

DIFFERENT TESTING OF THE PREDICTION OF BANKRUPTCY OF HEALTH SECTOR SERVICES (HOSPITALS) LISTING ON BEI BEFORE COVID-19 PANDEMIC AND COVID-19 PANDEMIC WITH SPRINGATE METHOD**Lardin Korawijayanti^{1*}, Rudi Handoyono², Fatchur Ridho³**¹ Jurusan Akuntansi Politeknik Negeri Semarang, Jl. Prof. Soedarto, Semarang 50275² Jurusan Akuntansi Politeknik Negeri Semarang, Jl. Prof. Soedarto, Semarang 50275³ Jurusan Akuntansi Politeknik Negeri Semarang, Jl. Prof. Soedarto, Semarang 50275* Corresponding Author E-mail: lardinkorawijayanti@polines.ac.id**ABSTRACT**

The pandemic Covid-19 has the impact of changing financial conditions that can result in bankruptcy. Bankruptcy is the failure of company in carrying out its operational activities to generate profits and failure to pay obligations. One of the signs before the occurrence of bankruptcy in a company is financial distress. Financial distress can be seen from the financial statements which are a reflection of the financial condition and results of company, financial statements that can be compared in the data regarding changes that occur in the form of percentages trends and rupiah. The study aims to determine the differences in prediction of healthcare service companies (hospitals) before the pandemic Covid-19 and during the pandemic Covid-19. The population in this study are healthcare service companies (hospital) listed on the IDX for the 2019-2020 period. Samples were selected using purposive sampling method. Hypothesis testing using a different paired 2 test. The results of this study indicate that before the pandemic Covid-19 there were 2 healthcare service companies (hospitals) in the non-bankruptcy category and 5 other companies in the bankrupt category. Meanwhile, during the pandemic Covid-19, 3 healthcare service companies (hospitals) were not bankrupt category and 4 other companies in the bankrupt category. This study also shows that there is a significant difference between the value of the bankruptcy ratio of healthcare service companies before the pandemic Covid-19 and during the pandemic Covid-19.

Key Words: Bankruptcy, Financial Distress, Hospital, Pandemic Covid-19, Method Springate.

INTRODUCTION**Introduction**

Increasingly competitive competition makes companies have to maintain and optimize investment opportunities from investors in the stock exchange so that companies avoid potential resource declines to the potential for company bankruptcy. According to Hasan (2012) efforts to improve quality and balance the availability of services with customer needs are one of the important things for companies to survive the competition. Technically, companies will compete to provide the best service, but not all companies can fulfill it. According to Norma et al (2020) this can be seen from the ability to generate profits.

The decline in profits that occurs is one indicator of the potential for bankruptcy in the company. Bankruptcy is the most important thing that every company should avoid. Lorina and Paul (2019) stated that if the company went bankrupt, the company was considered to have failed in running its business. Companies that experience a decline in performance are a concern for management as consideration for making decisions in business continuity.

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In Indonesia, non-Covid-19 patient visits to hospitals have decreased by up to 80%. This was conveyed by the Secretary General of the Indonesian Hospital Association (Persi), Lia G Partakusuma during a press conference. This decrease in non-Covid-19 patient benefits has led to a decrease in hospital revenues. Income that is not proportional to expenses will result in the possibility of losses for the hospital. Income that is not proportional to expenses will result in the possibility of losses for the hospital. If this condition continues, it is possible that the hospital will terminate its services and threaten to collapse. Further research Khullar, et al. (2020) revealed that several hospitals with limited asset and liquidity capabilities would find it difficult to maintain financial security during the pandemic and mobilize existing resources for handling health resources. These problems indicate the existence of financial distress at the hospital. Financial Distress According to Surya (2018), bankruptcy is a company's failure to carry out its operational activities to generate profits and failure to pay obligations. Sulastri and Zannati (2018) suggest that financial distress can be seen from the company's financial statements, namely the income statement and the statement of financial position. From these financial statements, it is necessary to analyze the financial statements in measuring the company's financial distress.

One way to look at the financial distress prediction model is the Springate model. According to Madaconta and Soeltan (2019), the Springate model can be used to detect the possibility of bankruptcy of non-manufacturing companies. Research conducted by Norma et al (2020) on comparative analysis of the Altman Z Scroe, Springate, Zmijewski and Grover models in predicting financial distress revealed that the Springate model has the highest accuracy rate of 83.33%. Springate model is a model developed using multi discriminant analysis by Springate using 4 ratios. Neeraj (2019) conducted a study on a comparison of 3 bankruptcy prediction models for hospital companies in the United States, the result is that the Altman Z-Score method has the highest accuracy rate compared to the Springate model and the Ohlson model.

According to data from the Indonesia Stock Exchange, there are 8 shares of listed hospital companies, including PT Medikaloka Hermina Tbk (HEAL), PT Metro Healthcare Indonesia Tbk (CARE), PT Mitra Keluarga Karyasehat Tbk (MIKA), PT Royal Prima Tbk (PRIM), PT Sarana Meditama Metropolitan Tbk (SAME), PT Siloam International Hospitals Tbk (SILO), PT Sejahteraraya Anugrahjaya Tbk (SRAJ) and PT Bundamedik Tbk (BHMS). This study focuses on the analysis of predictions of bankruptcy of health sector service companies (hospitals) during the pandemic using the 2019 financial statements and 2020 financial statements on companies that have been listed on the BEI no later than 2018. Based on the explanation above, the researchers are interested in conducting research. with the title "Analysis of Differences in Prediction of Bankruptcy in Health Sector Service Companies (Hospitals) Listing on the IDX Before the Pandemic and the Pandemic Period Using the Springate Method".

