ANALYSIS OF POTENTIAL BANKRUPTCY USING THE ZMIJEWSKI METHOD IN TELECOMMUNICATION COMPANIES LISTED ON THE IDX FOR THE PERIOD OF 2018 – 2022

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Abstract

This study aims to analyze the potential for bankruptcy in telecommunications companies listed on the Indonesia Stock Exchange (IDX) in the 2018-2022 period. The method used in this analysis is the Zmijewski method, which has been proven effective in identifying bankruptcy risks in companies. Financial data from telecommunication companies listed on the IDX during the study period were taken and analyzed. The results of the analysis show that there are several telecommunication companies that show bankruptcy potential. during the 2018-2022 period. Factors such as decreased profitability, increased debt, and low liquidity are the main causes of this potential bankruptcy. This research provides important information for telecommunications company stakeholders to better understand bankruptcy risk and take appropriate steps to deal with it. In addition, this research can also be a basis for developing more effective and sustainable bankruptcy prevention strategies.

Keywords: Bankruptcy, Zmijewski Method, Telecommunications Company.

INTRODUCTION

Bankruptcy is a financial condition in which a company does not have sufficient assets to meet its financial obligations. Bankruptcy in a company occurs because the company is unable to pay debts to creditors or to shareholders.

A telecommunications company is a type of company that provides long-distance communication services. Telecommunications companies have the responsibility to transmit data, voice and video between users through various media such as cables, fiber optics, radio waves, as well as other wireless technologies.

Based on research conducted byJamil, Vadilla (2022 : 42)smartphone user data in Indonesia in 2017 amounted to 11.48% and 10.18% in 2019. Meanwhile, internet users in Indonesia in 2017 were 13.33% and 12.61% in 2019. From these data, It is clear that internet usage is higher than the number of smartphone users.

According toJamil, Vadilla (2022 : 41)The development of telecommunications is very rapid in line with advances in information technology. Currently, various activities carried out by the community are inseparable from communication, both for business purposes and for student needs, which are used to add insight to each individual. According toFatmawati (2012), the Zmijewski model has a prediction accuracy rate of 83%, the Altman model is 36% and the Springate model is 60%. This means that the Zmijewski model is better than the other two prediction models, namely the Springate model and the Altman model.

Based on previous research conducted by Christiana (2018) with the research title namely Analysis of Potential Bankruptcy in Food and Beverage Companies Listed on the IDX. The results of this research are from the three bankruptcy prediction models, namely the altman z-score model, the springate model, and the zmijewski model, of the nine companies sampled according to the altman z-score model, there are three companies that are in the classification of gray area conditions, meaning that the company is can still survive (no potential for bankruptcy) or will experience bankruptcy. Meanwhile, the results from the Springate model and the Zmijewski model find that all companies are in a condition classification with no potential for bankruptcy or a healthy condition.

Companies in any field are formed with the hope that in the future they can generate profits so that they can continue to grow and survive for a very long period of time. Therefore, it can be interpreted that the company is expected not to experience bankruptcy. At present, competition is

getting faster and more competitive between companies at the domestic and international levels, which is caused by the era of globalization and also increasingly advanced technology. Therefore, leaders are required to be able to have the ability to manage a company better so that in the future the company can move quickly in anticipation if changes occur later (Mandalurang, et al, 2019: 4359). The condition of bankruptcy is not a decision that a company wants, often a company will take various ways to avoid bankruptcy such as restructuring debt, selling assets, and looking for additional investment.

METHODS

a) Financial statements

The financial report is a record of information related to the financial condition of a company in one accounting period that can be used to describe the performance of a company. According to Yanuarmawan (2018 :26)"Financial reports are written reports that provide quantitative information about the financial position and also its changes, as well as the results obtained during a certain period".

b) Bankruptcy Analysis

Bankruptcy is a condition where the operating cash flow of a company cannot pay off its current liabilities such as debt, so the company needs to make improvements. According to Silaban (2017 :323)Bankruptcy is a situation in which a company experiences a lack of funds in running its business. He also stated that the level of bankruptcy occurs when there is a temporary lack of liquidity and continues to have a much larger amount than the total assets owned by a company.

c) Zmijewski Model Bankruptcy Analysis

The bankruptcy prediction made by Zmijewski is able to provide additional validity to the financial ratios used as a tool to detect failures that occur in company finances. This Zmijewski model definitely has advantages and disadvantages. According to Permatasari (2019: 78) The advantages and disadvantages of the Zmijewski model are as follows:

- Excess
  1. Able to combine various types of financial ratios at the same time.
  2. Able to provide appropriate coefficients, which will be used to combine several independent variables.
  3. Makes it easy to implement.
- Lack
  1. The value obtained can be engineered or also known as bias which is carried out through accounting principles that have been declared wrong or through other types of financial engineering.
  2. This model only uses three types of financial ratios
  3. This model can be said to be not stringent for use in assessing the level of bankruptcy.

The formula that will be used in the model proposed by Zmijewski is:

$$\text{X-Score} = -4.3 - 4.5X1 + 5.7X2 - 0.004X3$$

Where:
- X1 : Return On Assets (ROA)
- X2 : Debt Ratio / Leverage
- X3: Current Ratio or Liquidity

Criteria:

*cut-offs*used in this model is 0, provided that if the X-Score results are positive, then the company can be said to be unhealthy. However, if the results of the X-Score are negative, then the company can be said to be healthy.

