DINASTI

E-ISSN: 2721-3013 P-ISSN: 2721-3005

JOURNAL OF ACCOUNTING AND FINANCE MANAGEMENT (JAFM)

https://dinastires.org/JAFM

dinasti.info@gmail.com

(C) +62 811 7404 455

DOI: https://doi.org/10.38035/jafm.v5i1

Received: 14 March 2024, Revised: 30 March 2024, Publish: 23 April 2024

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Financial Distress Analysis of Plantation Stocks on the Indonesia Stock Exchange

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Abstract: This research is to see the financial performance of companies using 5 models of analysis of potential financial distress, namely the first Altman Z score model, revision, modification, Springate and Zmijewski on plantation stock issuers as many as 11 out of 21 companies on the Indonesia Stock Exchange. This model of potential financial distress can be used in public and private companies with various company sizes, which will be useful for early detection of the company's financial performance and the sustainability of the company's operations in the future. This analysis of the calculation of potential financial distress uses the help of the Microsoft Excel program. The results of this study conclude that the issuers of company stocks that have good financial performance based on the potential for financial distress using the 5 models, namely issuers with LSIP and SMAR codes who have never experienced financial distress at all in the research period.

Keywords: Financial Distress, Fisrst Model Altman Z-Score, Revision, Modification, Springate, Zmijewski

INTRODUCTION

Financial performance is clearly depicted in the financial statements published by the company, which describe the real financial conditions and situation of the company that are useful for making the right decisions. This financial performance analysis will connect several financial ratios at once to assess the company's condition which will be important information for stakeholders. The company's financial performance is reflected through financial ratio ratios such as liquidity, profitability, activities, solvency, dividend policy, market ratio and various other models. These ratios are the basis and indication of financial health to management performance in the past and its prospects in the future. Financial distress analysis is one of the models that can be used as materials, references and information for academics, researchers and analysts based on financial statements.

Edward I. Altman (1968), selects and groups the most important indicators as a basis for assessing a company's financial performance and assessing potential financial distress known as Altman's Z-score. Financial stress indicates a severe liquidity problem that cannot be solved without a massive reschedule of the company's operations and financial structure. Surono.,

(2019). Altman's Z-score is a useful analysis for measuring a company's potential financial distress/difficulty. The Z-score value is sourced from 5 elements of ratio / comparison of; working capital to total assets, retained earnings to total assets, earnings before interest and taxes to total assets, stock market value to book value of total debt, and total income to total assets. These ratios show management's ability to manage and use a company's assets, so the analysis of Altman's Z-score calculation can also be used to measure a company's performance, especially from the point of view of potential financial distress. The analysis of the calculation is considered uncomplicated, because it combines five financial ratios obtained from financial statements and equity values that describe an objective measurement of a company's healthy financial condition, this analytical model is known as the first Altman Z score model analysis (Surono, 2019).

The next development was carried out by Altman by changing the X_4 variable, namely the comparison of the value of preferred and ordinary shares to the total book value, which aims to adjust so that the financial distress prediction model can be applied to companies in other sectors so that it is not only limited to manufacturing companies that go public which is known as the revised model. This revision model is used for companies that have sold shares on the Stock Exchange (go public) or those that have not. Companies that have not gone public quantitatively have a large number when compared to those that have gone public in Indonesia, so the amount of company value cannot be known for sure.

The application of the financial stress model continues to be developed by Altman to find a way to apply it to all companies such as bond issuers, manufacturing and non-manufacturing companies known as the modified model. This model was formed by Altman by eliminating the X_5 variable, which is the comparison between sales and total assets, on the grounds that this X_5 variable has an asset size whose value is different and varies greatly for each industry.

Springate (1978) also conducted research by developing a financial distress model using as many as 4 (four) ratios out of 19 (nineteen) well-known financial ratios which are useful for distinguishing companies that experience financial distress or companies that do not experience financial pressure. Springate explained that if Z > 0.862, then the company is included in companies that are not experiencing financial distress or are healthy, if the Z score < 0.862, then the company is included in financial pressure. Kokyung (2013).

