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# Corporate Policy Strategy Based on Comparison of Financial Performance Due to the Impact of the Covid-19 Pandemic

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**ABSTRACT:** The analysis carried out to see how far a company has carried out by using the rules of financial implementation correctly and adequately is called financial performance. There are 5 (five) ratios used in assessing a company's financial performance, including liquidity ratios, leverage ratios, activity ratios, profitability ratios, and market value ratios. This study aims to determine policy strategies based on the results of comparative tests of the financial performance of companies in the technology and infrastructure sector before and during the 2018-2021 Covid-19 pandemic. This study uses secondary data. The sampling technique used was the purposive sampling method. This study used the normality test and paired difference test. The results of this study indicate that the financial performance of technology companies during the Covid-19 pandemic obtained significant results for all variables. In contrast, for the variables in the infrastructure sector companies, only one variable was significant. Based on the comparative test results, a policy strategy is needed to overcome problems related to financial performance experienced by infrastructure and technology companies listed on the Indonesia Stock Exchange. Through the eight determined policy strategies, it is expected to be able to make the company survive and choose the proper steps in developing its business.

**Keywords:** Corporate Policy Strategy, Financial Performance, Covid-19, Financial Ratios



## INTRODUCTION

In 2019 the world was shocked by the occurrence of the Covid-19 pandemic, which caused many countries to be affected. The Covid-19 pandemic has had a severe impact on the business sector. The company's activities which began to decline, made many companies lay off their employees. This causes an increase in the unemployment rate, which may increase in the future. Several potentials and economies have an impact as a threat to decrease production or income, but it is also assumed that businesses are growing during the pandemic (2022).

On the Indonesia Stock Exchange, twelve sectors and industries have been listed, two of which are the technology sector (IDX TECHNO) and the infrastructure sector (IDX INFRA). The technology sector listed on the Indonesia Stock Exchange comprises six sub-sectors: online applications & services, IT services & consulting, software, networking equipment, computer hardware and electronic equipment, and instruments & components. The infrastructure sector listed on the Indonesia Stock Exchange consists of seven sub-sectors, namely, transport infrastructure operators, heavy constructions & civil engineering, telecommunication services, wireless telecommunication services, electric utilities, gas utilities, and water utilities.

The infrastructure sector is closely related to the construction sector, such as the construction of roads, bridges, irrigation, ports, airports, factories, to housing. Massive infrastructure development must be accompanied by the fulfillment of reliability, health, and safety aspects, starting from the planning stage to the completion stage of development (Zarei & Honarmandi, 2022). In companies listed on the Indonesia Stock Exchange, the infrastructure sector consists of several sub-sectors that are also related to technology, such as telecommunication services and wireless telecommunication services, about utilities such as electric utilities, gas utilities, and water utilities, related to infrastructure such as infrastructure operators, heavy constructions & civil engineering, and related to transportation. During the pandemic, the infrastructure sector experienced a significant impact because many projects had to be stopped due to the Covid-19 pandemic, which caused enormous losses for companies in the infrastructure sector (2022).

This is inversely proportional to the telecommunications sub-sector. During the pandemic, the use of services provided by telecommunication companies is increasing because most activities are carried out online. This is supported by the research conducted by Fajriyanti & Wiyarni (2022), who found that Covid-19 hurt traditional Industries in China but created opportunities for emerging technology Industries, including the telecommunications Industry. The Covid-19 pandemic demands that most of the community's activities be carried out online, which has led to an increase in the use of the internet and other services provided by telecommunication companies.

Based on the above phenomenon, the main objective of this research is to formulate a policy strategy based on a comparative analysis of the financial performance of technology and infrastructure sector companies listed on the Indonesia Stock Exchange before and during the COVID-19 pandemic. This study uses financial ratio variables, including the current ratio, debt-to-equity ratio, debt-to-asset ratio, receivable turnover, and net profit margin. This research is necessary because, during the COVID-19 pandemic, many companies experienced a decline in financial performance. Some experienced an increase in economic performance but could not formulate appropriate policies so they could survive during the Covid-19 pandemic. This research takes the range of 2018-2021 because, in 2018, there were no cases of covid-19 in Indonesia, then in 2020, when the COVID-19 pandemic began, and the economy weakened. In 2021, when the situation gradually improved.

### *Signaling Theory*

Signal theory explains what must be done in the event of failure or success of management or agents and conveyed to the principal. Apart from that, this theory also explains that signaling by

management can reduce asymmetric information. Financial reports can be used as a signal that describes the excellent performance of a company during the current year. Of course, the existence of a sound signal will positively impact a good market response because the information conveyed by the company will significantly influence the market response. Information is a crucial benchmark for an investor and its users because, through this information, the information needed will be obtained in the form of notes and descriptions related to conditions that occurred in the past and the future. Investors need quality and complete information in the capital market to determine their decisions (Ross, 1977)

The signal theory will provide an overview regarding why a company must have the motivation to publish information about financial reports to external parties. The information provided will significantly affect the company's value that external parties will provide because good details will have a positive impact so that it can also give an excellent image to stakeholders. Moreover, companies' profits will be huge if the information they provide gives the market a positive value. That is why a company needs to avoid information asymmetry, which can cause a decrease in company value because external parties are not interested in the company (Ross, 1977). This signal theory has a very close relationship with the information provided. The financial statements will be the basis for stakeholders to analyze future investing decisions.

