

# Analizing The Impact of The Covid 19 Pandemic on The Performance of Property Companies

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**Abstract:** *The purpose of this study was to see the difference in company performance between before and after Covid 19. The population in this study were all companies engaged in the Property and Real Estate sector that have 53 sharia stocks. The sampling technique used in this study uses purposive sampling technique with predetermined criteria. Based on the calculation, a sample of 45 companies was obtained for the period 2018 - 2021 so that the sample amounted to 90 data for each period, namely before and after covid 19. The results showed that there were differences between profitability (NPM, ROE, ROA), liquidity (Cash Ratio and Current Ratio) and Solvency (DER and DAR) between before and after Covid 19.*

**Keywords:** NPM; ROE; ROA; Cash Ratio; DER; DAR; Covid 19

**JEL Classification:**

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## 1. INTRODUCTION

The Corona Virus Disease (Covid 19) pandemic outbreak was discovered at the end of 2019 in Wuhan City China. Since starting from Wuhan Covid 19 has spread to other countries namely Italy, Spain, France, UK, and USA quickly developing into a health crisis and finally on 11 March 2020 WHO declared Covid 19 a pandemic.

The entire industrialised world has the biggest challenge which is the completion of a much-needed re-evaluation to ascertain the level of uncertainty regarding the impact of COVID-19 on economic recovery. Around the world most countries have experienced a decline in gross domestic product due to social distancing policies and business units being closed including schools and public facilities. The emergence of the Covid-19 pandemic forced the business world to mitigate, so that not a few government authorities in the world made monetary, social and aid package policies to alleviate suffering with palliative issuance. In the property and real estate sector, the Covid 19 pandemic has had an impact on vulnerability, so there are several different policies between countries, such as in the UK there is relief for debt holders for 3 months. In addition, there are policies to maintain value and liquidity (Uchehara, Hamma-adama, Obiri, Jafarifar, & Moore, 2020).

The Covid 19 virus began to spread in Indonesia in early 2020, precisely on 2 March 2020 with the discovery of 2 infected people and quickly spread to other areas. The policy taken by the Government of Indonesia in overcoming the outbreak of Covid-19 is to carry out social distancing or large-scale social restrictions (PSBB).

Based on the data explained by Worldometer, there has been an increase in cases of the spread of Covid 19 per day until September 2020 where confirmed cases of covid 19 were 29 million with patients who experienced deaths of 928 thousand people, while in Indonesia until July 2020 there were 218 thousand confirmed cases with 8 thousand deaths. Based on this data, Indonesia is in 9th position in the Asian region and 23rd position in the world with respect to

confirmed Covid 19. Although the percentage of deaths due to Covid in Indonesia has decreased since March 2020, the magnitude of death cases is still the highest of cases in general in the world. Until September 2020, the average case of death due to Covid 19 reached 3.99% while the global case reached 3.18% (Bramasta, 2020).

Various aspects of community life are greatly affected by the covid-19 pandemic. Since the Indonesian government made an announcement of the covid 19 case, a policy has been taken to limit community activities to inhibit the transmission of covid 19. Efforts to inhibit the spread of covid 19 have had a huge impact on social activities, triggering an increase in unemployment caused by the cessation of economic activity, resulting in a slowdown and even a sharp decline in economic growth performance. The impact of the emergence of unemployment reduces people's income, thus disrupting people's consumption.

Indonesia's Central Bureau of Statistics explained, "Indonesia's economy in 2020 faced a decline from the previous year of 2.07% with GDP at current prices reaching RP15,434.2 T and GDP per capita reaching Rp56.9 million. According to BPS, growth contraction occurred in the property sector, transportation and warehousing, procurement of food and beverage facilities, company services, giant trade, repair of two and four-wheeled vehicles. On the other hand, positive growth occurred in the health services and social activities, information and communication, water supply, agriculture, forestry, and fisheries sectors." (Badan Pusat Statistik, 2021).

In relation to the property sector, Bank Indonesia (BI) explained "the property price index (IHPR) experienced a slowdown in medium and large houses. This can be seen from sales growth in the first quarter of 2020 where there was a contraction of -43.19% (yoy), compared to the fourth quarter of 2019 which experienced growth of 1.19% (yoy). The decline occurred in all types of houses. Large houses decreased by -13.99% (yoy), medium houses decreased by -50.63% (yoy) and small houses decreased by -42.74% (yoy). Home sales growth slumped in the first to second quarters of 2020. In the first three months of 2020, home sales fell to minus 43.2% compared to 2019 in the same period. The second quarter of 2020 continued with shrinkage with a total of minus 25.6%. Although it is starting to stretch, the figure is still below 0%". This is as can be seen in figure 1.1 below (Pusparisa, 2020).