Research Purposes

Based on the problem formulation described above, the objectives of this study are as follows:

1. Knowing the prediction of the bankruptcy of health sector service companies (hospitals) listing on the IDX before the pandemic using the Springate model.
2. Knowing the prediction of the bankruptcy of health sector service companies (hospitals) listing on the IDX during the pandemic using the Springate model.
3. Analyzing the differences in predictions of bankruptcy of health sector service companies (hospitals) listing on the IDX before the pandemic and during the pandemic using the Springate model.

LITERATURE REVIEW

Definition of Hospital

Hospitals are health service institutions that provide health services that provide plenary individual health services that provide inpatient, outpatient, and emergency services (Permenkes No. 56 of 2014). Meanwhile, according to WHO (World Health Organization), the hospital is an integral part of a social and health organization with the function of providing plenary services (comprehensive), disease healing (curative) and disease prevention (Preventive) to the community.

Understanding Financial Statements

The financial report is the final result of the process of recording financial transactions of a company that shows the company's financial condition in a certain period and is a general description of the performance of a company. According to Munawir (2016) financial statements consist of a balance sheet and a profit and loss calculation as well as a report on changes in equity. The balance sheet shows or describes the amount of assets, liabilities and also the equity of a company at a certain date. According to Kasmir (2016), in simple terms, financial statements are reports that show the company's current financial condition or subsequent periods in the future. The purpose and objectives of the financial statements indicate the company's financial condition.

Understanding Financial Distress

Platt & Platt defines that financial distress is the stage of decline in the financial condition experienced by a company, which occurs before the occurrence of bankruptcy or liquidation. This condition is generally characterized by, among others, delays in delivery, declining product quality, and delays in payment of bills from banks. Financial distress can be viewed from the balance sheet composition, namely the comparison of the total assets and liabilities, from the income statement if the company continues to lose, and from the cash flow statement if the cash inflows are less than the cash outflows.

Financial Distress Indicator

According to Fauzi et al (2021), before a company is finally declared bankrupt, it is usually marked by various situations or special circumstances related to the effectiveness and efficiency of its operations. There are four indicators that can be used to observe the company's performance, the level of corporate bankruptcy, namely:

1. The company's profit rate
2. Effectiveness and efficiency of debt
3. Efficiency of fixed and operational costs
4. Return of stock.

Causes of Financial Distress

According to Fahrudin (2008), several causes of financial distress are as follows:

1. Neoclassical models

Financial distress occurs when the allocation of resources is not appropriate. Estimating the difficulty is done with balance sheet and income statement data.

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2. Financial models

Financial distress is characterized by the wrong financial structure and causes liquidity constraints. This means that although the company can survive in the long term, it must also go bankrupt in the short term.

3. Corporate Governance model

Financial distress according to the corporate governance model is when a company has the right asset structure and a good financial structure but is poorly managed.

Financial Distress Prediction

According to Lorina and Paul (2019) The Springate Method was developed in 1978 by Gordon L.V. Springate, this bankruptcy potential method was created by following the Multiple Discriminant Analysis method developed by Altman Z-score in potential bankruptcy. Springate uses financial ratios as a tool to measure bankruptcy in a company. Using 4 of the 19 existing ratios. The formula that has been found by Gordon L.V.

RESEARCH METHODOLOGY

Data Types and Sources

This type of research is a comparative applied quantitative research. According to Sugiyono (2010) applied research is research that aims to apply, test and evaluate the ability of a theory that is applied in solving practical problems. While comparative research according to Sugiyono (2010) is research that compares the state of one or more variables in two or more different samples, or at two different times.

According to Sugiyono (2015) Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions. The population in this study are health sector service companies (hospitals) listed on the Indonesia Stock Exchange during the pandemic or 2019-2020 period.

Table 1

List of Health Sector Service Companies (Hospitals)

No	Kode Saham	Nama Perusahaan
1	HEAL	PT Medikaloka Hermina Tbk
2	CARE	PT Metro Healthcare Indonesia Tbk
3	MIKA	PT Mitra Keluarga Karyasehat Tbk
4	PRIM	PT Royal Prima Tbk
5	SAME	PT Sarana Meditama Metropolitan Tbk
6	SILO	PT Siloam International Hospitals Tbk
7	SRAJ	PT Sejahteraraya Anugrahjaya Tbk
8	BHMS	PT Bundamedik Tbk

Source: www.idx.co.id

According to Sugiyono (2015) the sample is part of the population that is considered to represent the entire population. The sampling technique used is purposive sampling, namely taking samples based on certain criteria. The criteria used in the sampling of this research are:

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1. Health sector service companies (hospitals) that are still listed on the Indonesia Stock Exchange.
2. Health sector service companies (hospitals) that publish complete annual financial reports for the 2019-2020 period
3. Health sector service companies (hospitals) that present complete financial reports and include data on the required variables.

