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ANALYSIS OF FINANCIAL DISTRESS IN BROADCASTING SUB-SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

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Abstract

Financial distress, also known as financial difficulties, refers to a situation in which a company experiences unhealthy financial conditions or a crisis. It typically starts with increasing liquidity pressure and continues with a decrease in the value of company assets, ultimately leading to bankruptcy. Bankruptcy poses a significant risk for companies; however, this risk can be minimized or prevented through the use of bankruptcy detection models or tools. The purpose of this study was to assess the financial distress of companies in the Broadcasting Sub-Sector listed on the Indonesia Stock Exchange during the period of 2017-2021. The Springate, Zmijewski, and Grover models were employed for this analysis. The study's population comprised companies in the Broadcasting Sub-Sector listed on the Indonesia Stock Exchange during the specified period, amounting to 5 companies. A research sample of 4 companies was selected using a purposive sampling technique. The findings indicate that according to the Springate model, two companies, namely PT. MDIA Tbk with a rate of 80% and PT. VIVA Tbk with a level of 100%, were in a state of financial distress. The Zmijewski model identified PT VIVA Tbk as the only company in financial distress with a level of 80%. Additionally, based on the Grover model, PT. VIVA Tbk exhibited a financial distress level of 40%.

Keywords: *Financial Distress, Springate, Zmijewski, Grover*

1. INTRODUCTION

Changes in the economic cycle are resulting in increasingly stringent developments. This has significant implications for the business world, where companies need to diversify and be cautious to ensure their survival and prevent bankruptcy (Saswito & Dirman, 2021). Television and radio, as broadcasting media, hold substantial influence over people's lives in various dimensions, including social, political, and economic aspects. As creative industries, television and radio contribute directly and indirectly to the economy (Widyatama & Polereczki, 2020).

Television revenue heavily relies on advertising, and the amount of funds generated through advertising is influenced by a company's advertising capability, commonly referred to as advertising spending. Content, on the other hand, refers to the media presentations such as TV programs, news, features, etc. (Agung, 2011: 50). Currently, the success of a television program is measured by its audience share. Advertisers tend to prefer television programs with high audience shares, as it allows them to target a larger audience. Advertisers are drawn to larger viewership, resulting in increased ad placements on popular television stations (Ratih Maharani et al., 2015).

Financial distress, or financial difficulties, occurs when a company's finances deteriorate, leading to an unhealthy condition or crisis. It begins with liquidity pressure

(short-term financial difficulties), which worsens over time and ultimately causes a decline in the company's asset value, rendering it unable to meet its financial obligations (Zulaecha & Mulvitasari, 2019). Bankruptcy can be predicted well in advance, and therefore, it cannot be detected abruptly. Predicting financial difficulties requires analyzing company information from published financial reports (Rizkyansyah & Laily, 2018). To identify financial distress in a company, a bankruptcy detection model or tool is essential. Several models have been developed for this purpose, including the Springate, Zmijewski, and Grover methods. These models differ in accuracy, with the Springate model primarily relying on the EBITTA ratio in its equation, while others incorporate profitability ratios such as EBTCL and SATA (Kassidy & Handoko, 2022). Zmijewski's model compares returns on assets and debt, while Grover's model evaluates net income and return on assets (Munawarah et al., 2019). The following table presents data on the growth of assets, debt, and sales for broadcasting sub-sector companies listed on the Indonesia Stock Exchange from 2019 to 2021:

Table 1. Financial Performance Report of Broadcasting Sub-Sector Companies (2019-2021, in millions of rupiah)

Issuer Name	Year	Total Assets	%	Debt (in	%	Sale	%	Profit and loss	%
Media Nusantara Citra Tbk (MNCN)	2017	15,057,291		5,256,208		7,052,686		1,567,546	
	2018	16,339,552	8.51	5,697,247	8.37	7,443,905	5.54	1,605,621	2,42
	2019	17,836,430	9,16	5,310,928	-6.78	8,353,365	12,21	2,352,529	46,51
	2020	18,923,235	6.09	4,461,328	-15.99	7,956,238	-4.75	1,871,028	-20.46
	2021	21,369,004	12.92	3,850,254	-13.69	9,621,841	20.93	2,576,699	37,71
Surya Citra Media Tbk (SCMA)	2017	5,385,807		980,414		4,453,848		1,772,111	
	2018	6,138,225	13.97	1,035,274	5.59	5,001,848	12.70	1,937,695	9,34
	2019	6,716,724	9,42	1,228,125	18,62	5,523,362	10,42	1,330,568	-31.33
	2020	6,766,903	0.74	2,870,316	133.71	5,101,113	-7.64	1,459,476	9,68
	2021	9,913,440	46,49	2,452,264	-14.56	5,930,261	16,25	1,752,421	20.07
Mahaka Radio Integra Tbk (MARI)	2017	317,710		122,455		130,036		32,543	
	2018	338,701	6,60	115510	-5.67	145,199	11.66	32,961	1.28
	2019	355,135	4.85	107,852	-6,62	149,902	3,23	32026	-2.83
	2020	317,124	-10.70	120,517	11.74	72,881	-51.38	(49,587)	254.83
	2021	329,231	3.81	84,413	-29.95	69,662	-4.41	(27,008)	-45.53
Intermedia Capital Tbk (MDIA)	2017	5,149,249		2,495,163		1,990,144		553,502	
	2018	5,448,724	5,81	3,030,581	21.45	1,819,777	-8.56	(136,910)	-124.73
	2019	6,062,090	11.25	3,574,948	17.96	1,496,914	-17.74	68,840	49,71
	2020	6,594,597	8.78	4,053,512	13.38	1,282,045	-14.35	100,205	45,56
	2021	5,462,206	-0.17	2,828,712	-30,21	1,354,248	5,63	80,662	-19.50
	2017	7,731,830		4,591,519		2,774,985		209,676	