### *Covid-19*

The COVID-19 pandemic is a condition caused by the spread of the coronavirus. Coronavirus is a positive single-celled RNA virus (Gupta et al., 2022). This virus was originally only in the city of Wuhan, but because it has easily contagious characteristics, the whole world is affected by the dangers of the covid-19 virus. The first positive case of COVID-19 in Indonesia was detected on March 2, 2020, when two residents were infected by a Japanese citizen (Shimizu & Negita, 2020).

### *Financial Performance*

Financial performance describes the company's operational activities, which will later be presented as numbers printed on the financial statements. The company's operating activities will later be compared with the previous period's financial performance, the company's balance sheet and profit and loss budget, and various other financial performance averages (de Lima et al., 2022). The financial performance is part of the analysis that the company must carry out to see how far the company has achieved to achieve the predetermined targets (Hamzah et al., 2022). The financial performance itself is generally measured in the form of ratios as follows: (1) Profitability ratios, (2) Activity ratios, (3) Liquidity ratios, (4) Solvency ratios, and (5) Market value ratios.

### *Financial Performance Measurement*

According to Kapalu & Kodongo (2022), measuring financial performance means comparing the standards set with the company's economic performance. Measurement of the company's financial performance can be measured using financial ratios. Financial performance can be measured using financial ratio analysis. Financial ratio analysis can reveal relationships and become the basis for comparisons that indicate conditions or trends that cannot be detected when only looking at the components of the ratio itself.

### *Liquidity Ratio*

The liquidity ratio is a ratio that is the basis for determining how far a company can meet its short-term debt obligations. The liquidity ratio itself consists of (1) the current ratio, which serves to see how far the company can pay its short-term debt as a whole at maturity, (2) the quick ratio, which is the basis for determining the comparison between current assets and current liabilities and see if the comparison can cover its current liabilities, (3) cash ratio, is a calculation that functions to see the company's ability to pay off short-term debt with the accumulated results of a comparison of the amount of cash with current debt, (4) working capital to total assets ratio to see the value company liquidity (Kasmir, 2008).

1. *Current Ratio*

$$Current\ Ratio = \frac{Current\ Asset}{Current\ Liabilities}$$

2. *Quick Ratio*

$$Quick\ Ratio = \frac{Current\ Asset - Inventory}{Current\ Liabilities}$$

3. *Cash Ratio*

$$Cash\ Ratio = \frac{Cash\ \&\ Cash\ Equivalent}{Current\ Liabilities}$$

4. *Working Capital to Total Assets Ratio*

$$Net\ Working\ Capital\ to\ Total\ Assets\ Ratio = \frac{Net\ Working\ Capital}{Total\ Assets}$$

### *Solvency Ratio*

The solvency ratio is a ratio that shows a company's ability to fulfill all of its short-term and long-term debt obligations. Leverage is said to be high if the company uses much debt to finance its operational activities. The solvency ratio consists of (1) the total debt to equity ratio serves to calculate how capable the equity owned by the company is to bear the liabilities owned by the company, (2) the debt to asset ratio is used to see how capable the assets owned by the company are in bearing the debt owned by the company itself; generally, this ratio uses accumulated comparisons, (3) the long term debt to equity ratio serves to see the comparison between long term debt (non-current liabilities/long term debt) and total equity, (4) fixed charge coverage is a ratio that is almost similar to the time's interest earned ratio but is calculated if the company has a lease contract in its operational activities. (5) times interest earned ratio measures the number of times an operation/business can pay interest expense obligations (Amelia et al., 2019).

1. *Total Debt to Equity Ratio* (DER)

$$Total\ Debt\ to\ Equity\ Ratio = \frac{Total\ Liabilities}{Total\ Equity}$$

2. *Debt to Asset Ratio (DAR)*

$$Total\ Debt\ to\ Asset\ Ratio = \frac{Total\ Liabilities}{Total\ Assets}$$

3. *Long-Term Debt to Equity Ratio*

$$Long-Term\ Debt\ to\ Equity\ Ratio = \frac{Total\ Non-Current\ Liabilities}{Total\ Equity}$$

4. *Fixed Charge Coverage*

$$Fixed\ Charge\ Coverage = \frac{EBIT + Interest\ Expense + Rent\ Payable}{Interest\ Expense + Rent\ Payable}$$

5. *Times Interest Earned Ratio*

$$Time\ Interest\ Earned\ Ratio = \frac{EBIT}{Finance\ Cost}$$

***Activity Ratio***

The activity ratio is a ratio that shows the effectiveness of using assets financed with debt. The ratio includes (1) total assets turnover to calculate the turnover of funds invested in assets in one period, (2) receivable turnover serves to see the turnover of funds embedded in receivables, (3) account payable turnover is used to see the frequency of payment of company debts to creditors, (4) inventory turnover looks at the effectiveness of the turnover of funds invested in inventory, (5) working capital turnover is a picture of the ability of a company's net working capital to rotate in an accounting period (Herispon, 2016).