RESULTS AND DISCUSSION
Return on Assets (X1)

ROA is a type of ratio that compares profit after tax with the company's total assets. This type of ratio is able to show how good the company is if the assets invested are shared with the profits that have been generated. The provisions for this type of ratio are that the greater the ROA value, the more efficient the use of company assets will be. Vice versa, if the smaller the ROA value, the more inefficient the use of company assets will be.

Table 1 X1 Calculation Results (ROA)

STOCK CODE	YEAR	PROFIT LOSS (Rp)	TOTAL ASSETS (Rp)	ROA (%)	AVERAGE (%)
TLKM	2018	26,979,000,000,000	206,196,000,000,000	13.08	11.97
	2019	27,592,000,000,000	221,208,000,000,000	12.47	
	2020	29,563,000,000,000	246,943,000,000,000	11.97	
	2021	33,948,000,000,000	277,184,000,000,000	12.25	
	2022	27,680,000,000,000	275,192,000,000,000	10.06	
ISAT	2018	(2,085,059,000,000)	53,139,587,000,000	-3.92	2.64
	2019	1,630,372,000,000	62,813,000,000,000	2.60	
	2020	(630,160,000,000)	62,778,740,000,000	-1.00	
	2021	6,860,121,000,000	63,397,148,000,000	10.82	
	2022	5,370,203,000,000	113,880,230,000,000	4.72	
EXCL	2018	(3,296,890,000,000)	57,613,954,000,000	-5.72	-0.20
	2019	712,579,000,000	62,725,242,000,000	1.14	
	2020	371,598,000,000	67,744,797,000,000	0.55	
	2021	1,287,807,000,000	72,753,282,000,000	1.77	
	2022	1,121,188,000,000	87,277,780,000,000	1.28	
FREN	2018	(3,552,834,007,240)	25,213,595,077,036	-14.09	-4.93
	2019	(2,187,771,846,923)	27,650,462,178,339	-7.91	
	2020	(1,523,602,951,388)	38,684,276,546,076	-3.94	
	2021	(435,325,081,365)	43,357,849,742,875	-1.00	
	2022	1,064,304,591,187	46,492,367,225,786	2.29	
JAST	2018	5,497,953,006	86,916,165,514	6.33	-3.11
	2019	3,926,009,907	148,505,998,895	2.64	
	2020	(14,321,581,868)	114,094,419,514	-12.55	
	2021	(7,940,186,118)	100,685,269,541	-7.89	
	2022	(5,361,626,734)	131,497,017,992	-4.08	
KBLV	2018	(4,187,434,000,000)	7,026,611,000,000	-59.59	-22.64
	2019	(256,057,000,000)	7,174,495,000,000	-3.57	
	2020	(21,478,000,000)	6,606,047,000,000	-0.33	
	2021	(1,265,864,000,000)	4,585,222,000,000	-27.61	
	2022	(281,170,000,000)	1,271,090,000,000	-22.12	
LINK	2018	788,918,000,000	6,023,611,000,000	13.10	9.95
	2019	894,531,000,000	6,652,974,000,000	13.45	
	2020	941,707,000,000	7,799,803,000,000	12.07	
	2021	885,319,000,000	9,746,894,000,000	9.08	
	2022	240,718,000,000	11,644,794,000,000	2.07	
BALI	2018	50,353,175,264	3,437,653,341,261	1.46	2.45

	2019	46,024,437,201	4,147,689,322,753	1.11	
	2020	84,403,215,805	4,651,939,975,688	1.81	
	2021	188,536,504,140	5,001,398,828,957	3.77	
	2022	212,090,007,799	5,196,995,589,938	4.08	
CENT	2018	35,637,000,000	5,207,342,000,000	0.68	
	2019	8,912,000,000	5,729,085,000,000	0.16	
	2020	(509,181,000,000)	7,629,153,000,000	-6.67	-3.62
	2021	(314,231,000,000)	19,798,329,000,000	-1.59	
	2022	(2,146,381,000,000)	20,101,049,000,000	-10.68	
GHON	2018	49,423,302,000	485,156,762,000	10.19	
	2019	63,509,234,000	740,433,237,000	8.58	
	2020	77,752,839,000	827,628,586,000	9.39	8.96
	2021	89,855,831,000	1,021,478,602,000	8.80	
	2022	90,728,112,000	1,156,622,811,000	7.84	
GOLD	2018	(8,081,959,089,000)	239,215,584,000	-3378.53	
	2019	7,054,944,000	329,963,071,000	2.14	
	2020	13,159,949,000	338,352,250,000	3.89	-672.89
	2021	14,604,362,000	360,871,363,000	4.05	
	2022	15,998,575,000	400,972,660,000	3.99	
IBST	2018	146,006,831,186	7,725,601,132,423	1.89	
	2019	128,831,147,635	8,893,030,992,719	1.45	
	2020	67,204,167,744	1,012,826,253,217	6.64	2.22
	2021	63,351,210,259	9,547,133,662,297	0.66	
	2022	41,526,767,474	9,431,928,852,947	0.44	
LCKM	2018	4,806,252,640	143,302,214,511	3.35	
	2019	2,295,609,020	143,904,158,664	1.60	
	2020	4,817,922,834	146,610,616,333	3.29	2.78
	2021	7,647,206,699	147,143,641,262	5.20	
	2022	702,210,466	145,557,220,841	0.48	
SUPR	2018	(1,223,843,000,000)	11,670,481,000,000	-10.49	
	2019	228,382,000,000	11,164,825,000,000	2.05	
	2020	708,883,000,000	11,156,376,000,000	6.35	1.41
	2021	(69,075,000,000)	11,635,100,000,000	-0.59	
	2022	936,343,000,000	9,601,515,000,000	9.75	
TBIG	2018	702,632,000,000	29,113,747,000,000	2.41	
	2019	866,121,000,000	30,871,710,000,000	2.81	
	2020	1,066,576,000,000	36,521,303,000,000	2.92	3.18
	2021	1,601,353,000,000	41,870,435,000,000	3.82	
	2022	1,689,441,000,000	43,139,968,000,000	3.92	
TOWR	2018	2,200,060,000,000	22,959,618,000,000	9.58	
	2019	2,353,089,000,000	27,665,695,000,000	8.51	
	2020	2,853,617,000,000	34,249,550,000,000	8.33	7.40
	2021	3,447,875,000,000	65,828,670,000,000	5.24	
	2022	3,496,535,000,000	65,625,136,000,000	5.33	
MTEL	2018	449,632,813,000	13,053,224,264,000	3.44	2.77