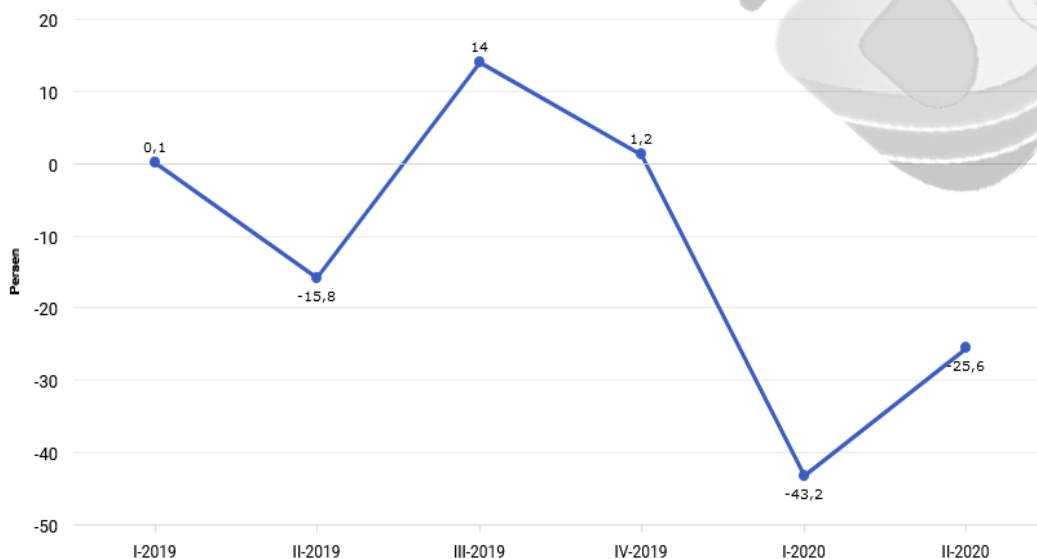


Figure 1: Home Sales Growth by Quarter (YoY)

The condition of the spread of COVID-19 certainly has an impact on the decline in profit in various business companies, thereby reducing company performance. Property and Real Estate companies listed on the IDX are used as objects in this study, where the ongoing Covid-19 has suppressed business in the property sector. So that the financial performance of a number of property and real estate companies in the first semester of 2020 recorded a decline compared to the previous period. The biggest decline in performance occurred at PT Alam Sutera Realty Tbk (ASRI), which recorded a net loss of Rp 512.5 billion. Last year, the company managed to record a

net profit of Rp 158.8 billion. Meanwhile, PT Ciputra Development Tbk's (CTRA) profit fell 42.8% from Rp 296.4 billion to Rp 169.5 billion. Meanwhile, PT Pakuwon Jati Tbk (PWON) earned the highest net profit among the other five issuers, which was Rp 482.6 billion in the first semester of 2020. However, PWON's profit also fell quite deeply by 64.7% from the first semester of 2019, which managed to print a net profit of up to Rp 1.4 trillion.

PPRO's financial performance during the pandemic is quite depressed. Based on its financial statements, until the third quarter of 2020, PPRO earned a net profit of Rp 76.7 billion. This figure dropped 65 per cent from the achievement in the same period in 2019 which was recorded at Rp 216.4 billion. As for the third quarter of 2020, PPRO recorded sales and operating income of Rp 1.27 trillion. Meanwhile, PT Summarecon Agung Tbk (SMRA) also experienced a decline in performance. SMRA reported that its revenue in the third quarter of 2020 fell 26.05 per cent on an annual basis (yoy) from Rp 4.41 trillion in the third quarter of 2019 to Rp 3.26 trillion in 2020. SMRA's net profit also fell, from a net profit of Rp 314.61 billion to a net loss of Rp 12.25 billion.

BSDE earned revenue of Rp 4.28 trillion in the January-September 2020 period. BSDE's revenue in the third quarter of 2020 fell 18.16 per cent from the realisation in the third quarter of 2019 which was recorded at Rp 5.23 trillion. In fact, the net profit of this Sinarmas Group property issuer fell 79.67 per cent to Rp 469.56 billion. In fact, in the January-September 2019 period, net profit still reached Rp 2.31 trillion. Furthermore, ASRI's revenue until the third quarter of 2020 was recorded to have decreased by 43.88 per cent on an annual basis (yoy) to Rp 1.1 trillion from Rp 1.96 trillion. With a recorded cost of Rp 599.05 billion, ASRI posted a gross profit of Rp 503.58 billion. However, due to the large amount of general and administrative expenses of Rp 245.37 billion and interest expenses of Rp 528.56 billion, ASRI posted a loss of Rp 977.65 billion. Although, previously in the third quarter of 2019 ASRI still recorded a net profit of Rp 213.59 billion.

