



Comparison of Financial Performance During Covid 19 Pandemic: A Case Study at Transportation and Logistics Sector Listed in IDX

Aulia Azzahra Nur Listiarti ^{a,1,*}, Caecilia Widi Pratiwi ^{a,2}, Sulistining Trimulyani ^{a,3}

^a Fakultas Ekonomi, Universitas Gunadarma, Indonesia

¹ auliazahra1204@gmail.com *; ² widipratiwi72@gmail.com; ³ sulistining24@gmail.com

* corresponding author

ARTICLE INFO

Article history

Received : 4 June 2022

Revised : 1 September 2022

Accepted : 14 September 2022

Keywords

DuPont System

Covid-19

Financial Performance

Transportation and Logistics

Kata Kunci

Sistem DuPont

Covid-19

Kinerja Keuangan

Transportasi dan Logistik

ABSTRACT

This study aims to analyze companies' financial performance in the Transportation and Logistics Sector before and during the Covid-19 pandemic. The data used is secondary data in the form of the 2017 – 2020 annual financial statements of Transportation and Logistics Sector Companies. The sampling technique is purposive sampling. This study uses descriptive research with a quantitative approach. The analytical tool used is the Du Pont System method (NPM, TATO, ROA, ROE, EM), Normality Test, and Wilcoxon Signed-Rank Test. Based on the analysis results, it can conclude that the results of calculating the significance value of NPM, TATO, and ROA on land and air transportation are different. In contrast, for the EM value, there is no difference. The significance value of NPM, TATO, ROA, ROE and EM on sea transportation showed no difference. Overall, there are differences in the significance values of NPM, TATO, ROA, and ROE, while no difference exists in EM. Therefore, the transportation sector that is most affected during the Covid-19 pandemic is air transportation.

ABSTRAK

Tujuan penelitian ini adalah untuk menganalisis kinerja keuangan perusahaan Sektor Transportasi dan Logistik sebelum dan saat pandemi Covid-19. Data yang digunakan adalah data sekunder berupa laporan keuangan tahunan 2017-2020 Perusahaan Sektor Transportasi dan Logistik. Teknik pengambilan sampel adalah purposive sampling. Penelitian ini menggunakan penelitian deskriptif dengan pendekatan kuantitatif. Alat analisis yang digunakan adalah metode Du Pont System (NPM, TATO, ROA, ROE, EM), Uji Normalitas dan Uji Wilcoxon Signed-Rank Test. Berdasarkan hasil analisis dapat disimpulkan bahwa hasil hitung nilai signifikansi NPM, TATO, ROA pada transportasi darat dan udara terdapat perbedaan, sedangkan untuk nilai EM tidak ada perbedaan. Nilai signifikansi NPM, TATO, ROA, ROE, dan EM pada transportasi laut tidak menunjukkan adanya perbedaan. Secara keseluruhan, nilai signifikansi NPM, TATO, ROA, dan ROE terdapat perbedaan, sedangkan EM tidak terdapat perbedaan. Oleh karena itu, sektor transportasi yang paling terdampak selama pandemi Covid-19 adalah transportasi udara.

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



1. Introduction

The development of the business world in Indonesia affects increasing the number of new companies. In this case, the company must have competitiveness in the face of intense competition. Every company's management must maintain a healthy financial condition and improve performance to achieve company goals in the face of intense competition. The company's goals can be achieved by increasing the quality and quantity in various fields, managing its management, and assessing whether it is in the good, reasonable, or bad condition through company financial analyses (Lubis, Nurul 2018). Financial statement analysis helps decision-makers discover the company's strengths and weaknesses through information obtained from financial reports (Hery, 2018). Financial ratios are a measure that is often used to perform financial analysis. The use of financial ratios is a measure that is often used to perform financial analysis (Dewi, 2017). Financial ratio analysis involves two types of comparisons. The use of financial ratios is a measure that is often used to perform financial analysis. The first is by comparing the current ratio with the past and expected future ratios while comparing the second financial ratio with financial ratios against similar companies.

Financial performance is the ability of a company to manage its financial assets effectively during a specific period to find out and evaluate the level of success of the company's financial activities (Azizah & Nengzih, 2021). This study analyzes the financial statements using the DuPont System method. Financial performance appraisal using the DuPont system can avoid misleading conclusions about financial analysts (Prasetyo & Isnwardiati, 2022). The DuPont system has the advantage that it is a comprehensive financial analysis technique that can provide benefits to the assessment of the company's financial performance (Riyanto et al., 2021). Marketing can see the impact of increasing or decreasing sales by focusing on profit margins and overall asset turnover, and company financial analysts can look for ways to reduce investment in various types of assets. In this method, the calculations used are *Net Profit Margin* (NPM), *Total Assets Turn Over* (TATO), *Return on Assets* (ROA), *Return on Equity* (ROE), and *Equity Multiplier* (EM).

The global economy faces challenges due to the Covid-19 pandemic in all countries, including Indonesia (Sumarni, 2020). The government issued one of the policies to be implemented in Indonesia to prevent the spread of Covid-19 transmission, namely the Large-Scale Social Restrictions (LSSR), which have now been changed to the Community Activities Restrictions Enforcement (CARE). The implementation of CARE consists of several points, such as limiting offices by implementing work from home (WFH), online teaching and learning activities, restaurants eating or eating at places only by 25%, and shopping or mall operating hours until 19.00 pm (Handoyono, 2021). CARE is more stringent than LSSR because several activities are restricted, including closing schools and workplaces, stopping religious activities in places of worship, restrictions on activities in public areas or facilities, sociocultural activities, and restrictions on transportation modes (CNN Indonesia, 2021).