This study was made by following the procedure modeled by Altman, which uses stepwise multiple discriminant analysis to select four of the nineteen popular financial ratios to properly differentiate between healthy companies and bankrupt companies (failure). The framework of this research can be described in the following scheme:

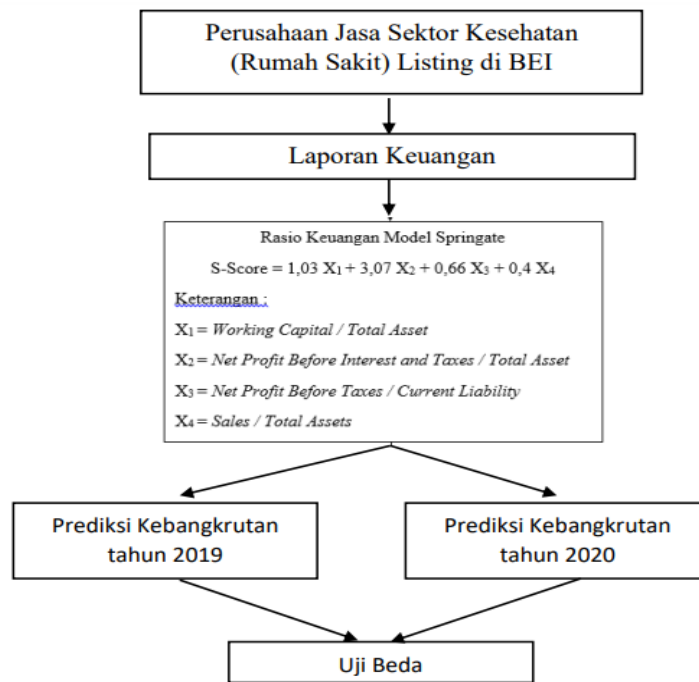


Figure 1
Theoretical Thinking Framework Model
Source: A. Kardim, Zeynep Turk. Etc., Anisa Aulia. Etc.

Hypothesis

A hypothesis is a provisional guess from a study. Based on the above framework, the hypothesis is formulated as follows:

- H0 = There is no significant difference in the score of bankruptcy of the health service sector companies (hospitals) before the pandemic and during the pandemic
- H1 = There is a significant difference in the score of the bankruptcy of the health service sector companies (hospitals) before the pandemic and during the pandemic

The method of collecting data used in this research is to use documentation and literature study. Documentation is collecting data by looking at documents or records that are relevant to the problem. Retrieval of documents in the form of quarterly financial reports of hospital companies published in 2019 and 2020 on the Indonesia Stock Exchange website, namely www.idx.co.id.

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This study the variables used are financial ratios used in the Springate calculation which can be combined to see the difference between bankrupt and non-bankrupt companies. The ratios are as follows:

1. Working Capital divided by Total Assets (X1).
This ratio shows the company's ability to generate net working capital from the total assets owned. This ratio is calculated by dividing net working capital by total assets. Net working capital is obtained by deducting current assets by current liabilities.
2. Profit Before Tax and Interest divided by Total Assets (X2)
This ratio is used to measure the actual productivity of the company's assets. The ratio is to measure the company's ability to generate profits from the assets used.
3. Profit before Tax divided by Current Liabilities (X3)
This ratio is used to determine the company's ability to generate profits from total liabilities.
4. Sales divided by Total Assets (X4)
This ratio is used to measure the level of sales efficiency in utilizing assets owned to generate and earn profits.

Data analysis technique

Analyzing data is a very critical step in research. Researchers must determine which analysis pattern will be used, whether statistical analysis or non-statistical analysis. This selection depends on the type of data collected (Suryabrata, 2016, p. 40). The data analysis method used in this study is the Springate model. The analysis is carried out from financial statement data in the form of a statement of financial position/balance sheet and income statement.

Data Normality Test according to Ghazali (2018: 111), the normality test aims to test whether in the regression model, the independent and dependent variables are normally distributed or not. Testing the normality of the data using the Kolmogorov-Smirnov test in the SPSS application program with a probability level (sig) of 0.05. The test criteria for the Kolmogorov-Smirnov test are the probability value (sig) > 0.05, then the data is normally distributed, while the probability value (sig) < 0.05, then the data is not normally distributed

The data collected from the study were then analyzed against the prerequisites for the difference test. Testing this hypothesis using parametric statistical tests with the Paired sample t test technique, the reason for using the Parametric Statistics test is that this research is limited by assumptions about the population, and the data are normally distributed. The parametric test used is the paired sample t test. With the test criteria, if sig < 0.05 then H₀ is rejected and if sig > 0.05 then H₀ is accepted.

RESULTS AND ANALYSIS

This study discusses the difference in the value of the bankruptcy analysis ratio before the Covid-19 pandemic and the Covid-19 pandemic. This study took a sample of 7 companies in the health service sector (hospitals) listed on the IDX, including; PT Medikaloka Hermina Tbk, PT Mitra Keluarga Karyasehat Tbk, PT Metro Healthcare Indonesia Tbk, PT Royal Prima Tbk, PT Sarana Meditama Metropolitan Tbk, PT Siloam International Hospitals Tbk, PT Sejahtera Raya Anugrah Tbk. The following is a brief review of each company.

This data analysis contains the calculation of the variables in the calculation of the S-Score value before and during the Covid-19 pandemic and the impact of the Covid-19 pandemic for companies in the health service sector (hospitals). The following is an explanation of the S-Score calculation data analysis.

S-Score Calculation During the Covid-19 Pandemic

This ratio is a ratio that detects the liquidity of the total assets and working capital position. This ratio is used as an indicator in detecting the company's liquidity problems. Based on calculations using the ratio of net working capital to total assets, the net working capital owned by each company in the health service sector (hospital) listed on the IDX is obtained from current assets minus current liabilities and divided by the company's total assets as shown in the table below.