Vision Media Asia Tbk (VIVA)	2018	**8,024,565**	**3.78**	**6,332,144**	**27,88**	**2,400,197**	**-13.50**	**(1,111,687)**	**-630.19**
	2019	**8,567,653**	**6,76**	**7,419,666**	**17,17**	**2,117,781**	**-11.76**	**(540,883)**	**-51.34**
	2020	**8,584,281**	**0.19**	**8,369,846**	**12.80**	**1,830,516**	**-13.56**	**(809,081)**	**49,58**
	2021	**8,573,516**	**0.27**	**9,190,854**	**9.80**	**1,812,198**	**-0.01**	**(883,329)**	**9,17**

Source: Indonesia Stock Exchange

If we examine the financial performance table above, it becomes evident that the total assets of the five companies consistently increase each year, along with a corresponding increase in total debt. The occurrence of financial distress symptoms can be influenced by high asset values, as companies with large assets are typically larger in size. When a company is large, with high asset values and a significant number of employees, it can lead to increased operational costs. If these high operational costs are not accompanied by substantial sales and profit growth, the risk of financial distress increases (Pratama et al., 2022).

Regarding total debt, it can be observed that the debt has either increased or shows a tendency to increase. From a financial perspective, several conditions can contribute to financial distress, including a heavy debt burden and continuous losses (Nugraha & Fajar, 2018). Additionally, the sales table indicates a decline in sales earnings, which is directly related to the profit table showing a similar decrease. One of the causes of financial distress is the company's inability to effectively manage and maintain the stability of its financial performance, resulting in declining sales and diminished income and profits. This situation leads to operational losses during the specified period (Pratiwi & Machmuddah, 2017).

The main goal of this study was to analyze the financial distress of companies in the Broadcasting Sub-Sector listed on the Indonesia Stock Exchange from 2017 to 2021. By using different models to predict financial distress, this study also contributes to the existing knowledge about bankruptcy prediction. This study provides valuable insights into the financial distress of companies in the Broadcasting Sub-Sector. It helps investors, policymakers, regulators, and companies make informed decisions to avoid financial problems and ensure the sector's stability and growth.

2. LITERATURE REVIEW

2.1. Financial Statements

Financial statements play a crucial role in providing management information. These reports are essential for assessing a company's financial development, including its income, expenses, and other related financial positions. Financial statements serve as an accounting process to communicate financial data and information about company activities to interested parties (Widiastoeti & Sari, 2020).

Financial statements are comprehensive reports that depict the financial condition of a company at a given time or within a specific period. They describe the financial components and positions acquired by the company during that period (Rahmayuni, 2017). Commonly known types of financial reports include balance sheets, income statements, cash flow reports, and reports on changes in financial position.

2.2. Financial Statement Analysis

Financial statement analysis is a critical process that helps evaluate a company's current and past financial position and operational results. Its purpose is to make informed predictions and assessments concerning the company's future condition and performance (Trianto et al., 2017). The analysis of financial statements aims to obtain information related to the company's financial position and the results it has achieved. Financial data gains significance for parties interested in financial information when it can be compared across two or more periods and analyzed in greater depth to facilitate decision-making (Riesmiyantiningtias & Siagian, 2020).

2.3. Financial Distress

Financial distress refers to a situation in which a company encounters financial difficulties, typically occurring before bankruptcy (Rizkyansyah & Laily, 2018). Gunawan et al. (2017) provide an additional definition, stating that financial distress arises when a company faces challenges in generating profits or operates at a deficit. Recognizing the presence of financial distress within a company is crucial as it enables the implementation of various measures aimed at preventing bankruptcy.

2.4. Financial Distress Prediction Model

1) Altman Z-Score models

Edward I. Altman conducted research to predict bankruptcy using financial ratios and statistical techniques, resulting in the development of the Altman Z-Score model (Saputra et al., 2021). Altman identified five financial ratios that differentiate bankrupt and non-bankrupt companies. The model can be represented as follows:

$$Z = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.999X5$$

Where:
X1 = Working capital/Total assets
X2 = Retained earnings/Total assets
X3 = Earnings before interest and taxes/Total assets
X4 = Market value of equity/Book value of total debt
X5 = Sales/Total assets

The Altman Z-Score model uses a cutoff value to assess a company's financial distress. If the Z value is less than 1.81, it suggests the company is close to bankruptcy (Distress Zone). If the Z value falls between 1.81 and 2.99, it indicates a possible bankruptcy situation (Grey Zone). A Z value greater than 2.99 implies the company is unlikely to face bankruptcy (Safe Zone) (Dahni, 2019).