	2019	493,340,716,000	20,091,171,218,000	2.46	
	2020	601,964,452,000	25,285,211,943,000	2.38	
	2021	1,381,071,227,000	57,728,318,286,000	2.39	
	2022	1,785,067,859,000	56,071,558,764,000	3.18	

Source: Results of data analysis with Microsoft Excel

Debt Ratio (X2)

Debt Ratio / Leverage is a type of ratio that can compare total debt to total assets. The provisions for this type of ratio are that the greater the ratio obtained, the greater the use of debt in financing investment on assets, which means that the financial risk in a company will also increase.

Table 2 Calculation Results of X2 (Debt Ratio)

STOCK CODE	YEAR	TOTAL ASSETS (Rp)	TOTAL LIABILITIES (Rp)	DEBT RATIO (%)	AVERAGE (%)
TLKM	2018	206,196,000,000,000	88,893,000,000,000	43.11	
	2019	221,208,000,000,000	103,958,000,000,000	47.00	
	2020	246,943,000,000,000	126,054,000,000,000	51.05	46.89
	2021	277,184,000,000,000	131,785,000,000,000	47.54	
	2022	275,192,000,000,000	125,930,000,000,000	45.76	
ISAT	2018	53,139,587,000,000	41,003,340,000,000	77.16	
	2019	62,813,000,000,000	49,105,807,000,000	78.18	
	2020	62,778,740,000,000	49,865,344,000,000	79.43	78.15
	2021	63,397,148,000,000	53,094,346,000,000	83.75	
	2022	113,880,230,000,000	82,265,242,000,000	72.24	
EXCL	2018	57,613,954,000,000	39,270,856,000,000	68.16	
	2019	62,725,242,000,000	43,603,276,000,000	69.51	
	2020	67,744,797,000,000	48,607,431,000,000	71.75	70.46
	2021	72,753,282,000,000	52,664,537,000,000	72.39	
	2022	87,277,780,000,000	61,503,554,000,000	70.47	
FREN	2018	25,213,595,077,036	12,765,589,253,394	50.63	
	2019	27,650,462,178,339	14,914,975,380,320	53.94	
	2020	38,684,276,546,076	26,318,344,155,226	68.03	61.90
	2021	43,357,849,742,875	30,704,407,248,908	70.82	
	2022	46,492,367,225,786	30,732,855,026,797	66.10	
JAST	2018	86,916,165,514	49,085,498,628	56.47	
	2019	148,505,998,895	58,744,134,670	39.56	
	2020	114,094,419,514	58,255,094,779	51.06	48.07
	2021	100,685,269,541	51,938,232,419	51.58	
	2022	131,497,017,992	54,781,384,063	41.66	
KBLV	2018	7,026,611,000,000	5,758,641,000,000	81.95	
	2019	7,174,495,000,000	6,228,754,000,000	86.82	
	2020	6,606,047,000,000	5,680,226,000,000	85.99	97.21
	2021	4,585,222,000,000	4,554,830,000,000	99.34	
	2022	1,271,090,000,000	1,677,346,000,000	131.96	
LINK	2018	6,023,611,000,000	1,272,512,000,000	21.13	
	2019	6,652,974,000,000	1,996,559,000,000	30.01	39.07
	2020	7,799,803,000,000	3,177,089,000,000	40.73	