Zmijewski (1984) conducted a study using ratio analysis that measures performance, leverage, and liquidity in companies for its prediction model. The model was developed using the variables return on asset, leverage and current ratio. Further research on the bankruptcy of a company that uses financial ratios to predict the financial distress condition of a company was carried out by Lau (1987); Doumpos & Zouponidis (1999) and Platt & Platt (2002). Platt & Platt (1990) conducted a study by comparing unadjusted financial ratios with relative industry ratios. The results show that the unadjusted ratio has a lower classification level than if using the relative ratio of the industry. Platt & Platt (2002), used financial ratios to measure a company's financial distress and determine the most dominant ratio to predict such financial stress.

Another study was also conducted by Surono & Sindy (2019), by analyzing a comparative analysis of financial distress using the first altman model, revision, modification, Springate model and Zmiejewski model in manufacturing companies as many as 22 issuers on the Indonesia Stock Exchange where the results were only 11 issuer companies that had never experienced financial pressure. This research is a continuation of this research but uses the object of plantation stock groups on the Indonesia Stock Exchange. This study focuses on 11 issuer companies with codes AALI, BWPT, DNSG, GZCO, JAVA, LSIP, PALM, SGRO, SIMP, SMAR and SSMS from 21 plantation sector issuers on the Indonesia Stock Exchange, with complete financial statements during the research period, using rupiah currency, having positive equity and positive profits. Another factor that is of interest to research in this sector is because Indonesia has a large oil palm plantation, the investment required is very large and is one of the sectors that is able to support the national economy so that the author is interested in conducting research, especially whether it has financial distress or not.

METHOD

Plat and Plat (2002), define that financial distress is the stage of decline in financial condition experienced by a company, which occurs before bankruptcy or liquidation. Financial distress begins with the inability to meet its obligations, especially short-term liabilities including liquidity obligations, and also includes liabilities in the solvency category. Darmawan (2014), Financial Distress is a situation where a company's operating cash flow is not enough to satisfy its current obligations (such as credit trading or interest expenses) and the company is forced to take correlational actions.

According to Hanafi et all (2016), financial distress information will be useful for related parties such as:

For management, financial distress information will have an impact on the costs that will be incurred to cover a large amount of potential financial distress. If management is able to anticipate and detect early from potential financial distress, then management can carry out the efficiency and effectiveness of all operations, restructuring and mergers so that costs incurred related to financial distress will be prevented or avoided.

For Accountants, financial distress information will be an important input for accountants for the company's survival in the future.

For investors, financial distress information will provide important information related to the investment they make, especially for the security and sustainability of investment in the company. Investors will also seek to find the right and accurate model to detect potential financial distress that will impact the company's bankruptcy.

For creditors, financial distress information will be useful to determine the party who is eligible for a loan which can then also be useful for monitoring and detecting the loan that has been given.

For the government, financial pressure information can be used to supervise and monitor companies and also related to taxation.

First model Altman Z-score

Altman Z-score is a method used to see the potential financial distress of a company using 5 elements of ratio; working capital / total assets, retained earnings / total assets, profit before interest and taxes / total assets, equity market value / book value of total debt and total income / total assets. Z-Score is determined using the following formula; Surono, (2019).

Z-Score = $1,2.X_1 + 1,4.X_2 + 3,3.X_3 + 0,6.X_4 + 0,999.X_5$

Description:

 X_1 = working capital to total assets

 X_2 = retained earnings to total assets

 X_3 = earning before interest and taxes to total assets

 X_4 = Equity market value to total debt book value

 $X_5 = \text{Total sales to total assets}$

The categories that Altman used in assessing the financial performance of the first model companies are:

- 1. If the Z value < 1.8, then it is in the category of experiencing financial distress.
- 2. If the value of 1.8 < Z < 2.99, then it is in the gray category, or it cannot be determined whether the category is experiencing financial stress or not.
- 3. If the Z value > 2.99, then it is in the category of not experiencing financial pressure (healthy).