2) Springate model

The Springate model, developed by Gordon LV Springate in 1978, identifies four financial ratios that effectively distinguish healthy and unhealthy companies (Pisfestalia

& Priyadi, 2019). Similar to Altman, Springate utilizes Multiple Discriminant Analysis (MDA) to assess financial distress (Rahmawati et al., 2018). The formula for the Springate model is as follows:

$$S = 1.03\ X1 + 3.07\ X2 + 0.66\ X3 + 0.4\ X4$$

Where:
X1 : Working Capital to Total Assets
X2 : Net Profit Before Interest and Tax to Total Assets
X3 : Net Profit Before Tax on Current Liabilities
X4 : Sales to Total Assets

The Springate model uses a cutoff value of 0.862 to classify companies. A S-score less than 0.862 indicates potential financial distress (financial distress), while a score greater than 1.802 suggests a healthy company (non-financial distress) (Nosita & Jusman, 2019).

3) Zmijewski model

Zmijewski reviewed previous bankruptcy studies and selected relevant financial ratios to construct the Zmijewski model. By considering profitability ratios (ROA), leverage (Debt Ratio), and liquidity (Current Ratio), Zmijewski achieved an accuracy rate of 94.9% in predicting financial distress (Fahma & Setyaningsih, 2021). The formula for the Zmijewski model is:

$$Z = -4.3 - 4.5\ X1 + 5.7\ X2 - 0.004\ X3$$

Where:
X = Zmijewski Score
X1 = ROA (return on assets)
X2 = Total Debt/total assets
X3 = Current assets/current liabilities

The Zmijewski model uses a cutoff value: a positive X value predicts financial distress, while a negative X value suggests non-financial distress (Fakhani, 2018)..

4) Grover models

The Grover model is a modified version of the Altman Z-Score model. It incorporates thirteen additional financial ratios to predict financial distress in companies (Januar et al., 2020). Three influential ratios, namely Working Capital/Total Assets, Earnings Before Interest and Taxes/Total Assets, and ROA (Net Income/Total Assets), are used in the Grover model. The formula is as follows:

$$G = 1.650\ X1 + 3.404\ X2 - 0.016\ X3 + 0.057$$

Where:
X1 = Working Capital to Total Assets
X2 = Earnings Before Interest and Taxes to Total Assets
X3 = ROA (Return on Assets)

The Grover model uses a cutoff value to classify companies. A G value greater than or equal to 0.01 indicates a healthy company (non-distress), while a G value less than or equal to -0.02 suggests the potential for financial distress (Elia & Rahayu, 2019)..

5) Ohlson models

James Ohlson developed a bankruptcy prediction model in 1980 using logistic regression and nine financial ratios (Widiasmara & Rahayu, 2019). The Ohlson model is represented by the following equation :

$$O\ Score = -1.32 - 0.407X1 + 6.03X2 - 1.43X3 + 0.0757X4 - 2.37X5 - 1.83X6 + 0.285X7 - 1.72X8 - 0.521X9$$

Where:
X1: Log (total assets/GNP price level index)
X2: Total debt/total assets
X3: Working capital/total assets
X4: Current liabilities/current assets
X5: 1 if total debt > total assets, 0 if total debt < total assets
X6: Net profit/total assets
X7: Operating cash flow/total debt
X8: 1 if net profit is negative for the last 2 years, 0 if net profit is positive for the last 2 years
X9: (net profit in year - net profit in year t-1)/(net profit in year + net profit in year t-1)

The Ohlson model suggests a cutoff point at a value of 0.38. An O score less than 0.38 indicates no financial difficulties (non-distress), while a score greater than 0.38 predicts financial distress (Widiasmara & Rahayu, 2019)..

6) Traffler Model

The Taffler model was formulated in 1993 for manufacturing companies, utilizing four financial ratios: profit before tax to current liabilities, current assets to total liabilities, current liabilities to total assets, and net profit after tax to total assets (Haryo Prakoso et al., 2022). The Taffler model's equation is as follows :

$$Taffler = 0.53\ (X1) + 0.13\ (X2) + 0.18\ (X3) + 0.16\ (X4)$$

Where:
X1 = Earning before tax / Current Liabilities

X2 = Current Assets / Current Liabilities
X3 = Current Liabilities / Total Assets
X4 = Sales / Total Assets

The Taffler model employs a cutoff value: if the Taffler model result (T) is greater than 0.3, it suggests no bankruptcy (non-distress), while a result less than 0.2 indicates potential bankruptcy (financial distress).