Various studies regarding Covid 19 on financial performance include research conducted by Ari Siswati where differences were obtained between NPM, CR and TATO between before and after Covid 19. However, for DER between before and after Covid 19 there is no difference. (Siswati, 2021). Chairun Amallia et al research shows that there is no difference in CR, ROA and TATO between before and after Covid 19. While Debt Ratio there is a difference between before and after Covid 19 (Amallia, Rahmawati, & Dwijayanti, 2021).

Festiana et al., (2022) The results of the company's financial ratios including liquidity, solvency, and profitability (ROA, NPM and ROI) between before and after covid 19 in plantation and mining companies did not show any significant differences. Hyung Ju Song and Jihwan Yeon's research results show that restaurant companies with large assets, good leverage, good cash flow, small ROA and branches in other countries are more resistant to the impact caused by COVID-19 than similar companies (Song, Yeon, & Lee, 2020).

Uchegara, et al the results of his research show that past financial performance recessions are used as a reference to the macroeconomic crisis in the property and real estate market as a covid 19 impact through procedural approaches and the use of legal contexts to mitigate risk (Uchegara et al., 2020).

Research by Nanda, et. al., found that COVID-19 has accelerated the process of change in property companies driven by urbanisation and digitalisation factors by focusing more on asset selection, changes to online stores, investment management and customer engagement (Nanda, Xu, & Zhang, 2020). Richter and Wilson's results showed that financial market developments dominated claim losses due to Covid 19 pandemic demographics and other factors (Wilson, 2020).

## **2. METHODOLOGY**

### *2.1. Population and Sample*

This study uses all companies engaged in Property and Real Estate that have 53 sharia stocks. The sampling technique used is purposive sampling with the criteria of companies that have sharia shares. Based on the predetermined criteria,  $45 \times 2 = 90$  financial data were obtained for each

period, namely before and after Covid 19.

## 2.2. Operational Definition of Variables

To describe the research variables, the researcher presents them in the following table:  
Table 1: Operational Definition of Research Variables

Variabel	Rumus	Skala Ukur
<b>Likuiditas</b>		
Cash Ratio	$Cash\ ratio = \frac{Cash + Securities}{Current\ Liabilities} \times 100\%$	Rasio
Current Ratio	$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities} \times 100\%$	Rasio
<b>Solvabilitas</b>		
Debt to Assets Ratio	$DAR = \frac{Total\ Debt}{Total\ Assets} \times 100\%$	Rasio
Debt to Equity Ratio	$DAR = \frac{Total\ Debt}{Total\ Equity} \times 100\%$	Rasio
<b>Profitabilitas</b>		
Return on Assets (ROA)	$ROA = \frac{Net\ Profit}{Total\ Assets} \times 100\%$	Rasio
Return on Equity (ROE)	$ROE = \frac{Net\ Profit}{Total\ Equity} \times 100\%$	Rasio
Net Profit Margin (NPM)	$NPM = \frac{Net\ Profit}{Net\ Sales} \times 100\%$	Rasio

## 2.2. Data Analysis Technique

To see whether or not there is a difference in financial performance between before and after Covid 19, researchers used paired samples t test with an alpha of 5%. The t-test formula used for paired samples is:

$$t = \frac{\delta}{SD\delta / \sqrt{n}} \dots\dots\dots (1)$$

Description:

- $\delta$  : Average deviation (difference between sample before and sample after)
- $SD\delta$  : Standard deviation of  $\delta$  (difference between before and after samples)
- $n$  : samples

## 3. RESULTS AND DISCUSSION

### 3.1. Descriptive statistic

Descriptive statistics explain the minimum, maximum and average values of all variables studied. For more details, it can be described for each variable as follows:

#### 3.1.1. Profitability

Based on data processing, descriptive profitability can be obtained as presented in table 2.

Table 2: Descriptive Statistics of Net Profit Margin Ratio

Description	N	Minimum	Maximum	Mean
Net Profit Margin Sebelum Covid	90	-101.59	250.97	11.4580
Net Profit Margin Setelah Covid	90	-307.51	592.35	-17.5896
Valid N (listwise)	90			

Source: Field research data processed (2023)

Referring to table 2, the minimum value of the net profit margin ratio before covid 19 was -101.59% and the maximum was 250.97% with an average value of 11.458%. The average value of 11.458% indicates that the average net profit margin ratio value of property companies that were the object of this study before covid 19 was in bad condition because it was below the standard of 40%. Then for the minimum value of the net profit margin ratio after covid 19 of -307.51% and a maximum of 592.35% with an average of -17.5896%. The average value of -17.5896% indicates that the average value of the net profit margin ratio of property companies that are the object of this study after covid 19 is also in bad condition because it is below the standard of 40%.

