Comparison of The Impact of Covid-19 on The Probability of Financial Distress between Health and Tourism Companies

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Abstract. Covid-19 is a disease outbreak that has damaged the sustainability of many companies, but behind these losses there are actually benefits that are obtained by several sectors, one of the example which can be seen in the income level of several sectors such as the tourism sector and the health sector. The probability of financial distress can be one of the factors that represent the company's performance in maintaining its stability. This research aims to analyze the comparison of levels of financial distress before, during, and after Covid-19 in Health and Tourism sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2021 period. The sample consists of 18 companies from the health sector and 23 companies from the tourism sector. This research is an event study method and uses the Khaira Model to determine the probability of a company's financial distress. The Results Obtained In 2019 and 2020 the probability level of financial distress for health and tourism companies is still relatively healthy and there is no significant difference. However, in 2021 the probability level of health financial distress is better than tourism and there is a significant difference.

Keywords: Covid-19; Probability of Financial Distress; Health and Tourism Sector.

1. Introduction

The onset of the Covid-19 epidemic was initially identified in Wuhan City, Hubei, China on December 31, 2019. This virus rapidly disseminated and profoundly impacted the entire globe. On March 11, 2020, the World Health Organisation (WHO) officially designated it a pandemic. The initial confirmed case of COVID-19 in Indonesia was identified on March 2, 2020. Since one month, the covid outbreak in Indonesia has recorded 1,528 positive corona virus patients. Of these, 81 patients have recovered and 136 patients have died.

The Covid-19 pandemic has not only affected the economy in the health sector but also in tourism. In Indonesia, the health and pharmaceutical sectors have shown positive performance. In 2011 the growth of the health sector reached 9.25 percent and continued to increase until 2015, then stagnated four years later and only rose again in 2019. Based on data published by BPS, the rate of health growth in 2019, was recorded at 8.66 percent. Meanwhile, in 2020 it recorded a growth of 11.56 percent and in 2021, the health sector far surpassed several sectors that dominate the National GDP. This shows the disparity in the growth of the health sector that was so marked after the pandemic hit Indonesia. The worrying state of the COVID-19 pandemic

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has made the government continue to try to overcome and minimize cases of COVID-19 in Indonesia by implementing large social programs (PSBB), PPKM (Enforcement of Restrictions) policies, doing work from home , prohibiting entry into the community. Indonesia for citizens who prevent covid-19, and the implementation of vaccine injections for the community.

The tourism industry company is among the sectors most significantly impacted by the newly implemented regulations that have a substantial influence on the country's economic sector (Jehezkiel C. & Lulu S. 2021). The most dreaded peril that poses a significant risk to the tourism industry is none other than corporate insolvency. The Central Statistics Agency (BPS) data indicates a decrease in the number of foreign tourists visiting Indonesia in the beginning of 2020. The number of visits decreased from 1.37 million in 2019 to 1.27 million. The hotel occupancy rate in popular tourist destinations like Bali has declined. The occupancy rate of five-star hotels in Bali was 45.98% in February 2020. In March 2020, the percentage decreased to 25.41%. We conducted an analysis of health and tourism sector enterprises in Indonesia to examine the disparity in financial hardship experienced by these sectors before and after the Covid-19 outbreak. The employed methodology consists of utilising the event study approach and the Khaira model for analysis.

2 Literature Review

Financial distress refers to a situation when a firm or individual is unable to generate enough revenue or income to meet their financial obligations and cannot pay them.The primary causes of this phenomenon are typically attributed to elevated fixed expenses, assets that are difficult to convert into cash, or revenues that are very susceptible to economic contractions. Additionally, it may arise from external influences, such as governmental limitations on commercial activities as a response to the COVID-19 pandemic. Michael A. Steel, 2020 Disregarding the indications of financial hardship prior to it escalating can have catastrophic consequences. At some point, serious financial difficulty may become irreparable due to an excessive accumulation of commitments that cannot be repaid by the organisation or individual. In the event of such occurrence, bankruptcy could become the sole recourse.Adam Hayes, 2021.

In 2020, the Director-General of the World Health Organisation (WHO) provided an initial statement during a press conference regarding COVID-19. The current number of confirmed cases is at over 118,000, spread over 114 countries, with a total death toll of 4,291. In hospitals, there are thousands of individuals who are currently battling for their lives.In the upcoming days and weeks, we anticipate a further increase in the number of cases, fatalities, and affected countries.The World Health Organisation (WHO) has been continuously evaluating this outbreak and we are profoundly worried about the distressing extent of transmission and severity, as well as the concerning lack of action.Consequently, we have determined that COVID-19 can be classified as a pandemic.