7) Fulmer model

Fulmer utilized a step-wise multiple discriminant analysis method and evaluated 40 financial ratios on a sample of 60 companies (Ambarwati et al., 2017). The Fulmer model is represented by the following formula :

$$H = 5.528\ (V1) + 0.212\ (V2) + 0.073\ (V3) + 1.270\ (V4) - 0.120\ (V5) + 2.335\ (V6) + 0.575\ (V7) + 1.083\ (V8) + 0.894\ (V9) - 6.075$$

Where:
V1 = Retained Earning / Total Assets (Retained earnings to total assets)
V2 = Sales / Total Assets (Sales to total assets)
V3 = EBT / Equity (Profit before tax to total equity)
V4 = Cash Flow / Total Debt (Cash flow to total liabilities)
V5 = Debt / Total Assets (total liabilities to total assets)
V6 = Current Liabilities / Total Assets (total current liabilities to total assets)
V7 = Log Fix Assets (Log total tangible assets)
V8 = Working Capital / Total Debt (working capital to total liabilities)
V9 = Log EBIT / Interest (Log profit before interest and tax on interest expense)

The Fulmer model categorizes companies based on a cutoff value: if H is less than 0, the company is considered to be in a state of bankruptcy (financial distress), while if H is greater than 0, the company is considered to be in a healthy condition (non-financial distress).

8) Foster model

George Foster developed the Foster model in 1978, which applies a multivariate model to identify bankrupt and non-bankrupt transportation companies (Sudarman et al., 2020). The model utilizes two variables: TE/OR (Transportation Expense to Operating Revenue) and TIE (Times Interest Earned). TE/OR represents the ratio of operating costs to income, while TIE indicates the ratio of operating profit to interest payments. The Foster model is represented by the following formula:

$$Z\text{-Score} = -3.366\ X + 0.657\ Y$$

In this case, Foster uses a cutoff point of Z = 0.640. If the Z value is greater than 0.640, the company is classified as non-bankrupt. If the Z value is less than 0.640, the company is classified as bankrupt.

3. RESEARCH METHODS

In this study, quantitative data was used, specifically financial statements of companies in the broadcasting sub-sector from 2017 to 2021. The data was collected using documentary data collection techniques. The research involved a literature review to gather information on financial distress and field research to observe financial reports and collect necessary data for analysis. The samples used in this study were financial position statements, income statements, and reports of changes in equity of broadcasting sub-sector companies from 2019 to 2021.

The research utilizes three models: Springate, Zmijewski, and Grover.

1) The Springate model includes four dimensions:
    a. Working Capital to Total Assets (X1) = (Current Assets - Current Liabilities) / Total Assets
    b. Net Profit Before Interest and Tax to Total Assets (X2) = (Profit Before Interest and Tax) / Total Assets
    c. Net Profit Before Tax on Current Liabilities (X3) = (Profit Before Tax) / Current Liabilities
    d. Sales to Total Assets (X4) = Sales / Total Assets
2) The Zmijewski model consists of three dimensions:
    a. Net Profit to Total Assets (X1) = Net Profit / Total Assets
    b. Total Debt to Total Assets (X2) = Total Debt / Total Assets
    c. Current Assets to Current Liabilities (X3) = Current Assets / Current Liabilities
3) The Grover model includes three dimensions:
    a. Working Capital to Total Assets (X1) = (Current Assets - Current Liabilities) / Total Assets
    b. Earnings Before Interest and Tax to Total Assets (X2) = (Earnings Before Interest and Tax) / Total Assets
    c. Sales to Total Assets (X3) = Sales / Total Assets

Financial distress refers to a company's declining financial condition before bankruptcy. It starts with an inability to pay short-term obligations and extends to difficulties meeting all financial obligations.

Springate Method: This method is a financial distress prediction model based on the Altman Z-Score model. It utilizes four financial ratios:

a. X1 measures the ability of broadcasting companies to generate net working capital from their total assets.
b. X2 reflects the productivity of company assets in the broadcasting sector, independent of taxes.
c. X3 shows the ability of broadcasting companies to generate profits before tax with their current debts or liabilities.
d. X4 measures the efficiency of asset utilization and sales generation in broadcasting companies.

Zmijewski Method: This method uses three ratios to assess financial distress:

a. X1 measures the return on assets generated from each unit of invested funds in broadcasting companies.
b. X2 determines the liquidity of broadcasting companies by comparing total debt to total assets.
c. X3 evaluates the short-term liquidity of broadcasting companies by comparing current assets to current liabilities.

Grover Method: This model expands on the Z-Score Altman model by incorporating thirteen additional financial ratios. It focuses on three ratios:

a. X1 measures the ability of broadcasting companies to generate net working capital from their total assets.
b. X2 reflects the profitability generated from company assets before interest and tax payments.
c. X3 evaluates the return on assets in the broadcasting sub-sector by comparing sales to total assets.

