > 0.05$) with *t*-value (.077) obtained through calculations infers that there is no statistical significance in the Net profit ratio of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p*-value.

The mean operating cost ratio of selected telecommunication companies in India during the pre-COVID and post-COVID periods is 147.1864 times and -173.0881 times. The Operating Cost Ratio has increased Post-COVID-19. The *p*-value ($p = .063 > 0.05$) with *t*-value (-2.118) obtained through calculations infers that there is no statistical significance in the Net profit ratio of Pre-covid and Post-covid Period of Selected

Table 27: Showing the operating profit ratio of selected telecommunication companies in India for the pre-covid period and post-covid period

| | <i>Operating Profit Ratio</i> | 2016-2017 | 2017-2018 | <i>Pre-Covid (Mean)</i> | <i>2018-2019 (Covid Period)</i> | 2019-2020 | 2020-2021 | <i>Post -Covid (Mean)</i> |
|----|-------------------------------------|-----------|-----------|-------------------------|---------------------------------|-----------|-----------|---------------------------|
| 1 | Bharti Airtel Ltd | 38.8013 | 38.5238 | 38.6625 | 37.4323 | -2.3726 | 40.8126 | 19.2200 |
| 2 | Gtl Ltd | -10.0998 | -84.8416 | -47.4707 | -179.8128 | -2.8505 | 32.1778 | 14.6636 |
| 3 | Indus Tower Ltd | 78.6366 | 71.8269 | 75.2317 | 68.4334 | 80.1424 | 60.4953 | 70.3189 |
| 4 | Mahanagar Telephone Nigam Ltd | -12.7229 | -16.6292 | -14.6760 | -32.6842 | -46.5643 | 39.7331 | -3.4156 |
| 5 | Nettlinx Ltd | 26.5263 | 31.6794 | 29.1029 | 40.7282 | 9.8718 | 9.6491 | 9.7605 |
| 6 | Quadrant Televentures Ltd | 155.7862 | -43.1493 | 56.3185 | 0.8599 | 20.5104 | -36.5491 | -8.0193 |
| 7 | Tata Communication Ltd | 20.9976 | 13.6919 | 17.3447 | 16.9886 | 17.3900 | 25.3953 | 21.3926 |
| 8 | Tata Teleservices (Maharashtra) Ltd | -10.2993 | -414.2397 | -212.2695 | 83.2853 | -183.1666 | -25.5658 | -104.3662 |
| 9 | Tejas Network Ltd | 0.1623 | 0.2410 | 0.2016 | 0.2587 | -0.1378 | 0.1488 | 0.0055 |
| 10 | Vodafone Idea Ltd | 30.8464 | 23.8952 | 27.3708 | 15.9207 | -49.0417 | -6.2373 | -27.6395 |

Table 28: Showing the summary of the operating profit ratio of selected telecommunication companies in India for the pre-covid period and post-covid period

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|------------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Operating Profit Ratio | Pre Covid | -3.0184 | 81.41763 | | | |
| | Post Covid | -.8080 | 44.48193 | -.137 | .894 | Accept |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 29: Showing the return on investment of selected telecommunication companies in India for the pre-covid period and post-covid period

