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Analysis of Financial Performance of Indonesian and Japanese Telecommunication Companies Period 2016-2020 (Telecommunication Indonesia and *Nippon Telegraph Telecommunication)*

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Abstract: ***This study aims to determine the comparison of financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication. The data in this study uses secondary data sources in the form of financial statements and annual reports of telecommunication companies during the period 2016-2020. The population in this study is Indonesian telecommunications companies and Nippon Telegraph Telecommunication period 2016-2020. The sampling method used is purposive sampling method. The samples used in this study were as many as 2 companies. The data processing method used is Wilcoxon sign rank test. Based on the results of the research, Indonesian Telecommunications and Nippon Telegraph Telecommunication companies experienced fluctuating increases and also decreases caused by internal and external factors. The results of this study also showed that between Indonesian Telecommunications companies and Nippon Telegraph Telecommunication has no difference between FL and NPM. However, there are differences in variable ratios of TIER, TATO, ITO, RTO, CR, QR, ROA and ROE between the two Indonesian Telecommunications companies and Nippon Telegraph Telecommunication.***

Keywords: Financial Performance, Financial Ratio, Indonesian Telecommunication Companies, Nippon Telegraph Telecommunication, Wilcoxon Sign Rank Test

1. Introduction

At this time during the Covid-19 pandemic that has spread in early 2020 becomes one of the triggers for the government to implement work from home or work from home. Not only that, the people who own businesses will also be affected by psbb or large-scale social restrictions. This can be seen from the switch of offline system to online / online system. Even in terms of education today has started to do teaching and learning activities using the internet with other platforms that support. There is a very high surge in the telecommunications industry is what makes telecommunications companies in Indonesia and abroad will be more extra to make requests or desires from internet users. From the company side will also gain more trust from internet users as a provider of network services.

International Finance Corporation stated that companies from the field of Telecommunication Industry today greatly benefit from the use of telecommunication networks that are very widely used by the public [15]. According to a report from the Global Telecommunications Industry Statistics the telecommunications sector records that at least in 2020 there are approximately 7.7 billion active mobile broadband subscriptions worldwide, which is certainly an increase from previous years in the telecommunications sector. Of course, this is related to the expansion of the current 4G network. With some of these improvements, telecommunications sector companies have confidence in the opportunities that exist currently, thus giving rise to the desire to offer the latest network namely 5G [16].

Telecommunication revenue in the world will be very different from the revenue of telecommunications in a country. In Indonesia, the telecommunications services sector has made the largest contribution to non-tax state revenues (BNPB). In this telecommunication service sector there are at least some of the largest telecommunication companies in Indonesia recorded in IDX namely PT Telekomunikasi Indonesia, PT XL Axiata, and PT Indosat [7]. Telecommunication networks in Indonesia have several variations, some use cable networks or wireless communication networks or commonly referred to as wireless users or mobile users [14].Not only PT Telekomunikasi Indonesia has a rise in revenue, as well as telecommunications companies in Japan, namely Nippon Telegraph Telecommunication which has the development of telecommunication revenue. It can be seen that Nippon TelegraphTelecommunication company became the representative of the best Asian telecommunications company in the world [12].

In this case it can be known that a company can be said to be good when viewed in terms of its performance. If the performance of a company is good or good, then investors will also be interested in investing in the company. In the Latuconsina&Rizal study (2018), an ability that will be exercised by the company to meet obligations in the short term, this is shown in the liquidity ratio. In the study in analyzing its financial ratio using wilcoxon sign rank test method [10]. In another study by Liu et al (2013), suggesting that some companies in China have lower liquidity ratios compared to some companies in the United States, this is due in part to the tendency of short-term debt compared to long-term debt [11].

From Barus et al research (2017), how a company has the capacity to fulfill short-term or long-term obligations called solvency ratios. The result in this study is that the solvency

ratio value of an automotive component company has a smaller number compared to other companies [4]. Furthermore, from Amanah, R (2014), the ability of a company in profiting in the form of profit from economic value, this is indicated in the profitability ratio. the result in the study was to analyze how the significant impact of profitability ratio and liquidity ratio to shares in LQ45 index companies [1]. In the results of Rinnaya et al (2016), research using activity ratio i.e. ROA and TATO has an influence on the value of the company because it has a effectiveness in the use of its assets [13].