4. RESULTS AND DISCUSSION

4.1. Research Results

4.1.1 Springate Models

Table 2. Springate Model Calculations

Issuer Name	Year	X1	X2	X3	X4	S-SCORE	PREDICTION
Media Nusantara Citra Tbk (MNCN)	2017	0.3597	0.8934	1.0925	0.1873	2.5331	*Non Distressed*
	2018	0.3267	0.8678	0.6446	0.1822	2.0214	*Non Distressed*
	2019	0.3174	0.9161	0.9066	0.1873	2.3276	*Non Distressed*
	2020	0.3351	0.7958	0.7151	0.1681	2.0143	*Non Distressed*
	2021	0.3198	0.8088	0.6807	0.1801	1.9895	*Non Distressed*
Surya Citra Media Tbk (SCMA)	2017	0.3758	1.0101	1.5822	0.3307	3.2990	*Non Distressed*
	2018	0.4400	0.9691	1.6160	0.3259	3.3512	*Non Distressed*
	2019	0.3941	0.6081	0.9163	0.3289	2.2475	*Non Distressed*
	2020	0.3145	0.6621	0.6367	0.3015	1.9149	*Non Distressed*
	2021	0.5156	0.5426	0.6708	0.2392	1.9684	*Non Distressed*
Intermedia Capital Tbk (MDIA)	2017	0.7144	0.4057	0.4899	0.1545	1.7647	*Non Distressed*
	2018	0.5452	0.1838	-0.0403	0.1335	0.8223	*Distress*
	2019	0.3263	0.0512	0.0200	0.0987	0.4964	*Distress*
	2020	0.0994	0.0929	0.0218	0.0777	0.2920	*Distress*
	2021	0.3933	0.1421	0.0341	0.0991	0.6688	*Distress*
Vision Media Asia Tbk (VIVA)	2017	0.2601	0.2804	0.1282	0.1435	0.8123	*Distress*
	2018	0.0618	0.0219	-0.2120	0.1196	-0.0086	*Distress*
	2019	-0.3238	-0.0114	-0.0469	0.0988	-0.2833	*Distress*
	2020	-0.4860	0.0180	-0.0649	0.0852	-0.4476	*Distress*
	2021	-0.5928	0.0524	-0.0627	0.0845	-0.5185	*Distress*
Average		**0.2348**	**0.4655**	**0.4859**	**0.1763**	**1.3627**	
PT. MNCN		**0.3317**	**0.8564**	**0.8079**	**0.1810**	**2.1772**	
PT. SCMA		**0.4080**	**0.7584**	**1.0844**	**0.3052**	**2.5562**	
PT. MDIA		**0.4157**	**0.1751**	**0.1051**	**0.1127**	**0.8088**	
PT. VIVA		**-0.2161**	**0.0722**	**-0.0516**	**0.1063**	**-0.0891**	

Source: Data processed (2022)

The table above displays the values and averages of each potential financial distress variable using the Springate model. It can be observed that the average value of the variable "Working Capital to Total Assets" for the four companies is 0.2348. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 0.3317, 0.4080, 0.4157, and -0.2161, respectively.

Similarly, the average ratio of "Earning Before Interest Taxes to Total Assets" for the four companies is 0.4655. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 0.8564, 0.7584, 0.1751, and 0.0722, respectively.

Additionally, the average ratio of "Earning Before Taxes to Current Liabilities" for the four companies is 0.4859. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 0.8079, 1.0844, 0.1051, and -0.0516, respectively.

The last ratio utilized in the Springate model is the "Sales to Total Assets" ratio, which has an average of 0.1763 across the four companies. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 0.1810, 0.3052, 0.1127, and 0.1063, respectively.

Furthermore, the table reveals the financial health of PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk based on 20 samples studied using the Springate model from 2017-2021. PT. MNCN Tbk and PT. SCMA Tbk demonstrate good health (Non-Distress) during this period. On the other hand, PT. MDIA Tbk was in a healthy condition (Non-Distress) in 2017 but experienced financial distress from 2018-2021. Similarly, PT. VIVA Tbk was in a condition of financial distress throughout 2017-2021. The overall average S-Score is 1.3627, with PT. MNCN Tbk at 2.1772, PT. SCMA Tbk at 2.5562, PT. MDIA Tbk at 0.8088, and PT. VIVA Tbk at -0.0891.

4.1.2 Zmijewski Models

Table 3. Zmijewski Model Calculations

Issuer Name	Year	X1	X2	X3	Z-SCORE	PREDICTION
Media Nusantara Citra Tbk (MNCN)	2017	0.4684	1.9897	0.0184	-2.7602	*Non Distressed*
	2018	0.4421	1.9874	0.0136	-2.7411	*Non Distressed*
	2019	0.5935	1.6972	0.0142	-3.1820	*Non Distressed*
	2020	0.4449	1.3438	0.0154	-3.3857	*Non Distressed*
	2021	0.5426	1.0270	0.0125	-3.8030	*Non Distressed*
Surya Citra Media Tbk (SCMA)	2017	1.4806	1.0376	0.0145	-4.7284	*Non Distressed*
	2018	1.4205	0.9613	0.0170	-4.7421	*Non Distressed*
	2019	0.8914	1.0422	0.0143	-4.1348	*Non Distressed*
	2020	0.9705	2.4177	0.0093	-2.8434	*Non Distressed*
	2021	0.7954	1.4099	0.0156	-3.6697	*Non Distressed*
Intermedia Capital Tbk (MDIA)	2017	0.4837	2.7620	0.0205	-2.0011	*Non Distressed*
	2018	-0.1130	3.1703	0.0103	-1.0062	*Non Distressed*
	2019	0.0511	3.3614	0.0062	-0.9834	*Non Distressed*
	2020	0.0683	3.5036	0.0060	-0.8586	*Non Distressed*
	2021	0.0664	2.9535	0.0070	-1.4058	*Non Distressed*