| | <i>Return On Investment</i> | 2016-2017 | 2017-2018 | <i>Pre-Covid (Mean)</i> | <i>2018-2019 (Covid Period)</i> | 2019-2020 | 2020-2021 | <i>Post -Covid (Mean)</i> |
|----|-------------------------------------|-----------|------------|-------------------------|---------------------------------|-----------|-----------|---------------------------|
| 1 | Bharti Airtel Ltd | 21.6524 | 17.9047 | 19.7785 | 16.0108 | -0.9516 | 18.3686 | 8.7085 |
| 2 | Gtl Ltd | 2.3304 | 13.9445 | 8.1374 | 5.8280 | 0.0843 | -0.9766 | -0.4462 |
| 3 | Indus Tower Ltd | 30.3262 | 28.0340 | 29.1801 | 32.1339 | 29.7422 | 22.5394 | 26.1408 |
| 4 | Mahanagar Telephone Nigam Ltd | -11.9941 | -13.0097 | -12.5019 | -16.2733 | -17.6669 | -3.5496 | -10.6083 |
| 5 | Nettlinx Ltd | 18.4683 | 14.0658 | 16.2671 | 19.3229 | 9.3769 | 7.132 | 8.2543 |
| 6 | Quadrant Televentures Ltd | -84.2096 | 82.0383 | -1.0857 | 6.6499 | -15.7042 | 37.1594 | 10.7276 |
| 7 | Tata Communication Ltd | -84.2096 | 82.0383 | -1.0857 | 6.6499 | -15.7042 | 37.1594 | 10.7276 |
| 8 | Tata Teleservices (Maharashtra) Ltd | -5.3998 | -3695.7981 | -1850.5990 | 123.3027 | 675.8743 | -50.9228 | 312.4758 |
| 9 | Tejas Network Ltd | 18.9993 | 17.8147 | 18.4070 | 18.8143 | -4.4275 | 6.9177 | 1.2451 |
| 10 | Vodafone Idea Ltd | 45.4566 | 25.9922 | 35.7244 | 13.5917 | -67.2041 | 16.2286 | -25.4878 |

Table 30: Showing the summary of the return on investment ratio of selected telecommunication companies in India for the pre-covid period and post-covid period

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|----------------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Return on Investment Ratio | Pre Covid | -173.7778 | 589.35715 | | | |
| | Post Covid | 34.1737 | 98.76126 | -.957 | .364 | Accept |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The mean operating profit ratio of selected telecommunication companies in India during the pre-COVID and post-COVID periods is -3.0184 times and -0.8080 times. The Operating Cost Ratio has decreased Post-COVID-19.

The *p-value* ($p = -.137 > 0.05$) with t-value (0.894) obtained through calculations infers that there is no statistical significance in the Net profit ratio of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The mean return on investment ratio of selected

Table 31: Showing the return on assets of selected telecommunication companies in India for the pre-covid period and post-covid period

| | Return On Assets | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|----|-------------------------------------|-----------|------------|------------------|--------------------------|-----------|-----------|--------------------|
| 1 | Bharti Airtel Ltd | 7.3925 | 5.8223 | 6.6074 | 5.6158 | -6.3717 | 1.0493 | -2.6612 |
| 2 | Gtl Ltd | 2.8321 | 13.7421 | 8.2871 | 5.4998 | 0.1456 | -0.9183 | -0.3863 |
| 3 | Indus Tower Ltd | 16.9874 | 14.4099 | 15.6987 | 16.7729 | 19.5493 | 11.6079 | 15.5786 |
| 4 | Mahanagar Telephone Nigam Ltd | -9.7449 | -10.5226 | -10.1338 | -14.7912 | -16.9704 | -3.4057 | -10.1881 |
| 5 | Nettlinx Ltd | 12.1125 | 6.5976 | 9.3550 | 11.0171 | 5.5612 | 0.7771 | 3.1692 |
| 6 | Quadrant Televentures Ltd | 401.0738 | 260.5942 | 330.8340 | 68.1828 | 32.3640 | 129.6458 | 81.0049 |
| 7 | Tata Communication Ltd | 8.1827 | -2.3172 | 2.9328 | 0.5123 | -0.5807 | 8.4177 | 3.9185 |
| 8 | Tata Teleservices (Maharashtra) Ltd | -22.8511 | -1812.2876 | -917.5694 | -38.1981 | 662.7842 | -187.0103 | 237.8870 |
| 9 | Tejas Network Ltd | 10.6079 | 9.2186 | 9.9132 | 11.1277 | -21.3735 | 3.2452 | -9.0642 |
| 10 | Vodafone Idea Ltd | -0.4892 | -4.6875 | -2.5884 | -7.4117 | -49.3007 | -27.6508 | -38.4757 |