Altman Z-score revised model (Z')

Altman then developed a model by revising to make adjustments so that the prediction of financial distress is not only for manufacturing companies that go public, but also so that it can be used for other private sector companies, which is due to the fact that there are still many other private companies that have not sold their shares to the Stock Exchange (go public), so

that the market value cannot be known as in developing countries including Indonesia with a large quantity quite large. Altman made this revision in 1983 by replacing the variable X4 (Preferred and ordinary stock market value to total book value), so that the formulation became as follows: (Surono., 2019).

 $Z' = 0.717.X_1 + 0.847.X_2 + 3.107.X_3 + 0.420.X_4 + 0.998.X_5$

Description:

Z' = revised financial distress index.

 $X_1 =$ (current assets - current liabilities) to total assets

 X_2 = retained earnings to total assets

 X_3 = earning before interest and taxes to total assets

 X_4 = book value of common and preferred shares relative to total book value of debt

 X_5 = sales to total assets.

The category of companies that are experiencing financial distress or not experiencing financial distress (healthy) based on the revised Altman Z-Score score is:

- 1. If value of Z' < 1.23, then in the category of experiencing financial distress.
- 2. If value of 1.23 < Z' < 2.9 is in the gray category, or it cannot be determined whether the category is experiencing financial pressure or not.
- 3. If value of Z' > 2.9 is in the category of not experiencing financial stress (healthy).

Altman Z-score modifikasi (Z'')

Altman (1995) made modifications to the revised model, with the aim that it could be applied to all types of companies, namely in the group of manufacturing companies, non-manufacturing companies and bond issuing companies in developing countries. The modification made by Altman is by eliminating the variable X5 (sales / total assets), on the basis that there are various industries with various asset sizes (sizes). Altman Z-Score modification formulation: Surono., (2019).

$$Z'' = 6,56.X_1 + 3,26.X_2 + 6,72.X_3 + 1,05.X_4$$

Description:

Z" = Index financial distress modification

 X_1 = working capital to total assets

 X_2 = retained earnings to total assets

 X_3 = earning before interest and taxes to total assets

 X_4 = equity book value to total debt book value.

The category of companies that are healthy and do not experience financial distress is based on the Z-score value of the modified Altman model, which is:

- 1. If the value of Z'' < 1.1, then it is in the category of experiencing financial distress.
- 2. If the value of 1.1 < Z'' < 2.6, then it is in the gray category, or it cannot be determined whether the category is experiencing financial distress or not.
- 3. If the Z" value > 2.6, then it is in the category of not experiencing financial distress (healthy).

Springate Model

Springate (1978), stated that there are 4 (four) out of 19 (nineteen) financial ratios that contribute the most to the prediction of financial distress. The four financial ratios are combined in a formula called the Springate method. Springate determines a limit (standard) in the form of a value of 0.862 to predict a company that has the potential to go financial distress or has the potential to be a healthy company. The Springate method is formulated in a formula as follows: (Surono., 2019).

$$Z = 1,03.X_1 + 3,07.X_2 + 0,66.X_3 + 0,4.X_4$$

Description:

 X_1 = working capital to total assets

 X_2 = earning before interest and taxes to total assets

 X_3 = earning before tax to current debt

 X_4 = sales to total assets

This model has a standard where companies that have a Z score of > 0.862 are categorized as companies that do not experience financial distress / healthy, while companies that have a Z score of < 0.862 are categorized as companies that experience financial distress.

Zmijewski Model

Zmijewski (1984), conducted a study using a ratio analysis that measures company performance based on leverage and liquidity in predicting financial distress, a study conducted by Zmijewski on 40 companies that had gone bankrupt out of 800 existing companies at the time of the study. The model that was successfully developed with the following formula: (Surono., 2019).

 $X = -4.3 - 4.5.X_1 + 5.7.X_2 - 0.004.X_3$

Description:

 X_1 = return on assets (ROA)

 $X_2 =$ Solvability (*debt ratio*)

 $X_3 = Liquidity (current ratio)$

The assessment criteria of this Zmijewski model are that the greater the value of X, the greater the probability / probability of the company experiencing financial distress, so in analyzing this model it can be said that if the value is negative, the company is not experiencing financial distress.

