

Z Score Comparative Analysis of Tourism, Restaurant and Hotel Sub-Sector Companies Listed on The Indonesia Stock Exchange Before and After The Implementation of The Covid-19 Vaccine Policy

Analisis Komparatif Z Score Perusahaan Sub Sektor Pariwisata, Restoran dan Hotel Yang Terdaftar Di BEI Sebelum Dan Setelah Penerapan Kebijakan Vaksin Covid-19

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ABSTRACT

This study aimed to determine the impact of vaccine policy implementation on financial performance in terms of the Z-Score value of Tourism, Restaurant and Hotel sub-sector companies listed on the Indonesia Stock Exchange. This type of research is descriptive (descriptive research). The sampling technique in this study was purposive. The sample in this study are Tourism, Restaurant and Hotel Sub-Sector Companies listed on the Indonesia Stock Exchange which issues financial reports for 2020-2021. This study uses secondary data, namely annual financial reports. The analysis technique used is an event study which aims to analyze the differences in the company's Z-Score before and after the Covid-19 Vaccine Policy. This study's results showed no significant difference in the z score of the tourism, restaurant and hotel sub-sector companies before and after the Covid-19 vaccine policy.

Keywords : Z Score, the Covid-19 Vaccine Policy

ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui dampak implementasi kebijakan vaksin terhadap kinerja keuangan ditinjau dari nilai Z-Score perusahaan subsektor Pariwisata, Restoran dan Hotel yang terdaftar di Bursa Efek Indonesia. Jenis penelitian ini adalah deskriptif (penelitian deskriptif). Teknik pengambilan sampel dalam penelitian ini adalah teknik purposive sampling. Sampel dalam penelitian ini adalah Perusahaan Sub Sektor Pariwisata, Restoran dan Hotel yang terdaftar di Bursa Efek Indonesia yang menerbitkan laporan keuangan tahun 2020-2021. Penelitian ini menggunakan data sekunder yaitu laporan keuangan tahunan. Teknik analisis yang digunakan adalah event study yang bertujuan untuk menganalisis perbedaan Z-Score perusahaan sebelum dan sesudah Kebijakan Vaksin Covid-19. Hasil penelitian ini menunjukkan bahwa tidak terdapat perbedaan yang signifikan pada z score perusahaan subsektor pariwisata, restoran dan hotel sebelum dan sesudah kebijakan vaksin Covid-19.

Kata kunci : Z Score, Kebijakan Vaksin Covid-19

1. Introduction

Covid-19 first appeared at the end of December 2019 in Wuhan, China. In March 2020 Covid-19 had spread to Indonesia. The Covid-19 virus not only has an impact on global health but also has an impact on the world economic situation. Many companies experienced a downturn during the Covid-19 outbreak, this is because of the policy of maintaining social distance and large-scale social restrictions, many companies cannot survive in this difficult condition (Rahmah & Novianty, 2021).

In 2021 the Government of Indonesia will start enforcing the mandatory co-19 vaccine policy, it is hoped that the vaccine's spread of the co-19 virus will be more controlled so that the

national economic situation will improve including the tourism sector. The following is data regarding financial performance in several tourism, restaurant and hotel sub-sector companies listed on the Indonesia Stock Exchange before and after the co-19 vaccine policy.

Table 1. Financial Performance of Tourism, Restaurant and Hotel Sub-Sector Companies Listed on the Indonesia Stock Exchange

No.	Stock code	Profit 2020 (Before vaccine Policy)	Profit 2020 (After Vaccine Policy)
1	PNSE	(40,628,111,375)	(29,698,987,307)
2	EAST	5,183,545,503	12,146,882,356
3	FAST	(377,184,702)	(295,737,750)
4	MAMI	(60,500,867,524)	(36,214,707,144)
5	PDES	(83,349,771,476)	(60,591,729,163)

Source: Bursa Efek Indonesia, 2022

Based on the table above, it can be seen from the 5 companies in the tourism, restaurant and hotel sub-sector that were listed on the Indonesia Stock Exchange, after the vaccine policy experienced they have an increase in profits. Out of 5 companies only 1 company experienced no losses, but 4 companies, although still in a loss condition, experienced a decline in value. Losses after the vaccine policy. Based on this background, this research is interested in studying "A Comparative Analysis of Z-Score Values of Companies in the Tourism, Restaurant and Hotel Sub Sector Listed on the Indonesia Stock Exchange Before and After the Implementation of the Covid-19 Vaccine Policy."