Vision Media Asia Tbk (VIVA)	2017	0.1220	3.3849	0.0089	-1.0281	*Non Distressed*
	2018	-0.0169	4.4978	0.0045	0.2193	*Distress*
	2019	-0.2840	4.9362	0.0024	0.9228	*Distress*
	2020	-0.4241	4.8129	0.0019	0.9390	*Distress*
	2021	-0.4636	6.1104	0.0017	2.2758	*Distress*
Average		**0.3770**	**2.7203**	**0.0107**	**-1.9458**	
PT. MNCN		**0.4983**	**1.6090**	**0.0148**	**-3.1744**	
PT. SCMA		**1.1117**	**1.3737**	**0.0142**	**-4.0237**	
PT. MDIA		**0.1113**	**3.1501**	**0.0100**	**-1.2510**	
PT. VIVA		**-0.2133**	**4.7484**	**0.0039**	**0.6657**	

Source: Data processed (2022)

The table above displays the values and averages of each potential financial distress variable using the Zmijewski model. The average value of Return on Total Assets (ROA) for the four companies is 0.3770. The average ROA ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. Viva Tbk are 0.4983, 1.1117, 0.1113, and -0.2133, respectively.

Similarly, the average Debt to Total Assets ratio for the four companies is 2.7203. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 1.6090, 1.3737, 3.1501, and 4.7484, respectively.

Furthermore, the Liquidity ratio has an average value of 0.0107 across the four companies. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 0.0148, 0.0142, 0.0100, and 0.0039, respectively.

Additionally, the table reveals the financial health of PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk based on 20 samples studied using the Zmijewski model from 2017-2021. PT. MNCN Tbk, PT. SCMA Tbk, and PT. MDIA Tbk show a non-financial distress condition (healthy condition) during this period. However, PT. VIVA Tbk was in a non-financial distress condition (healthy condition) in 2017 but experienced financial distress from 2018-2021.

The average Z-Score for the four companies is -1.9458, with PT. MNCN Tbk at -3.1744, PT. SCMA Tbk at -4.0237, PT. MDIA Tbk at -1.2510, and PT. VIVA Tbk at 0.6657.

4.1.3 Grover models

Table 4. Grover Model Calculations

Issuer Name	Year	X1	X2	X3	S-SCORE	PREDICTION
Media Nusantara Citra Tbk (MNCN)	2017	0.5763	0.9906	0.0074	1.6164	*Non Distressed*
	2018	0.5234	0.9622	0.0072	1.5353	*Non Distressed*
	2019	0.5085	1.0158	0.0074	1.5738	*Non Distressed*
	2020	0.5368	0.8824	0.0067	1.4695	*Non Distressed*
	2021	0.5123	0.8968	0.0072	1.4590	*Non Distressed*
Surya Citra Media Tbk (SCMA)	2017	0.6020	1.1200	0.0132	1.7658	*Non Distressed*
	2018	0.7049	1.0745	0.0130	1.8235	*Non Distressed*
	2019	0.6314	0.6743	0.0131	1.3495	*Non Distressed*
	2020	0.5038	0.7341	0.0120	1.2830	*Non Distressed*

	2021	0.8259	0.6017	0.0095	1.4751	*Non Distressed*
Intermedia Capital Tbk (MDIA)	2017	1.1445	0.4499	0.0061	2.1582	*Non Distressed*
	2018	0.8734	0.2038	0.0053	1.6419	*Non Distressed*
	2019	0.5228	0.0568	0.0039	1.1456	*Non Distressed*
	2020	0.5028	0.1030	0.0031	1.1728	*Non Distressed*
	2021	0.6301	0.1575	0.0039	1.3537	*Non Distressed*
Vision Media Asia Tbk (VIVA)	2017	0.4166	0.3109	0.0057	1.2918	*Non Distressed*
	2018	0.0990	0.0243	0.0047	0.6885	*Non Distressed*
	2019	-0.5187	-0.0126	0.0039	0.0345	*Non Distressed*
	2020	-0.7786	0.0199	0.0034	-0.1921	*Distress*
	2021	-0.9497	0.0582	0.0033	-0.3248	*Distress*
Average		**0.3934**	**0.5162**	**0.0070**	**1.2160**	
PT. MNCN		**0.5314**	**0.9496**	**0.0072**	**1.5308**	
PT. SCMA		**0.6536**	**0.8409**	**0.0122**	**1.5394**	
PT. MDIA		**0.7347**	**0.1942**	**0.0045**	**1.4944**	
PT. VIVA		**-0.3462**	**0.0801**	**0.0042**	**0.2996**	

Source: processed data (2022)

The table above displays the values and averages of each potential financial distress variable using the Grover model. The average value of the Working Capital to Total Assets variable for the four companies is 0.3934. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 0.5314, 0.6536, 0.7347, and -0.3462, respectively.