RESULT AND DISCUSSION

The results of the calculation in this study with the first Altman Z-score model, revised, modification, Springate model and Zmijewski model on the plantation stock group on the Indonesia Stock Exchange, which consists of 11 company issuers, including:

Table 1. Results of calculation of financial distress index numbers with 5 models

	ALTMAN 'S Z SCORE	2014	2015	2016	2017	2018	2019	2020	2021	2022
AALI	MODEL PERTAMA	3.183389	1.894558	1.801607	1.981089	1.835875	1.641107	1.900099	2.103067	2.57051
	MODEL REVISI	2.852585	1.932163	2.594618	2.925033	2.704887	2.395197	2.496631	2.775113	3.09772
	MODEL MODIFIKASI	4.432026	2.981018	5.081616	6.076262	5.391369	5.03661	5.402153	5.51414	6.974654
	MODEL SPRINGATE	0.996987	0.412693	0.577853	0.797151	0.645381	0.461127	0.620858	0.794488	0.79626
	MODEL ZMIJEWSKI	-2.87281	-1.8471	-3.13328	-3.21972	-2.98909	-2.65225	-2.69516	-2.87685	-3.21134
BWPT	MODEL PERTAMA	0.61511	0.469582	0.251696	0.142594	0.075513	-0.18858	-0.1833	-0.28598	-0.06031
	MODEL REVISI	0.505849	0.454239	0.463502	0.492273	0.401288	0.185302	0.087757	0.097263	0.315692
	MODEL MODIFIKASI	0.344261	0.281046	0.267339	0.061528	-0.00855	-0.58372	-0.66683	-1.52464	-1.43765
	MODEL SPRINGATE	0.039074	0.02608	0.032362	0.050516	0.011014	-0.16532	-0.08041	-0.04252	0.182234
	MODEL ZMIJEWSKI	-1.07315	-0.70373	-0.68914	-0.71067	-0.51874	0.065107	0.408153	0.95237	0.436246
DNSG	MODEL PERTAMA	1.631764	1.476346	1.039667	1.505339	1.016142	1.01819	1.100264	1.417028	1.82785
5.100	MODEL REVISI	1.814249	1.422632	1.222661	1.772297	1.209837	1.262928	1.401462	1.683358	2.012695
	MODEL MODIFIKASI	2.43085	2.007123	1.617081	2.599279	1.843182	1.509184	2.226067	2.953348	3.292398
	MODEL SPRINGATE	0.855145	0.57514	0.425074	0.762665	0.447076	0.375195	0.460943	0.601076	0.768326
	MODEL ZMIJEWSKI	-0.8323	-0.59569	-0.62495	-1.18678	-0.54518	-0.50205	-1.26396	-1.7651	-1.98415
GZCO	MODEL PERTAMA	0.546616	0.334278	-1.01187	-0.2747	-0.95612	-1.54288	-1.00646	-0.28872	3.650853
0200	MODEL REVISI	0.848127	0.782601	0.412728	0.354473	-0.10667	-0.29945	-0.14707	0.39844	0.524721
	MODEL MODIFIKASI	1.751686	1.675966	-1.9524	-0.39219	-2.27803	-2.81884	-1.88805	-0.89826	-0.15139
	MODEL SPRINGATE	0.103561	0.009171	-1.65489	-0.16973	-0.5522	-1.06605	-0.35385	0.115733	0.279041
-	MODEL ZMIJEWSKI	-1.41373	-1.63885	1.521487	-0.87886	-0.15308	0.34532	-0.94371	-1.64724	-1.98038
JAWA	MODEL PERTAMA	0.545595	0.293482	0.120486	-0.15604	0.003502	-0.14311	-0.40697	-0.05944	-0.31516
JAWA	MODEL PERTAMA	0.854969	0.293462	0.400464	0.14533	0.003302	0.091238	-0.40697	0.020705	-0.08283
	MODEL MODIFIKASI	1.131159		-0.17673	-1.72745	-0.41611	-0.95922	-1.56136	-1.46019	-1.9309
	MODEL MODIFIKASI	0.189521	0.439767	-0.17673	-0.31386	-0.41611	-0.95922	-0.18884	-0.01883	-0.08187
-	MODEL ZMIJEWSKI	-1.12697	-0.76981	-0.11188	0.223212	0.6732	1.123779	1.394405	0.814218	1.586473
LSIP		8.446425	5.32458				2.007465		3.034805	4.394105