Table 3: Descriptive Statistics of Return on Equity Ratio

Description	N	Minimum	Maximum	Mean
Return on Equity Sebelum Covid	90	-497.64	33.42	-.2648
Return on Equity Setelah Covid	90	-480.63	60.99	-7.9326
Valid N (listwise)	90			

Source: Field research data processed (2023)

Referring to table 3, the minimum return on equity ratio before covid 19 was -497.64% and the maximum was 33.42% with an average of -0.2648%. The average value of -0.2648% indicates that the average value of the return on equity ratio of property companies that were the object of this study before covid 19 was in bad condition because it was below the standard of 40%. Then for the minimum value of return on asset ratio after covid 19 of -480.63% and a maximum of 60.99% with an average of -7.9326%. The average value of -7.9326% indicates that the average value of the return on equity ratio of property companies that are the object of this study after covid 19 is also in bad condition because it is below the standard of 40%.

Table 4: Descriptive Statistics of Return on Asset Ratio

Description	N	Minimum	Maximum	Mean
Return on Asset Sebelum Covid	90	-10.88	22.84	2.5880
Return on Asset Setelah Covid	90	-43.31	27.56	-1.0846
Valid N (listwise)	90			

Source: Field research data processed (2023)

Referring to table 4, the minimum value of return on assets before covid 19 was -10.88% and the maximum was 22.84% with an average of 2.588%. The average value of 2.588% indicates that the average ROA value of property companies that were the object of this study before covid 19 was in bad condition because it was below the standard of 30%. Then for the minimum value of return on assets after covid 19, the minimum value is -43.31% and the maximum is 27.56% with an average of -1.08%. The average value of -1.08% indicates that the average ROA value of property companies that are the object of this study after covid 19 is also in bad condition because it is below the standard of 30%.

### 3.1.1. Liquidity

The liquidity ratio is reflected through the current ratio and cash ratio. The descriptive statistics of the current ratio and cash ratio are as follows:

Table 5: Descriptive Statistics of Cash Ratio

Description	N	Minimum	Maximum	Mean
Cash Ratio Sebelum Covid	90	1.82	666.21	71.1134
Cash Ratio Setelah Covid	90	1.88	308.90	52.7574
Valid N (listwise)	90			

Source: Field research data processed (2023)

Referring to table 5, the minimum value of the cash ratio variable before covid 19 was 1.82% and the maximum was 666.21% with an average of 71.1134%. The average value of 71.1134% indicates that the average cash ratio value of property companies that were the object of this study before covid 19 was in good condition because it was above the standard of 50%. Then for the minimum value of cash ratio after covid 19 of 1.88% and a maximum of 308.90% with an

average of 52.7574%. The average value of 52.7574% indicates that the average cash ratio value of property companies that are the object of this study after covid 19 is also in good condition because it is above the standard of 50%.

Table 6: Descriptive Statistics of Current Ratio

Description	N	Minimum	Maximum	Mean
Current Ratio Sebelum Covid	90	17.86	2488.19	294.0389
Current Ratio Setelah Covid	90	14.68	1554.83	252.3986
Valid N (listwise)	90			

Source: Field research data processed (2023)

Referring to table 6, the minimum value of the current ratio variable before covid 19 was 17.86% and the maximum was 2,488.19% with an average of 294.0389%. The average value of 294.0389% indicates that the average current ratio value of property companies that were the object of this study before covid 19 was in good condition because it was above the standard of 200%. Then for the minimum value of the current ratio after covid 19 of 14.68% and a maximum of 1,554.83% with an average of 252.3986%. The average value of 252.3986% indicates that the average current ratio value of property companies that are the object of this study after covid 19 is also in good condition because it is above the standard of 200%.

### 3.1.2. Solvency

Solvency ratio is reflected through DAR and DER with descriptive statistics as follows.

Table 7: Descriptive Statistics of Debt to Equity Ratio

Description	N	Minimum	Maximum	Mean
Debt to Equity Ratio Sebelum Covid	90	5.55	4449.82	162.3716
Debt to Equity Ratio Setelah Covid	90	5.42	1181.74	163.1031
Valid N (listwise)	90			

Source: Field research data processed (2023)

Referring to table 7, it is known that the minimum value of DER before covid 19 was 5.55% and the maximum was 4,449.82% with an average of 162.3716%. The average value of 162.3716% indicates that the average DER value of property companies that were the object of this study before covid 19 was in a warning condition because it was above the standard of 100%. Then for the minimum value of DER after covid 19 of 5.42% and a maximum of 1181.74% with an average of 163.10%. The average value of 163.10% indicates that the average DER value of property companies that are the object of this study after covid 19 is also in a warning condition because it is above the standard, namely 100%.