Similarly, the average ratio of Earnings Before Interest and Taxes to Total Assets for the four companies is 0.5162. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 0.9496, 0.8409, 0.1942, and 0.0801, respectively.

The last ratio used in the Grover model is the Return on Assets (ROA) ratio, with an average of 0.0070 across the four companies. The average ratios for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk are 0.0072, 0.0122, 0.0045, and 0.0042, respectively.

Furthermore, the table reveals the financial health of PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk based on 20 samples studied using the Grover model from 2017-2021. It shows that all four companies were in a non-financial distress condition (healthy condition) during this period. The overall average G-Score is 1.2160, with PT. MNCN Tbk at 1.5308, PT. SCMA Tbk at 1.5394, PT. MDIA Tbk at 1.4944, and PT. VIVA Tbk at 0.2996.

4.2. Discussion

Based on the conducted calculations, we can analyze the prediction results of the Springate, Zmijewski, and Gorver models for companies in the Broadcasting Sub-Sector listed on the Indonesia Stock Exchange during the period of 2017-2021. The results indicate the following:

According to the Springate model, PT. MNCN Tbk and PT. SCMA Tbk are in a non-distressed (healthy) condition throughout the 2017-2021 period. This determination is based on the S-Score value, which aligns with the established cutoff value. Conversely, PT. MDIA Tbk and PT. VIVA Tbk show different results. PT. MDIA Tbk experienced

four years of financial distress within the five-year period, indicating a high level of financial difficulties at 80%. Meanwhile, PT. VIVA Tbk faced financial distress for all five years, signifying a high level of financial difficulties at 100%.

PT. MDIA Tbk was only non-distressed in 2017, while from 2018 to 2021, it encountered financial difficulties. On the other hand, PT. VIVA Tbk experienced financial distress throughout the 2017-2021 period. The value of X1 (Working Capital to Total Assets) suggests financial distress because the working capital is not proportionate to the total assets. In the case of PT. MDIA Tbk, the working capital is smaller than the total asset value, which is larger. The small working capital value is a result of fluctuating current assets and current liabilities. As for X2 (EBIT to Total Assets), the EBIT of both companies decreased while the total assets increased each year. The decrease in EBIT value to a negative number was caused by operating expenses exceeding income. The value of X3 (Profit Before Tax on Current Liabilities) indicates that neither PT. MDIA Tbk nor PT. VIVA Tbk can be classified as non-distressed due to the profit before tax and current debt being incomparable. Both companies exhibit a decreasing trend in profit before tax, often resulting in negative values. This decrease is attributed to declining operating profit and/or other income (expenses) reducing to negative values, leading to X3 being consistently small or negative. Finally, the value of X4 (Sales to Total Assets) is unstable as sales decrease annually while total assets grow larger.

Based on the calculation results from the Zmijewski model, we can observe the following regarding PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk during the 2017-2021 period:

For PT. MNCN Tbk, PT. SCMA Tbk, and PT. MDIA Tbk, the Z-Score values indicate a non-distressed (healthy) condition throughout the entire period. These companies have Z-Scores that exceed the predetermined cutoff value. However, PT. VIVA Tbk shows a different trend. From the five-year period, it experiences four years of financial distress, indicating a high level of financial difficulties at 80%. In 2017, PT. VIVA Tbk obtains a Z-Score of -1.0281, categorizing it as non-distressed according to the Zmijewski model's criteria. However, from 2018 to 2021, the company's Z-Score values are 0.2193, 0.9228, 0.9390, and 2.2758, respectively. These values show a decrease in the Z-Score, mainly due to a decline in X1 and an increase in X2.

In terms of X1, PT. VIVA Tbk's net income divided by total assets yields a negative value, indicating an inability to use total assets efficiently in generating profits. This is attributed to a continuous decline in sales and contracting profits, despite overall growth. The calculation results for X2 show an increasing value for PT. VIVA Tbk because the company's asset values tend to increase. The X3 (Current Assets/Current Liabilities) calculation measures a company's ability to fulfill its obligations. In this case, the amount of current assets should exceed current liabilities. However, the value of X3 for PT. VIVA Tbk is unfavorable as current liabilities surpass current assets. This indicates an increasing financial risk for the company.