Table 1. Cumulative Growth Rate (%) of Transportation Sector 2017-2020

No	Information	Cumulative Growth Rate%			
		2017	2018	2019	2020
	Transport and Warehousing	8,49	7,05	6,39	-15,04
	Rail Transport	19,00	10,74	4,49	-42,34
	Land Transportation	7,94	7,13	9,96	-5,34
	Sea Transportation	4,64	7,22	10,56	-4,57
	River and Lake Transportation Crossing	6,01	5,20	5,58	-13,00
	Air Transportation	11,93	6,03	-9,76	-53,01
	Warehousing and Transportation Support Services; Post and Courier	8,52	7,93	10,34	-17,61

The transportation and logistics sector has a vital role in the economy. This sector provides access to the community and the smooth fulfillment of people's daily logistics needs (Apriyanto, 2020). From the data above, the Central Statistics Agency (CSA) recorded that the GDP growth rate in the transportation and logistics sector experienced the deepest contraction with -15,04% throughout 2020

Badan Pusat Statistika(2020) due to a decrease in the number of passengers from normal capacity, the ban on going home on holidays (Apriyanto, 2020). Eid al-Fitr, and the closure of specific locations, such as tourist attractions. The transportation sector that experienced the deepest contraction was the air force -53,01% (Badan Pusat Statistika, 2020). The downturn in the transportation and logistics sector during the Covid-19 pandemic led to wage cuts, reduced working hours, and layoffs. The company does it to survive because the income received by the company is not proportional to the operating costs incurred (Apriyanto, 2020).

Based on the explanation above, to see if there is a difference in the company's financial performance during the Covid-19 pandemic, use the *DuPont* System method. According to research, the company's performance using profitability ratios such as NPM, ROA, and ROE has decreased drastically to touch negative numbers. The decrease was due to the Covid-19 pandemic (Lumenta et al., 2021). The decrease in ROE in a hotel, restaurant and tourism company indicates a decrease in management performance in managing existing resources within the company to generate profits due to external factors, namely the Covid-19 pandemic (Esomar & Christianty, 2021). The Covid-19 pandemic has caused the low value of TATO, which can be seen from the total turnover of assets towards low sales. This situation impacts decreasing ROE (Ediningsih & Satmoko, 2022). In line with this information, research that examines the comparison of financial performance during the Covid-19 pandemic using the *DuPont* system with all components can also be supported by conducting a Differential Test. This test tests the significance of two related or correlated samples in finding differences. Therefore, this study aims to analyze the financial performance of Transportation and Logistics Sector Companies before and during the Covid-19 pandemic.

2. Literature Review

2.1 Agency Theory

Agency theory is a concept that describes the relationship between the principal (contract giver) and the agent (contract recipient). The principal hires an agent for the principal's interests or purposes. It allows the principal to make decisions for the agent's goals (Supriyono, 2018). Agency theory arises when shareholders give jobs to other parties to manage the companies they own. Conflicts of interest between the principal and the agent can also occur in the company due to excessive cash flow. Excess cash flow is usually invested in things unrelated to the company's core activities. That results in a difference of interest. Shareholders prefer high-risk investments to generate high returns, while management prefers investments with lower risks. Profits received by both parties are based on the company's performance. In other words, the relationship between the principal and the agent highly depends on the principal's assessment of the company's performance. Good performance has a positive effect on the compensation received, while poor performance has a negative effect.

2.2 Financial Performance

Financial performance is a financial picture obtained from a company's performance in managing its assets to generate the maximum possible profit per the existing financial implementation rules. That can be seen in capital adequacy, profitability, and capital adequacy (Hafsah et al., 2021) According to Hery (2018), a company can be said to be successful if it has achieved the specified performance.

2.3 DuPont Analysis

According to Krisnaryatko & Ika (2019), *DuPont* analysis is used to analyze firm value. This analysis finds the company's efficiency in using its assets and can measure the profit on sales (Ulupu et al., 2021). The ratio of *return on assets* and *return on equity* is broken down into several calculations (Sukamulja, 2019), and is based on profitability, namely the company's ability to generate business operating profits and return on equity means the company's ability to increase business profitability.

2.4 Net Profit Margin (NPM)

Net Profit Margin (NPM) is a ratio used to measure the profit margin on sales by dividing net profit after tax by net sales (Kasmir, 2018). This ratio looks at the company's ability to earn sales revenue over a certain period (Li, 2021). The higher the NPM, the higher the company's ability to

generate high profits and the more productive the company's performance, the greater the confidence of investors to invest in the company.

2.5 Total Assets Turn Over (TATO)

Total Assets Turn Over (TATO) is a ratio used to measure the turnover of all company assets and net sales obtained from each rupiah of assets (Kasmir, 2018). The higher the TATO, the higher the company's ability to generate high profits. It shows that the value of sales increases, and the desire to earn a profit also increases. The lower the TATO, the more sales have not been maximized. Companies with large assets have small asset turnover, meaning the higher the ratio, the more efficiently the company manages its assets (Sukamulja, 2019).

2.6 Return on Assets (ROA)

Return on Assets (ROA) is the ratio used to generate net income from assets owned along with measuring the company's rate of return on investment (Sukamulja, 2019). This ratio can be compared with the prevailing bank interest rate (Kariyoto, 2017). The higher this ratio, the better the performance (Lumenta et al., 2021)

2.7 Return on Equity (ROE)

Return on Equity (ROE) is the ratio used to generate net profit after tax with own capital (Kasmir, 2018). The higher this ratio, the better the company. According to (Shabani et al. (2021), ROE is a profitability ratio that measures the company's ability to generate shareholder investment returns. This ratio is essential for shareholders to determine the rate of return on their shares (Sukamulja, 2019).