	2021	9,746,894,000,000	4,497,552,000,000	46.14	
	2022	11,644,794,000,000	6,676,754,000,000	57.34	
BALI	2018	3,437,653,341,261	1,743,784,175,271	50.73	52.81
	2019	4,147,689,322,753	2,249,372,866,307	54.23	
	2020	4,651,939,975,688	2,472,095,850,875	53.14	
	2021	5,001,398,828,957	2,649,677,296,449	52.98	
	2022	5,196,995,589,938	2,753,271,517,109	52.98	
CENT	2018	5,207,342,000,000	2,168,918,000,000	41.65	69.84
	2019	5,729,085,000,000	2,714,193,000,000	47.38	
	2020	7,629,153,000,000	5,157,414,000,000	67.60	
	2021	19,798,329,000,000	17,740,454,000,000	89.61	
	2022	20,101,049,000,000	20,693,476,000,000	102.95	
GHON	2018	485,156,762,000	92,999,798,000	19.17	23.83
	2019	740,433,237,000	139,124,612,000	18.79	
	2020	827,628,586,000	157,782,245,000	19.06	
	2021	1,021,478,602,000	302,459,113,000	29.61	
	2022	1,156,622,811,000	375,812,491,000	32.49	
GOLD	2018	239,215,584,000	145,163,764,000	60.68	19.38
	2019	329,963,071,000	33,260,378,000	10.08	
	2020	338,352,250,000	28,616,385,000	8.46	
	2021	360,871,363,000	34,437,898,000	9.54	
	2022	400,972,660,000	32,547,385,000	8.12	
IBST	2018	7,725,601,132,423	2,504,220,878,822	32.41	110.30
	2019	8,893,030,992,719	3,090,312,252,257	34.75	
	2020	1,012,826,253,217	4,210,975,933,401	415.76	
	2021	9,547,133,662,297	2,962,262,142,191	31.03	
	2022	9,431,928,852,947	3,540,668,594,029	37.54	
LCKM	2018	143,302,214,511	14,879,297,198	10.38	8.75
	2019	143,904,158,664	14,188,519,810	9.86	
	2020	146,610,616,333	12,579,094,626	8.58	
	2021	147,143,641,262	11,970,337,380	8.14	
	2022	145,557,220,841	9,891,118,346	6.80	
SUPR	2018	11,670,481,000,000	8,700,576,000,000	74.55	71.27
	2019	11,164,825,000,000	8,191,309,000,000	73.37	
	2020	11,156,376,000,000	9,341,679,000,000	83.73	
	2021	11,635,100,000,000	8,424,556,000,000	72.41	
	2022	9,601,515,000,000	5,020,440,000,000	52.29	
TBIG	2018	29,113,747,000,000	25,434,182,000,000	87.36	79.06
	2019	30,871,710,000,000	25,348,426,000,000	82.11	
	2020	36,521,303,000,000	27,217,465,000,000	74.52	
	2021	41,870,435,000,000	32,081,197,000,000	76.62	
	2022	43,139,968,000,000	32,219,585,000,000	74.69	
TOWR	2018	22,959,618,000,000	14,926,338,000,000	65.01	72.66
	2019	27,665,695,000,000	18,905,074,000,000	68.33	
	2020	34,249,550,000,000	24,065,502,000,000	70.27	

	2021	65,828,670,000,000	53,766,654,000,000	81.68	
	2022	65,625,136,000,000	51,192,802,000,000	78.01	
MTEL	2018	13,053,224,264,000	10,167,326,596,000	77.89	57.71
	2019	20,091,171,218,000	12,359,874,053,000	61.52	
	2020	25,285,211,943,000	17,122,064,447,000	67.72	
	2021	57,728,318,286,000	24,082,708,466,000	41.72	
	2022	56,071,558,764,000	22,264,125,054,000	39.71	

Source: Results of data analysis with Microsoft Excel

Current Ratio (X3)

Current Ratio can be measured by comparing the current assets with current liabilities. This type of ratio is used to measure the liquidity of a company, but this type of ratio is more focused on the short term.

Table 3 Calculation Results of X3 (Current Ratio)

STOCK CODE	YEAR	CURRENT ASSETS (Rp)	CURRENT LIABILITIES (Rp)	CURRENT RATIO (%)	AVERAGE (%)
TLKM	2018	43,268,000,000,000	46,261,000,000,000	93.53	79.83
	2019	41,722,000,000,000	58,369,000,000,000	71.48	
	2020	46,503,000,000,000	69,093,000,000,000	67.30	
	2021	61,277,000,000,000	69,131,000,000,000	88.64	
	2022	55,057,000,000,000	70,388,000,000,000	78.22	
ISAT	2018	7,906,525,000,000	21,040,365,000,000	37.58	45.67
	2019	12,444,795,000,000	22,129,440,000,000	56.24	
	2020	9,594,951,000,000	22,658,094,000,000	42.35	
	2021	11,499,439,000,000	28,658,152,000,000	40.13	
	2022	18,683,115,000,000	35,874,074,000,000	52.08	
EXCL	2018	7,058,652,000,000	15,733,294,000,000	44.86	39.00
	2019	7,145,648,000,000	21,292,684,000,000	33.56	
	2020	7,571,123,000,000	18,857,026,000,000	40.15	
	2021	7,733,191,000,000	20,953,921,000,000	36.91	
	2022	10,408,358,000,000	26,350,500,000,000	39.50	
FREN	2018	1,987,582,883,558	6,113,366,615,810	32.51	28.89
	2019	1,774,596,661,176	6,119,936,082,173	29.00	
	2020	2,646,319,224,796	8,417,955,655,404	31.44	
	2021	2,322,497,796,081	9,603,232,140,323	24.18	
	2022	2,364,667,930,207	8,658,869,351,727	27.31	
JAST	2018	32,978,084,524	41,925,588,125	78.66	94.28
	2019	75,249,667,231	52,815,345,090	142.48	
	2020	60,757,202,497	52,688,677,814	115.31	
	2021	24,856,317,173	47,911,877,658	51.88	
	2022	40,952,790,546	49,309,690,270	83.05	
KBLV	2018	250,940,000,000	4,103,058,000,000	6.12	11.03
	2019	344,763,000,000	4,069,059,000,000	8.47	
	2020	133,685,000,000	4,920,800,000,000	2.72	
	2021	142,582,000,000	4,404,354,000,000	3.24	
	2022	571,881,000,000	1,652,441,000,000	34.61	