1. *Total Assets Turnover*

$$Total\ Assets\ Turnover = \frac{Net\ Sales}{Total\ Assets}$$

2. *Receivable Turnover*

$$Receivable\ Turnover = \frac{Sales\ on\ Credit}{Account\ Receivable}$$

3. *Inventory Turnover*

$$Inventory\ Turnover = \frac{Cost\ of\ Goods\ Sold}{Inventory}$$

4. *Working Capital Turnover*

$$Working\ Capital\ Turnover = \frac{Net\ Sales}{Working\ Capital}$$

5. *Accounts Payable Turnover*

$$Account\ Payable\ Turnover = \frac{Cost\ of\ Good\ Sold}{Account\ Payable}$$

***Profitability Ratio***

The profitability ratio is a ratio that is generally used to see a comparison of the level of return earned by a company with the sales or assets it owns. This ratio is divided into several parts, namely: (1) gross profit margin functions to see the percentage of profit earned from product sales activities carried out by the company, (2) net profit margin is used to see the level of net profit obtained from the business being carried out, (3) return on total assets is a ratio that assesses the percentage of net profit generated for each rupiah of total assets, (4) return on equity ratio is a ratio that aims to measure the percentage of net profit generated for each rupiah of equity capital, (5) earnings per share is used to see the percentage of the company's success in achieving the targets expected by shareholders (Herispon, 2016).

1. *Gross Profit Margin*

$$Gross\ Profit\ Margin = \frac{Gross\ Profit}{Sales}$$

2. *Net Profit Margin*

$$Net\ Profit\ Margin = \frac{Earning\ After\ Tax}{Sales}$$

3. *Return on Total Asset*

$$Return\ on\ Total\ Asset = \frac{Net\ Profit}{Total\ Assets}$$

4. *Return on Equity Ratio*

$$Return\ on\ Equity\ Ratio = \frac{Net\ Profit}{Total\ Equity}$$

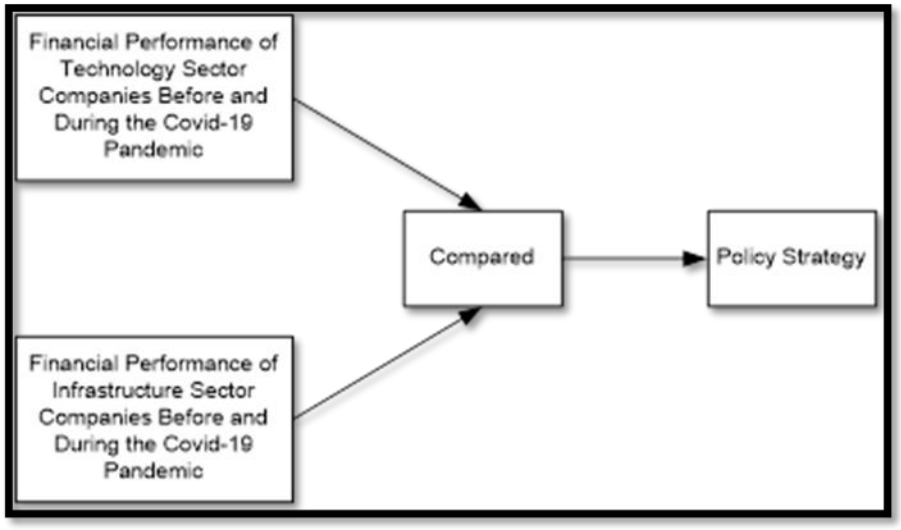
5. *Earning per Share*

$$Earning\ per\ Share = \frac{Net\ Profit}{Total\ Share\ Outstanding}$$

### Research Framework

This research framework uses eight independent variables, which are proxies for the current ratio (X1), total debt to equity ratio (X2), debt to asset ratio (X3), receivable turnover (X4), net profit margin (X5), for the dependent variable or variable (Y) in this study is the financial performance of technology and infrastructure sector companies listed on the Indonesia Stock Exchange in 2018-2021 later based on this comparative analysis a policy strategy will be formulated for technology and infrastructure companies.

Based on previous research and the relationship between variables, the research framework can be arranged as follows:




**Picture 1 Research Framework**

## METHOD

### *Research Design*

The research design will briefly describe the research methods used, such as an overview of the relationships between variables, the Population and sample size, the selected sample technique, how to collect data, and the analytical tools used. This type of research is comparative with a quantitative approach. Later, based on the results of a comparison of financial performance, a suitable policy strategy will be determined for companies in the infrastructure and technology sectors. According to Juliandi et al (2014), comparative research is conducted not to explain

causal relationships directly but to make various comparisons between several situations. On that basis, an assumption is made about what causes the differences in situations. Meanwhile, Sekaran (2017) explains that the quantitative approach focuses more on proving the hypothesis.

***Population and Sample***

***a) Population***

The Population in this study are all technology and infrastructure sector companies listed on the Indonesia Stock Exchange in 2018-2021. In general, researchers limit the Population with the aim that the research population is homogeneous so that the level of difficulty in research can be minimized.

***b) Sample***

The criteria used as samples in this study are:

1. Technology and infrastructure sector companies listed on the Indonesia Stock Exchange in 2018-2021
2. Provide complete annual financial reports for the 2018-2021 period
3. Entire data regarding the variables studied are available.

**Table 1 Sample Selection Procedure**

| No. | Criteria | Total |
|---|---|---|
| 1. | Technology and infrastructure sector companies listed on the Indonesia Stock Exchange in 2018-2021 | 86 |
| 2. | Does not provide annual financial reports for the 2018-2021 period | (15) |
| 3. | Complete data regarding the variables studied are not available. | (0) |
| **Number of selected research samples** | | 71 |
| **Research year** | | 4 |
| **The total number of examples in the study** | | 284 |

**Variable Operations**

A variable is the object of research observation, commonly referred to as a factor that has a role in research or the phenomenon to be studied.