Table 8: Descriptive Statistics of Debt to Asset Ratio

Description	N	Minimum	Maximum	Mean
Debt to Asset Ratio Sebelum Covid	90	5.26	97.26	42.7900
Debt to Asset Ratio Setelah Covid	90	5.14	90.99	48.2001
Valid N (listwise)	90			

Source: Field research data processed (2023)

Referring to table 8, the DAR value before covid 19 was 5.26% and a maximum of 97.26% with an average of 42.79%. The average value of 42.79% indicates that the average DAR value of property companies that were the object of this study before covid 19 was in good condition because it was less than 100%. Then for the minimum value of DAR after covid 19 of 5.14% and a maximum of 90.99% with an average of 44.20%. The average value of 44.20% indicates that the average DAR value of property companies that are the object of this study after covid 19 is also in good condition because it is less than 100%.

### 3.2. The difference in NPM between before and after Covid 19

Before analysing the differences, the normality of the data must first be known, with the following results.

Table 9. Test of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Net Profit Margin Sebelum Covid	.219	90	.000	.789	90	.000
Net Profit Margin Setelah Covid	.235	90	.000	.652	90	.000

a. Lilliefors Significance Correction

Source: Field research data processed (2023)

Referring to table 9, the significance values of KS and SW are all <0.05, meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was conducted with the following results.

**Table 10. Test Statistics<sup>a</sup>**

Net Profit Margin Setelah Covid – Net Profit Margin Sebelum Covid	
Z	-5.506 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Source: Field research data processed (2023)

Referring to table 10, the probability value is 0.000 <0.05, which means that the Net Profit Margin (NPM) between before and after Covid 19 there is a difference.

### 3.3. The difference in ROE between before and after Covid 19

Based on data processing, the normality test values are obtained in table 11.

**Table 11. Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Return on Equity Sebelum Covid	.405	90	.000	.186	90	.000
Return on Equity Setelah Covid	.377	90	.000	.262	90	.000

a. Lilliefors Significance Correction

Source: Field research data processed (2023)

Referring to table 11, the significance values of KS and SW are all <0.05, meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was conducted with the following results.

**Table 12. Test Statistics<sup>a</sup>**

Return on Equity Setelah Covid – Return on Equity Sebelum Covid	
Z	-5.639 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Source: Field research data processed (2023)

Referring to table 12, the probability value is 0.000 <0.05, meaning that the Return on Equity (ROE) value between before and after Covid 19 is different.

### 3.4. Difference in ROA between before and after Covid 19

Based on data processing, the results of normality testing are shown in Table 13.

**Table 13. Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Return on Asset Sebelum Covid	.138	90	.000	.921	90	.000
Return on Asset Setelah Covid	.228	90	.000	.679	90	.000

a. Lilliefors Significance Correction

Source: Field research data processed (2023)

Referring to table 13, the significance values of KS and SW are all  $<0.05$ , meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was conducted with the following results.

**Table 14. Test Statistics<sup>a</sup>**

	Return on Asset Setelah Covid – Return on Asset Sebelum Covid
Z	-5.818 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Source: Field research data processed (2023)

Referring to table 14, the probability value is  $0.000 < 0.05$ , meaning that the Return on Asset (ROA) value between before and after Covid 19 has a difference.

### 3.5. Difference in Cash Ratio between before and after Covid 19

Based on data processing, the results of normality testing are shown in Table 15.

**Table 15. Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cash Ratio Sebelum Covid	.260	90	.000	.593	90	.000
Cash Ratio Setelah Covid	.215	90	.000	.722	90	.000

a. Lilliefors Significance Correction

Source: Field research data processed (2023)

Referring to table 15, the significance values of KS and SW are all  $<0.05$ , meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was conducted with the following results.

**Table 16. Test Statistics<sup>a</sup>**

	Cash Ratio Setelah Covid – Cash Ratio Sebelum Covid
Z	-2.990 <sup>b</sup>
Asymp. Sig. (2-tailed)	.003

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Source: Field research data processed (2023)

Referring to table 16, the probability value of  $0.003 < 0.05$  is obtained, meaning that the Cash Ratio value between before and after Covid 19 is different.

### 3.6. Difference in Current Ratio between before and after Covid 19

Based on data processing, the results of normality testing are shown in Table 17.

**Table 17. Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Current Ratio Sebelum Covid	.220	90	.000	.578	90	.000
Current Ratio Setelah Covid	.259	90	.000	.605	90	.000

a. Lilliefors Significance Correction

Source: Field research data processed (2023)

Referring to table 17, the significance values of KS and SW are all  $<0.05$ , meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was conducted with the following results.



**Table 18. Test Statistics<sup>a</sup>**

	Current Ratio Setelah Covid - Current Ratio Sebelum Covid
Z	-3.261 <sup>b</sup>
Asymp. Sig. (2-tailed)	.001

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Source: *Field research data processed (2023)*

Referring to table 18, the probability value is 0.001 < 0.05, meaning that the Current Ratio value between before and after Covid 19 is different.

### 3.7. Difference in DER between before and after Covid 19

Based on data processing, the results of normality testing are shown in Table 19.