According to the study findings by the Ministry of Manpower, around 88 percent of enterprises that were impacted by the pandemic in the past six months had overall financial losses. Reportedly, the Covid-19 epidemic had a direct impact on 90% of firms in Indonesia. The data is derived from a survey that he conducted through internet, telephone, and email methods. The survey included 1,105 enterprises that were selected using a probability sample technique with a 95 percent confidence level and a margin of error (MoE) of 3.1 percent. The survey covered 32 provinces in Indonesia.

Various service sectors experienced significant impact, while industry and agriculture were also adversely affected. The pandemic had a significant impact on financial markets, causing varying levels of instability in different markets and products.

Pandemics can also lead to reduced tax receipts and increased spending, resulting in fiscal hardship, particularly in lower-middle-income countries (LMICs) where fiscal limitations are more pronounced and tax systems are still in need of enhancement. The economic impact severity was evident in Liberia during the Ebola virus outbreak, as it led to increased public health spending, economic decline, and reduced government revenue due to the inability to generate income as a result of quarantine and curfews. Pandemics often result in economic shocks due to labour scarcity caused by disease, increased mortality rates, and fear-driven behavioural changes.

2.1 Different Test Hypothesis

The tourism industry worldwide has experienced a significant and far-reaching effect as a result of the coronavirus epidemic, mostly due to a decline in both local and international tourist demand. The significant decline in demand resulted from the implementation of several travel restrictions by several nations in an effort to mitigate the spread and transmission of the virus, which can lead to catastrophic outcomes.

Suparjo Ramalan (2021) The Regional Government of East Nusa Tenggara (NTT) noted that the occupancy or the number of tourist visits in Labuan Bajo decreased significantly. Throughout 2020, the recorded number of tourists only touched 44,543 people. This number shows a contraction of 82 percent when compared to tourist occupancy in 2019 which reached 256,171. The Head of the West Manggarai Regency Tourism Office stated the decline was due to restrictions on mass movement during the Covid-19 pandemic. Chairman of the Committee for Handling COVID-19 and National Economic Recovery, Airlangga Hartarto, acknowledged that the impact of the COVID-19 pandemic on the national economy, particularly in the tourism sector, was hit hard. In fact, one of the national tourist destinations, namely in Bintan Regency, Riau Islands (Kepri), experienced a very significant decline in income. "Revenue from the tourism sector in Bintan has fallen by 90 percent during the pandemic," Airlangga said in a teleconference, Friday, September 25, 2020.

Unlike other sectors, the health sector can certainly benefit from other sectors considering that COVID-19 is a problem that can be overcome through treatment.

Based on the financial reports of several health sectors that can be accessed on the IDX, PT Siloam International Hospitals Tbk (SILO) or Siloam Hospitals Group in the first quarter of 2021 recorded revenue of Rp. 1.91 trillion, an increase of 32.6 percent from revenue for the same period in 2020.

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From these differences, the different test hypotheses are obtained as follows:

H_0 : μ1= μ2

Both probability of financial distress in the tourism sector and the health sector show the same level after Covid-19

H_a: μ1≠ μ2

Both probability of financial distress in the tourism sector and the health sector not in the same level after Covid-19

3 Research Methods

The Stock Exchange (IDX) from 2019 to 2021. The study focuses on a specific group of firms that were listed between 2019 and 2021, encompassing the time before, during, and after the covid-19 pandemic. A total of 41 companies from this group were selected as the sample for this study. The unit of analysis is determined by multiplying 41 by 3 years, resulting in 123 units. The display application will be utilized to do panel data regression analysis. The model employed in this study is:

$$Pi = 1 / [1+ \exp (-5.472 + 9.555\ X_1 – 32.347\ X_2)]$$

This model can be written as:

$$Pi = 1 / [1+ 2.718 - (-5.472 + 9.555\ X_1 – 32.347\ X_2)$$

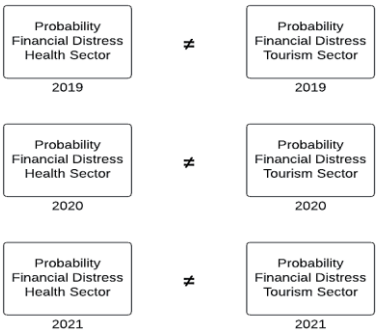

Fig 1. Conceptual Framework.