2.8 Equity Multiplier (EM)

Equity Multiplier (EM) is an important indicator to determine the company's debt level (Li, 2021). EM is used to see how much equity or equity is funded by equity (Sukamulja, 2019). A higher EM means less equity funding that shareholders need to fund their assets, with some of the funding coming from debt. The smaller the EM, the better the performance because shareholders fund their assets in equity. EM is essential in analyzing company performance when evaluating returns to shareholders.

In this study, the company's performance is assessed using the *DuPont* system. Companies that are taken in this research are Transportation and Logistics Sector Companies. Below is presented the research framework as follows:

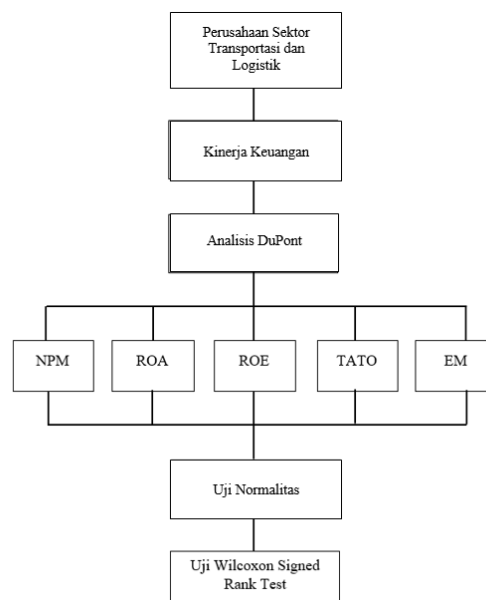


Fig. 1. Research Framework

2.9 Hypothesis Development

According to research by Amelya et al., (2021), NPM during Covid-19 was better than before Covid-19 due to increased sales and net profit from the sale of PT Indofood CBP Sukses Makmur Tbk's product, namely Indomie. ROA and TATO before the Covid-19 pandemic were better than

during the Covid-19 pandemic, which was caused by increased profits and total assets. The ROE value for hotel, restaurant and tourism companies shows differences in financial performance before and during the Covid-19 pandemic. The ROE value for hotel, restaurant and tourism companies shows differences in financial performance before and during the Covid-19 pandemic (Esomar & Christianty, 2021). According to research by Ediningsih & Satmoko (2022), there are differences in the value of TATO and ROE before and during the Covid-19 pandemic due to the decline in people's purchasing power for food and beverage companies on the Indonesia Stock Exchange. The financial performance of transportation companies before Covid-19 was better than during the Covid-19 pandemic. During the Covid-19 pandemic, it was seen that the NPM, ROA, and ROE of the five transportation companies had decreased, which means that the company's financial performance during the Covid-19 pandemic was not good (Lumenta et al., 2021). Based on the description above, the researcher can formulate the following hypothesis:

H1: There are differences in financial performance before and during the Covid-19 Pandemic. Transportation and Logistics Sector Companies are listed on the IDX for 2017 – 2020.

3. Research Methods

The type of data used in this research is secondary data. The secondary data used is the 2017–2020 annual financial report, including the income statement and financial position report published by the Indonesia Stock Exchange (IDX) through the website www.idx.co.id and the website of the Transportation and Logistics Sector Company. The data before the Covid-19 pandemic is the average from 2017-2019, and the data during the Covid-19 pandemic is 2020. The population used is 28 Transportation and Logistics Sector Companies listed on the Indonesia Stock Exchange (IDX) for 2017–2020. The sampling technique used is the Purposive Sampling Technique. The purposive sampling technique is a sample carried out according to specific criteria and ignores those that do not meet these criteria. The sample companies that meet the criteria are 15 companies in the Transportation and Logistics Sector in the 2017–2020 period, namely: PT Maming Enam Sembilan Mineral Tbk (AKSI), PT Adi Sarana Armada Tbk (ASSA), PT Blue Bird Tbk (BIRD), PT Eka Sari Lorena Transport Tbk (LRNA), PT Mitra International Resources Tbk (MIRA), PT Sidomulyo Selaras Tbk (SDMU), PT WEHA Transport Indonesia Tbk (WEHA), PT Pelayaran Nelly Dwi Putri Tbk (NELY), PT Temas Tbk (TMAS), PT AirAsia Indonesia Tbk (CMPP), PT Jaya Trishindo Tbk (HELI), PT Berlian Laju Tanker Tbk (BLTA), PT Samudera Indonesia Tbk (SMDR), PT Garuda Indonesia (Persero) Tbk (GIAA) and PT Indonesia Transport & Infrastructure (IATA). The method used is descriptive with a quantitative approach. The analytical tool used is the DuPont System (NPM, TATO, ROA, ROE, and EM), Normality Test, and the different test with the Wilcoxon Signed-Rank Test.

4. Research Results and Discussion

4.1. Dupont Analysis

DuPont analysis provides information about the various factors that cause the ups and downs of a company's financial performance.