Table 2
Working Capital During the Covid-19 Pandemic (Year 2020)

No	Kode Perusahaan	Saat Pandemi Covid-19 (2020)		
		Aset Lancar	Hutang Lancar	Modal Kerja
1	HEAL	Rp 2.252.402,00	Rp 1.479.658,00	Rp 772.744,00
2	MIKA	Rp 3.103.602,00	Rp 568.431,00	Rp 2.535.171,00
3	CARE	Rp 781.853,00	Rp 48.429,00	Rp 733.424,00
4	PRIM	Rp 137.390,00	Rp 60.950,00	Rp 76.440,00
5	SAME	Rp 131.347,00	Rp 293.281,00	-Rp 161.934,00
6	SILO	Rp 2.421.691,00	Rp 1.681.474,00	Rp 740.217,00
7	SRAJ	Rp 939.835,00	Rp 1.740.988,00	-Rp 801.153,00

Sumber : Laporan Keuangan (data diolah)

After knowing the total working capital of each company in 2020, then proceed with calculating the comparative value of working capital with total assets. These calculations can be assessed in table 3.

Table 3
Working Capital to Total Assets During the Covid-19 Pandemic (Year 2020)

No	Kode Perusahaan	X1 (2020)		
		Modal Kerja	Total Aset	Skor X1
1	HEAL	Rp 772.744,00	Rp 6.355.254,00	0,121591364
2	MIKA	Rp 2.535.171,00	Rp 6.372.279,00	0,397843691
3	CARE	Rp 733.424,00	Rp 3.445.671,00	0,212853752
4	PRIM	Rp 76.440,00	Rp 950.302,00	0,080437587
5	SAME	-Rp 161.934,00	Rp 1.889.591,00	-0,08569791
6	SILO	Rp 740.217,00	Rp 8.427.782,00	0,087830582
7	SRAJ	-Rp 801.153,00	Rp 4.346.329,00	-0,18432866

Sumber : Laporan Keuangan (data diolah)

According to the calculation above, in the health sector service companies (hospitals) listings on the IDX range from -0.184 to 0.397. the highest working capital to assets ratio value at PT Mitra Keluarga Karyasehat is 0.397. While the lowest ratio value is at PT Sejahterajaya Anugrahjaya -0.184.

Table 4
Net Profit Before Interest and Taxes to Total Assets During the Covid-10 Pandemic (Year 2020)

No	Kode Perusahaan	X2 (2020)		
		EBIT	Total Aset	Skor X2
1	HEAL	Rp 1.074.817,00	Rp 6.355.254,00	0,169123
2	MIKA	Rp 1.181.235,00	Rp 6.372.279,00	0,185371
3	CARE	Rp 25.098,00	Rp 2.232.052,00	0,011244
4	PRIM	Rp 50.252,00	Rp 950.302,00	0,05288
5	SAME	-Rp 263.011,00	Rp 1.889.591,00	-0,13919
6	SILO	Rp 401.819,00	Rp 8.427.782,00	0,047678
7	SRAJ	Rp 70.753,00	Rp 4.346.329,00	0,016279

Sumber : Laporan Keuangan (data diolah)

The calculation table above shows that the health sector service companies (hospitals) listed on the IDX have a range of Net Profit Before Interest and Taxes to Total Assets ratio values of -0.139 to 0.185. The highest ratio value at PT Mitra Keluarga Karya Sehat Indonesia is 0.185 and the lowest ratio value at PT Sarana Meditama Metropolitan is -0.139.

Table 5
Net Profit Before Taxes to Current Liability During the Covid-19 Pandemic (Year 2020)

No	Kode Perusahaan	X3 (2020)		
		EBT	Liabilitas Lancar	Skor X3
1	HEAL	Rp 946.010,00	Rp 1.479.658,00	0,639344
2	MIKA	Rp 1.169.750,00	Rp 568.431,00	2,057858
3	CARE	Rp 13.792,00	Rp 48.429,00	0,284788
4	PRIM	Rp 49.893,00	Rp 60.950,00	0,818589
5	SAME	-Rp 266.468,00	Rp 293.281,00	-0,90858
6	SILO	Rp 125.250,00	Rp 1.681.474,00	0,074488
7	SRAJ	Rp 191,00	Rp 1.740.988,00	0,00011

Sumber : Laporan Keuangan (data diolah)

The calculation of table 5 describes the value of the ratio of net profit before taxes to current liability. The ratio of net profit before taxes to current liability for health service companies (hospitals) listed on the IDX ranges from -0.908 to 2.057. PT Mitra Keluarga Karya Sehat has the highest net profit before taxes to current liability ratio of 2.057 and PT Sarana Meditama Metropolitan has the lowest net profit before taxes to current liability ratio of -0.908.