Regarding the Grover model, the financial distress predictions for PT. MNCN Tbk, PT. SCMA Tbk, and PT. MDIA Tbk during the 2017-2021 period suggest a non-distressed condition. These companies are projected to not experience financial difficulties based on the G-Score values, which align with the predetermined cutoff value. In contrast, PT. VIVA Tbk shows two years of financial distress within the five-year

period, indicating a moderate level of financial difficulties at 40%. Specifically, PT. VIVA Tbk faces distress in 2020 and 2021 due to a continuous decrease in X1 (working capital) from 2019 to 2021, resulting in negative values (-0.5187, -0.7786, and -0.9497). Although the company was initially non-distressed in 2019, it failed to maintain this condition as working capital decreased to negative values, while total assets experienced a significant increase in the last two years, primarily due to current debt surpassing current assets. Additionally, the value of X2 (earnings before interest and tax on total assets) tends to decrease while total assets increase annually. The decrease in EBIT to negative values is attributed to operating expenses exceeding income. Furthermore, the X3 (ROA) value for PT. VIVA Tbk continues to decline in the last two years due to decreased sales revenue, which was influenced by the Covid-19 pandemic in 2020.

Although the three prediction models differ in indicators, variables used, and criteria for cutoff values, all serve the same purpose of predicting financial distress in companies. In the case of PT. VIVA Tbk, it demonstrates financial distress according

Based on the calculation results of the Zmijewski model, we can observe the following trends for PT. MNCN Tbk, PT. SCMA Tbk, PT. MDIA Tbk, and PT. VIVA Tbk during the 2017-2021 period:

- PT. MNCN Tbk, PT. SCMA Tbk, and PT. MDIA Tbk consistently show non-distressed (healthy) conditions throughout the entire period. Their Z-Scores exceed the predetermined cutoff value. However, PT. VIVA Tbk displays a different pattern, with four years of financial distress out of the five-year period. This indicates a high level of financial difficulties at 80%. In 2017, PT. VIVA Tbk's Z-Score was -1.0281, classifying it as non-distressed according to the Zmijewski model. However, from 2018 to 2021, the company's Z-Scores were 0.2193, 0.9228, 0.9390, and 2.2758 respectively, showing a decrease. This decrease is primarily due to a decline in X1 and an increase in X2.

- PT. VIVA Tbk's X1 value indicates an inefficient use of total assets in generating profits. The net income divided by total assets yields a negative value, reflecting a decline in sales and contracting profits despite overall growth. X2 shows an increasing value for PT. VIVA Tbk, as the company's asset values tend to increase. However, the X3 calculation (Current Assets/Current Liabilities) reveals an unfavorable situation, with current liabilities exceeding current assets. This signifies an increasing financial risk for the company.

Regarding the Grover model's financial distress predictions, PT. MNCN Tbk, PT. SCMA Tbk, and PT. MDIA Tbk are projected to remain in a non-distressed condition from 2017 to 2021. The G-Score values align with the predetermined cutoff value, indicating no financial difficulties for these companies. In contrast, PT. VIVA Tbk shows two years of financial distress within the five-year period, representing a moderate level of financial difficulties at 40%. Specifically, PT. VIVA Tbk experiences distress in 2020 and 2021 due to a continuous decrease in X1 (working capital) from 2019 to 2021, resulting in negative values (-0.5187, -0.7786, and -0.9497). Although the company was initially non-distressed in 2019, it failed to maintain this condition due to decreasing working capital and a significant increase in total assets, primarily driven by current debt surpassing current assets. Additionally, X2 (earnings before interest and tax on total assets) tends to decrease while total assets increase annually. The decrease in EBIT to

negative values is caused by operating expenses exceeding income. Furthermore, the X3 value (ROA) for PT. VIVA Tbk continues to decline in the last two years due to decreased sales revenue influenced by the Covid-19 pandemic in 2020.

Although the three prediction models differ in indicators, variables used, and cutoff criteria, their purpose remains the same - predicting financial distress in companies. In the case of PT. VIVA Tbk, it demonstrates financial distress across all three prediction models.

5. CONCLUSION

Based on the discussions, it can be concluded that the analysis using different models provides insights into the financial distress levels of the companies studied.

Using the Springate model, it is evident that two out of the four companies analyzed, namely PT. Intermedia Capital Tbk (MDIA) and PT. Visi Media Asia Tbk (VIVA), are in a state of financial distress. PT. MDIA has a distress level of 80%, indicating a significant proportion of financial difficulties. PT. VIVA, on the other hand, faces a distress level of 100%, indicating a high proportion of financial distress.

Similarly, the Zmijewski model highlights PT. VIVA as the only company experiencing financial distress among the four analyzed. With a distress level of 80%, PT. VIVA faces significant financial difficulties.

Considering these findings, it is recommended that PT. MDIA and PT. VIVA undertake thorough assessments of their financial situations to identify the underlying causes of distress and implement appropriate measures to mitigate the challenges they are facing. This may involve improving working capital management, addressing any issues related to total assets and liabilities, and exploring strategies to enhance profitability.

Lastly, according to the Grover model, PT. VIVA is classified as being in a state of financial distress with a distress level of 40%, indicating a moderate level of financial difficulties. It is advisable for PT. VIVA to closely monitor its financial performance, identify areas for improvement, and develop strategies to strengthen its financial position and reduce the distress level.

Overall, the analysis of these models provides consistent evidence that PT. VIVA is experiencing financial distress, while the other companies in the study do not exhibit significant financial difficulties. The identified distress levels call for proactive measures and strategic decision-making to ensure the financial stability and long-term viability of the affected companies.

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