Financial Statement

According to Sari and Arif, 2020 financial reports are a company's financial records at a certain time or for a certain period. According to (Fahmi, 2017) financial statements are information that describes the condition of a company, and in the future it will become information that describes a company's performance. According to (Sanjaya, 2018) financial statement analysis is a method or technique of analysis of financial statements that functions to convert data originating from financial reports as raw material into information that is more useful, deeper, and sharper with certain techniques.

The main objective of financial analysis is future performance. Financial statement analysis wants to know the level of profitability (profit) and the level of risk or soundness of a company. The level of risk of a company can be seen from the possibility that the company will experience financial difficulties or experience bankruptcy (Hanafi and Halim, 2016; Setiawan et al., 2022)

Financial Performance

According to (Fahmi, 2017) financial performance is an analysis carried out to see the extent to which a company has used the rules of financial implementation properly and correctly. According to Hutabarat, (2020) there are several stages to analyzing the financial performance of a company in general, namely:

1. Reviewing financial report data.
2. Perform calculations.
3. Make a comparison of the calculation results that have been obtained.
4. Perform interpretation (Interpretation) of the various problems found
5. Finding and providing solutions to various problems found.

Financial Distress

Financial distress is a company's inability to meet its current financial obligations (Shilpa and Amulya, 2017). Financial distress can be interpreted as a situation where a company

experiences liquidity difficulties or its ability to fulfil its obligations. Based on the above understanding, it can be concluded that financial distress is a situation where a company is experiencing financial difficulties making it difficult to pay off the obligations that must be paid (Devi et al., 2020; Kadasae & Mahamat, 2022).

Bankruptcy

1. Economic Distressed

Economic failure means that the company's income is unable to cover its costs, this means that the profit is less than the cost of capital. In economic terms, the cash flow generated from the company is smaller than the expected cash flow.

2. Financial failure (financially Distressed)

Financial failure or financial distress means the company is experiencing funding difficulties (in terms of cash or working capital). Bankruptcy is a condition where the company cannot manage profits in its operational activities, causing funding difficulties, and ultimately the company experiences a decrease in profits so that bankruptcy occurs.

According to (Kadim and Sunardi, 2018), corporate bankruptcy is a phenomenon that often occurs in the business world, both influenced by internal and external parties of the company

Benefits of Bankruptcy Analysis

Bankruptcy analysis is needed for companies to provide information to the parties involved with the company regarding the company's performance. Bankruptcy as an early warning of company conditions really helps companies experiencing financial distress to improve their performance before bankruptcy occurs (Nugroho, 2018). According to (Hanafi and Halim, 2016) bankruptcy analysis is carried out to obtain early warnings of bankruptcy (early signs of bankruptcy).

Altman Z Score

The Altman Z-score Analysis Model is an analytical method that is applied in predicting bankruptcy in companies; besides that it can be used to assess the success rate of company performance in using, utilizing and managing funds contained in the company (Purnomo, 2014).

Altman Z-Score Type

According to (Hani, 2015) the Altman Z-score model for predicting bankruptcy is divided into three models, which are as follows:

1. The First Altman Z-score Model

In his research, Altman produced the first financial distress and bankruptcy model. The bankruptcy equation of this model is intended for companies engaged in manufacturing. The first Altman model equation is as follows:

$$Z = 1,2 (X1) + 1,4 (X2) + 3,3 (X3) + 0,6 (X4) + 1 (X5)$$

Explanation :

Z = Financial Distress Index

X1 = Working Capital to Total Assets

X2 = Retained Earnings to Total Assets

X3 = Earnings Before Interest and Taxes to Total Assets

X4 = Market Value of Equity to Book Value of Debt

X5 = Sales to Total Assets

Table 2. Criteria For Cut-Off Point First Z-Score Model

Criteria	Value Z
Not bankrupt if Z >	2,99
Areas prone to bankruptcy (Grey Area)	1,81-2,99
Bankrupt if Z <	1,81

Source: Hani, 2015

2. Revised Altman Method

The model developed by Altman underwent revision. This revised model is intended so that the prediction model is not only used in manufacturing companies but can also be used for companies other than manufacturing. The equation of the revised Altman model is as follows:

$$Z = 0,717 (X1) + 0,874 (X2) + 3,107 (X3) + 0,420 (X4) + 0,998 (X5)$$

Explanation :