Table 6
Sales to Assets During the Covid-19 Pandemic (Year 2020)

No	Kode Perusahaan	X4 (2020)		
		Penjualan	Total Aset	Skor X4
1	HEAL	Rp 4.416.042,00	Rp 6.355.254,00	0,694865
2	MIKA	Rp 3.419.342,00	Rp 6.372.279,00	0,536596
3	CARE	Rp 216.296,00	Rp 2.232.052,00	0,096905
4	PRIM	Rp 260.590,00	Rp 950.302,00	0,274218
5	SAME	Rp 507.616,00	Rp 1.889.591,00	0,268638
6	SILO	Rp 7.110.124,00	Rp 8.427.782,00	0,843653
7	SRAJ	Rp 1.283.798,00	Rp 4.346.329,00	0,295375

Sumber: Laporan Keuangan (data diolah)

Based on the calculation of the table above, the value of the ratio of sales to total assets of health sector service companies (hospitals) has a range of values between 0.096 to 0.843. The company with the highest sales to total asset ratio is PT Siloam International Hospitals

with a value of 0.843 and the company with the lowest sales to total asset ratio is PT Metro Healthcare Indonesia at 0.096.

Table 7
Calculation of S-Score of Health Sector Service Companies (Hospitals) During the Covid-19 Pandemic (Year 2020)

Kode Perusahaan	S-Score (2020)					Keterangan
	X1	X2	X3	X4	S-Score	
HEAL	0,12159	0,16912	0,63934	0,69486	1,34436	Tidak Bangkrut
MIKA	0,39784	0,18537	2,05786	0,5366	2,55169	Tidak Bangkrut
CARE	0,21285	0,01124	0,28479	0,0969	0,48048	Bangkrut
PRIM	0,08044	0,05288	0,81859	0,27422	0,89515	Tidak Bangkrut
SAME	-0,0857	-0,1392	-0,9086	0,26864	-1,0078	Bangkrut
SILO	0,08783	0,04768	0,07449	0,84365	0,62346	Bangkrut
SRAJ	-0,1843	0,01628	0,00011	0,29538	-0,0217	Bangkrut

Sumber: Laporan Keuangan (data diolah)

The calculation above shows that PT Medikaloka Hermina (HEAL) has an S-Score of 1.344, meaning that HEAL is included in the non-bankrupt category. This is because HEAL was able to strive for cost efficiency during the Covid-19 pandemic, so that it was able to record an increase in net profit of 87.73% reaching Rp. 646 Billion from Rp. 344 Billion. In addition, although the overall volume of patients decreased by 35.27%, HEAL was able to record an increase in income of Rp. 4.416 Billion from Rp. 3,631 Billion. This increase in income was mostly derived from the increase in inpatient income, initially at Rp. 2.102 billion to Rp. 2.855 Billion.

Impact of the Covid-19 Pandemic

PT Medikaloka Hermina Tbk. The condition of the Covid-19 pandemic resulted in a surge in Covid-19 patients, one Hermina hospital in Karwang was prepared as a special hospital for treating Covid-19 patients, until the end of 2020 as many as 1300 beds were prepared for the treatment of Covid patients. However, this increase cannot compensate for the decrease in total patient volume, considering that non-critical patients choose to delay the treatment process. As an effort to overcome the impact of Covid-19 on financial management, PT Medikaloka Hermina took cost efficiency measures through more disciplined management of drug procurement and supply and delaying the recruitment of new employees. (PT Medikaloka Hermina Annual Report : [95-96], 2020)

PT Mitra Keluarga Karya Sehat Tbk. The impact of the Covid-19 pandemic was also felt by PT Mitra Keluarga Karyasehat, with a surge in Covid-19 patients resulting in a decrease in Covid-19 patient visits. This is because non-critical patients delay hospitalization. The decrease in non-critical patient visits resulted in a decrease in the contribution of outpatient net income by 4.1% from the previous year. In response to the decline in the number of patient visits, various measures have been taken to improve cost efficiency. This includes the policy of delaying recruitment and tightening of overtime work practices. Employee transfers have also been carried out, especially to fill various positions at the newly inaugurated Mitra Keluarga hospital. (PT Mitra Keluarga Karyasehat Annual Report : [87-95], 2020)

PT Metro Healthcare Indonesia Tbk. In contrast to the previous 2 companies, the overall performance of PT Metro Healthcare Indonesia experienced a significant growth. This company did not experience a decrease in outpatients or inpatients. This is due to the increasing number of general patients as well as BPJS patients and the Ministry of Health. During the Covid-19 pandemic, the company managed to record an increase in total assets, especially current assets by 167.62%, other income growth almost doubled or 198.20%. However, PT Metro Healthcare Indonesia experienced an increase in operating expenses from

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general and administrative expenses up to 77.27%. (PT Metro Healthcare Indonesia Annual Report: [75-79], 2020).

PT Royal Prima Tbk. Facing the Covid-19 pandemic, the Royal Prima Hospital was appointed by the Indonesian Ministry of Health to be one of the referral hospitals for Covid-19 patients. The appointment of the company's hospital resulted in a 50% increase in revenue from the previous year, the largest revenue structure coming from the Ministry of Health's revenue of 40.7% or 106 billion. In line with revenue growth, PT Royal Prima's profit before tax also experienced a significant increase of up to 8 times from the previous year. This means that the company has had a positive impact during the Covid-19 pandemic. (PT Royal Prima Annual Report: [39-41], 2020)

PT Sarana Meditama Metropolitan Tbk. The Covid-19 pandemic has had a very significant impact on the Company's performance. Throughout 2020, there were 12,719 inpatients, a decrease of approximately 38% compared to 2019, where there were 20,519 inpatients. The number of outpatients also decreased when compared to 2019, where the decrease occurred by approximately 43% from 301,170 patient visits in 2019 to 172,676 patient visits in 2020. The decline in the number of patients severely hit the Company's financial performance. As a result, the Company posted revenue of Rp507.6 billion, a 4.1% decrease compared to Rp529.3 billion in 2019. Not only that, the Company posted a loss of Rp449.5 billion. (PT Sarana Meditama Metropolitan Annual Report : [20], 2020)