**Data Sources and Data Collection Techniques**

**a) *Sample***

The data used in this study is secondary data that can be directly used and obtained from an agency or outside the agency concerned. In this study, the secondary data used is the annual financial report data of technology and infrastructure sector companies listed on the Indonesia Stock Exchange in 2018-2021 and obtained through the website www.idx.co.id. The reason for choosing the data period to be used is because the results of this study will

compare the company's financial performance before and during the covid-19 pandemic in 2018-2021, thus requiring four years of financial statements as the basis for conducting comparative analysis to determine the company's policy strategy.

**b)** ***Data Collection Techniques***

Research also uses library research by reading and studying literature and publications related to research. The data used in this study was carried out using:

1) Documentation
2) Literature Review
3) Evaluation of Data Collection

**Data Analysis Methods**

1) Quantitative Descriptive Analysis
2) Normality Test
3) Hypothesis test.

## RESULT AND DISCUSSION

### Descriptive Statistical Analysis

Descriptive statistics are statistics used to analyze data by describing or describing the data that has been collected as it is without intending to make conclusions that apply to the public or generalizations (Hardani et al., 2020). Descriptive analysis can provide an overview and description of the frequency distribution of the variables in this study. Descriptive analysis data includes the number of samples, minimum value, maximum value, average value, and standard deviation of each variable.

This study uses research variables in the form of company financial performance, which are analyzed through 8 (eight) financial ratios, namely the liquidity ratio proxied by the current ratio (CR), the solvency ratio proxied by the total debt to equity ratio (DER) and the debt to asset ratio (DAR), activity ratio proxied by receivable turnover (RTO), and profitability ratio proxied by net profit margin (NPM). To carry out descriptive analysis in this study assisted by SPSS software version 25. The following is the result of a descriptive analysis of each financial ratio which forms the basis for comparative tests in determining company policy strategies:

**Table 2 Technology Sector Companies Descriptive Statistical Analysis Results**

| Variable | Period | N | Min | Max | Mean | Std. Devices |
|---|---|---|---|---|---|---|
| **CR** | Before | 22 | 1.08 | 7.02 | 3.1286 | 1.84127 |
| | During | 22 | 0.87 | 4.75 | 2.7523 | 1.21330 |
| **DER** | Before | 22 | 0.17 | 0.59 | 0.3414 | 0.10787 |
| | During | 22 | 0.10 | 0.69 | 0.3659 | 0.16582 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **DAR** | Before | 22 | 0.02 | 0.76 | 0.3574 | 0.18597 |
| | During | 22 | 0.10 | 0.74 | 0.3201 | 0.16260 |
| **RTO** | Before | 22 | 2.53 | 7.73 | 5.4123 | 1.62270 |
| | During | 22 | 1.23 | 8.01 | 5.0427 | 1.88508 |
| **NPM** | Before | 22 | 0.27 | 5.10 | 2.4082 | 1.43762 |
| | During | 22 | -8.54 | 8.71 | 1.6268 | 3.83335 |

**Source: Processed Data, 2022**

Based on the results of the descriptive analysis in the table above, it can be explained as follows:

### *1. Current Ratio (CR)*

The Current Ratio is included in one of the liquidity ratios. Where based on the data in the table above, it can be seen that before the Covid-19 pandemic had a standard deviation value of 1.84127, while the mean value was 3.1286 with a maximum value of 7.02 in NFC Indonesia companies (NFCX) and a minimum of 1.08 at the Sat Nusapersada (PTSN) company. The average CR value of 3.1286 indicates that the company can pay off its short-term debt by utilizing its current assets at an average of 313%.

Based on the data in the table above, it can be seen that during the Covid-19 pandemic, the standard deviation value was 1.21330, while the mean value was 2.7523 with a maximum value of 4.75 at the Kioson Komersial Indonesia (KIOS) company and a minimum value of 0.87 at the Anabatic company. Technologies (ATIC). The average value of 2.7523 shows the company can pay off its short-term debt with an average of 275% through the use of current assets owned by the company.

### *2. Debt to Equity Ratio (DER)*

As measured by the debt-to-equity ratio (DER) before the Covid-19 pandemic, the solvency ratio had a standard deviation of 0.10787. At the same time, the mean value was 0.3414, with a maximum value of 0.59 at Anabatic Technologies (ATIC) and a minimum value of 0.17. at the Distribusi Voucher Nusantara (DIVA). The average DER value of 0.3414 indicates that the average level of the company's debt is below number one, where it is said that the company can pay its long-term debt well with an average of 34% of its equity.

The solvency ratio measured by the debt to equity ratio (DER) during the Covid-19 pandemic has a standard deviation of 0.16582. At the same time, the mean value is 0.3659, with a maximum value of 0.69 for Anabatic Technologies (ATIC) and a minimum value of 0.10 for companies. Distribusi Voucher Nusantara (DIVA). The average DER value of 0.3659 indicates that the average level of the company's debt is above number one, where the company has more significant debt than equity, where the company can be said to be not good at paying its long-term debt with an average of 37%.

### *3. Debt to Asset Ratio (DAR)*

The debt to Asset ratio is a solvency ratio. Based on the table above, it can be seen that before the Covid-19 pandemic, the company had a standard deviation of 0.18597. At the same time, the mean value was 0.3574, with a maximum value of 0.76 at Anabatic Technologies (ATIC) and a minimum value of 0.02 in the company Kresna Graha Investama (KREN). The average DAR value of 0.3574 indicates that the average level of the company's debt is below one, which means that the assets owned by the company are still able to bear the long-term debt owned by the company with an average of 36% of the company's assets.