	2018	1,077,472,000,000	1,095,579,000,000	98.35	
	2019	898,564,000,000	1,413,016,000,000	63.59	
LINK	2020	774,438,000,000	2,818,011,000,000	27.48	50.50
	2021	860,648,000,000	1,964,255,000,000	43.82	
	2022	895,066,000,000	4,648,427,000,000	19.26	
	2018	299,165,402,551	516,318,541,594	57.94	
	2019	355,757,344,382	1,091,568,985,440	32.59	
BALI	2020	401,196,606,179	642,283,365,635	62.46	57.98
	2021	459,258,299,276	645,813,931,744	71.11	
	2022	514,604,194,596	781,927,018,201	65.81	
	2018	940,154,000,000	778,970,000,000	120.69	
	2019	1,285,023,000,000	1,255,977,000,000	102.31	
CENT	2020	1,116,644,000,000	4,983,388,000,000	22.41	81.73
	2021	1,279,833,000,000	6,004,704,000,000	21.31	
	2022	2,376,921,000,000	1,675,037,000,000	141.90	
	2018	45,955,010,000	63,527,586,000	72.34	
	2019	41,885,488,000	62,828,314,000	66.67	
GHON	2020	37,262,521,000	112,293,182,000	33.18	46.80
	2021	75,858,670,000	250,140,903,000	30.33	
	2022	96,533,792,000	306,363,017,000	31.51	
	2018	30,438,627,000	111,498,348,000	27.30	
	2019	114,100,749,000	31,386,202,000	363.54	
GOLD	2020	110,339,347,000	25,792,856,000	427.79	295.19
	2021	112,647,222,000	31,756,190,000	354.73	
	2022	88,045,362,000	29,098,404,000	302.58	
	2018	1,149,973,619,979	956,508,963,121	120.23	
	2019	1,463,644,955,334	993,021,427,528	147.39	
IBST	2020	1,380,008,830,013	1,194,454,114,708	115.53	171.71
	2021	2,296,081,016,362	817,505,939,412	280.86	
	2022	1,893,120,295,382	973,196,711,688	194.53	
	2018	123,903,058,802	14,661,817,244	845.07	
	2019	126,517,364,372	13,911,019,974	909.48	
LCKM	2020	129,473,203,351	12,156,902,355	1065.02	1123.67
	2021	135,624,679,108	11,555,188,045	1173.71	
	2022	136,600,695,360	8,405,947,346	1625.05	
	2018	2,073,521,000,000	1,536,265,000,000	134.97	
	2019	1,764,606,000,000	1,566,989,000,000	112.61	
SUPR	2020	1,444,271,000,000	1,721,017,000,000	83.92	87.40
	2021	1,932,729,000,000	2,700,564,000,000	71.57	
	2022	727,964,000,000	2,145,801,000,000	33.93	
	2018	2,027,465,000,000	6,424,937,000,000	31.56	
	2019	2,376,740,000,000	4,513,623,000,000	52.66	
TBIG	2020	3,227,394,000,000	13,777,876,000,000	23.42	36.86
	2021	3,021,253,000,000	8,432,425,000,000	35.83	
	2022	3,565,804,000,000	8,728,182,000,000	40.85	

	YEAR			
TOWR	2018	2,275,390,000,000	4,751,801,000,000	47.88	
	2019	2,474,389,000,000	4,565,104,000,000	54.20	
	2020	3,002,332,000,000	7,225,188,000,000	41.55	40.55
	2021	7,398,138,000,000	21,880,264,000,000	33.81	
	2022	3,651,134,000,000	14,446,084,000,000	25.27	
MTEL	2018	2,048,824,941,000	3,677,517,868,000	55.71	
	2019	2,876,098,725,000	4,931,313,094,000	58.32	
	2020	2,893,802,348,000	7,347,938,748,000	39.38	111.94
	2021	21,302,798,534,000	6,475,515,478,000	328.97	
	2022	7,886,437,733,000	10,200,552,606,000	77.31	

Source: Results of data analysis with Microsoft Excel, 2023

Financial Distress Calculation Results Using the Zmijewski Method

Table 4 Financial Distress Calculation Results of PT Telkom Indonesia (Persero) Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.5888	2.4573	0.0037	-2.4352	*Non Distressed*
2019	-4.3	0.5613	2.6787	0.0029	-2.1854	*Non Distressed*
2020	-4.3	0.5387	2.9096	0.0027	-1.9318	*Non Distressed*
2021	-4.3	0.5511	2.7100	0.0035	-2.1447	*Non Distressed*
2022	-4.3	0.4526	2.6084	0.0031	-2.1474	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Telkom Indonesia (Persero) Tbk. In the 2018-2022 period, the company is in a healthy condition or categorized as non-distress, but even so the company still has to maintain the company's financial stability. Such as by increasing sales so that the net profit obtained can continue to increase, and the company must also be able to fulfill its obligations.