PT Siloam International Hospitals Tbk. At the end of March 2020, the hospital began to experience a substantial decrease in patient volume. There was a marked reduction in elective surgery and non-critical medical consultations. In April and May 2020, the number of inpatients decreased by 49% (yoy) compared to the same period in 2019. The volume of outpatients in April and May 2020 also decreased by 55% (yoy) compared to the same period the previous year. however, the volume of patients after the second quarter of 2020 has increased from the lows in the second quarter of 2020. In the second half of 2020, the number of inpatients and outpatients decreased by 38% and 29% respectively compared to the second half of the previous year. The Company's revenue in the second quarter of 2020 decreased by 22% compared to the second quarter of 2019. Gross Operating Income was stable in FY2020 at IDR 7,110 billion, an increase of 1.3% compared to IDR 7,018 billion in FY2019. (PT Siloam International Hospitals Annual Report : [18], 2020)

PT Sejahtera Raya Anugrah Tbk. Almost all business sectors in 2020 experienced a recession due to the COVID-19 pandemic. Demand declined following the policy of social restrictions and the spread of the COVID-19 virus throughout Indonesia. As a result, patient visits decreased by 8%, especially between March and May 2020. However, due to better adaptation to changes and comprehensive cooperation from all stakeholders, the Company's Gross Operating Revenue (GOR) increased by 28.12% while Profit before Interest, Depreciation and Amortization Tax (EBITDA) increased by 11.66%. The Company recorded a Profit Before Tax of Rp 191.4 million in 2020. (Annual Report of PT Sejahtera Raya Anugrah: [9-10], 2020)

S-Score Calculation Before the Covid-19 Pandemic

Table 8
Working Capital Before the Covid-19 Pandemic (In 2019)

No	Kode Perusahaan	Sebelum Pandemi Covid-19 (2019)		
		Aset Lancar	Hutang Lancar	Modal Kerja
1	HEAL	Rp 1.664.488,00	Rp 1.040.038,00	Rp 624.450,00
2	MIKA	Rp 2.475.229,00	Rp 430.760,00	Rp 2.044.469,00
3	CARE	Rp 292.153,00	Rp 65.496,00	Rp 226.657,00
4	PRIM	Rp 74.805,00	Rp 60.377,00	Rp 14.428,00
5	SAME	Rp 116.348,00	Rp 225.981,00	-Rp 109.633,00
6	SILO	Rp 1.845.117,00	Rp 1.370.337,00	Rp 474.780,00
7	SRAJ	Rp 428.967,00	Rp 1.098.846,00	-Rp 669.879,00

Sumber : Laporan Keuangan (data diolah)

The table above shows the net working capital owned by each company in the health service sector (hospital) listed on the IDX obtained from current assets minus current liabilities and divided by the company's total assets. Furthermore, the calculation of the ratio of working capital to total assets is continued. The value of the ratio can be seen in the table below.

Table 9
Working Capital to Total Assets Before the Covid-19 Pandemic

No	Kode Perusahaan	X1 (2019)		
		Modal Kerja	Total Aset	Skor X1
1	HEAL	Rp 624.450,00	Rp 5.047.787,00	0,123707676
2	MIKA	Rp 2.044.469,00	Rp 5.576.085,00	0,36664954
3	CARE	Rp 226.657,00	Rp 2.448.470,00	0,092570871
4	PRIM	Rp 14.428,00	Rp 911.548,00	0,01582802
5	SAME	-Rp 109.633,00	Rp 2.232.894,00	-0,049099062
6	SILO	Rp 474.780,00	Rp 7.741.782,00	0,061326966
7	SRAJ	-Rp 669.879,00	Rp 3.109.580,00	-0,21542427

Sumber : Laporan Keuangan (data diolah)

According to the calculation above, in the health sector service companies (hospitals) listings on the IDX range from -0.215 to 0.367. the highest working capital to assets ratio at PT Mitra Keluarga Karyasehat is 0.367. While the lowest ratio value is at PT Sejahteraraya Anugrahjaya -0.215.

Table 10
Net Profit Before Interest and Taxes to Total Assets Before the Covid-19 Pandemic (In 2019)

No	Kode Perusahaan	X2 (2019)		
		EBIT	Total Aset	Skor X2
1	HEAL	Rp 614.353,00	Rp 5.047.787,00	0,121707
2	MIKA	Rp 1.017.919,00	Rp 5.576.085,00	0,182551
3	CARE	-Rp 2.275,00	Rp 2.010.967,00	-0,00113
4	PRIM	Rp 7.046,00	Rp 911.548,00	0,00773
5	SAME	-Rp 922.950,00	Rp 2.232.894,00	-0,41334
6	SILO	-Rp 97.139,00	Rp 7.741.782,00	-0,01255
7	SRAJ	-Rp 51.497,00	Rp 3.109.580,00	-0,01656

Sumber : Laporan Keuangan (data diolah)

The calculation table above shows that the health sector service companies (hospitals) listed on the IDX have a range of Net Profit Before Interest And Taxes to Total Assets ratio values of -0.413 to 0.182. The highest ratio value at PT Mitra Keluarga Karyasehat company was 0.182 and the lowest ratio value at PT Sarana Meditama Metropolitan was -0.413.