Based on the test results, it can be seen that during the Covid-19 pandemic, the company had a standard deviation of 0.16260, while the mean value was 0.3201 with a maximum value of 0.74 at the Anabatic Technologies (ATIC) company and a minimum value of 0.10 at the Distribusi Voucher Nusantara ( DIVA). The average DAR value of 0.3201 indicates that the average level of the company's debt is below one, which means that the assets owned by the company are still able to bear the long-term debt owned by the company with an average of 32% of the company's assets.

### *4. Receivable Turnover (RTO)*

Accounts receivable turnover or Receivable turnover includes the activity ratio, where based on test data, it can be seen that before the Covid-19 pandemic, the company had a standard deviation value of 1.62270, while the mean value was 5.4123 with a maximum value of 7.73 in M-Cash Integrasi (MCAS) company and a minimum value of 2.53 at the Sentra Mitra Informatika (LUCK) company. The average RTO value is 5.4123, indicating that the funds owned by the company are embedded in all receivables with a reasonable rotation period of 5.41 times.

Based on the test results at the time of the Covid-19 pandemic, the company had a standard deviation value of 1.88508, while the mean value was 5.0427 with a maximum value of 8.01 for the company M-Cash Integrasi Tbk (MCAS) and a minimum value of 1.23 for the company Sentral Mitra Informatika (LUCK). The average RTO value is 5.0427, indicating that the funds owned by the company are embedded in all receivables with an average rotating period of 5.04 times.

### *5. Net Profit Margin (NPM)*

Net profit margin is one of the profitability ratios. Based on the test results in the table, it can be seen that before the Covid-19 technology company had a standard deviation value of 1.43762, the mean value was 2.4082, where the maximum value of the sample was 5.10 at the Kresna Graha Investama (KREN) and a minimum value of 0.27 at the company Elang Mahkota Teknologi (EMTK). The average value of the NPM itself is 2.4082, indicating that the company's profit level is classified as a period average of 24%.

Based on the test results in the table, it can be seen that when Covid-19 occurred, technology companies had a standard deviation value of 3.83335, the mean value was 1.6268, where the maximum value of the sample was 8.71 at the Elang Mahkota Teknologi (EMTK) company. The minimum value is -8.54 at the company Anabatic Technologies (ATIC). The average value of the

NPM itself is 1.6268, indicating that the company's profit level is classified as a period average of 162%.

**Table 3 Results of Descriptive Statistical Analysis of the Infrastructure Sector**

| Variable | Period | N | Min. | Max. | Mean | Std. Devices |
|---|---|---|---|---|---|---|
| **CR** | Before | 62 | 0.06 | 6.68 | 1.5934 | 1.32421 |
| | During | 62 | 0.08 | 9.28 | 1.4484 | 1.52447 |
| **DER** | Before | 62 | -1.75 | 35.47 | 2.0984 | 4.54455 |
| | During | 62 | -3.43 | 8.43 | 1.7469 | 1.99630 |
| **DAR** | Before | 62 | 0.16 | 2.62 | 0.6385 | 0.38037 |
| | During | 62 | 0.19 | 2.91 | 0.6832 | 0.46450 |
| **RTO** | Before | 62 | 0.01 | 93.08 | 11.1073 | 16.64526 |
| | During | 62 | 1.17 | 84.07 | 11.0894 | 17.57093 |
| **NPM** | Before | 62 | -0.65 | 0.28 | 0.0232 | 0.16574 |
| | During | 62 | -1.30 | 0.30 | -0.0565 | 0.28928 |

**Source: Processed Data, 2022**

The following is an explanation regarding the results of the descriptive statistical analysis in table 3 above:

1. ***Current Ratio (CR)***

The liquidity ratio, as measured by the current ratio (CR) before the covid-19 pandemic, had a standard deviation of 1.32421, with a mean value of 1.5934, a maximum value of 6.68 at the Cikarang Listrindo company (POWR) and a minimum value of 0.06 at the ICTSI Jasa Prima (KARW) company. The average CR value of 1.5934 shows that the company has an excellent ability to pay off its short-term debt by utilizing the company's current assets.

The liquidity ratio, as measured by the current ratio (CR) during the covid-19 pandemic, has a standard deviation of 1.52447, with a mean value of 1.4484, a maximum value of 9.28 at the Cikarang Listrindo company (POWR) and a minimum value of 0.08 at the ICTSI Jasa Prima (KARW). The average CR value of 1.4484 shows that the company has an excellent ability to pay off its short-term debt by utilizing the company's current assets. The average CR value, which decreased during the covid-19 pandemic compared to the average CR before the covid-19 pandemic, shows that infrastructure sector companies have reduced their ability to meet their short-term obligations (Han & An, 2022).

2. ***Debt to Equity Ratio (DER)***

The solvency ratio as measured by the debt to equity ratio (DER) before the covid-19 pandemic had a standard deviation of 4,54455, with a mean value of 2,0984, a maximum value of 35.47 at Asset Indonusa (ACST) and a minimum score of -1.75 at ICTSI Jasa Prima (KARW). The

average DER value of 2.0984 indicates that the average level of the company's debt is above number one, which indicates that the company has more significant debt than its equity. The company can be said to need to improve at paying its debts.