LOIP	MODEL PERTAMA MODEL REVISI			2.38548 3.1554	2.405313 3.69618	2.025356 3.354069	3.27737	2.543813 3.748114		
		3.867046	3.490332						4.225154	4.721059
	MODEL CODINGATE	9.151012	8.307665	7.837643	9.236471	8.758273	8.632197	10.11215	11.37855	13.14592
	MODEL SPRINGATE	0.881858	0.622322	0.60421	0.749809	0.488475	0.43155	0.629971	0.845087	0.878878
DALM	MODEL ZMIJEWSKI	-3.83136	-3.64446	-3.4902	-3.7043	-3.48003	-3.44925	-3.73315	-3.86971	-3.99206
PALM	MODEL PERTAMA	0.285587	-0.00809	0.881359	0.456378	0.373672	0.38896	2.837678	11.71223	794.0184
	MODEL REVISI	0.715949	0.504591	1.422453	1.075901	2.359866	3.564003	9.138118	62.12888	1006.254
	MODEL MODIFIKASI	0.646054	-0.53875	3.582397	1.379038	4.94574	8.935406	26.70713	158.7317	2517.011
	MODEL SPRINGATE	0.239393	-0.03406	0.558109	0.152017	-0.04592	0.104386	1.866913	1.417276	0.171711
0000	MODEL ZMIJEWSKI	-1.04942	-0.59723	-2.29151	-1.79118	-2.96248	-3.79397	-6.24723	-5.80602	-4.4846
SGRO	MODEL PERTAMA	1.554761	1.178243	1.023241	1.197677	0.905235	0.771373	0.904781	1.507186	1.678711
	MODEL REVISI	1.869082	1.411706	1.219872	1.479964	1.178674	1.065661	1.083577	1.649383	1.944458
	MODEL MODIFIKASI	2.909112	2.650174	2.51972	2.71262	2.012583	1.346136	1.631773	3.092469	3.695959
	MODEL SPRINGATE	0.583903	0.462562	0.375058	0.472634	0.256104	0.162825	0.312875	0.752938	0.841376
0.0.45	MODEL ZMIJEWSKI	-2.03599	-1.42983	-1.42286	-1.52219	-1.18022	-1.12158	-0.73434	-1.66501	-1.96897
SIMP	MODEL PERTAMA	1.210727	1.003885	1.093862	1.050744	0.856113	0.756681	0.925175	1.24612	1.262967
-	MODEL REVISI	1.602467	1.455884	1.525921	1.525163	1.306833	1.182522	1.333199	1.757564	1.773834
-	MODEL MODIFIKASI	2.500167	2.403342	2.793376	2.542106	2.093372	1.661832	2.167975	2.859286	3.257933
	MODEL SPRINGATE	0.440442	0.335553	0.436276	0.383339	0.230015	0.148454	0.306534	0.520437	0.517175
	MODEL ZMIJEWSKI	-1.85361	-1.7523	-1.77258	-1.79844	-1.58554	-1.42239	-1.62275	-1.9159	-2.13076
SMAR	MODEL PERTAMA	2.241814		1.859528	2.059853	2.095785	1.896697	1.925018	2.356753	3.154144
	MODEL REVISI	2.673507	2.401951	2.22255	2.424924	2.441205	2.279774	2.229148	2.851675	3.589183
<u> </u>	MODEL MODIFIKASI	2.341527	1.672259	2.717168	2.836196	3.147579	2.138614	2.774513	3.345907	4.98517
<u> </u>	MODEL SPRINGATE	1.01028	0.763215	0.774984	0.829848	0.837554	0.697206	0.829782	1.09829	1.565458
	MODEL ZMIJEWSKI	-1.04129	-0.34397	-1.27386	-1.1723	-1.07622	-0.99064	-0.83844	-0.95513	-1.75905
SSMS	MODEL PERTAMA	13.42847	5.806142	2.107133	2.29879	1.760584	1.132381	1.265029	1.492758	1.858808
	MODEL REVISI	3.202072	1.437171	1.671667	1.680161	1.498016	1.050861	1.315988	1.561046	1.816625
	MODEL MODIFIKASI	8.436043	2.749106	3.10809	4.880492	4.53418	2.564227	3.061984	3.64503	3.099553
	MODEL SPRINGATE	1.545541	0.662805	0.682978	0.973915	0.770261	0.406953	0.621334	1.597786	0.818586
	MODEL ZMIJEWSKI	-3.67095	-1.46097	-1.72216	-1.37273	-0.69043	-0.56504	-0.98017	-1.61176	-1.82679