From background exposure and previous research, researchers wanted to know the comparison of the financial performance of Indonesian and Japanese telecommunications companies using a Financial Laverage (FL) &Times Interest Earned Ratio (TIER) analysis to find out performance comparisons based on how companies can pay down debt in the short and long term. Activity Ratio (Total Asset Turnover (TATO), Inventory Turnover (ITO) &Amp; Receivable Turnover (RTO)) to find out performance comparison based on the company's effectiveness in measuring efficiency level. Liquidity Ratio (CR) &Amp; Quick Ratio (QR)) to determine performance comparison based on ability to meet short-term debt maturities. And Profitability Ratio (Net Profit Margin (NPM)), Return on Asset (ROA) &Return on Equity (ROE)) to find out performance comparisons based on the company's ability to make a profit or profit.

Furthermore, it will be analyzed using non parameticstatictic method (Wilcoxon Test) to identify the difference between Indonesian and Japanese Telecommunication companies.

Based on the description above, this study aims to:

1) To determine the results of the financial performance of telecommunication companies in Indonesia (Telkom Indonesia) by using Solvency Ratio (Financial Laverage (FL) &Times Interest Earned Ratio (TIER)), Activity Ratio (Total Asset Turnover (TATO), Inventory Turnover (ITO) &turnover receivable (RTO)), Liquidity Ratio (CR) &Quick Ratio (QR)) and Profitability Ratio (NPM)), Return on Asset (ROA) &Return on Equity (ROE)).
2) To determine the results of the financial performance of Japanese Telecommunications companies (Nippon Telegraph Telecommunication) using Solvency Ratio (Financial Laverage (FL) &Times Interest Earned Ratio (TIER)), Activity Ratio (Total Asset Turnover (TATO), Inventory Turnover (ITO) & Receivable Turnover (RTO)), Liquidity Ratio (CR) &Quick Ratio (QR)) And Profitability Ratio (NPM)), Return on Asset (ROA) &Return on Equity (ROE)).
3) To know the comparison of financial performance of Indonesian Telecommunications companies (Telkom Indonesia) and Japan (Nippon Telegraph Telecommunication).

2. Literature Review

Financial Statements

Financial statements are reports that have been published by the company for shareholders and for users of the company's financial statements per year and in this financial statement will certainly contain some basic financial analysis reports and top management analysis for the past year and also for the future [5].

Financial Ratio

Financial ratio is a comparison activity between the numbers in the financial statements and other numbers. This can be done by comparing one component with another component contained in the financial statement itself or with another. From the performance results described can be used as a form of future evaluation of what needs to be changed or that will be done in the future [5].

1)Solvability Ratio

Solvability Ratio is a ratio used to know how much the company is financed by debt and of course to measure the ability of how the company will pay its debt in the short and long term if the company is dissolved: [9]. Types of solvency ratios are:

a) Time Interest Earned Ratio
Is a ratio that uses the amount of interest earned which the company will be seen in terms of how the company makes interest payments. The formula used is:

$$\text{Times Interest Earned:} \frac{\text{EBIT}}{\text{Interest}} \quad (1)$$

b) Long Term Debt to Equity Ratio (Financial Leverage)
It is a ratio used in assessing long-term debt with self-issued capital. Which generally aims to figure out the size of how much of the share we make to long-term debt security. The formula used is:

$$\text{LTDER:} \frac{\text{Long Term Debt}}{\text{Equity}} \quad (2)$$

2) Activity Ratio

Is the ratio used in looking at the measure of effectiveness of a company in using assets owned or can also be said to measure the level of efficiency of the benefits of the company's resources used [9]. Types of activity ratios are:

a) Total Asset Turnover
Total asset turnover is a ratio used to measure the number of sales earned from assets. The formula used is:

$$\text{Total asset turnover:} \frac{\text{Sales}}{\text{Total Assets}} \quad (3)$$

b) Inventory Turnover
It is a ratio used to measure the number of times funds stored in inventory can rotate in a period. The formula used is:

$$\text{Inventory Turnover:} \frac{\text{Cost of Goods Sold}}{\text{Inventory}} \quad (4)$$

c) Account Receivable Turnover
Account Receivable Turnover is a ratio used to measure how long credit collection (receivables) or the number of times funds invested in receivables rotate during a period. The formula used is:

$$\text{Account Receivable Turnover:} \frac{\text{Credit Sales}}{\text{Account Receivable}} \quad (5)$$