1. Net Profit Margin (NPM)

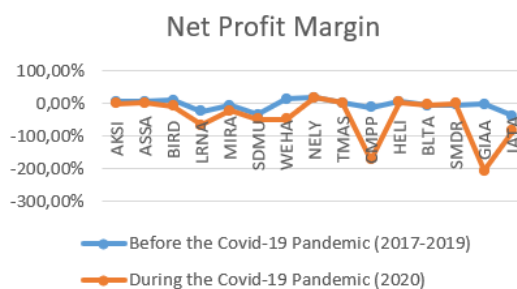


Fig. 2. Graph NPM of Transportation, Logistics Sector Companies Before and During the Covid-19 Pandemic

Based on figure 2, it can be seen that the average net profit margin of companies in the transportation and logistics sub-sector before the pandemic was -37,06% and during the pandemic -41,88%, which means a decrease of 4,82%. Before the pandemic (2017-2019), the best net profit margin was 19,00% at Pelayaran Nelly Dwi Putri Tbk (NELY), while the lowest net profit margin was -37,06% at the Indonesian Transport & Infrastructure Company (IATA). During the pandemic (2020) the best net profit margin value was 19,05% on Pelayaran Nelly Dwi Putri Tbk (NELY) while the lowest net profit margin value was -206,27% on Garuda Indonesia (Persero) Tbk (GIAA). The Covid-19 pandemic affected the Company's performance both directly and indirectly, such as increased company expenses, financial expenses, cargo claims expenses, decreased revenue, decreased volume of transportation results, decreased operating results, decreased total assets, decreased types of company services, decreased utility fleet, decreased transportation fares, decreased value of several fleets causing non-operating expenses, decreased helicopter rental business, decreased customer requests, such as: decreased scheduled flights, non-scheduled flights, and other income, reduced hours of use aircraft.

2. Total Assets Turnover (TATO)

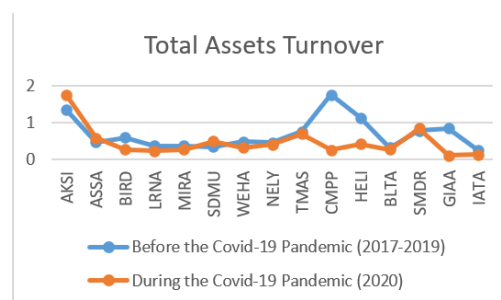


Fig. 3. Graph of TATO of Transportation and Logistics Sector Companies Before and During the Covid-19 Pandemic

Based on figure 3, it can seem that the average value of the total asset turnover of companies in the transportation and logistics sub-sector before the pandemic (2017-2019) was 0,69 times, and during the pandemic, 0,48 times, which means a decrease of 0,21 times. Before the pandemic (2017-2019), the best total asset turnover value was 1,77 times at Air Asia Indonesia Tbk, while the lowest total assets turnover value was 0,25 times at the Indonesian Transport & Infrastructure (IATA) Company. During the pandemic (2020), the best total asset turnover value was 1.75 times at Maming Enam Sembilan Mineral Tbk (AKSI), while the lowest total assets turnover value was 0.24 times at Eka Sari Lorena Transport Tbk (LRNA). The Covid-19 pandemic caused total assets and sales to decline, such as a decrease in operating results from the transportation business along with the sale of several assets (trucks and ships) used to support operational continuity and payment of employee salaries, decreased volume of chemicals and oil production volume, depreciation vehicles, a decrease in the number of the transportation, hampered loading/unloading or other activities, a decrease in scheduled flights, unscheduled flights and, other income, reduced flight hours using aircraft, depreciation of fixed assets and elimination of unproductive spare parts.

3. Return on Assets (ROA)

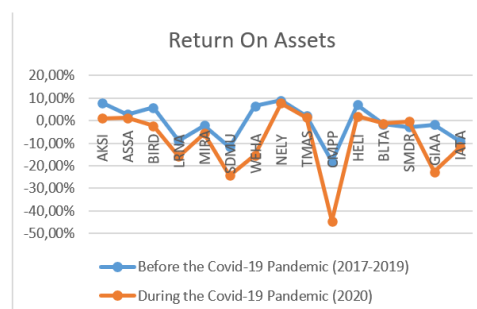


Fig. 4. Graph of ROA of Transportation and Logistics Sector Companies Before and During the Covid-19 Pandemic

Based on figure 4, it can seem that the average *return on assets* of companies in the transportation and logistics sub-sector before the pandemic (2017-2019) was -1,00% and during the pandemic -8,69%, which means a decrease of 7,69%. Before the pandemic (2017-2019), the best *return on assets* was 8,92% at Pelayaran Nelly Dwi Putri Tbk (NELY), while the lowest *return on assets* was -18,21% at AirAsia Indonesia Tbk (CMPP). During the pandemic (2020), the best *return on assets* was 7.81% at Pelayaran Nelly Dwi Putri Tbk (NELY), while the lowest *return on assets* was -44,46% at AirAsia Indonesia Tbk (CMPP). The Covid-19 pandemic has caused a decrease in net profit margin and turnover assets.

4. Return on Equity (ROE)

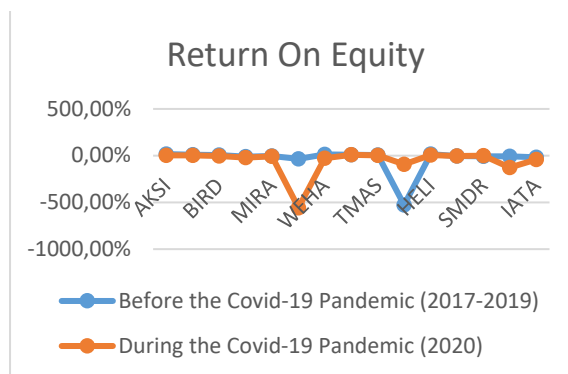


Fig. 5. Graph of ROE of Transportation and Logistics Sector Companies Before and During the Covid-19 Pandemic

Based on figure 5, it can seem that the average *return on equity* of companies in the transportation and logistics sub-sector before the pandemic (2017-2019) was -35,57%, and during the pandemic -57,04%, which means a decrease of 21,47%. The best *return on equity* value is 15,49% at Jaya Trishindo Tbk (HELI), while the lowest *return on equity* is -527.13% at AirAsia Indonesia Tbk (CMPP). During the pandemic (2020), the best *return on equity* was 8,9% at Pelayaran Nelly Dwi Putri Tbk (NELY), while the lowest *return on equity* was -556,93% at Sidomulyo Selaras Tbk (SDMU). The Covid-19 pandemic has caused the return on assets and equity multiplier to decline.