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Net Profit Before Taxes to Current Liability

Furthermore, calculating the value of the ratio of Net Profit Before Taxes to Current Liability, the calculation can be seen in table 11 below.

Table 11
Net Profit Before Taxes to Current Liability Before the Covid-19 Pandemic (In 2019)

No	Kode Perusahaan	X3 (2019)		
		EBT	Liabilitas Lancar	Skor X3
1	HEAL	Rp 343.920,00	Rp 1.040.038,00	0,33068
2	MIKA	Rp 1.004.330,00	Rp 430.760,00	2,33153
3	CARE	Rp 505.476,00	Rp 65.496,00	-0,32863
4	PRIM	Rp 6.180,00	Rp 60.377,00	0,102357
5	SAME	-Rp 140.270,00	Rp 225.981,00	-0,62072
6	SILO	-Rp 332.998,00	Rp 1.370.337,00	-0,243
7	SRAJ	-Rp 66.323,00	Rp 1.098.846,00	-0,06036

Sumber : Laporan Keuangan (data diolah)

The calculation of table 11 describes the value of the ratio of net profit before taxes to current liability. The ratio of net profit before taxes to current liability for health service companies (hospitals) listed on the IDX ranges from -0.620 to 2.331. PT Mitra Keluarga Karyasehat has the highest net profit before taxes to current liability ratio of 2.331 and PT Sarana Meditama Metropolitan has the lowest net profit before taxes to current liability ratio of -0.620.

Table 12
Sales to Total Assets Before the Covid-19 Pandemic (In 2019)

No	Kode Perusahaan	X4 (2019)		
		Penjualan	Total Aset	Skor X4
1	HEAL	Rp 3.630.940,00	Rp 5.047.787,00	0,719313
2	MIKA	Rp 3.205.020,00	Rp 5.576.085,00	0,57478
3	CARE	Rp 154.077,00	Rp 2.010.967,00	0,076618
4	PRIM	Rp 174.217,00	Rp 911.548,00	0,191122
5	SAME	Rp 529.319,00	Rp 2.232.894,00	0,237055
6	SILO	Rp 7.017.919,00	Rp 7.741.782,00	0,906499
7	SRAJ	Rp 1.002.002,00	Rp 3.109.580,00	0,322231

Based on the calculation of the table above, the value of the ratio of sales to total assets of health sector service companies (hospitals) has a range of values between 0.076 to 0.906. The company with the highest sales to total asset ratio is PT Siloam International Hospitals with a value of 0.906 and the company with the lowest sales to total asset ratio value is PT Metro Healthcare Indonesia at 0.076.

S-Score Calculation

Based on the data from the calculation of the four variables used in the Springate model above, the next step is to enter these results into the equation model from Springate by multiplying the results of the data above by the constant or standard value of each ratio, the equation model and the calculation results based on Springate are:

$$\text{S-Score} = 1,03X_1 + 3,07X_2 + 0,66X_3 + 0,4X_4$$

Description:

X1 = Working Capital/Total Assets

X2 = Earnings Before Interest and Taxes/Total assets

X3 = Profit Before Taxes/Current liabilities

X4 = Sales/Total Assets

The equation is classified based on the cut off value as follows:

1. The value is less than 0.862 ($S < 0.862$), then the company is classified as unhealthy/bankrupt.
2. The value exceeds or equals 0.862 ($S \geq 0.862$), then the company is included in the classification of financially healthy companies.

Table 13
Calculation of S-Score of Health Sector (Hospital) Service Companies Before the Covid-19 Pandemic (2019)

No	Kode Perusahaan	S-Score (2019)					Keterangan
		X1	X2	X3	X4	S-Score	
1	HEAL	0,12371	0,12171	0,33068	0,71931	1,00703	Tidak Bangkrut
2	MIKA	0,36665	0,18255	2,33153	0,57478	2,7068	Tidak Bangkrut
3	CARE	0,09257	-0,0011	-0,3286	0,07662	-0,0944	Bangkrut
4	PRIM	0,01583	0,00773	0,10236	0,19112	0,18404	Bangkrut
5	SAME	-0,0491	-0,4133	-0,6207	0,23706	-1,6344	Bangkrut
6	SILO	0,34647	-0,0125	-0,243	0,9065	0,52056	Bangkrut
7	SRAJ	-0,2154	-0,0166	-0,0604	0,32223	-0,1837	Bangkrut

Sumber : Laporan Keuangan (data diolah)

Table 14
Calculation of S-Score of Health Sector Service Companies (Hospitals) During the Covid-19 Pandemic (2020)

No	Kode Perusahaan	S-Score (2020)					Keterangan
		X1	X2	X3	X4	S-Score	
1	HEAL	0,12159	0,16912	0,63934	0,69486	1,34436	Tidak Bangkrut
2	MIKA	0,39784	0,18537	2,05786	0,5366	2,55169	Tidak Bangkrut
3	CARE	0,21285	0,01124	0,28479	0,0969	0,48048	Bangkrut
4	PRIM	0,08044	0,05288	0,81859	0,27422	0,89515	Tidak Bangkrut
5	SAME	-0,0857	-0,1392	-0,9086	0,26864	-1,0078	Bangkrut
6	SILO	0,08783	0,04768	0,07449	0,84365	0,62346	Bangkrut
7	SRAJ	-0,1843	0,01628	0,00011	0,29538	-0,0217	Bangkrut

Sumber : Laporan Keuangan (data diolah)

Table 13 and Table 14 show that PT Medikaloka Hermina experienced an increase in the S-Score ratio by 33%, before the Covid-19 pandemic the ratio value was 1.007 and during the Covid-19 pandemic the ratio value was 1.344, so that PT Medikaloka Hermina was in the Not Bankrupt category. PT Mitra Keluarga Karya Sehat experienced a decrease in the value of the S-Score ratio by -6%, although it experienced a decrease in the S-Score value but was still in the Not Bankrupt category, the ratio value of PT Mitra Keluarga Karyasehat in 2019 was 2.706 and in 2020 it was 2.551.