Table 5. Financial Distress Calculation Results for PT Indosat Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	-0.1766	4.3982	0.0015	0.2733	*Distress*
2019	-4.3	0.1168	4.4561	0.0022	0.0371	*Distress*
2020	-4.3	-0.0452	4.5275	0.0017	0.2710	*Distress*
2021	-4.3	0.4869	4.7737	0.0016	-0.0149	*Non Distressed*
2022	-4.3	0.2122	4.1176	0.0021	-0.3967	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Indosat Tbk. In the 2018-2020 period, the company was in an unhealthy condition or categorized as distress. However, in the 2021-2022 period the company is in a healthy condition or categorized as non-distress. But even so, the company still has to maintain its financial stability so that the profit earned can always increase, moreover, this company has experienced unhealthy conditions for 3 consecutive years. Therefore, it is very important for the company to continue to be able to fulfill its obligations.

Table 6 Results of Financial Distress Calculations for PT XL Axiata Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	-0.2575	3.8852	0.0018	-0.1591	*Non Distressed*
2019	-4.3	0.0511	3.9623	0.0013	-0.3901	*Non Distressed*
2020	-4.3	0.0247	4.0898	0.0016	-0.2365	*Non Distressed*

2021	-4.3	0.0797	4.1261	0.0015	-0.2550	*Non Distressed*
2022	-4.3	0.0578	4.0167	0.0016	-0.3427	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT XL Axiata Tbk. In the 2018-2022 period, the company is in a healthy condition or categorized as non-distress, but even so the company still has to maintain the company's financial stability. Such as by increasing sales so that the net profit obtained can continue to increase, and the company must also be able to fulfill its obligations.

Table 7 Financial Distress Calculation Results for PT Smartfren Telecom Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	-0.6341	2.8859	0.0013	-0.7813	*Non Distressed*
2019	-4.3	-0.3561	3.0746	0.0012	-0.8705	*Non Distressed*
2020	-4.3	-0.1772	3.8779	0.0013	-0.2461	*Non Distressed*
2021	-4.3	-0.0452	4.0365	0.0010	-0.2193	*Non Distressed*
2022	-4.3	0.1030	3.7679	0.0011	-0.6362	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Smartfren Telecom Tbk. In the 2018-2022 period, the company is in a healthy condition or categorized as non-distress, but even so the company still has to maintain the company's financial stability. Such as by increasing sales so that the net profit obtained can continue to increase, and the company must also be able to fulfill its obligations.

Table 8 Calculation Results of Financial Distress for PT Jasnita Telekomindo Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.2847	3.2190	0.0031	-1.3687	*Non Distressed*
2019	-4.3	0.1190	2.2547	0.0057	-2.1699	*Non Distressed*
2020	-4.3	-0.5649	2.9103	0.0046	-0.8294	*Non Distressed*
2021	-4.3	-0.3549	2.9403	0.0021	-1.0069	*Non Distressed*
2022	-4.3	-0.1835	2.3746	0.0033	-1.7452	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Jasnita Telekomindo Tbk. In the 2018-2022 period, the company is in a healthy condition or categorized as non-distress, but even so the company still has to maintain the company's financial stability. Such as by increasing sales so that the net profit obtained can continue to increase, and the company must also be able to fulfill its obligations.

Table 9 Financial Distress Calculation Results for PT First Media Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	-2.6817	4.6714	0.0002	3.0529	*Distress*
2019	-4.3	-0.1606	4.9486	0.0003	0.8089	*Distress*
2020	-4.3	-0.0146	4.9012	0.0001	0.6157	*Distress*
2021	-4.3	-1.2423	5.6622	0.0001	2.6044	*Distress*
2022	-4.3	-0.9954	7.5218	0.0014	4.2158	*Distress*

Source: Results of data analysis with Microsoft Excel, 2023

PT First Media Tbk. In the 2018-2022 period, the company was in an unhealthy condition or categorized as distress, therefore, in the future the company must be able to improve the company's performance so that it can obtain increasing profits, and the company must also be able to fulfill its obligations.

Table 10 Financial Distress Calculation Results for PT Link Net Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.5894	1.2041	0.0039	-3.6892	*Non Distressed*
2019	-4.3	0.6051	1.7106	0.0025	-3.1970	*Non Distressed*
2020	-4.3	0.5433	2.3218	0.0011	-2.5226	*Non Distressed*
2021	-4.3	0.4087	2.6302	0.0018	-2.0803	*Non Distressed*
2022	-4.3	0.0930	3.2682	0.0008	-1.1256	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT LinkNet Tbk. In the 2018-2022 period they are in a healthy condition or categorized as in a non-distress state, but every year the X-Score value continues to increase, which will have a bad impact on the company, so the company must be able to increase its sales so that the profit earned can increase every year. annually, and also the current liabilities must decrease each year by reducing borrowing. Because if the value of liabilities continues to increase and the company cannot fulfill these obligations, the company will lead to financial distress.

Table 11 Financial Distress Calculation Results for PT Bali Towerindo Sentra Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.0659	2.8914	0.0023	-1.4768	*Non Distressed*
2019	-4.3	0.0499	3.0912	0.0013	-1.2600	*Non Distressed*
2020	-4.3	0.0816	3.0290	0.0025	-1.3551	*Non Distressed*
2021	-4.3	0.1696	3.0198	0.0028	-1.4527	*Non Distressed*
2022	-4.3	0.1836	3.0198	0.0026	-1.4665	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Bali Towerindo Sentra Tbk. In the 2018-2022 period, the company is in a healthy condition or categorized as non-distress, but even so the company still has to maintain the company's financial stability. Such as by increasing sales so that the net profit obtained can continue to increase, and the company must also be able to fulfill its obligations.

