Measuring Transportation and Logistics Companies' Performance Before and During the Covid-19 Pandemic

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Abstract. The Covid-19 pandemic has made the world economy, including Indonesia, unstable. Indonesia is a very large country consisting of various islands, and due to Covid-19, the Indonesian government has implemented the Social Activity Restriction (PPKM) system. The present study aims to see whether the Covid-19 pandemic influences the performance of transportation and logistics companies in Indonesia. This study used 45 transportation and logistics companies listed on the Indonesia Stock Exchange. This study compared the performance before (2019) and after (2020) the pandemic. This study applied the normal distribution test and then the T-paired test to see the performance before and during the pandemic. The results of this study show the influence of the Covid-19 pandemic, seen from the Return on Equity (ROE), Return on Assets (ROA), and Return on Inventory (ROI).

Keywords: Return on equity · return on assets · return on inventory

1 Introduction

Indonesia is a vast country consisting of various islands, from Sabang to Merauke. Due to this, the market share related to transportation and logistics is still extensive. It can be seen from the number of transportation and logistics companies (private and state-owned) included in this industry and the increase in e-commerce in Indonesia, so people's needs for the delivery of goods are increasingly varied.

The increase in Indonesia's transportation and logistics industry sector is excellent for Indonesia's economic growth. However, the emergence of external factors that significantly affect this sector is the Covid-19 pandemic. The current Covid-19 pandemic has greatly affected various parts of the world and various sectors of the world economy, including Indonesia. As a developing country, the Indonesian economy is affected by the Covid-19 pandemic.

Based on this background, the authors want to investigate the performance of transportation and logistics companies before and during the Covid-19 pandemic in Indonesia, by comparing the profitability ratios of transportation and logistics companies. The

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authors also want to know whether the Covid-19 pandemic significantly affected the transportation and logistics companies' profitability performance.

Research on profitability performance has often been carried out, especially in Indonesia, but what distinguishes previous research from this current study is the Covid-19 pandemic situation because this situation becomes a research gap that must be analyzed further. In addition, the Covid-19 pandemic that began in 2019 will give short and long-term impacts on all industries, including the transportation and logistics industry.

The current study aims to determine the extent of the Covid-19 pandemic impact on Indonesia's transportation and logistics industry and as an additional source of research in measuring the effect of the pandemic in Indonesia. The formulation of the problem in this study focuses on the profitability ratio, as follows: (a) Is the ROE of transportation and logistics companies in Indonesia different before and during the Covid-19 pandemic? (b) Is the ROA of transportation and logistics companies in Indonesia different before and during the Covid-19 pandemic? (c) Is the ROI of transportation and logistics companies in Indonesia different before and during the Covid-19 pandemic?

The company's financial condition is measured by how big the financial ratios are. Financial ratios are a company's way of measuring its ability to manage its business. This study focuses on profitability performance: Return on Equity (ROE), Return on Assets (ROA), and Return on Investment (ROI) [1].

Company's performance in terms of its ROA is quite good because it can manage its assets effectively [2]. The company's current ratio and debt ratio are not good. Current ratio does not affect ROA [3]. Total asset turnover, debt to equity ratio, debt ratio, net profit margin, sales growth and firm size affect ROA. Return on equity has no significant effect on stock prices, partially net profit margin has a significant effect on stock prices, partially return on assets has a significant effect on stock prices, simultaneously return on equity, net profit margin, and return on assets have a significant effect on property stock prices [4]. Meanwhile, earnings per share, return on investment, and debt to equity ratio variables have an impact on stock prices [5].

In this study, the authors used two theories: the Signaling theory, which emphasizes that the company's performance in which there is information on the company's financial statements is fully informed to the capital market [3] and agency theory that relates to the relationship between the parties involved in the company. There is a conflict between the majority shareholder and the manager. The conflict is explicitly or implicitly reflected in the financial statements [6].

Return on Equity (ROE) can be measured by comparing net income after tax with total equity. The definition of ROE is a measurement of the income (income) available to company owners (both common and preferred shareholders) for the capital they invest in the company [2]. By calculating the return on equity, we can measure the extent to which the company utilizes its capital to generate profits for the company [2].

Return on Assets (ROA) looks at the extent to which the assets owned by the company are used optimally in producing goods or services to be sold. The greater the ROA indicates that the assets owned have been used optimally in increasing the company's return [2].

Return on Investment (ROI) compares net income after tax with total assets. Return on investment is the extent to which the company's assets used can generate profits for the company. The higher this ratio, the better the company state. ROI shows how much net profit the company obtains when measured by asset value [2].

2 Research Methods

This study used the quantitative method because this research used financial statements as material for analysis so that this research is more objective and in the form of numbers. This study also used secondary data, namely the company's financial statements, to make the research results more fair and valid.

This type of research is a comparative method as this method wants to explain the performance of transportation companies before and during the Covid-19 pandemic. This is done so that researchers can find out the impacts of the Covid-19 pandemic on transportation and logistics companies. The variables studied in this study were return on equity (ROE), return on assets (ROA), and return on investment (ROI).