Table 15
Kolmogorov-Smirnov Normality Test Before and During the Covid-19 Pandemic

	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
Sebelum Pandemi	.241	7	.200 [*]
Pandemi	.142	7	.200 [*]

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

a. Lilliefors Significance Correction

Sumber : Olah Data Menggunakan SPSS 25

In table 15, the results of the normality test have a Kolmogorov-Smirnov score before the Covid-19 pandemic of 0.200, which means the score before the Covid-19 pandemic has data that is normally distributed. The normality test result for the Kolmogorov-Smirnov score during the Covid-19 pandemic is 0.200, meaning that the score during the Covid-19 pandemic has a normal data distribution. Thus the residual data is normally distributed before the COVID-19 pandemic and during the Covid-19 pandemic.

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Table 16
Different Test Results

		Paired Samples Test							
		Paired Differences			95% Confidence Interval of the Difference		t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Sebelum Pandemi – Pandemi	- .37760	.301464	.113943	-.656409	-.098794	-3.314	6	.016

The different test conducted in this research is the Paired Sample Ttest. In this study, changes will be seen in the variables observed before the Covid-19 pandemic and during the Covid-19 pandemic. Based on the output of the table above, it is known that the probability number sig (2-tiled) is $0.016 < 0.05$. As the basis for decision making in the paired sample t-test, if the probability of sig (2-tiled) < 0.05 , then H_0 is accepted and H_a is rejected. It can be concluded that there is a significant difference between the value of the bankruptcy ratio of companies in the health service sector (hospitals) before the Covid-19 pandemic and during the Covid-19 pandemic.

Analysis of S-Score Difference Test Results

From the analysis and calculations above, in the pre-pandemic period there were two companies in the health service sector (hospitals) in the non-bankrupt category, including; PT Medikaloka Hermina with an S-Score of 1.007, and PT Mitra Keluarga Karyasehat with an S-Score of 2.706. Meanwhile, 5 other companies in the bankrupt category include; PT Metro Healthcare Indonesia with an S-Score of -0.094, PT Royal Prima has an S-Score of 0.184, PT Sarana Meditama Metropolitan has an S-Score of -1.634, PT Siloam International Hospitals has an S-Score of 0.520, and PT Sejahteraraya Anugrahjaya has S-Score value -0.813. Meanwhile, during the Covid-19 pandemic, there were 3 companies in the non-bankrupt category, including; PT Medikaloka Hermina, PT Mitra Keluarga Karyasehat, and PT Royal Prima, with S-Score scores of 1.344, 2.551, 0.895, respectively. Meanwhile, 3 other health sector service companies (hospitals) are included in the bankrupt category including; PT Metro Healthcare Indonesia, PT Sarana Meditama Metropolitan, PT Siloam International Hospitals, and PT Sejahteraraya Anugrahjaya with S-Scores of 0.480, -1.007, 0.623, -0.021, respectively.

CONCLUSION

Based on the data analysis and hypothesis testing that has been done, it can be concluded from this research, namely:

Based on the calculation of the S-Score ratio before the pandemic, there were 2 companies in the health service sector (hospitals) in the non-bankrupt category, namely; PT Medikaloka Hermina with an S-Score of 1.007, and PT Mitra Keluarga Karyasehat with an S-Score of 2.706. Meanwhile, 5 other companies in the bankrupt category include; PT Metro Healthcare Indonesia with an S-Score of -0.094, PT Royal Prima has an S-Score of 0.184, PT Sarana Meditama Metropolitan has an S-Score of -1.634, PT Siloam International Hospitals has an S-Score of 0.520, and PT Sejahteraraya Anugrahjaya has S-Score value -0.813. Meanwhile, during the Covid-19 pandemic, there were 3 companies in the non-bankrupt category, including; PT Medikaloka Hermina, PT Mitra Keluarga Karyasehat, and PT Royal Prima, with S-Score scores of 1.344, 2.551, 0.895, respectively. Meanwhile, 3 other health sector service companies (hospitals) are included in the bankrupt category including; PT Metro Healthcare Indonesia, PT Sarana Meditama Metropolitan, PT Siloam International Hospitals, and PT Sejahteraraya Anugrahjaya with S-Scores of 0.480, -1.007, 0.623, -0.021, respectively.

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Based on the different test using the Paired Sample T-test, the Sig (2-tailed) value is 0.016, which is less than the critical research limit value of 0.05. This means that there is a significant difference between the value of the bankruptcy ratio of companies in the health service sector (hospitals) before the Covid-19 pandemic and during the Covid-19 pandemic. The Covid-19 pandemic has had an impact on health service companies (hospitals).

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