3) Liquidity Ratio

Is a ratio used to measure the ability to meet short-term debt (liabilities), especially maturing debt. In measuring liquidity ratio there are two commonly used liquidity ratio

measurements namely Current Ratio and Quick Ratio [9]. The types of variables used are:

a) Quick Ratio
Quick (Acid-test) ratio is a measure of the company's ability to meet or pay current liabilities or debts (short-term debt) with current assets without considering inventory (inventory value). The formula used is:

$$\text{Quick Ratio: } \frac{\text{Current Asset} - \text{Inventories}}{\text{Current Liabilities}} \quad (6)$$

b) Current Ratio
Current ratio is a ratio that measures the company's ability to meet short-term liabilities or debt that will mature. The formula used is:

$$\text{Current Ratio: } \frac{\text{Current Asset}}{\text{Current Liabilities}} \quad (7)$$

4) Profitability Ratio

Profitability ratio is a ratio used to measure the company's ability to make profit. The profitability ratio shows a measure of the effectiveness and efficient management of a company from profits derived from sales, assets and investment income [9]. The types of variables used are:

a) Net Profit Margin
Net profit margin is a ratio used to measure the percentage value of sales (profit) remaining after deducting from all costs and expenses including taxes and interest. The formula used is:

$$\text{Net Profit Margin : } \frac{\text{Net income}}{\text{Sales}} \quad (8)$$

b) Return On Asset
Return on Total Assets is a ratio that measures the effectiveness of management in generating available profits. The formula used is:

$$\text{Return on Assets : } \frac{\text{Net Operating Income (EBIT)}}{\text{Total Asset}} \quad (9)$$

c) Return On Equity
Return on Equity or ROE is a ratio used to measure the return on net profit after tax with its own capital. The formula used is:

$$\text{Return on Equity : } \frac{\text{Net Income}}{\text{Equity}} \quad (10)$$

3. Framework

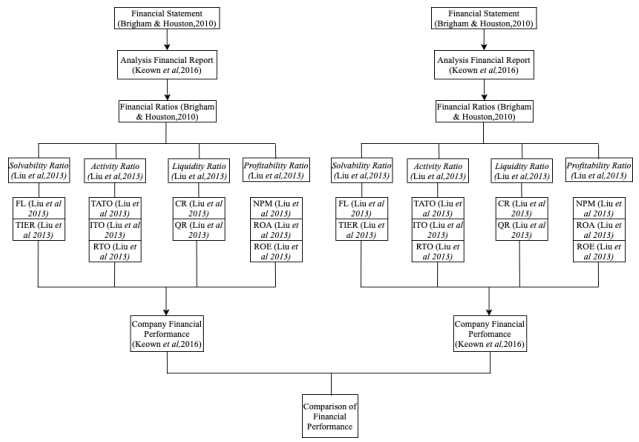

Figure 1: The research framework that adapted from liu et al (2013)

Research Hypotesis

H1: There is a difference in financial performance between Indonesian Telecommunications companies (Telkom Indonesia) and Japan (Nippon Telegraph Telecommunication).

4. Method and Result

The type of research used in this study is by quantitative method. The definition of quantitative method is a scientific research used to conduct accurate measurement experiments on opinions, knowledge, behaviors, and attitudes [8].This type of research is descriptive research in which researchers describe or explain phenomena related to an object or population subject. So that in descriptive research can be used to consider the proportion of the population that has certain properties or characteristics [6].

In conducting the research, the researchers used a type of comparative investigation in which the researchers wanted to compare the results of one study with another. From the involvement of researchers, researchers do not make data changes finally because researchers get data from sources that have been obtained before. Based on this, this analysis is individual and based on the implementation time, namely Data Panel.

Table 2: Research Characteristics

No.	Research Characteristics	Type
1.	Based on Method	Quantitative
2.	Based on Destination	Descriptive
3.	Based on Investigation Type	Comparative
4.	Based on Engagement	Not Interfering with Data
5.	Based on Analysis Unit	Individual
6.	Based on Implementation Time	Data Panel

a) Solvability Ratio

Table 3: Result Solvability Ratio

Company	Year	FL (%)	TIER (X)
Telecommunication Indonesia	2016	29,26	9,21
	2017	29,59	11,24
	2018	34,13	8,42
	2019	36,99	7,64
	2020	44,32	7,96
Nippon Telegraph Telecommunication	2016	53,46	3,23
	2017	48,31	4,12
	2018	44,49	3,61
	2019	44,58	4,29
	2020	43,13	3,13