**Table 19. Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Debt to Equity Ratio Sebelum Covid	.370	90	.000	.222	90	.000
Debt to Equity Ratio Setelah Covid	.252	90	.000	.650	90	.000

a. Lilliefors Significance Correction

Source: *Field research data processed (2023)*

Referring to table 19, the significance values of KS and SW are all < 0.05, meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was conducted with the following results.

**Table 20. Test Statistics<sup>a</sup>**

	Debt to Equity Ratio Setelah Covid – Debt to Equity Ratio Sebelum Covid
Z	-4.631 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Source: *Field research data processed (2023)*

Referring to table 20, the probability value is 0.000 < 0.05, meaning that the value of Debt to Equity Ratio between before and after Covid 19 is different.

### 3.8. Difference in DAR between before and after Covid 19

Based on data processing, the results of normality testing are obtained in table 21

**Table 21. Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Debt to Asset Ratio Sebelum Covid	.071	90	.200*	.985	90	.369
Debt to Asset Ratio Setelah Covid	.082	90	.185	.979	90	.149

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

a. Lilliefors Significance Correction

Source: *Field research data processed (2023)*

Referring to table 21, the significance values of KS and SW are all > 0.05, meaning that the data is normally distributed. Therefore, paired samples t test was conducted with the following results.

**Table 22. Paired Samples Test**

		Pair 1		
		Debt to Asset Ratio Sebelum Covid - Debt to Asset Ratio Setelah Covid		
Paired Differences	Mean		-5.41011	
	Std. Deviation		12.69479	
	Std. Error Mean		1.33815	
	95% Confidence Interval of the Difference	Lower		-8.06898
		Upper		-2.75124
t			-4.043	
df			89	
Sig. (2-tailed)			.000	

Source: Field research data processed (2023)

Based on table 22, the probability value of  $0.000 < 0.05$  is obtained, meaning that the value of the Debt to Asset Ratio between before and after Covid 19 is different, where the average value of DAR before Covid 19 is 42.79 and the average value of DAR after Covid 19 is 48.20, this shows an increase of 5.41 after Covid 19. This condition is shown in table 23.

**Table 23. Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Debt to Asset Ratio Sebelum Covid	42.7900	90	19.53632	2.05931
	Debt to Asset Ratio Setelah Covid	48.2001	90	20.70114	2.18209

Source: Field research data processed (2023)

### 3.9. Discussion

#### 3.9.1. Difference in NPM between before and after Covid 19

The significance values of KS and SW are all  $< 0.05$ , meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was tested with the results of a probability value of  $0.000 < 0.05$ , which means that the NPM value between before and after Covid 19 there is a difference.

In the net profit margin ratio variable before Covid 19, the minimum value is -101.59% and the maximum is 250.97% with an average of 11.458%. The average value of 11.458% indicates that the average net profit margin ratio value of property companies that were the object of this study before Covid 19 was in bad condition because it was below the standard of 40%. Then the minimum value of NPM after covid 19 is -307.51% and the maximum is 592.35% with an average of -17.5896%. The average value of -17.5896% indicates that the average NPM value of property companies that are the object of this study after covid 19 is also in bad condition because it is below the standard of 40%.

This condition shows that the NPM value between before and after covid 19 is not in good condition, but before covid 19 the condition is better than after covid 19. This is indicated that the NPM value before covid 19 is positive but after covid 19 the net profit margin value drops to a negative value.

Net profit margin is a ratio used in assessing profit margins on sales. The impact of covid 19 has caused the general average of Proverti and Real Estate Companies to experience losses. This explains that the company is inefficient in determining costs, especially in determining the cost of goods sold, plus sales that occurred during covid 19 decreased greatly due to the condition of people who experienced a decline in their financial condition, thereby reducing their purchasing power for property and real estate.

Sara Intan Hartati's research (2022) supports this research, where there is a significant difference between net profit margin in Health Sector Companies listed on the IDX before and

after covid 19. In contrast to Ahffha & Pradana (2022) where there is no significant difference between net profit margins in technology companies listed on the IDX.

### 3.9.2. The difference in ROE between before and after Covid 19

The significance values of KS and SW are all  $<0.05$ , meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was carried out with the results of a probability value of  $0.000 < 0.05$ , meaning that the ROE value between before and after Covid 19 there is a difference.

The minimum ROE value before Covid 19 was  $-497.64\%$  and the maximum was  $33.42\%$  with an average of  $-0.2648\%$ . The average value of  $-0.2648\%$  indicates that the average ROE value of property companies that were the object of this study before Covid 19 was in bad condition because it was below the standard of  $40\%$ . Then for the minimum value of ROE after covid 19 of  $-480.63\%$  and a maximum of  $60.99\%$  with an average of  $-7.9326\%$ . The average value of  $-7.9326\%$  indicates that the average ROE value of property companies that are the object of this study after covid 19 is also in bad condition because it is below the standard of  $40\%$ . This explains that the ROE of property companies before covid 19 was in bad condition. However, during the covid 19 pandemic, it got worse and experienced a decline.