The solvency ratio, as measured by the debt to equity ratio (DER) during the covid-19 pandemic, has a standard deviation of 1.99630, with a mean value of 1.7469, a maximum value of 8.43 at Asset Indonusa (ACST) and a minimum value of -3.43 at the Garuda Maintenance Facility Ae (GMFI). The average DER value of 1.7469 indicates that the average level of the company's debt is above one, which suggests that the company has debt more significant than its equity. The company can be said to need to improve at paying its debts. The average DER value decreased during the covid-19 pandemic compared to the average DER before the covid-19 pandemic, showing that infrastructure sector companies have increased their ability to pay their obligations.

### 3. *Debt to Asset Ratio (DAR)*

The solvency ratio, as measured by the debt to asset ratio (DAR) before the covid-19 pandemic, had a standard deviation of 0.38037, with a mean value of 0.6385, a maximum value of 2.62 at the ICTSI Jasa Prima (KARW) and a minimum value of 0.16 at a Jasa Armada Indonusa (IPCM). The average value of DAR is 0.6385, below number 1, indicating that the company's financial condition towards its debts is still good and the smaller the capital that comes from loans used by the company.

The solvency ratio, as measured by the debt to asset ratio (DAR) during the COVID-19 pandemic, has a standard deviation of 0.46450, with a mean value of 0.6832, a maximum value of 2.91 for ICTSI Jasa Prima (KARW) and a minimum value of 0.19 for companies Jasa Armada Indonusa (IPCM). The average value of DAR is 0.6832, below number 1, indicating that the company's financial condition towards its debts is still considered good and the smaller the capital that comes from the loans used by the company. The average DAR value, which has increased during the covid-19 pandemic when compared to the average DAR before the covid-19 pandemic, shows that the company experienced an increase in capital obtained from loans, but because the average DAR value before and during the covid pandemic -19 is still below the number one, indicating that the company's financial condition is still considered good (2022).

### 4. *Receivable Turnover (RTO)*

The activity ratio as measured by receivable turnover (RTO) before the covid-19 pandemic had a standard deviation of 16.64526, with a mean value of 11.1073, a maximum value of 93.08 for Smartfren Telecom (FREN) companies and a minimum value of 0.01 for Cardig Aero Services (CASS). The average RTO value of 11.1073 indicates that companies can collect their receivables on average 11.1073 times a year.

The activity ratio as measured by receivable turnover (RTO) during the Covid-19 pandemic has a standard deviation of 17.57093, with a mean value of 11.0894, a maximum value of 84.07 for the XL Axiata (EXCL) and a minimum value of 1.17 for the company Paramita Bangun Sarana (PBSA). The average RTO value of 11.0894 indicates that companies can collect their receivables on average 11.0894 times a year. The average RTO value, which experienced a decrease during the Covid-19 pandemic compared to the average RTO before the Covid-19 pandemic, shows

that the company experienced a decrease in its ability to collect its average receivables (Rahmah & Novianty, 2021).

### 5. *Net Profit Margin (NPM)*

The profitability ratio as measured by the net profit margin (NPM) before the covid-19 pandemic had a standard deviation of 0.16574, with a mean value of 0.0232, a maximum value of 0.28 for the Nusantara Infrastructure (META) company and a minimum value of -0.65 for the Smartfren Telecom (FREN). The average NPM value of 0.0232 indicates that the company generates an annual net profit of 2.32%.

The profitability ratio as measured by net profit margin (NPM) during the Covid-19 pandemic has a standard deviation of 0.28928, with a mean value of -0.0565, a maximum value of 0.30 for the company Paramita Bangun Sarana (PBSA) and a minimum value of -1.30 at the Garuda Maintenance Facility Ae (GMFI) company. The average NPM value is -0.0565, indicating that the average company generates a yearly net profit of -5.65%. The average NPM value, which decreased during the Covid-19 pandemic compared to the average RTO before the Covid-19 pandemic, shows that the company's ability to generate net profit has decreased (Reyhan et al., 2022).

### Classical Assumption Test Using Normality Test (Kolmogorov-Smirnov)

Before testing the hypothesis, the data normality test was conducted on the company under study. The normality test was carried out to determine whether the data obtained had a normal distribution. This study uses the normality test with the Kolmogorov-Smirnov test. The level of significance used in this study is 5% or 0.05. Data can be declared generally distributed if the significance level is more significant than 0.05 or 5%. Decision-making in the normality test using the Kolmogorov-Smirnov test, which was tested with the SPSS 25 program using the following guidelines:

a) If the *p-value* > 0.05, then the data is usually distributed

b) If the *p-value* < 0.05, then the data is not normally distributed

**Table 4 Kolmogorov-Smirnov Normality Test of Technology Sector Companies**

| Variable | Period | N | Asymp. Sig. (2-tailed) | Significance Level | Conclusion |
|---|---|---|---|---|---|
| **CR** | Before | 22 | 0.083 | 0.05 | Normal |
| | During | 22 | 0.137 | 0.05 | Normal |
| **DER** | Before | 22 | 0.095 | 0.05 | Normal |
| | During | 22 | 0.200 | 0.05 | Normal |
| **DAR** | Before | 22 | 0.122 | 0.05 | Normal |
| | During | 22 | 0.102 | 0.05 | Normal |
| **RTO** | Before | 22 | 0.051 | 0.05 | Normal |
| | During | 22 | 0.200 | 0.05 | Normal |

| | | | | | |
|---|---|---|---|---|---|
| **NPM** | Before | 22 | 0.200 | 0.05 | Normal |
| | During | 22 | 0.200 | 0.05 | Normal |

**Sources: Processed Data, 2022**

Based on the normality test results in the table above, all research variables were usually distributed before and during the Covid-19 pandemic. Overall the data distribution is normal. Then the hypothesis test is performed using the paired T-test.