b) Activity Ratio

Table 4: Result Activity Ratio

Company	Year	TATO (X)	TIER (X)	RTO (X)
Telecommunication Indonesia	2016	10,81	1,70	1,58
	2017	10,76	2,68	1,55
	2018	10,88	3,99	1,27
	2019	10,37	6,73	1,17
	2020	5,7	4,04	1,02
Nippon Telegraph Telecommunication	2016	5,48	10,36	3,59
	2017	5,36	12,88	3,54
	2018	5,44	11,78	3,24
	2019	5,32	7,37	2,70
	2020	5,17	9,32	3,39

c) Liquidity Ratio

Table 5: Result Liquidity Ratio

Company	Year	CR (%)	QR (%)
Telecommunication Indonesia	2016	120	103,40
	2017	104,8	103,42
	2018	93,5	91,9
	2019	71,5	70,47
	2020	90,77	62,45
Nippon Telegraph Telecommunication	2016	145,06	145,04
	2017	128,58	119,74
	2018	126,62	117,33
	2019	125,85	119,51
	2020	101,45	90,8

d) Profitability Ratio

Table 6: Result Activity Ratio

Company	Year	NPM (%)	ROA (%)	ROE (%)
Telecommunication Indonesia	2016	9,96	16,2	22,9
	2017	10,36	16,5	23,9
	2018	8,03	13,1	23
	2019	8,13	12,5	23,5
	2020	12	7,15	14,1
Nippon Telegraph Telecommunication	2016	8,49	6,40	8,72
	2017	9,30	7,24	9,20
	2018	10,33	7,57	10,13
	2019	9,58	7,59	9,64
	2020	9,33	6,78	9,69

Ratio Comparison

1) Solvency Ratio

Based on the results of the comparison of fl and tier variables obtained that FL from Nippon Telegraph Telecommunication company has a higher value when compared to Indonesian Telecommunications companies, and when viewed from tier variables, Indonesian Telecommunication companies have a higher value when compared to Nippon Telegraph Telecommunication companies.

2) Activity ratio

Based on the results of the comparison of variables TATO, ITO and RTO obtained that TATO from The Indonesian Telecommunication company has a higher value when compared to Nippon Telegraph Telecommunication company, if seen from the ITO variable then Nippon Telegraph Telecommunication company has a higher value when compared to The Indonesian Telecommunication company and when viewed from the RTO variable then Nippon Telegraph Telecommunication company has a higher value when compared to Indonesian Telecommunication companies.

3) Liquidity Ratio

Based on the results of the comparison of variables CR and QR obtained that the CR of NipponTelegraph Telecommunication company has a higher value when compared to the Company Telecommunications Indonesia, and when viewed from the QR variable nippon telegraph Telecommunication company has a higher value when compared to the Company Telecommunications Indonesia

4) Profitability Ratio

Based on the results of variable comparison NPM, ROA and ROE obtained that Indonesian Telecommunication company has a higher value when compared to Nippon Telegraph Telecommunication company.

Normality Test

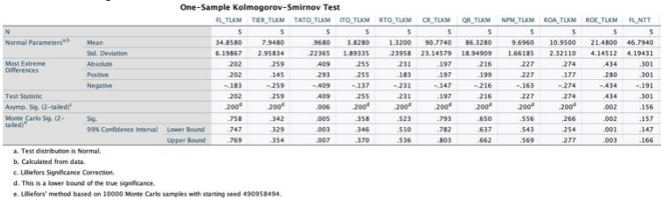

Figure 2: FL Telkom Normality Test – FL NTT
(Data that has been processed with SPSS, 2021)

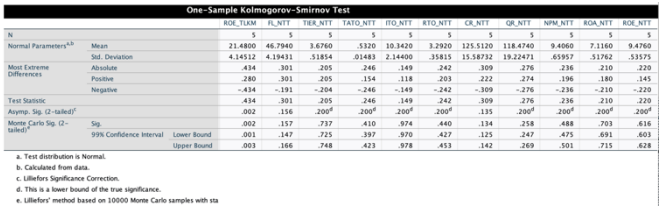

Figure 3: TIERNTT Normality Test – ROE NTT
(Data that has been processed with SPSS, 2021)

From the results of the picture above can be known that the results after the normality test there is still data that is distributed abnormally. When viewed from a significant level in the ratio of Telkom TATO and ROE Telkom there is a level value of 0.006 and 0.002 which means less than 0.05. Then the next is to do the test using Wilcoxon Sign Rank Test.