5. Equity Multiplier (EM)

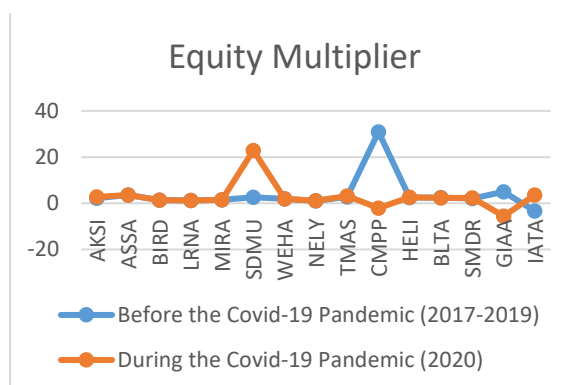


Fig. 6. Graph of EM of Transportation and Logistics Sector Companies Before and During the Covid-19 Pandemic

Based on figure 6, it can seem that the average equity multiplier of companies in the transportation and logistics sub-sector before the pandemic (2017-2019) was 3,84 times, and during the pandemic, -2,85 times, which means it decreased by 0,99. The best equity multiplier value is 1.11 times at Pelayaran Nelly Dwi Putri Tbk (NELY), while the lowest equity multiplier is 30,92 times at AirAsia Indonesia Tbk (CMPP). During the pandemic (2020), the best equity multiplier value was 1,14 times at Pelayaran Nelly Dwi Putri Tbk (NELY), while the lowest equity multiplier was -5,55 times at Garuda Indonesia (Persero) Tbk (GIAA). The Covid-19 pandemic has caused a decrease in total assets and equity, such as a decrease in financial assets available for sale (trucks and ships) to support operational continuity and payment of employee salaries, an increase in net loss, delaying fleet

rejuvenation in line with a decrease in fleet utility, a decrease in cash and banks, a decrease in trade receivables, a decrease in investment, a decrease in non-current assets, a decrease in the Company's liquidity, and the elimination of unproductive spare parts.

4.2. Different Test

Normality Test

The normality test aims to determine whether the research data is normally distributed. The following is a normality test that researchers have carried out can be seen in the table below.

Table 2. Shapiro Wilk Test Results

	Tests of Normality					
	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Before the Pandemic_NPM	,181	15	,199	,921	15	,198
During the Pandemic_NPM	,228	15	,035	,775	15	,002
Before the Pandemic_TATO	,211	15	,070	,851	15	,018
During the Pandemic_TATO	,211	15	,071	,733	15	,001
Before the Pandemic_ROA	,144	15	,200*	,930	15	,271
During the Pandemic_ROA	,213	15	,065	,868	15	,031
Before the Pandemic_ROE	,436	15	,000	,369	15	,000
During the Pandemic_ROE	,342	15	,000	,483	15	,000
Before the Pandemic_EM	,383	15	,000	,483	15	,000
During the Pandemic_EM	,384	15	,000	,623	15	,000

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

a. Lilliefors Significance Correction

The table above shows that the value of the Shapiro-Wilk test in this study was not normally distributed, as indicated by the large significance value [Asymp. Sig. (2-tailed)] below 0,05, namely NPM (during the Covid-19 pandemic of 0,002), TATO (before the Covid-19 Pandemic of 0,018 while during the Covid-19 pandemic of 0,001), ROA (during the pandemic 0,271), ROE (before and during the Covid-19 Pandemic of 0,000), and EM (before and during the Covid-19 Pandemic of 0,000).

4.3. Hypothesis Testing

Test the hypothesis using the Wilcoxon Signed-Rank Test. This test aims to measure the difference between 2 groups of paired data on an ordinal or interval scale.

Table 3. Wilcoxon Signed-Rank Test Results

	Test Statistics ^a				
	<i>During_NPM - Before_NPM</i>	<i>During_TATO - Before_TATO</i>	<i>During_ROA - Before_ROA</i>	<i>During_ROE - Before_ROE</i>	<i>During_EM - Before_EM</i>
Z	-2,897b	-1,648b	-3,067b	-2,101b	-,767b
Asymp. Sig. (2- tailed)	,004	,009	,002	,036	,443

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

The *Wilcoxon Signed-Rank Test* results show that calculating the significance of NPM, TATO, ROA, and ROE shows differences before and during the Covid-19 pandemic, so it can be concluded that H_0 is rejected and H_1 is accepted. The results of the EM significance calculation show that there is no difference before and during the Covid-19 pandemic, so it can be concluded that H_0 is accepted and H_1 is rejected.

A Different Test on the Type of Transportation

There are three types of transportation in the transportation sector, namely land, sea, and air transportation. The impact of the pandemic is certainly different between each type of transportation. Below, we will discuss what types of transportation are most affected by the Covid-19 pandemic.

Wilcoxon Signed-Rank Land Transportation Test

Results in this study, there were 7 land transportation companies, namely PT Maming Enam Sembilan Mineral Tbk (AKSI), PT Adi Sarana Armada Tbk (ASSA), PT Blue Bird Tbk (BIRD), PT Eka Sari Lorena Transport Tbk (LRNA), PT Mitra International Resources Tbk (MIRA), PT Sidomulyo Selaras Tbk (SDMU), and PT WEHA Transport Indonesia Tbk (WEHA).