Not experiencing financial distress / healthy

Grey area

Experiencing financial distress

Financial performance of 11 (eleven) plantation stock issuers using the potential financial distress model based on table 1, namely:

PT. Astra Agro Lestari, Tbk. (AALI)

Potential financial distress on PT. Astra Agro Lestari, Tbk. (AALI) using the first Altman Z score model in the period 2014-2022 shows that financial performance in 2014 did not experience financial distress (healthy), and in 2019 experienced financial distress while in other years it was included in the gray category.

Potential financial distress using the revised Altman model for the period 2014 - 2022, it can be seen that in 2017 and 2022 in a condition of not experiencing financial distress (healthy) while in other years it is included in the gray category.

Potential financial distress using the modified Altman model for the period 2014 – 2022, it can be seen that in that period there was no financial distress (healthy).

Potential financial distress using the Springate model for the 2014 – 2022 period, it can be seen that financial performance in 2014 did not experience financial distress (healthy), while in other years it was included in the category of experiencing financial distress.

Potential financial distress using the Zmijewski model for the 2014 - 2022 period, it can be seen that financial performance in that period did not experience financial distress

(healthy).

PT. Eagle High Plantation, Tbk. (BWPT)

Potential financial distress on PT. Eagle High Plantation, Tbk. (BWPT), using the first Altman Z score model in the 2014-2022 period, it can be seen that financial performance during the research period experienced financial distress.

Potential financial distress using the revised Altman model during the research period shows that his financial performance is under financial distress.

Potential financial distress using the modified Altman model during the research period shows that his financial performance is also experiencing financial distress.

Potential financial distress using the Springate model during the research period shows that its financial performance is under financial distress.

Potential financial distress using the Zmijewski model during the research period shows that financial performance in 2014, 2015, 2016, 2017 and 2018 did not experience financial distress (healthy) while other years experienced financial distress.

PT. Dharma Satya Nusantara, Tbk. (DNSG)

Potential financial distress on PT. Dharma Satya Nusantara, Tbk. (DNSG), using the first Altman Z score model in the 2014-2022 period, it can be seen that financial performance during the research period experienced financial distress except for 2022 which was included in the gray category.

Potential financial distress using the revised Altman model during the research period shows that financial performance experienced financial distress in 2014, 2015, 2016, 2017 and 2018, while the years 2019, 2020, 2021 and 2022 were included in the gray category.

Potential financial distress using the modified Altman model during the research period shows that financial performance from 2014 - 2020 is included in the gray category while in 2021 and 2022 there is no financial distress (healthy).

Potential financial distress using the Springate model during the research period shows that its financial performance is under financial distress.

Potential financial distress using the Zmijewski model during the research period showed that his financial performance did not experience financial distress (healthy).

PT. Gozco Plantations, Tbk. (GZCO)

Potential financial distress on PT. Gozco Plantations, Tbk. (GZCO), using the first Altman Z score model in the period 2014 - 2022, it can be seen that financial performance during the research period experienced financial distress except for 2022 which was included in the category of healthy / not experiencing financial distress.

Potential financial distress using the revised Altman model during the research period shows that his financial performance is under financial distress.

Potential financial distress using the modified Altman model during the research period shows that financial performance in 2014 and 2015 is included in the gray category while other years are included in the category of experiencing financial distress.

Potential financial distress using the Springate model during the research period shows that its financial performance is under financial distress.

Potential financial distress using the Zmijewski model during the research period shows that his financial performance did not experience financial distress / healthy except in 2016 and 2019 experienced financial distress.