Wilcoxon Sign Rank Test

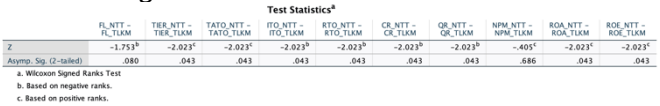

Figure 4: Wilcoxon Sign Rank Test
(Data that has been processed with SPSS, 2021)

In the provisional results in the hypothetical testing section that is used as a reference in the Wilcoxon Sign Rank Test, namely:

a) If the significance level is smaller than 0.05 or "H0 rejected" then there is a significant difference in the two sample companies.
b) If the significant level is greater than 0.05 or "H0 received" then there is no significant difference between the two sample companies.

Based on the test results using wilcoxon sign rank test above, the test results for the hypothesis are as follows:

a) Solvability Ratio

There is no significant difference in financial leverage between Indonesian telecommunications companies and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.080 which means greater than 0.05. Due to sig 0.080 > 0.05 H0 is accepted, meaning there is no difference in the variable Financial Leverage on the financial performance of Indonesian Telecommunications

companies and Nippon Telegraph Telecommunication Japan.

There is a significant difference in the variable Times Interest Earned Ratio between Indonesian Telecommunications companies and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.043 which means it is smaller than 0.05. Because sig 0.043 < 0.05 then H0 was rejected, meaning there is a difference in the variable Times Interest Earned Ratio on the financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication Japan.

b) Activity Ratio

There is a significant difference in total asset turn over variable between Indonesian telecommunication company and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.043 which means it is smaller than 0.05. Due to sig 0.043 < 0.05, H0 was rejected, meaning there was a difference in the variable Total Asset Turn over on the financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication Japan.

There is a significant difference in inventory turnover variable between Indonesian telecommunication company and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.043 which means it is smaller than 0.05. Because sig 0.043 < 0.05 then H0 was rejected, meaning there is a difference in inventory turnover variables on the financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication Japan.

There is a significant difference in the Variable Receivable Turn Over between The Indonesian Telecommunications company and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.043 which means it is smaller than 0.05. Because sig 0.043 < 0.05 then H0 was rejected, meaning there is a difference in the variable Receivable Turn Over on the financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication Japan.

c) Liquidity Ratio

There is a significant difference in the Current Ratio variable between the Indonesian Telecommunications company and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.043 which means it is smaller than 0.05. Due to sig 0.043 < 0.05, H0 was rejected, meaning there is a difference in the Current Ratio variable on the financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication Japan.

There is a significant difference in the Quick Ratio variable between the Indonesian Telecommunications company and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.043 which means it is smaller than 0.05. Because sig 0.043 < 0.05 then H0 is rejected, meaning there is a difference in the quick ratio variable on the financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication Japan.

d) Profitability Ratio

There is no significant difference in net profit margin variable between Indonesian telecommunication company and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.686 which means greater than 0.05. Due to sig 0.686 > 0.05, H0 was accepted, meaning there was no difference in Net Profit Margin on the financial performance of Indonesian Telecommunications company and Nippon Telegraph Telecommunication Japan.

There is a significant difference in return on asset variable between Indonesian telecommunication company and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.043 which means it is smaller than 0.05. Due to sig 0.043 < 0.05, H0 was rejected, meaning there was a difference in return on asset variables in the financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication Japan.

There is a significant difference in return on equity variable between Indonesian Telecommunications company and Nippon Telegraph Telecommunication. This is seen in the significant result of 0.043 which means it is smaller than 0.05. Due to sig 0.043 < 0.05, H0 was rejected, meaning there was a difference in return on asset variables in the financial performance of Indonesian Telecommunications companies and Nippon Telegraph Telecommunication Japan.