Table 4. Wilcoxon Signed-Rank Land Transport Test Results

	Test Statistics ^a				
	<i>During_NPM - Before_NPM</i>	<i>During_TATO - Before_TATO</i>	<i>During_ROA - Before_ROA</i>	<i>During_ROE - Before_ROE</i>	<i>During_EM - Before_EM</i>
Z	-2,366b	-,169b	-2,366b	-2,366b	-1,270c
Asymp. Sig. (2- tailed)	,018	,046	,018	,018	,204

a. Wilcoxon Signed Ranks Test
b. Based on positive ranks.
c. Based on negative ranks.

The *Wilcoxon Signed-Rank Test* results on land transportation show that calculating the significance of NPM, TATO, ROA, and ROE shows differences before and during the Covid-19 pandemic, so it can be concluded that H_0 is rejected and H_1 is accepted. The results of the EM significance calculation show that there is no difference before and during the Covid-19 pandemic, so it can be concluded that H_0 is accepted and H_1 is rejected.

Wilcoxon Signed-Rank Sea Transportation Test

In this research, there are 4 sea transportation companies, namely PT Pelayaran Nelly Dwi Putri Tbk (NELY), PT Temas Tbk (TMAS), PT Berlian Laju Tanker Tbk (BLTA), and PT Samudera Indonesia Tbk (SMDR).

Table 5. Wilcoxon Signed-Rank Sea Transport Test Results

	Test Statistics ^a				
	<i>During_NPM - Before_NPM</i>	<i>During_TATO - Before_TATO</i>	<i>During_ROA - Before_ROA</i>	<i>During_ROE - Before_ROE</i>	<i>During_EM - Before_EM</i>
Z	-1,095b	-,552c	,000d	-,730b	-1,095b
Asymp. Sig. (2- tailed)	,273	,581	1,000	,465	,273

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.
c. Based on positive ranks.
d. The sum of negative ranks equals the sum of positive ranks.

The results of the *Wilcoxon Signed-Rank Test* on sea transportation show that the results of calculating the significance of NPM, TATO, ROA, ROE, and EM indicate that there is no difference before and during the Covid-19 pandemic, so it can be concluded that H_0 is accepted and H_1 is rejected.

Wilcoxon Signed-Rank Air Transportation Test

In this research, there are 4 air transportation companies, namely PT AirAsia Indonesia Tbk (CMPP), PT Jaya Trishindo Tbk (HELI), PT Garuda Indonesia (Persero) Tbk (GIAA) and PT Indonesia Transport & Infrastructure (IATA).

Table 6. Wilcoxon Signed-Rank Air Transport Test Results

	Test Statistics ^a				
	<i>During_NPM - Before_NPM</i>	<i>During_TATO - Before_TATO</i>	<i>During_ROA - Before_ROA</i>	<i>During_ROE - Before_ROE</i>	<i>During_EM - Before_EM</i>
Z	-1,826b	-1,826b	-1,826b	-,365b	-,730b
Asymp. Sig. (2- tailed)	,048	,048	,048	,015	,465

a. Wilcoxon Signed Ranks Test
b. Based on positive ranks.

The Wilcoxon Signed-Rank Test results on air transportation show differences in calculating the significance of NPM, TATO, ROA, and ROE before and during the Covid-19 pandemic, can be concluded that H_0 is rejected and H_1 is accepted. The results of the EM significance calculation show that there is no difference before and during the Covid-19 pandemic, so it can be concluded that H_0 is accepted and H_1 is rejected.

The policy of the Implementation of Community Activities Restrictions Enforcement (CARE) to prevent the spread of Covid-19 transmission caused a decrease in the number of passengers from normal capacity due to the closure of specific locations, such as tourist attractions, prohibition of going home (Idul Fitri, Christmas, New Year), has not opened learning activities which are carried out online, and restrictions on other social activities.

Head of Balitbanghub Dr.Ir.Umiyatun Hayati stated that “means and transportation are essential because Indonesia has two-thirds of the sea area. Sea transportation has a significant role in supporting logistics in Indonesia, especially ships used for shipping goods to small and outer islands”. The government provides exceptions for sea transportation services that transport logistics goods, such as necessities, medicines, medical devices, and other strategic items (Astutik, 2020). Thus, logistics distribution services through sea transportation will continue to operate correctly. Intran Executive Director Deddy Herlambang stated that land transportation is one of the community’s modes of choice because the rates are affordable. Meanwhile, the Directorate of Road Transportation, the Director-General of Land Transportation of the Ministry of Transportation, stated that the Covid-19 pandemic impacted land transportation (buses and transportation), which caused a decrease in the number of passengers and goods for all modes of public transportation (Artanti, 2020). Intron Executive Director Deddy Herlambang stated that land transportation is one of the modes of choice that is widely used by the community because the fares are also affordable. Meanwhile, the Directorate of Road Transportation, the Director General of Land Transportation of the Ministry of Transportation, stated that the Covid-19 pandemic had an impact on land transportation (buses and transportation) which caused a decrease in the number of passengers and goods for all modes of public transportation (Yati, 2022).

Overall, the most affected by Covid-19 is air transportation. Through the Minister of Transportation Regulation Number 18 of 2020 concerning Transportation Control in the Context of Preventing the Spread of Covid-19, the Ministry of Transportation has regulated the control of air transportation activities. These controls include reducing airport capacity, limiting the number of passengers to 50% of the maximum seating capacity, and adjusting fares. The regulation also regulates the technical implementation of travel using airplane mode. This provision influences the behavior of airline airlines (Kementerian Perhubungan Republik Indonesia & Universitas Indonesia, 2020).