Table 12 Financial Distress Calculation Results for PT Centratama Telekomunikasi Indonesia Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.0308	2.3741	0.0048	-1.9615	*Non Distressed*
2019	-4.3	0.0070	2.7004	0.0041	-1.6107	*Non Distressed*
2020	-4.3	-0.3003	3.8533	0.0009	-0.1473	*Non Distressed*
2021	-4.3	-0.0714	5.1075	0.0009	0.8781	*Distress*
2022	-4.3	-0.4805	5.8680	0.0057	2.0428	*Distress*

Source: Results of data analysis with Microsoft Excel, 2023

PT Centratama Telekomunikasi Indonesia Tbk. In the 2018-2020 period, the company is in a healthy condition or is categorized as non-distress. However, in the period 2021-2022 the company is in an unhealthy condition or is categorized as in distress. Therefore, the company must always maintain financial stability so that the profit earned can always increase, moreover this company has experienced unhealthy conditions for 2 years in a row. Therefore, it is very important for the company to continue to be able to fulfill its obligations.

Table 13 Financial Distress Calculation Results for PT Gihon Telekomunikasi Indonesia Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.4584	1.0926	0.0029	-3.6687	*Non Distressed*
2019	-4.3	0.3860	1.0710	0.0027	-3.6176	*Non Distressed*

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2020	-4.3	0.4228	1.0867	0.0013	-3.6374	*Non Distressed*
2021	-4.3	0.3958	1.6878	0.0012	-3.0093	*Non Distressed*
2022	-4.3	0.3530	1.8521	0.0013	-2.8022	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Gihon Telekomunikasi Indonesia Tbk. In the 2018-2022 period, the company is in a healthy condition or categorized as non-distress, but even so the company still has to maintain the company's financial stability. Such as by increasing sales so that the net profit obtained can continue to increase, and the company must also be able to fulfill its obligations.

Table 14 Financial Distress Calculation Results for PT Visi Telekomunikasi Infrastuktur Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	-152.0336	3.4589	0.0011	151.1915	*Distress*
2019	-4.3	0.0962	0.5746	0.0145	-3.8362	*Non Distressed*
2020	-4.3	0.1750	0.4821	0.0171	-4.0101	*Non Distressed*
2021	-4.3	0.1821	0.5440	0.0142	-3.9524	*Non Distressed*
2022	-4.3	0.1795	0.4627	0.0121	-4.0290	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Vision Telecommunications Infrastructure Tbk. In the 2018 period, the company was in an unhealthy condition or categorized as distress. However, in the 2019-2022 period the company is in a healthy condition or categorized as non-distress. Therefore, the company must always maintain financial stability so that the profit earned can always increase, moreover this company has experienced unhealthy conditions for 1 year. Therefore, it is very important for the company to continue to be able to fulfill its obligations.

Table 15 Financial Distress Calculation Results for PT Inti Bangun Sejahtera Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.0850	1.8476	0.0048	-2.5422	*Non Distressed*
2019	-4.3	0.0652	1.9807	0.0059	-2.3903	*Non Distressed*
2020	-4.3	0.2986	23.6986	0.0046	19.0954	*Distress*
2021	-4.3	0.0299	1.7686	0.0112	-2.5725	*Non Distressed*
2022	-4.3	0.0198	2.1397	0.0078	-2.1879	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Inti Bangun Sejahtera Tbk. In the 2018-2019 period the company was in a healthy condition or categorized as non-distress, then in the 2020 period the company was in an unhealthy condition or categorized as distress, and in the 2021-2022 period the company was again in a healthy condition or categorized as non-distress. Therefore, the company must always maintain financial stability so that the profit earned can always increase, moreover this company has experienced unhealthy conditions for 1 year. Therefore, it is very important for the company to continue to be able to fulfill its obligations.

Table 16 Financial Distress Calculation Results for PT LCK Global Kedaton Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.1509	0.5918	0.0338	-3.8929	*Non Distressed*
2019	-4.3	0.0718	0.5620	0.0364	-3.8462	*Non Distressed*
2020	-4.3	0.1479	0.4891	0.0426	-4.0014	*Non Distressed*
2021	-4.3	0.2339	0.4637	0.0469	-4.1171	*Non Distressed*
2022	-4.3	0.0217	0.3873	0.0650	-3.9994	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT LCK Global Kedaton Tbk. In the 2018-2022 period, the company is in a healthy condition or categorized as non-distress, but even so the company still has to maintain the company's financial stability. Such as by increasing sales so that the net profit obtained can continue to increase, and the company must also be able to fulfill its obligations.

Table 17 Financial Distress Calculation Results for PT Solusi Tunas Pratama Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	-0.4719	4.2495	0.0054	0.4160	*Distress*
2019	-4.3	0.0920	4.1819	0.0045	-0.2146	*Non Distressed*
2020	-4.3	0.2859	4.7728	0.0034	0.1835	*Distress*
2021	-4.3	-0.0267	4.1272	0.0029	-0.1490	*Non Distressed*
2022	-4.3	0.4388	2.9804	0.0014	-1.7598	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Solusi Tunas Pratama Tbk has experienced unhealthy conditions or is in the distress category, namely in 2018 and 2020. Then in 2019, 2021 and 2022 the company returns to a healthy condition or is in the non-distress category. Therefore, companies must always improve performance in increasing profits, and companies must also always be able to fulfill their obligations.