5. Management Aspects

1) Telecommunication Indonesia

a) Solvency Ratio

In Telecommunication Companies Indonesia has results that tend to rise and fluctuating when viewed from financial leverage and times interest earned ratio this is because The Indonesian Telecommunication Company periodically conducts a review of the position of the capital structure, leverage level and debt repayment performance as the basis of decisions from the payment or addition of debt, both long-term debt and short-term debt. While the financial condition is strong enough to maintain financial stability and increase the effectiveness of funding management and working capital, Telkom company will reprofiling the debt by improving the debt profile by doing a portion of floating interest debt into fixed interest. This is done to reduce the burden of interest rate fluctuating in the future. The strategies that Telkom has used in reprofiling this debt include 1. Optimizing the use of internal sources of funds used to meet the needs of the company's management. 2. Balancing the proposi of interest rates with floating interest rates and fixed rates (Annual Report Indonesian Telecommunication, 2021) [3].

b) Activity Ratio

In Indonesian telecommunication companies the financial variables of inventory turnover and total asset turnover tend to be volatile and variable receivable turnover tends to

decrease every year. By Indoneia Telecommunication company in anticipating uncollectible receivables Telkom conducts several efforts in collecting receivables among others, namely by conducting several visits and billing processes directly to its customers who have large arrears, then cooperating with partners related to the disbursement of receivables and actively contacting their customers by email, phone or letter (Annual Report Indonesian Telecommunication, 2021) [3].

c) Liquidity Ratio

In Indonesia Telecommunication Company variable current ratio and quick ratio decreased from 2016 to 2020. This is due to the dynamics of the macro environment that can potentially change in a negative direction to reduce profits for the digital and telecommunications industry sectors such as poor liquidity, trade wars and uncertainty in monetary policy. Therefore, this company does several ways to avoid a decrease in CR and QR by always closely monitoring liquidity and availability of funds to make short-term and long-term payments that will be due and also to maintain the liquidity of Telkom Indonesia companies also reduce cash flow from various sources, among others from the current year's operating profit, the availability of internal funds, loan facility for banking funds and debt instrument (Annual Report Indonesian Telecommunication, 2021) [3].

d) Profitability Ratio

In Indonesian Telecommunication companies, NPM, ROA, and ROE have volatile values every year. This is because Telkom Indonesia continues to commit to maintain its profitability by changing business policy changes by focusing on business lines that have a higher level of profitability that is recurring or recurring, especially in some enterprise solutions services such as data center &cloud, enterprise connectivity and selectively reduce and not prioritize business solutions that have relatively low margin levels and non-recurring (Annual Report Indonesian Telecommunication, 2021) [3].

2) Nippon Telegraph Telecommunication

a) Solvency Ratio

At Nippon Telegraph Telecommunication the variable financial leverage and times interest earned ratio have volatile results as the company continues to use net cash generated from operating activities, funding from banks and other financial institutions as well as offering equity or debt securities in the capital market to meet capital inventories as well as expenses and debt payments. (Nippon Telegraph Telecommunication Annual Report) [2].

b) Activity Ratio

At Nippon Telegraph Telecommunication, the inventory turnover variable has a volatile value due to the increase and the decline in its inventory. And on this variable the company has a low inventory in 2020 due to pandemic conditions. When viewed from the variable total asset turnover of this company has a volatile value but remains stable with a value of 0.55; 0,53; 0.54. While for variable receivable turnover also has a volatile stable value with a value of 3,593.54; 3, 24.

c) Liquidity Ratio

At Nippon Telegraph Telecommunication the current ratio has a decreased value every year due to the increasing amount of assets and liabilities. And for variable quick ratio the company experienced a volatile value with the lowest value in 2020 of 90.8% (Annual Report Nippon Telegraph Telecommunication) [2].

d) Profitability Ratio

At Nippon Telegraph Telecommunication the variable net profit margin has a stable and volatile value in the range of 8% to 10%. When viewed from the roe variable this company has a stable value and fluctuating in the range of values from 8% to 10%. And the latter for ROA variables also have a stable and volatile value with a range of values of 6% to 7%. In other words, even in pandemic conditions the company maintains stability of its value by improving operational efficiency through digital transformation and limiting the number of its investment. (Nippon Telegraph Telecommunication Annual Report) [2].

6. Conclusion

Based on the results of the analysis and discussion that has been described earlier, it can be concluded that, Telecommunications Companies Indonesia and Nippon Telegraph Telecommunication there are significant differences based on variables TIER, TATO, ITO, RTO, CR, QR, ROA and ROE. Meanwhile, based on FL and NPM variables, there is no significant difference between Indonesian Telecommunications company and Nippon Telegraph Telecommunication.

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