Return on Equity (ROE) is the return that the company prints for shareholders, this shows that both before and after the covid 19 pandemic hit the property company did not provide returns to shareholders due to the condition of the company which was in a loss. This condition illustrates that the company does not have the ability to manage its costs effectively and efficiently, coupled with the large number of people infected with COVID-19, resulting in the government implementing a Lockdown policy (regional quarantine) in an effort to limit the spread of COVID-19, but this policy has an impact on very significant disruption of community activities and affects all sectors of activity, including the property sector, on the other hand the company's operations, which continue to incur costs and salaries for its employees despite the decrease in company revenue as a result of Covid 19.

Research by Nofiar & Chasanah, (2023) found that there were differences in ROE before and after the covid 19 pandemic at Bank Himbara. However, it is different from Hartati et al., (2022) where there is no difference in ROE before and after the covid 19 pandemic in Health Sector Companies Listed on the IDX.

### 3.9.3. The difference in ROA between before and after Covid 19

The significance values of KS and SW are all  $<0.05$ , meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was carried out with the results of a probability value of  $0.000 < 0.05$ , meaning that the ROA value between before and after Covid 19 was different.

The minimum ROA value before Covid 19 was  $-10.88\%$  and the maximum was  $22.84\%$  with an average of  $2.588\%$ . The average value of  $2.588\%$  indicates that the average ROA value of property companies that were the object of this study before Covid 19 was in bad condition because it was below the standard of  $30\%$ . Then for the minimum value of ROA after covid 19 of  $-43.31\%$  and a maximum of  $27.56\%$  with an average of  $-1.08\%$ . The average value of  $-1.08\%$  shows that the average ROA value of property companies that are the object of this study after covid 19 is also in bad condition because it is below the standard of  $30\%$ .

This shows that the ROA obtained by property companies both before and after the pandemic is both in a bad condition because it is below the  $30\%$  standard. However, the condition of return on assets before the pandemic was positive, which means that in general property and real estate companies were able to generate profits even though they were still below the standard, while during the pandemic the condition of return on assets was negative, which explained that in general property and real estate companies experienced losses as a result of Covid 19.

Return on assets provides an overview for leaders, investors, or analysts regarding the level of efficiency carried out by company management when managing company assets to generate income. Before Covid 19 hit in general, property companies were not fully able to efficiently use

their assets in making a profit, but when Covid 19 hit in general property companies did not even have the ability to use their assets efficiently because they suffered losses.

Research by Nofiar & Chasanah, (2023) the result is that there are differences in ROA before and after the covid 19 pandemic at Bank Himbara. In contrast to Festiana et al., (2022) the results of his research ROA between before and after Covid 19 in plantation and mining companies did not show any significant difference.

#### 3.9.4. The difference in Cash Ratio between before and after Covid 19

The significance values of KS and SW are all  $<0.05$  which means the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was tested with the results of a probability value of  $0.003 < 0.05$ , meaning that the Cash Ratio value between before and after Covid 19 there is a difference.

In the cash ratio variable before Covid 19, the minimum value was 1.82% and the maximum was 666.21% with an average of 71.1134%. The average value of 71.1134% indicates that the average cash ratio value of property companies that were the object of this study before Covid 19 was in good condition because it was above the standard of 50%, where Rp 1 of debt owned by property and real estate companies can be paid with Rp 0.71 of cash owned by the company. Then for the minimum cash ratio value after covid 19 of 1.88% and a maximum of 308.90% with an average of 52.7574%. The average value of 52.7574% indicates that the average cash ratio value of property companies that are the object of this study after covid 19 is also in good condition because it is above the standard of 50%, where Rp 1 of debt owned by property and real estate companies can be paid with Rp 0.52 of cash owned by the company.

This shows that descriptively the condition of the cash ratio in property companies between before and after covid 19 is both in good condition, which is above the 50% standard. However, before Covid 19, the general cash ratio in property and real estate companies averaged 71.1134% and decreased by 18.356% where during the Covid 19 pandemic the average cash ratio was 52.7574%.

Cash ratio reflects the position of the company's cash and cash equivalents to guarantee current obligations or short-term debt. By knowing the value of the cash ratio, it will help company management to take strategic steps. This step can later be used as a solution to save the company's finances when it is in trouble. For this reason, company management must continue to control the value of the company's cash ratio regularly so that the financial condition of the business can run well and all operational activities can run smoothly.

Alcander & Nuraini (2022) and Nuraida et al., (2022) found that there was no difference in cash ratio between before and after covid 19.

#### 3.9.5. The difference in Current Ratio between before and after Covid 19

The significance values of KS and SW are all  $<0.05$ , meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was tested with the results of a probability value of  $0.001 < 0.05$ , meaning that the Current Ratio value between before and after Covid 19 there is a difference.