PT. Jaya Agra Wattie, Tbk. (JAWA)

Potential financial distress on PT. Jaya Agra Wattie, Tbk. (JAWA), using the first Altman Z score model in the 2014 - 2022 period, it can be seen that financial performance during the research period experienced financial distress.

Potential financial distress using the revised Altman model during the research period shows that his financial performance is under financial distress.

Potential financial distress using the modified Altman model during the research period shows that its financial performance is under financial distress except in 2014 which is in the gray category.

Potential financial distress using the Springate model in the research period shows that its financial performance is experiencing financial distress.

Potential financial distress using the Zmijewski model during the research period shows that financial performance in 2014, 2015 and 2016 did not experience financial distress / healthy while in other years experienced financial distress.

PT. PP London Sumatra Indonesia, Tbk. (LSIP)

Potential financial distress on PT. PP London Sumatra Indonesia, Tbk. (LSIP), using the first Altman Z score model in the period 2014 - 2022, it can be seen that financial performance during the research period did not experience financial distress in 2014, 2015, 2021 and 2022. In 2016 - 2020 it was included in the gray category.

Potential financial distress using the revised Altman model during the research period shows that financial performance does not experience financial distress / healthy.

Potential financial distress using the modified Altman model during the research period shows that his financial performance does not experience financial distress.

Potential financial distress using the Springate model in the research period shows that financial performance that does not experience financial distress occurs in 2014 and 2022, while other years are in the gray category.

Potential financial distress using the Zmijewski model during the research period shows that financial performance during the research period does not experience financial distress / healthy.

PT. Provident Agro, Tbk. (PALM)

Potential financial distress on PT. Provident Agro, Tbk. (PALM), using the first Altman Z score model in the period 2014 - 2022, it can be seen that financial performance during the research period did not experience financial distress in 2014 -2019 experienced financial distress, in 2020 it was included in the gray category while in 2021 and 2022 it did not experience financial distress / healthy.

Potential financial distress using the revised Altman model during the research period shows that financial performance does not experience financial distress / healthy.

Potential financial distress using the modified Altman model during the research period shows that his financial performance does not experience financial distress / healthy.

Potential financial distress using the Springate model shows that in 2014 and 2022 there was no financial distress while the rest were in the gray category.

Potential financial distress using the Zmijewski model was seen that during the research period there was no financial distress / healthy.

PT. Sampoerna Agro, Tbk. (SGRO).

Potential financial distress on PT. Sampoerna Agro, Tbk. (SGRO), using the first Altman Z score model in the 2014 - 2022 period, it can be seen that financial performance during the research period experienced financial distress.

Potential financial distress using the revised Altman model during the research period shows that financial performance in 2014, 2015, 2017, 2021 and 2022 experienced financial distress while in 2016, 2018, 2019 and 2020 in the category of experiencing financial distress.

Potential financial distress using the modified Altman model during the research period shows that 2014, 2015, 2021 and 2022 did not experience financial distress, while 2016 - 2020 was included in the gray category.

Potential financial distress using the Springate model It can be seen that financial performance during the research period is under financial distress.

Potential financial distress using the Zmijewski model shows that financial performance during the research period does not experience financial distress / healthy.

PT. Salim Ivomas Pratama, Tbk. (SIMP).

Potential financial distress on PT. Salim Ivomas Pratama, Tbk. (SIMP), using the first Altman Z score model in the 2014-2022 period, it can be seen that financial performance during the research period experienced financial distress.

Potential financial distress using the revised Altman model during the research period shows that financial performance is in the gray category except for 2019 in the category of experiencing financial distress.

Potential financial distress using the modified Altman model during the research period shows that 2016, 2021 and 2022 did not experience financial distress, while the years 2014, 2015, 2017, 2018, 2019 and 2020 are included in the gray category.

Potential financial distress using the Springate model It can be seen that financial performance during the research period is under financial distress.

Potential financial distress using the Zmijewski model shows that financial performance during the research period does not experience financial distress / healthy.

PT. Smart, Tbk. (SMAR).

Potential financial distress on PT. Smart, Tbk. (SMAR), using the first Altman Z score model in the period 2014-2022, it can be seen that financial performance during the research period is included in the gray category except for 2022 which is included in the category of not experiencing financial distress / healthy.