Table 18 Financial Distress Calculation Results for PT Tower Bersama Infrastructure Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.1086	4.9796	0.0013	0.5697	*Distress*
2019	-4.3	0.1262	4.6802	0.0021	0.2519	*Distress*
2020	-4.3	0.1314	4.2479	0.0009	-0.1844	*Non Distressed*
2021	-4.3	0.1721	4.3673	0.0014	-0.1062	*Non Distressed*
2022	-4.3	0.1762	4.2571	0.0016	-0.2208	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Tower Bersama Infrastructure Tbk. In the 2018-2019 period experienced unhealthy conditions or were in the distress category. However, in the 2020-2022 period the company is again in a healthy condition or in the non-distress category. Therefore, it is very important for companies to be able to continue to maintain company performance so that companies do not experience unhealthy conditions again. The company must also be able to increase the company's profits and be able to always fulfill its obligations.

Table 19 Financial Distress Calculation Results for PT Sarana Menara Nusantara Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.4312	3.7056	0.0019	-1.0275	*Non Distressed*
2019	-4.3	0.3827	3.8950	0.0022	-0.7899	*Non Distressed*
2020	-4.3	0.3749	4.0051	0.0017	-0.6715	*Non Distressed*
2021	-4.3	0.2357	4.6556	0.0014	0.1185	*Distress*
2022	-4.3	0.2398	4.4465	0.0010	-0.0943	*Non Distressed*

Source: Results of data analysis with Microsoft Excel

PT Sarana Menara Nusantara in the 2018-2020 period the company is in a healthy condition or in the non-distress category, but in 2021 the company's condition becomes unhealthy or is in the distress category, then in 2022 the company returns to being in a healthy condition or in the distress category. non distressed. This means that the company must be able to always increase sales so that the profit earned also increases, and the company must always be able to meet its needs so that the company's financial condition can continue to be stable.

Table 20 Financial Distress Calculation Results for PT Dayamitra Telekomunikasi Tbk.

YEAR		4.5(X1)	5.7(X2)	0.004(X3)	X-SCORE	PREDICTION RESULTS
2018	-4.3	0.1550	4.4398	0.0022	-0.0174	*Non Distressed*
2019	-4.3	0.1105	3.5066	0.0023	-0.9063	*Non Distressed*
2020	-4.3	0.1071	3.8598	0.0016	-0.5489	*Non Distressed*
2021	-4.3	0.1077	2.3779	0.0132	-2.0429	*Non Distressed*
2022	-4.3	0.1433	2.2633	0.0031	-2.1831	*Non Distressed*

Source: Results of data analysis with Microsoft Excel, 2023

PT Dayamitra Telekomunikasi Tbk. In the 2018-2022 period, the company is in a healthy condition or categorized as non-distress, but even so the company still has to maintain the company's financial stability. Such as by increasing sales so that the net profit obtained can continue to increase, and the company must also be able to fulfill its obligations.

CONCLUSION

Based on the results of the research and discussion in this study, the conclusion that can be drawn is that in the 2018-2022 period there were 10 telecommunications companies that were truly in a healthy condition for 5 years, namely TLKM, EXCL, FREN, JAST, LINK, BALI, GHON, GOLD, LCKM, and MTEL. Then there is 1 company that is really in an unhealthy condition for 5 consecutive years, namely KBLV. While the other 6 companies namely ISAT, CENT, IBST, SUPR, TBIG, and TOWR have experienced unhealthy conditions in certain periods and have also experienced healthy conditions in certain periods.

REFFERENCES

Jamil Camenia, Poppy, And Iffa Vadilla As. (2022). Internal Growth Rate in Telecommunications Companies Listed on the Indonesia Stock Exchange. Available Journal Of Islamic Finance And Accounting Research (JAFAR), 1(2), 40–51.

Christiana, Irma (2018). Analysis of Bankruptcy Potential in Food and Beverage Companies Listed on the Indonesian Stock Exchange. Royal National Seminar (SENAR), 1(1), 435–40.Http://Jurnal.Stmikroyal.Ac.Id/Index.Php/Senar/Article/View/215.

Fatmawati, Milia. (2012). Using The Zmijewski Model, The Altman Model, And The Springate Model As Predictors Of Delisting. Journal of Finance and Banking, 16(1), 56–65.

Permatasari, Desy, Acep Samsudin, and Kokom Komariah. (2019). Financial Distress Analysis Using the Zmijewski Method. Journal Of Management And Business, 1(1).

Mandalurang, J Et Al. (2019). Bankruptcy Analysis Using the Altman and Springate Methods in the Retail Trading Industry Registered in Bei for the 2014-2018 Period. EMBA Journal: Journal of Economics, Management, Business and Accounting Research, 7(3), 4358–66.

Silaban, Pasaman. (2017). Bankruptcy Analysis Using the Altman Model (Z-Score) Case Study in Telecommunication Companies. Journal of Accounting, 18(3), 322–34.

Yanuarmawan, Dion. (2018). The Concept of Objectivity in Making Financial Reports (Case Study on Home Industry Ud. Ar. Putra 2016-2017). JIAI (Indonesian Scientific Journal of Accounting), 3(1), 25–41.