**Table 5 Kolmogorov-Smirnov Normality Test of Technology Sector Companies**

| Variable | Period | N | Asymp. Sig. (2-tailed) | Significance Level | Conclusion |
|---|---|---|---|---|---|
| **CR** | Before | 62 | 0.000 | 0.05 | Abnormal |
| | During | 62 | 0.000 | 0.05 | Abnormal |
| **DER** | Before | 62 | 0.000 | 0.05 | Abnormal |
| | During | 62 | 0.000 | 0.05 | Abnormal |
| **DAR** | Before | 62 | 0.000 | 0.05 | Abnormal |
| | During | 62 | 0.000 | 0.05 | Abnormal |
| **RTO** | Before | 62 | 0.000 | 0.05 | Abnormal |
| | During | 62 | 0.000 | 0.05 | Abnormal |
| **NPM** | Before | 62 | 0.000 | 0.05 | Abnormal |
| | During | 62 | 0.000 | 0.05 | Abnormal |

**Source: Processed Data, 2022**

Based on the normality test results in table 5 above, the research variables used for infrastructure sector companies do not have a normal distribution. Overall, the data distribution was not expected, so the next hypothesis test was carried out using the Wilcoxon signed rank test.

## Hypothesis Test

Data normality test using the Kolmogorov Smirnov test based on financial report data from 11 samples of technology companies and 31 samples of infrastructure companies with residual criteria is expected if the significant value is above 0.05 or 5%. The results of the data normality test with the Kolmogorov-Smirnov test show that the value of a technology company meets the normality criteria. Namely, the details show that the significant value of the current ratio is 0.203 > 0.05 (5%), the total debt to equity ratio shows an important value of 0.594 > 0.05 ( 5%), the debt to asset ratio shows a value of 0.287 > 0.05 (5%), receivable turnover shows a significant deal of 0.433 > 0.05 (5%), net profit margin shows an effective value of 0.295 > 0.05 (5%),

This normality test data from technology sector companies is inversely proportional to infrastructure sector companies. Based on the Kolmogorov Smirnov test results show that the value of infrastructure companies does not meet the normality criteria because 30 samples from the infrastructure sector have a value of <0.05 (5%). Based on the test results for different infrastructure sector tests, the Wilcoxon signed rank test would be used.

**Table 6 *Paired sample t-test for technology***

| Variable | Sig. (*2-tailed)* | Conclusion |
|---|---|---|
| *Current ratio* | 0.006 | Significant |
| *Total Debt to Equity Ratio* | 0.012 | Significant |
| *Debt to Asset Ratio* | 0.003 | Significant |
| *Receivable Turnover* | 0.009 | Significant |
| *Net Profit Margin* | 0.032 | Significant |

**Source: Processed Data, 2022**

The comparison test using the sample-paired T-test aims to describe the number of differences between the two samples to be tested with the data before and after. The characteristics in making decisions on the paired T-test are <0.05 (5%). From the table above, the results obtained are a current ratio of 0.006 <0.05 (5%). The total debt-to-equity ratio is 0.012 < 0.05 (5%). Debt to asset ratio of 0.003 < 0.05 (5%). Receivable turnover of 0.032 <0.05 (5%). A net profit margin of 0.032 < 0.05 (5%).

Based on the paired t-test that has been carried out, it can be seen which financial ratios need to be formulated as a policy strategy based on the results of a comparative analysis of financial performance in technology sector companies:

### *1. Liquidity Ratio*

The results of the paired t-test can explain that the value of the liquidity ratio as measured by the current ratio is significant, namely 0.006, which means that the current ratio is greatly affected by Covid-19. This is because the average technology company during the pandemic focused on developing infrastructure in the form of big data that could increase its users' performance productivity (2022). Of course, infrastructure development will lead to an increase in corporate debt, so a strategic policy is needed to improve the impact of the increase in debt. The right policy strategy to overcome this problem is to increase sales of products and services provided through online marketing strategies, especially during the Covid-19 pandemic (Outra & Fernandes, 2023). For example, what was done by PT Telkom Indonesia Tbk, where the company accelerated digital business channels by selling sim cards online so that they could increase sales effectively. The higher the level of sales of products and services the company provides, the more potential payments the company can make to pay off its debts (Park et al., 2022).

### *2. Solvency Ratio*

The results of the paired t-test can explain that the total debt measures the value of the solvency ratio to equity ratio and debt to asset ratio. The significance value is 0.012 for the total debt-to-equity ratio and 0.003 for the debt-to-asset ratio, which shows the impact of Covid-19 on the company's receivables. This is due to the inability of debtors to pay their obligations to creditors (technology sector companies), which causes low revenues (2022). Of course, the low acceptance of receivables obtained by the company will result in delays in the company's operations due to a lack of funds. The right policy strategy to overcome this problem is to provide debt restructuring to debtors and a reduction in loan interest rates so that debtors can still pay their obligations (Desai, 2021).

### *3. Activity Ratio*

The results of the paired t-test can explain that the value of the activity ratio proxied by receivable turnover has a significant value of 0.009, which indicates that Covid-19 causes an impact on company receivables. This is due to the customer's inability to pay the company's receivables. Of course, the low payment of receivables made by the customer will result in many receivables that the company needs to realize (Chinnapong et al., 2021). The right policy strategy to overcome this problem is to follow up with customers who have passed the payment deadline. Second aggressive billing is carried out if the first strategy needs to be revised. Third, imposing fines for late payments is a form of company firmness for actions taken by the customer to increase customer compliance in making debt payments (Tudose et al., 2022).