The data collection technique in this research used the library study method, which takes data from financial statements of transportation and logistics companies that have initial public offerings (IPOs). The sampling technique in this study was carried out randomly. The sample used was transportation and logistics companies listed on the Indonesia Stock Exchange (IDX).

The data analysis method used in this study was the normal distribution test and the paired t-test was used to analyze the company's performance, seen from the differences before and during the Covid-19 pandemic. In this study, SPSS was used as a tool to analyze research.

3 Results and Discussion

The Shapiro-Wilk test was used for this study. This test was chosen because the number of samples before and during the Covid 19 pandemic was less than 50 samples, namely 45 research samples, with return on equity (ROE), return on assets (ROA) and return on investment (ROI) variables.

Table 1 are the results of the normality test in this study.

The normality test results for before and during the Covid-19 pandemic are sig values > 0.05, which means that all research variables in this study are normally distributed, implying that the distribution of data on this research variable has been normally distributed.

After the research variables are normally distributed, a paired t-test was carried out, namely to test whether there are differences before and after covid in return on equity

Table 1. Normality Test Result

	Statistic	Df	Sig
Before Covid	0.975	44	0.856
During Covid	0.966	44	0.788

Table 2. Paired t-test Result

	T	Df	Sig
ROE Bef-Dur Co	−3.91	44	0.013
ROA Bef-Dur Co	−2.87	44	0.023
ROI Bef-Dur Co	−2.24	44	0.045

(ROE), return on assets (ROA), and return on investment (ROI). Table 2 shows the results of paired t-test.

The results of this study are in line with Khoiriah et al. [7], which state that there is an abnormal return effect on LQ45 shares. The Covid-19 pandemic affected the world, both developed and developing economies. The impact of the pandemic has resulted in many companies laying off their employees in large numbers due to the reduced purchasing power of the people and the influence of the Social Activity Restriction (PPKM). Indonesia is a country that enforces PPKM, which has forced companies to implement a "working for home" and for MSMEs, their operating hours are from 11.00 to 20.00 Western Indonesian Time (WIB). These things resulted in a significant decrease in companies' income and a decrease in the attractiveness of foreign investors to invest in Indonesia.

The results of this study are also in line with Shiyammurti [8], where the pandemic virus in Indonesia has reduced the Indonesian economy due to the decline in the Composite Stock Price Index, this decline is also due to rising inflation in Indonesia, thereby reducing the level of people's purchasing power and sluggish investment from abroad.

4 Conclusion

Research the conclusion of this study is that the impact of the Covid-19 pandemic has greatly affected the company's income, due to government policies related to PPKM and the public who reduce their consumption, so that it has an impact on companies that reduce the consumption of raw materials for the production of their goods. This study also still has shortcomings in terms of the selected object is only limited to transportation and logistics companies, it is hoped that in the future other studies can use a wider sample and more varied variables.

References

1. Hani, D. Q. (2014). *Pengaruh Kinerja Keuangan (PER, PBV, DER dan ROE) Terhadap Harga Saham Industri Manufaktur yang Terdaftar di BEI Periode 2008–2010* (pp. 15–32) [Tesis, Yogyakaeta, UGM].
2. Wardayani, W., & Wahyuni, D. S. (2019). Analisis Return on Asset, Current Ratio dan Debt Ratio dalam Menilai Kinerja Keuangan pada PT. Pelabuhan Indonesia I (Persero) cabang Belawan. *Jurnal Ilmu Manajemen, 4*(1), 15–32.

3. Hasanah, A., & Enggariyanto, D. (2018). Analisis Faktor-Faktor Yang Mempengaruhi Return On Asset Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. *Journal of Applied Managerial Accounting, 2*(1), 15–25.
4. Wahyudi, A. N. (2019). Laporan Praktik Kerja Lapangan (PKL) di desa Mojosari Kecamatan Kalitidu Kabupaten Bojonegoro. UBAYA, Surabaya.
5. Hennessy, C. A., Livdan, D., & Miranda, B. (2010). Repeated signaling and firm dynamics. *The Review of Financial Studies, 23*(5), 1981–2023.
6. Astika, I. B. (2010). Pembentukan Return Saham Ekspektasian melalui Manajemen Laba di sekitar Peristiwa Pengumuman Program Opsi Saham Karyawan. *Jurnal Aplikasi Manajemen, 8*(3), 825–835.
7. Khoiriah, M., Amin, M., & Sari, A. F. (2020). Pengaruh Sebelum Dan Saat Adanya Pandemi Covid-19 Terhadap Saham Lq-45 Di Bursa Efek Indonesia Tahun 2020. *Jurnal Ilmiah Riset Akuntansi, 9*(11), 35–50.
8. Shiyammurti, N. R. (2020). Dampak Pandemi Covid-19 di PT. Bursa Efek Indonesia (BEI). *Journal of Accounting Taxing and Auditing, 1*(1), 23–39.