Table 32: Showing the summary of the return on asset ratio of selected telecommunication companies in India for pre-covid period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|-----------------------|------------|----------|--------------------|---------|---------|-----------------|
| Return on Asset Ratio | Pre Covid | -54.6663 | 320.09775 | -.680 | -.680 | Accept |
| | Post Covid | 28.0783 | 79.72855 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 33: Showing the return on equity ratio of selected telecommunication companies in India for the pre-covid period and post-covid period

| | Return On Equity Ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|----|-------------------------------------|-----------|-----------|------------------|--------------------------|-----------|-----------|--------------------|
| 1 | Bharti Airtel Ltd | 6.3198 | 3.1878 | 4.7538 | 2.3944 | -41.2800 | -18.1693 | -29.7246 |
| 2 | Gtl Ltd | 3.0154 | 13.9189 | 8.4672 | 5.7687 | 0.1431 | -0.8901 | -0.3735 |
| 3 | Indus Tower Ltd | 16.2827 | 15.3630 | 15.8228 | 15.8357 | 23.5001 | 25.6906 | 24.5954 |
| 4 | Mahanagar Telephone Nigam Ltd | 155.3947 | 61.2192 | 108.3070 | 42.1931 | 31.6922 | 16.6152 | 24.1537 |
| 5 | Nettlinx Ltd | 12.1786 | 2.8759 | 7.5272 | 11.6051 | 5.1632 | -3.0259 | 1.0687 |
| 6 | Quadrant Televentures Ltd | -26.8765 | 19.4527 | -3.7119 | 7.2707 | 2.5222 | 14.6922 | 8.6072 |
| 7 | Tata Communication Ltd | 200.2995 | -29.5818 | 85.3589 | 44.0175 | 11.9178 | -215.6093 | -101.8457 |
| 8 | Tata Teleservices (Maharashtra) Ltd | 79.7608 | 129.8488 | 104.8048 | 10.2061 | 42.4976 | 23.8745 | 33.1861 |
| 9 | Tejas Network Ltd | 19.5035 | 12.2085 | 15.8560 | 11.9111 | -19.7503 | 3.3894 | -8.1804 |
| 10 | Vodafone Idea Ltd | -1.6557 | -16.0332 | -8.8444 | -33.6119 | -225.1876 | 274.3300 | 24.5712 |

Table 34: Showing the summary of the return on equity ratio of selected telecommunication companies in India for pre covid-period and post-covid period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|------------------------|------------|---------|--------------------|---------|---------|-----------------|
| Return on Equity Ratio | Pre Covid | 33.8341 | 46.30554 | 1.778 | 0.109 | Accept |
| | Post Covid | -2.3942 | 39.76942 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

telecommunication companies in India during the pre-COVID & Post-Covid periods is -173.7778 times and 34.1737 times. The Return on Investment Ratio has increased Post-COVID-19. The *p-value* ($p = -.364 > 0.05$) with *t-value* (-.957) obtained through calculations infers that there is no statistical significance in the Return on Investment

Ratio of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The mean return on asset ratio of selected telecommunication companies in India during the Pre-Covid & Post-Covid period is -54.6663 times and 28.0783 times. The

Table 35: Showing the earnings per share of selected telecommunication companies in India for the pre-covid period and post-covid period

| <i>Eps</i> | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|---------------------------------------|-----------|-----------|------------------|--------------------------|-----------|-----------|--------------------|
| 1 Bharti Airtel Ltd | 8.57 | 2.48 | 5.525 | 0.92 | -57.9 | -26.95 | -42.425 |
| 2 Gtl Ltd | 0 | 0 | 0 | 0 | -1.91 | 2.91 | 0.5 |
| 3 Indus Tower Ltd | 14.85 | 13.48 | 14.165 | 13.48 | 17.83 | 14.02 | 15.925 |
| 4 Mahanagar Telephone Nigam Ltd | 0 | 0 | 0 | -53.78 | -58.63 | -39.07 | -48.85 |
| 5 Netlinx Ltd | 2.04 | 0 | 1.02 | 2.79 | 1.51 | -0.6 | 0.455 |
| 6 Quadrant Televentures Ltd | 6.28 | 0 | 3.14 | 0 | -0.76 | -4.84 | -2.8 |
| 7 Tata Communication Ltd | 43.26 | 0 | 21.63 | 0 | -3.02 | 43.88 | 20.43 |
| 8 Tata Teleservices (Maharashtra) Ltd | -12.05 | -50.34 | -31.195 | -3.41 | -19 | -10.21 | -14.605 |
| 9 Tejas Network Ltd | 0 | 11.32 | 5.66 | 15.5 | -24.83 | 3.89 | -10.47 |
| 10 Vodafone Idea Ltd | 0 | 0 | 0 | 0 | -25.71 | -15.39 | -20.55 |