### *4. Profitability Ratio*

The results of the paired t-test can explain that the value of the profitability ratio proxied by the net profit margin has a significant value of 0.032, which indicates that COVID-19 affects company profits and causes an impact. This is due to a decline in sales during the large-scale social restrictions (PSBB). Of course, low sales will cause a decrease in the value of profits owned by the company. The right policy strategy to overcome this problem is to strengthen the digital business sector by selling online both in terms of ordering and payment. Online services will provide customers convenience in transactions and can positively impact company sales (Narkunienė & Ulbinaitė, 2018).

**Table 7 Wilcoxon Signed Ranks Test**

| Variable | Sig. (*2-tailed)* | Conclusion |
|---|---|---|
| *Current Ratio* | 0.015 | Significant |
| *Total Debt to Equity Ratio* | 0.075 | Not Significant |
| *Debt to Asset Ratio* | 0.092 | Not Significant |
| *Receivable Turnover* | 0.073 | Not Significant |
| *Net Profit Margin* | 0.064 | Not Significant |

**Source: Processed Data, 2022**

The Wilcoxon Signed Ranks test was used to measure the significance of the difference between 2 groups of data that were not normally distributed. The Wilcoxon Signed Rank Test is an alternative test to the pairing T-test if it does not meet the normality assumption with the decision-making criteria of <0.05 (5%). Based on the Wilcoxon Signed Ranks Test, a significant value of the current ratio was 0.015 < 0.05 (5%). The total debt-to-equity ratio is 0.075 > 0.05 (5%). The debt-to-asset ratio is 0.092 > 0.05 (5%). Receivable turnover is 0.073 > 0.05 (5%). Net profit margin is 0.064 > 0.05 (5%).

Based on the Wilcoxon Signed Ranks Test that has been carried out, it can be seen which financial ratios are affected by the COVID-19 pandemic; only the infrastructure sector companies are companies whose policies are strongly influenced by the government and are bound. Moreover, infrastructure companies that are classified as State-Owned Enterprises (BUMN) are very dependent on policies issued by the government. For this reason, the formulation of policy strategies for infrastructure companies based on the results of comparative

analysis can only be formulated in general terms related to policies. The following is a policy strategy resulting from a comparative analysis of the financial performance of infrastructure companies:

### *Liquidity Ratio*

The comparative test results show that the value of the liquidity ratio proxied by the current ratio is greatly affected by the Covid-19 pandemic, namely with a value of 0.015, which means a policy strategy is needed for the company from the results of the comparative analysis. The right policy strategy is to make a stand-by facility loan. The loan serves as a catalyst for infrastructure sector companies in carrying out ongoing infrastructure developments. With the funds from the loan, the company can continue to carry out its operational activities because it is better for construction to continue than to let a planned project stall (2022). Of course, the development carried out using loan funds will cause the company's debt to increase, but this is an effort that must be made and can be used as a long-term investment by the company. Because later, through the development that has been carried out, funds will be obtained from the users of the development that has been carried out so that they can benefit even if it takes a long time (Cavusgil et al., 2021).

Quoted from an article published by kompas.com, it was stated that PT Indonesia Infrastructure Investment (IIF) is ready to provide loans to infrastructure companies affected by the Covid-19 Pandemic through the Extraordinary Event Relief Facility product. So the policy proposed above is in line with the opinion put forward by IFF, which states that it is better for the company to continue to strive for infrastructure development than to let it become a stalled project (Garcia et al., 2021).

## CONCLUSION

The study results show significant differences between the financial performance of technology and infrastructure sector companies before and during the pandemic. These significant differences include the current ratio, total debt-to-equity ratio, debt-to-asset ratio, receivable turnover, and net profit margin. This significant difference in financial performance requires the formulation of a policy strategy that can be implemented to address issues related to performance in the future.

The following policy strategies can be applied to overcome problems related to the company's economic performance:

1. Increase sales of products and services provided through online marketing strategies, especially during the Covid-19 pandemic.
2. Provide debt restructuring to debtors.
3. Provide a reduction in loan interest rates so that debtors can still pay their obligations.
4. Follow up with customers who have passed the payment deadline.

5. Perform aggressive billing, which is carried out if the first strategy fails to produce results.
6. Giving fines for late payments, this action is taken as a form of firmness by the company for the actions taken by the customer so that it can improve customer compliance in making debt payments.
7. Strengthen the digital business sector by selling online in terms of ordering and payment.
8. Make a stand-by facility loan. The loan serves as a catalyst for infrastructure sector companies in carrying out ongoing infrastructure developments.

***Limitation***

The limitation of this research is that the formulation of new policies is carried out for technology and infrastructure companies, even though on the Indonesia Stock Exchange itself, many corporate sectors are also significantly affected by the Covid-19 pandemic, so policies are needed to overcome this.

***Suggestion***

For this reason, the researcher hopes that through this research, several objectives will be achieved, namely:

**1) For the Company**

It can be used as a reference in determining policies to address problems that arise in technology sector companies during the Covid-19 pandemic.

**2) For the next researcher**

Hopefully, this research can develop by providing policy recommendations for companies in other sectors that are also heavily affected and need studies related to the policies they must implement in dealing with the Covid-19 pandemic situation.

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