5. Conclusions

Based on *DuPont* system analysis results, most of the Transportation and Logistics Sector Companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2020 period are in bad condition due to the Community Activities Restrictions Enforcement (CARE) policy. Restrictions on transportation modes to prevent the spread of Covid-19 transmission have caused a decrease in the number of passengers from normal capacity due to the closure of specific locations, a decrease in transportation volume, and a ban on going home (Idul Fitri, Christmas, New Year). The results of the testing of all Transportation and Logistics Sector Companies carried out using the Wilcoxon Signed-Rank test different test there are differences in performance before and during the Covid-19 pandemic

on NPM, TATO, ROA, and ROE. Meanwhile, EM did not experience any difference in performance before and during the Covid-19 pandemic. In testing the types of transportation, land, and air transportation have the different performance of NPM, TATO, ROA, and ROE, while there is no difference in performance in EM. In sea transportation, the results of NPM, TATO, ROA, ROE, and EM did not experience differences in performance before and during the Covid-19 pandemic. Overall, the maximum for Covid-19 is air transportation.

Companies carrying out operational activities must adjust to current conditions and see the potential of each field of activity to use and develop rational methods during the Covid-19 pandemic, for example, making operational costs and debt efficiency. Investors must be more selective in choosing the right company to invest in by paying attention to *return on equity* and *return on assets* to assess financial performance in generating profits or profits. Investors also follow company information during the Covid-19 pandemic to get good results and minimize risk in investing. Further researchers are expected to be able to conduct research that will discuss topics related to the analysis of financial performance before and during the Covid-19 pandemic using other methods and in the next period and involving the latest state of the economy in the transportation and logistics sector.

References

- Adi Sarana Armada Tbk. n.d. "Adi Sarana Armada Tbk (ASSA)." Retrieved December 29, 2021 (www.assa.id).
- AirAsia Indonesia Tbk. n.d. "AirAsia Indonesia Tbk (CMPP)." Retrieved December 29, 2021 (www.airasia.com).
- Amelya, Bella et al. 2021. "Analisis Perbandingan Kinerja Keuangan PT Indofood Cbp Sukses Makmur Tbk Sebelum Dan Setelah Adanya Pandemi Covid-19." *Jurnal Ilmiah MEA (Manajemen, Ekonomi, Dan Akuntansi)* 5(3):534–51.
- Apriyanto, Eko. 2020. "Resesi Dan Gigit Jari Sektor Transportasi." *DetikNews*. Retrieved September 21, 2021 (<https://news.detik.com/kolom/d-5276560/resesi-dan-gigit-jari-sektor-transportasi>).
- Artanti, Annisa Ayu. 2020. "Dibandingkan Moda Lain, Transportasi Laut Dinilai Masih Beruntung Tahun Ini." *Medcom.Id*. Retrieved (<https://www.medcom.id/ekonomi/bisnis/4baYYarb-dibandingkan-moda-lain-transportasi-laut-dinilai-masih-beruntung-tahun-ini>).
- Astutik, Yuni. 2020. "Pemerintah Kawal Kelancaran Logistik Di Tengah Covid-19." *CNBC Indonesia*. Retrieved (<https://www.cnbcindonesia.com/news/20200509162214-4-157337/pemerintah-kawal-kelancaran-logistik-di-tengah-covid-19>).
- Azizah, Moena, and Nengzih. 2021. "Financial Performance Analysis of Sharia Banks in Indonesia and Malaysia Using Dupont System." *Saudi Journal of Economics and Finance* 5(1):28–38. doi: 10.36348/sjef.2021.v05i01.003.
- Badan Pusat Statistika. 2020. "[Seri 2010] Laju Pertumbuhan PDB Seri 2010 (Persen)." *bps.go.id*. Retrieved September 21, 2021 (<https://www.bps.go.id/indicator/11/104/2/-seri-2010-laju-pertumbuhan-pdb-seri.html>).
- Blue Bird Tbk. n.d. "Blue Bird Tbk (BIRD)." Retrieved December 29, 2021 (www.bluebirdgroup.com).
- CNN Indonesia. 2021. "Beda PSBB Dan PPKM Mikro Kendalikan Pandemi Covid-19." *CNN Indonesia*. Retrieved September 21, 2021 (<https://www.cnnindonesia.com/nasional/20210621161039-20-657345/beda-psbb-dan-ppkm-mikro-kendalikan-pandemi-covid-19/2>).
- Dewi, Meutia. 2017. "Analisis Rasio Keuangan Untuk Mengukur Kinerja Keuangan PT Smartfren Telecom, Tbk." *Jurnal Penelitian Ekonomi Akuntansi (JENSI)* 1(1):1–14.
- Ediningsih, Sri Isworo, and Agung Satmoko. 2022. "Perbedaan Kinerja Keuangan Sebelum Dan Saat Pandemi Covid-19 Pada Perusahaan Makanan Dan Minuman Di Bursa Efek Indonesia." 7(Februari):44–54.