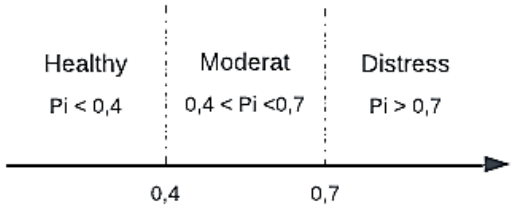

Fig 2. Classification Score P_i

Where:

Pi = The probability of experiencing financial trouble is measured on a scale from 0 to 1. A score of 0 signifies a robust corporation, whereas a score of 1 signifies a company undergoing financial hardship. Values ranging from 0 to 1 represent the likelihood of financial difficulties or the overall condition of the company.

X_1 = Total liabilities/total assets

X_2 = Net income/total assets.

4 Finding and Discussion

This study employs the event study methodology. Event Study is a research methodology that utilizes financial market data to quantify the influence of a certain event on the value of a company (MacKinlay 1997). The event study approach is employed to examine the response of companies in the Health and Tourism sector listed on the Indonesia Stock Exchange (IDX) to the financial challenges caused by the COVID-19 outbreak in Indonesia. This analysis involves reviewing and comparing the financial statements of these companies.

4.1 Independent Sample t-Test

Independent Sample t-Test according to (Santoso, 2014) is a test that uses a comparison method between two groups of mean from two different (independent) samples. In principle, the Independent Sample t-Test test serves to determine whether there is a difference in the mean between two populations by comparing the two sample means.

Table 1. Independent Sample T-Test 2019

Group Statistics 2019					
	Sector	N	Mean	Std. Deviation	Std. Error Mean
Pi	Health	18	.16933	.254534	.059994
	Tourism	23	.26303	.350233	.073029

Based on the table above, in 2019 it can be seen that the health sector has an average value of 0.16933 and the tourism sector is 0.26303 when compared to the indicator classification, it will be seen that both sectors have a very low probability of financial distress and are categorized as healthy companies. Then if we look at the significant value in Levene's Test for Equality of

Variances showing a value of 0.101, which is greater than alpha > 0.1, it can be concluded that in 2019 there is no significant difference between the Health and tourism sectors.

Table 2. Independent Sample T-Test 2020

Group Statistics 2020					
	Sector	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Pi	Health	18	.19727	.326180	.076881
	Tourism	23	.33246	.385137	.080307

	Levene's Test for Equality of Variances		**t-test for Equality of Means**						
	F	**Sig.**	**T**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**	
								Lower	**Upper**
Equal variances assumed	1.170	.286	-1.191	39	.241	-.135193	.113487	-.364743	.094357
Equal variances not assumed			-1.216	38.718	.231	-.135193	.111175	-.360118	.089732

In the table above, in 2020 it can be seen that the health sector has an average value of 0.19727 and the tourism sector is 0.33246 when compared to the indicator classification, it will be seen that both sectors have a low probability of financial distress and are categorized as healthy companies but this value is higher. compared to 2019. Then if we look at the significant value in Levene's Test for Equality of Variances showing a value of 0.286, which is greater than alpha > 0.1, it can be concluded that in 2020 there will also be no significant difference between the health and tourism sectors.

Table 3. Independent Sample T-Test 2021

Group Statistics 2021					
	Sector	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Pi	Health	18	.16902	.305523	.072012
	Tourism	23	.36195	.402855	.084001

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	4.229	.046	-1.686	39	.100	-.192933	.114438	-.424405	.038539
Equal variances not assumed			-1.744	38.976	.089	-.192933	.110643	-.416735	.030869

Furthermore, if seen in the table above, namely in 2021, the health sector has an average value of 0.16902 indicating that the average value of the company's health is healthier than the previous year, which is 0.19727 and in the tourism sector, which is 0.36195, it shows the average value of the tourism sector to be higher than the previous year 0.33246. Then if you look at the significant value in the Levene's Test for Equality of Variances section which is 0.046 < 0.1, it can be interpreted that the Health and tourism sectors are not the same (not homogeneous) so that the interpretation is guided by the Equal variances table not assumed.

From the output table in the "Equal variances not assumed" section, it is evident that the value of Sig. (2-tailed) is 0.046, which is less than 0.100. Therefore, we can infer that the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. Hence, it can be inferred that there exists a substantial disparity between the Health and tourist industries.

5 Conclusion

This study has found that Covid-19 can have a different impact on the possibility of financial distress in the Health and Tourism sector. The probability of financial distress in these two sectors before, during, and after covid-19 (2019-2021) shows insignificant to significant differences. the final result of this significant difference also shows that the Ha hypothesis is acceptable

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