Z = *Financial Distress Index*

X1 = *Working Capital to Total Assets*

X2 = *Retained Earnings to Total Assets*

X3 = *Earnings Before Interest and Taxes to Total Assets*

X4 = *Book Value of Equity to Book Value of Debt*

X5 = *Sales to Total Asset*

Table 3. Revision Z-score Model cut-off point criteria

Criteria	Value Z
Not bankrupt if Z >	2,90
Areas prone to bankruptcy (Grey Area)	1,20-2,90
Bankrupt if Z <	1,20

Source: Hani, 2015

3. Modified Altman Method

The modified Altman Z-score model differs from the first or revised Altman Z-score model. The modified Altman model formula is made simpler, by removing one of the elements of the assessment. The following are the modes of the equation:

$$Z = 6,56 (X1) + 3,26 (X2) + 6,72 (X3) + 1,05 (X4)$$

Explanation :

Z = *Financial Distress Index*

X1 = *Working Capital to Total Assets*

X2 = *Retained Earnings to Total Assets*

X3 = *Earnings Before Interest and Taxes to Total Assets*

X4 = *Book Value of Equity to Book Value of Debt*

Table 4. Modified Z-score model cut-off point criteria

Criteria	Value Z
Not bankrupt if Z >	2,6
Areas prone to bankruptcy (Grey Area)	1,1-2,6
Bankrupt if Z <	1,1

Source: Hani, 2015

2. Methods

Types of research

Based on the formulation of the problem that has been described, this research is classified as descriptive research. According to (Nur and Bambang, 1999) Descriptive research is research in the form of current facts from a population. The purpose of this study is to explain aspects that are relevant to the observed phenomena. Types and Sources of Data in this research uses secondary data, the financial report data (Annual Financial Reports) of companies in the tourism, restaurant and hotel sub-sector listed in Bursa Efek Indonesia.

Population, Sample and Data Collection

The population in this study were all companies in the tourism, restaurant and hotel sub-sector listed on the Indonesia Stock Exchange, namely 35 companies. The sample for this study consisted of companies in the Tourism, Restaurant and Hotel sub-sectors listed on the Indonesia Stock Exchange that had passed the sample selection criteria set by the researcher. The sampling technique used was purposive sampling, namely, groups or objects taken based on certain criteria (Jumirin, 2011). Based on the criteria set by the researchers, out of 35 companies engaged in the tourism, restaurant and hotel sub-sector, 29 met the criteria set by the researchers.

Analysis Method

1. Descriptive Analysis

The analytical method used is descriptive analysis, which determines the financial performance of companies operating in the Tourism, Restaurant and Hotel sub-sectors listed on the Indonesia Stock Exchange based on the Z-Score value before and after the government's Covid-19 vaccine policy.

2. Normality Test

The normality test is a part of the data analysis requirements test, meaning before carrying out the actual analysis. The normality test aims to test whether or not the research data carried out has a normal distribution (Nugrahanti, 2018). The normality test that is often used is the Kolmogorov-Smirnov method, with the basis for making decisions as follows:

- a. A significant value < 0.05 means the data is not normally distributed
- b. Significant value > 0.05 , the data is normally distributed

3. Hypothesis Test

Paired Sample t-Test (Singgih, 2014) This test was carried out on paired samples with the same subject, but experienced two different treatments and measurements. Paired Sample t Test is a parametric test when the data is normally distributed. The Wilcoxon test is a nonparametric test used to compare two paired groups by looking at the differences between the two groups being compared. The Wilcoxon test is a nonparametric test for data that is not normally distributed. The Wilcoxon test is a nonparametric test used to compare two paired groups by looking at the differences between the two groups being compared (Jonathan, 2014).