Table 36: Showing the summary of the earnings per share of selected telecommunication companies in India for the pre-covid period and post-covid period

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|--------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Earnings per share | Pre Covid | 1.9945 | 13.64353 | 1.794 | | |
| | Post Covid | -10.2390 | 22.51505 | | .106 | Accept |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 37: showing the dividend per share of selected telecommunication companies in India for pre-covid period and post-covid period

| <i>Dividend Per Share</i> | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post -Covid (Mean) |
|---------------------------------------|-----------|-----------|------------------|--------------------------|-----------|-----------|--------------------|
| 1 Bharti Airtel Ltd | 1 | 5.34 | 3.17 | 2.5 | 2 | 0 | 1 |
| 2 Gtl Ltd | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 Indus Tower Ltd | 16 | 14 | 15 | 15 | 10.5 | 20.12 | 15.31 |
| 4 Mahanagar Telephone Nigam Ltd | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 Netlinx Ltd | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 Quadrant Televentures Ltd | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 Tata Communication Ltd | 6 | 4.5 | 5.25 | 4.5 | 4 | 14 | 9 |
| 8 Tata Teleservices (Maharashtra) Ltd | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 Tejas Network Ltd | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 10 Vodafone Idea Ltd | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 38: showing the summary of the - dividend per share of selected telecommunication companies in India for the pre-covid period and post-covid period

| <i>Variables</i> | <i>Type</i> | <i>Mean</i> | <i>Standard Deviation</i> | <i>t-value</i> | <i>p-value</i> | <i>Null Hypothesis</i> |
|--------------------|-------------|-------------|---------------------------|----------------|----------------|------------------------|
| Dividend per share | Pre Covid | 2.3420 | 4.80465 | -4.17 | | |
| | Post Covid | 2.5310 | 5.29503 | | .687 | Accept |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Table 39: Showing the Price Earnings Ratio of Selected Telecommunication Companies in India for the Pre-Covid Period and Post-Covid Period

| | Price Earnings Ratio | 2016-2017 | 2017-2018 | Pre-Covid (Mean) | 2018-2019 (Covid Period) | 2019-2020 | 2020-2021 | Post-Covid (Mean) |
|----|-------------------------------------|-----------|-----------|------------------|--------------------------|-----------|-----------|-------------------|
| 1 | Bharti Airtel Ltd | 36.8 | 145.05 | 90.925 | 326.37 | -7.47 | -18.84 | -13.155 |
| 2 | Gtl Ltd | 17.1 | 11.37 | 14.235 | 4.69 | -0.57 | 1.79 | 0.61 |
| 3 | Indus Tower Ltd | 21.92 | 24.94 | 23.43 | 23.25 | 8.98 | 17.5 | 13.24 |
| 4 | Mahanagar Telephone Nigam Ltd | 24 | 18.85 | 21.425 | -0.22 | -0.1 | -0.48 | -0.29 |
| 5 | Nettlinx Ltd | 52.38 | 69.5 | 60.94 | 13.53 | 9.97 | -112.17 | -51.1 |
| 6 | Quadrant Televentures Ltd | 0.48 | 0 | 0.24 | 0 | -0.25 | -0.04 | -0.145 |
| 7 | Tata Communication Ltd | 29.85 | 66.36 | 48.105 | 0 | 31.81 | 31.46 | 31.635 |
| 8 | Tata Teleservices (Maharashtra) Ltd | -0.6 | -0.11 | -0.355 | -0.9 | -0.09 | -1.38 | -0.735 |
| 9 | Tejas Network Ltd | 0 | 32.11 | 16.055 | 11.09 | -1.29 | 41.26 | 19.985 |
| 10 | Vodafone Idea Ltd | 51.76 | 45.75 | 48.755 | 18.15 | -0.12 | -0.6 | -0.36 |