The minimum value of the current ratio variable before Covid 19 was 17.86% and the maximum was 2,488.19% with an average of 294.0389%. The average value of 294.0389% indicates that the average current ratio value of property companies that were the object of this study before Covid 19 was in good condition because it was above the standard of 200%. Then the minimum value of the current ratio after covid 19 is 14.68% and the maximum is 1,554.83% with an average of 252.3986%. The average value of 252.3986% indicates that the average current ratio value of property companies that are the object of this study after covid 19 is also in good condition because it is above the standard of 200%.

The current ratio descriptive condition shows that both before and after covid 19 are still in good condition above the standard of 200%. However, there was a decrease of 41.64% between before and after covid 19, this indicates that covid 19 also has a negative impact on the current ratio.

The current ratio or working capital ratio is a financial metric used by measuring the short-term cash available to the company. This reflects the company's ability to clear all its debts that are due within one year. This shows that in general both before and after the covid 19 pandemic hit property companies have a good ability to pay obligations when due,

Siswati, (2021) found that there were differences in the current ratio between before and after covid 19 in Technology Companies listed on the IDX. In contrast to Nuraida et al., (2022) who found that there was no difference in cash ratio between before and after covid 19.

#### 3.9.6. The difference in DER between before and after Covid 19

The significance values of KS and SW are all  $<0.05$ , meaning that the data is not normally distributed. Therefore, the Wilcoxon Signed Rank Test was carried out with the results of a probability value of  $0.000 < 0.05$ , which means that the value of DER between before and after Covid 19 there is a difference.

The minimum value of DER before Covid 19 was 5.55% and the maximum was 4,449.82% with an average of 162.3716%. The average value of 162.3716% indicates that the average DER value of property companies that were the object of this study before Covid 19 was in a warning condition because it was above the standard of 100%. Then the minimum value of DER after covid 19 is 5.42% and the maximum is 1181.74% with an average of 163.10%. The average value of 163.10% indicates that the average DER value of property companies that are the object of this study after covid 19 is also in a warning condition because it is above the standard, namely 100%.

The descriptive statistics above show that there was no change in DER between before and after the covid 19 pandemic hit, despite an average increase of 0.7284%. This condition explains that descriptively the covid 19 pandemic has no effect on DER in property companies.

DER reflects the company's ability to pay off all its debts. The smaller the DER ratio, the greater the company has the ability to pay off its debts. A large DER ratio has a bad impact on the company's performance, this is due to the large amount of debt. This condition shows the amount of interest borne by the company, thus reducing profits.

The Debt to Equity Ratio (DER) value below 100% indicates that the company has less debt than the capital (equity) it has and if the DER value is minus, then the company has accumulated losses that exceed the amount of its equity.

Siswati, (2021) found that there were differences in DER between before and after covid 19 in Technology Companies listed on the IDX. In contrast to Alcander & Nuraini (2022) who found that there was no difference in the DER ratio between before and after covid 19.

#### 3.9.7. Difference in DAR between before and after Covid 19

The significance values of KS and SW are all  $> 0.05$ , meaning that the data is normally distributed. Therefore, a paired samples t test was carried out with the results of a probability value of  $0.000 < 0.05$ , meaning that the value of DAR between before and after Covid 19 there is a difference. The average value of DAR before Covid 19 was 42.79 and after Covid 19 was 48.20, which means that there was an increase in DAR of 5.41.

In the DER ratio, the minimum value before Covid 19 was 5.26% and the maximum was 97.26% with an average of 42.79%. The average value of 42.79% indicates that the average DER value of property companies that were the object of this study before covid 19 was in good condition because it was less than 100%. Then the minimum value of DER after covid 19 is 5.14% and the maximum is 90.99% with an average of 44.20%. The average value of 44.20% indicates that the average DER value of property companies that are the object of this study after covid 19 is also in good condition because it is less than 100%.

Descriptively, it can be seen that the average DER value has increased by 1.41% between before and after covid 19, but it is still in good condition because it is less than 100%. Basically, creditors tend to prefer companies that have a low DER value, because the lower the DER, the greater the guarantee for creditors when liquidation occurs.

A company is said to be insolvent if it does not have the ability to pay off its short-term debt. In such a case, the company would have to sell all its assets to pay its debts first before

reimbursing investors. Simply put, of course creditors will think twice about lending money for investment to a company that has more debt than it has wealth.

Hilaliyah et al., (2022) found that there were differences in DER between before and after covid 19 in companies listed on the IDX. However, in contrast to Alcander & Nuraini (2022) found that there was no difference in DER between before and after covid 19.

#### 4. CONCLUSIONS

There is a significant difference between the value of profitability (NPM, ROE, ROA), liquidity (Cash Ratio and Current Ratio), and solvency (DER and DER) between before and after Covid 19.

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