3. Results and Discussion

Descriptive Analysis

Table 5. Z Score Value (Revised Altman Method) of Hotel and Restaurant Tourism Sub-Sector Companies Listed on the Bursa Efek Indonesia Before and After the Covid-19 Vaccine Policy

Stock Code	Z Before Vaccine	Z After Vaccine
BAYU	1.367498277	1.255088555
CLAY	-0.974314158	-1.139664711
DFAM	0.161092509	0.147269602
EAST	0.216326352	0.402011205
FAST	1.162838751	1.153527405
FITT	-0.68708852	-0.383979117
HRME	-0.252395639	-0.272937742
ICON	0.806683424	0.76417465
INPP	0.134783091	0.337688666
JGLE	-0.111806331	0.071260011
JJHD	0.24764849	0.223907318
JSPT	0.244208974	0.160220559
KPIG	0.252947224	0.215887578
MAMI	-0.088539358	-0.062859786
MAPB	0.520783645	1.036281864
NASA	0.047839986	0.095032851
NATO	0.141676413	0.109101423
PANR	0.018672064	-0.379415414
PDES	-0.873585913	-1.153636326
PGJO	-2.72703846	-1.95913147
PGLI	-0.043678672	0.605523544
PJAA	-0.112845551	0.081698154
PNSE	-0.123269538	-0.170378795
PSKT	-0.660967405	-0.608737606
PTSP	0.481272977	1.025340892
PZZA	1.49765694	1.699814599
SHID	-0.028157495	-0.006501501
SOTS	-0.323548803	-0.377133587
MINA	-0.17811856	-0.091954306

Source: Processed Data, 2023

Based on the table above, of the 29 companies that became the research sample, out of the 29 companies, 2 companies were included in the grey area / bankrupt-prone category, namely BAYU and PZZA companies, apart from these 2 companies, which were in bankrupt/ unhealthy category.

Normality Test

Table 6. Normality Test Result

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Z Before Vaccine	.178	29	.019	.926	29	.045
Z Aftre Vaccine	.168	29	.035	.948	29	.167

a. Lilliefors Significance Correction

Source: Processed Data, 2023

The normality test is a part of the data analysis requirements test, meaning before carrying out the actual analysis. The normality test aims to test whether or not the research data carried out has a normal distribution (Nugrahanti, 2018). Based on the table above, the sig value is > 0.05, so the data is said to be not normally distributed. So hypothesis testing can be done using the Wilcoxon Test.

Wilcoxon Test

Table 7. Wilcoxon Signed Ranks Test

Ranks				
		N	Mean Rank	Sum of Ranks
Z Before Vaccine	Negative Ranks	15 ^a	12.80	192.00
Z Aftre Vaccine	Positive Ranks	14 ^b	17.36	243.00
	Ties	0 ^c		
	Total	29		

a. Z Aftre Vaccine < Z Before Vaccine

b. Z Aftre Vaccine > Z Before Vaccine

c. Z Aftre Vaccine = Z Before Vaccine

Source: Processed Data, 2023

Based on the table above, it can be seen that there are 15 companies whose Z score after the vaccine is smaller than the Z score before the vaccine, and there are 14 companies whose Z score after the vaccine is greater than the z score before the vaccine.

Table 8. Wilcoxon Test

Test Statistics	
Z Aftre Vaccine- Z Before Vaccine	
Z	-.551 ^b
Asymp. Sig. (2-tailed)	.581

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

Source: Processed Data, 2023

Based on the table above, it can be seen that the significant value is 0.581 > 0.05. This indicates no difference in the Z Score of Tourism, Restaurant and Hotel Sub Sector Companies Listed on the Indonesia Stock Exchange Before and After the Covid 19 vaccine policy. This indicates that the vaccine policy has not improved the financial performance conditions of Tourism sub-sector companies. Restaurants and hotels during the Covid-19 pandemic

4. Conclusions

Based on the research above, several points of conclusion can be drawn:

- a. The Covid-19 vaccine policy in 2021 has not been able to improve the condition of financial performance in tourism, restaurant and hotel sub-sector companies
- b. Of the 29 companies used as research samples, only 14 obtained a higher z-core score after the vaccine policy than before.
- c. There is no significant difference in the z score of companies in the Tourism, Restaurant and Hotel Sub Sectors Companies Listed on the Indonesia Stock Exchange Before and After the Covid-19 vaccine policy.

Based on the results of the above research, several points of advice can be formulated as follows:

- a. The Indonesian government is more aggressively implementing the Covid-19 vaccine so that the Covid-19 pandemic is under control and the national economic situation improves.
- b. Suppose the Covid-19 pandemic is sufficiently under control. In that case, the Indonesian government is expected to simplify regulations to make it easier for tourists to visit Indonesia so that it can encourage improvements in the tourism, restaurant and hotel sub-sectors.

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