Potential financial distress using the revised Altman model during the research period showed that financial performance was in the gray category except for 2022 in the category of not experiencing financial distress / healthy.

Potential financial distress using the modified Altman model during the research period shows that the years 2014, 2015 and 2019 are included in the gray category, while the years 2016, 2017, 2018, 2020, 2021 and 2022 are included in the category of not experiencing financial distress/healthy.

Potential financial distress using the Springate model shows that financial performance in 2014, 2021 and 2022 did not experience financial distress, while the others were in the gray category.

Potential financial distress using the Zmijewski model shows that financial performance during the research period does not experience financial distress / healthy.

PT. Sawit Sumbermas Sarana, Tbk. (SSMS).

Potential financial distress on PT. Smart, Tbk. (SMAR), using the first Altman Z score model in the period 2014-2022, it can be seen that financial performance in 2014, 2015 is included in the category of not experiencing financial distress / healthy, while in 2016, 2017 and 2022 in the gray category and in 2018, 2019, 2020 and 2021 in the category of experiencing financial distress.

Potential financial distress using the revised Altman model during the research period shows that financial performance in 2014 is in the category of not experiencing financial distress / healthy, in 2019 in the category of experiencing financial distress and the rest is included in the gray category.

Potential financial distress using the modified Altman model during the research period shows that 2019 belongs to the gray category, while others belong to the category of not experiencing financial distress / healthy.

Potential financial distress using the Springate model shows that financial performance in 2014, 2017 and 2021 did not experience financial pressure, while the other categories experienced financial distress.

Potential financial distress using the Zmijewski model shows that financial performance during the research period does not experience financial distress / healthy.

CONCLUSION

Issuers that have good financial performance and have never experienced financial distress by using 5 financial distress models, namely LSIP and SMAR issuers, so they are worthy of being chosen as an investment portfolio for investors.

REFERENCES

- Altman, E.I. (1968). Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *Journal of Finance*, 23: 589-609.
- Darmawan, Deni. (2014). *Metode Penelitian Kuantitatif*. Bandung: PT. Remaja Rosdakarya Doumpos, M. & Zouponidis, C. (1999). A Multicriteria Discrimination Method for Prediction
- of Financial Distress: The Case of Greece. *Multicriteria Discrimination Method for Prediction of Financial Distress:* The Case of Greece. *Multinational Finance Journal*, 3(2): 71-101.
- Hanafi M. Mamduh & Halim Abdul. (2016). *Analisis Laporan Keuangan*, Edisi ke-5, Yogyakarta:UPP STIM YKPN
- Kokyung, K., & Khairani, S. (2014). Analisis Penggunaan Altman Z-score dan Springate untuk Mengetahui Potensi Kebangkrutan pada PT. Bakrie Telecom Tbk.
- Lau, A.H. (1987). A Five State Financial Distress Prediction Model. *Journal of Accounting Research*, 25: 127138.
- Platt, H.D. & Platt, M.B. (1990). Development of a Class of Stable Predictive Variables: The Case of Bankruptcy Predictions. *Journal of Business Finance & Accounting*, 17: 31-51
- Platt, H., dan M. B. Platt. (2002). Predicting Financial Distress, *Journal of Financial Service Professionals*.
- Ramadhani, A. S., & Lukviarman, N. (2009). Perbandingan analisis prediksi kebangkrutan menggunakan Model Altman pertama, Altman revisi, dan altman modifikasi dengan ukuran dan umur perusahaan sebagai variabel penjelas (studi pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia). *Jurnal Siasat Bisnis*, *13*(1).
- Surono, Y., & Pangestu, S. D. (2019). Analisis Kinerja Keuangan Sektor Manufacture dengan Multiple Discriminant Analysis Bankcruptcy Model di Bursa Efek Indonesia Periode 2014–2017. *J-MAS (Jurnal Manajemen dan Sains)*, 4(2), 298-306.
- Zmijewski, M.E. (1984). Methodological Issues Related to the Estimation of Financial Distress Prediction Models. *Journal of Accounting Research*, 22: 59-82. www.idx.co.id.