Table 40: Showing the Summary of the Price Earnings Ratio of Selected Telecommunication Companies in India for the Pre-Covid- Period and Post-Covid Period

| Variables | Type | Mean | Standard Deviation | t-value | p-value | Null Hypothesis |
|----------------------|------------|---------|--------------------|---------|---------|-----------------|
| Price Earnings Ratio | Pre Covid | 32.3755 | 29.17196 | 2.405 | .040 | Reject |
| | Post Covid | -.0315 | 22.01230 | | | |

*Accept – «Denotes that there is no statistically significant relationship.»

*Reject – «Denotes that there is a statistically significant relationship.»

Return on Asset Ratio has increased Post Covid 19. The *p-value* ($p = -.680 > 0.05$) with *t-value* (-.680) obtained through calculations infers that there is no statistical significance in the Return on Asset Ratio of Pre-Covid and Post-Covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The Mean Return on Equity Ratio of Selected Telecommunication companies in India during the Pre-Covid & Post-Covid period is 33.8341 times and -2.3942 times. The Return on Equity Ratio has decreased Post Covid 19. The *p-value* ($p = 1.778 > 0.05$) with a *t-value* (0.109) obtained through calculations infers that there is no statistical significance in the Return on Equity Ratio of Pre-Covid and Post-Covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The mean of earnings per share of selected telecommunication companies in india during the pre-covid & post-covid period is 1.9945 times and -10.2390 times. The earnings per share have decreased post-covid 19. The *p-value* ($p = 1.778 > 0.05$) with *t-value* (0.106) obtained through calculations infers that there is no statistical significance in the Earning per share of pre-covid and post-covid period of selected telecommunication companies in India, and Null is accepted based on the *p-value*.

The mean dividend per share of selected telecommunication companies in india during the pre-covid & post-covid periods is 2.3420 times and 2.5310 times. The dividend per share has increased post-covid 19. The *p-value*

($p = 0.687 > 0.05$) with *t-value* (-.417) obtained through calculations infers that there is no statistical significance in the dividend per share of Pre-covid and Post-covid Period of Selected Telecommunication Companies in India, and Null is accepted based on the *p-value*.

The mean price earnings ratio of selected telecommunication companies in India during the pre-covid & post-covid periods is 32.3755 times and -0.0315 times. The price earnings ratio has decreased post-covid-19. The *p-value* ($p = 0.040 < 0.05$) with *t-value* (2.405) obtained through calculations infers that there is statistical significance in the price earnings ratio of pre-covid and post-covid period of selected telecommunication companies in India, and Null is rejected based on the *p-value*.

Findings and Conclusion

The liquidity ratios have a marginal increase in the mean value after the start of the pandemic, and they are not statistically significant.

The average mean of the turnover ratios has a marginal increase after the effect of covid 19, except for the fixed assets turnover ratio, which is marginally decreasing. But all the ratios do not create any statistically significant difference. The solvency ratios have the same tendency of a marginal increase except for the Interest Coverage ratio, which is decreasing marginally, and all the ratios are statistically insignificant. The increase in the interest burden has reduced the coverage ratio.

The profitability ratios, except for Operating profit, ROE, EPS and PE ratio, the remaining ratios have a marginal increase.

Price Earnings Ratio has a statistically significant decrease in the mean values during the Covid period. The market sentiments are due to the pandemic drive in this ratio.

The profit status of the companies could have been more satisfactory since the mean values were increasing negatively. Even though the returns are less, the companies improved their ROCE and ROA by increasing their efficiency and effectiveness.

The pandemic has positively impacted the financial performance of the selected telecommunications sector even though there was no statistically significant difference in the mean values. The growing need for internet traffic and tele infrastructure during the post-COVID period will positively impact the companies' financial performance in the long run.

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