- Eka Sari Lorena Tbk. n.d. "Eka Sari Lorena Transport Tbk (LRNA)." Retrieved December 29, 2021 (lorena-transport.com).
- Esomar, Maria J. F., and Restia Christianty. 2021. "Dampak Pandemi Covid-19 Terhadap Kinerja Keuangan Perusahaan Sektor Jasa Di BEI." *Jkbn (Jurnal Konsep Bisnis Dan Manajemen)* 7(2):227–33. doi: 10.31289/jkbn.v7i2.5266.
- Garuda Indonesia (Persero) Tbk. n.d. "Garuda Indonesia (Persero) Tbk (GIAA)." Retrieved December 29, 2021 (www.garuda-indonesia.com).
- Hafsah et al. 2021. "Analisis SWOT Terhadap Strategi Pemasaran Produk Pembiayaan Murabahah (Studi PT. BNI Syariah Tbk Kantor Cabang Veteran Makassar)." *IBEF: Islamic Banking, Economic and Financial Journal* 1(2):6.
- Handoyono. 2021. "Ada Pembatasan Kegiatan, Jam Operasional Mal Dibatasi Hingga Pukul 19.00." *Kontan Nasional*. Retrieved September 21, 2021 (<https://nasional.kontan.co.id/news/ada-pembatasan-kegiatan-jam-operasional-mal-dibatasi-hingga-pukul-1900>).
- Hery. 2018. *Analisis Laporan Keuangan*. Cetakan 3., Jakarta: Grasindo.
- Indonesia Transport & Infrastr Tbk. n.d. "Indonesia Transport & Infrastr Tbk (IATA)." Retrieved December 29, 2021 (indonesia-air.com).
- Jaya Trishindo Tbk. n.d. "Jaya Trishindo Tbk (HELI)." Retrieved December 29, 2021 (www.jatigroup.com).
- Kariyoto. 2017. *Analisa Laporan Keuangan*. Cetakan 1., Malang: UBMedia.
- Kasmir. 2018. *Analisis Laporan Keuangan*. Cetakan 11. Depok: Rajawali Pers.
- Kementerian Perhubungan Republik Indonesia, and Universitas Indonesia. 2020. "Optimalisasi Kinerja Sektor Penerbangan Di Dalam Dan Setelah Deraan Pandemic Covid-19." <https://distp.ui.ac.id/>. Retrieved March 2, 2022 (https://distp.ui.ac.id/wp-content/uploads/2020/11/03-Policy-Brief-Penerbangan_update.pdf).
- Krisnaryatko, Niko, and Kristianti Ika. 2019. "Analisis Kinerja Keuangan Perusahaan Dengan Du Pont System (Studi Pada Nvidia Corporation Dan Advanced Micro Devices, Inc. Tahun 2015-2017)." *Jurnal Akuntansui Keuangan Dan Bisnis* 12(2):77–86.
- Li, Ding. 2021. "Analysis of Enterprise Profitability Based on Dupont Analysis Method-Taking China Life Insurance (Group) Company as an Example." *E3S Web of Conferences* 233. doi: 10.1051/e3sconf/202123301173.
- Lubis, Nurul, 'Izzah. 2018. "Analisis Pengukuran Kinerja Keuangan Menggunakan Dupont System." *Jurnal Akuntansi Dan Keuangan Kontemporer* 1(1):1–19.
- Lumenta, M. et al. 2021. "Analisis Perbandingan Kinerja Keuangan Perusahaan Transportasi Sebelum Dan Saat Pandemi Covid-19." *Emba* 9(3):341–54.
- Maming Enam Sembilan Tbk. n.d. "Maming Enam Sembilan Tbk (AKSI)." Retrieved December 29, 2021 (www.mesmineral.co.id).
- Mitra International Resources Tbk. n.d. "Mitra International Resources Tbk (MIRA)." Retrieved December 29, 2021 (www.mitrarajasa.com).
- Prasetyo, Oky Firman, and Kurnia Isnuwardiati. 2022. "Perbandingan Kinerja Keuangan Perusahaan Manufactur Dengan Metode Du-Pont Saat Pra." *IX*:220–30.
- Pelayaran Nelly Dwi Putri Tbk. n.d. "Pelayaran Nelly Dwi Putri Tbk (NELY)." Retrieved December 29, 2021 (nellydwiputri.co.id).
- Riyanto, Didik et al. 2021. "Kata Kunci: Du Pont System , NPM, Total Aset Turn Over , Kinerja Keuangan, ROI." *1(2)*:57–68.
- Samudera Indonesia Tbk. n.d. "Samudera Indonesia Tbk (SMDR)." Retrieved December 29, 2021

(www.samudera.id).

- Shabani, Halit et al. 2021. "Financial Performance of the SMEs Sector in Kosovo: An Empirical Analysis Using the DuPont Model." *International Journal of Sustainable Development and Planning* 16(5):819–31. doi: 10.18280/ijstdp.160503.
- Sidomulyo Selaras Tbk. n.d. "Sidomulyo Selaras Tbk (SDMU)." Retrieved December 29, 2021 (www.sidomulyo.com).
- Sukamulja, Sukmawati. 2019. *Analisis Laporan Keuangan Sebagai Dasar Pengambilan Keputusan Investasi*. Yogyakarta: ANDI Yogyakarta.
- Sumarni, Yenti. 2020. "Pandemi Covid-19: Tantangan Ekonomi Dan Bisnis." *Al-Intaj: Jurnal Ekonomi Dan Perbankan Syariah* 6(2):46. doi: 10.29300/aij.v6i2.3358.
- Supriyono, R. A. 2018. *Akuntansi Keperilakuan*. Yogyakarta: Gadjah Mada University Press.
- Temas Tbk. n.d. "Temas Tbk (TMAS)." Retrieved December 29, 2021 (www.temasline.com).
- Ulupu, I. Gusti Ketut Agung et al. 2021. *Pelaporan Keuangan Dan Praktik Pengungkapan*. Cetakan 1., Kuningan: Goresan Pena.
- WEHA Transportasi Indonesia Tbk. n.d. "WEHA Transportasi Indonesia Tbk (WEHA)." Retrieved December 29, 2021 (www.whitehorse.co.id).
- Yati, Rahmi. 2022. "Jaga Penyebaran Covid-19, Intran: Transportasi Darat Wajib Antigen." *bisnis.com*. Retrieved March 2, 2022 (<https://ekonomi.bisnis.com/read/20220105/98/1485790/jaga-penyebaran-covid-19-intran-transportasi-darat-wajib-antigen>).