

Analysis Financial Reports in *Financial Prediction Distress* with Method Grover and Springate on LQ45 Indexed Companies on BEI 2019 - 2022

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Abstract

Analysis of the influence of financial distress and financial ratios with the Grover and Springate method is used to conduct a thorough examination of financial performance periodically over a certain period of time. So the purpose of this study is to determine how healthy a company is in the technology sector by analyzing factors that affect financial distress through financial ratios and the formula equation of the grover and Springate method. The results of this study are that the use of the Gorgon L.V or S-SCORE method is a consistent method in predicting financial distress in companies, namely by approaching sales and total assets. by conducting financial distress predictions, companies can find out and prove the existence of factors that cause companies to go bankrupt. By increasing sales and proper management of total assets, companies can make high profits.

Keyword: Financial distress, Grover, Springate and Performance Finance

INTRODUCTION

Increasing growth economy in Indonesia Which start develop rapid in public, like as it is the more Lots Company Which capable develop the world of technology in just one hand. entrepreneurs who aim to develop the Company even bigger. progress in the world digitalization in the era of globalization and with such rapid competition. Making Every company innovates to gain profit as high as possible his. Matter This because of objective main from the establishment of company for culminate to profit Which will obtained as much as possible Possible Which Certain expected can guard continuity life a company.

No only develop in innovation, but company Also must pay attention to the health of a company, including the distribution of dividends every year, mark sell share Which tall, income Which increase and debt Which relative small. This can make a company's benchmark experience an increase performance finance Which relative Healthy. Will but no close possibility that company Also will experience decline performance finance, seen from height cost operational, the more weakening mark share, the more the decline giving dividend. so that company the need to be the existence of re-analysis of financial performance. The important role of management the company in running the company is a decrease in the capital structure, management assets Which not enough appropriate, and cost operational Which too tall. so that These factors result in *financial distress*. In this study, 2 methods were used, namely Grover and Springate. analyze potential bankruptcy a company. Which Where has there is some studies in various sector of companies listed on the IDX.

R formulation the problem in this study is whether Grover & Springate method can predict the occurrence *financial distress* against financial reports in the LQ45 indexed company sector on

the IDX, so that from the formulation of the problem it can be taken the aim is to prove the Grover & Springate method can predict the occurrence *financial distress* against financial reports in the corporate sector which is indexed by LQ45 on the IDX.

The research gap from previous research is that there are differences of opinion regarding accuracy of results measuring the bankruptcy of a company using the method Grover, and Springate due to data sampling from different company sectors like use method altman z-score in predicting financial distress in the sector company food and beverages listed on the IDX (Meta Putri A, et al: 2021), measuring financial distress by method grover, altman z-score, springate and zmijewski on pt solution get up Indonesia tbk (Nur Kholifah et al : 2020) . With this research, researchers are developing previous research, namely prove whether the accuracy of a method in measurement a company of course there are differences in each sector or on the contrary.

LITERATURE REVIEW

Report Finance

According to Davidson (2020:4) the report finance is notes information finance from a company on a period accounting and existence report finance can used for describe performance company specifically in field finance. So that report finance is very important document important in a agency for define and describe condition a company Good in a way assets, debt, cash or bank, owned capital, profit, income, purchases etc. which are mutually relatedness in transaction a company. finance a company that is useful for many parties, both internal and external to external parties. For internal or corporate parties, financial analysis distress is used as tool warning if the company is experiencing deterioration in its financial performance or other adverse events that interfere achievement target company. Whereas for party external, like creditors, investors, regulatory bodies, and government. Financial distress analysis help give description ability management in A company for manage finance in its operation (Khairunnisa, 2021:18). Irfan (2020:247) explain that financial distress or condition difficulty finance describes the condition of a company that fails to pay off its debts his debts that have matured and accompanied by with subtraction amount dividend. Wrong One characteristic Which cause potential financial difficulties namely operational cash flow the company that tend worth negative.

Financial distress

Financial distress is condition Where a company experience inability in do payment. While according to Nakamura (2021), financial distress is stage decline funding that occurs before company bankrupt or experience liquidation. Factors reason A company can experience financial shared distress become 2 factors, namely internal factors and external factors. Factors causing financial distress that originate from internal or external sources operational company, namely decline asset, decline mark sale, acquisition profit Which the more low, decrease capital Work, until level debt Which the more tall (Jessica, 2022:42).Meanwhile factor external Which can cause company in condition financial distress, namely, economic factors, social factors, technological development factors, government factors, consumer factors, supplier factors, and competitor factors (Jessica 2022:40) .

Method Grover (G – SCORE)

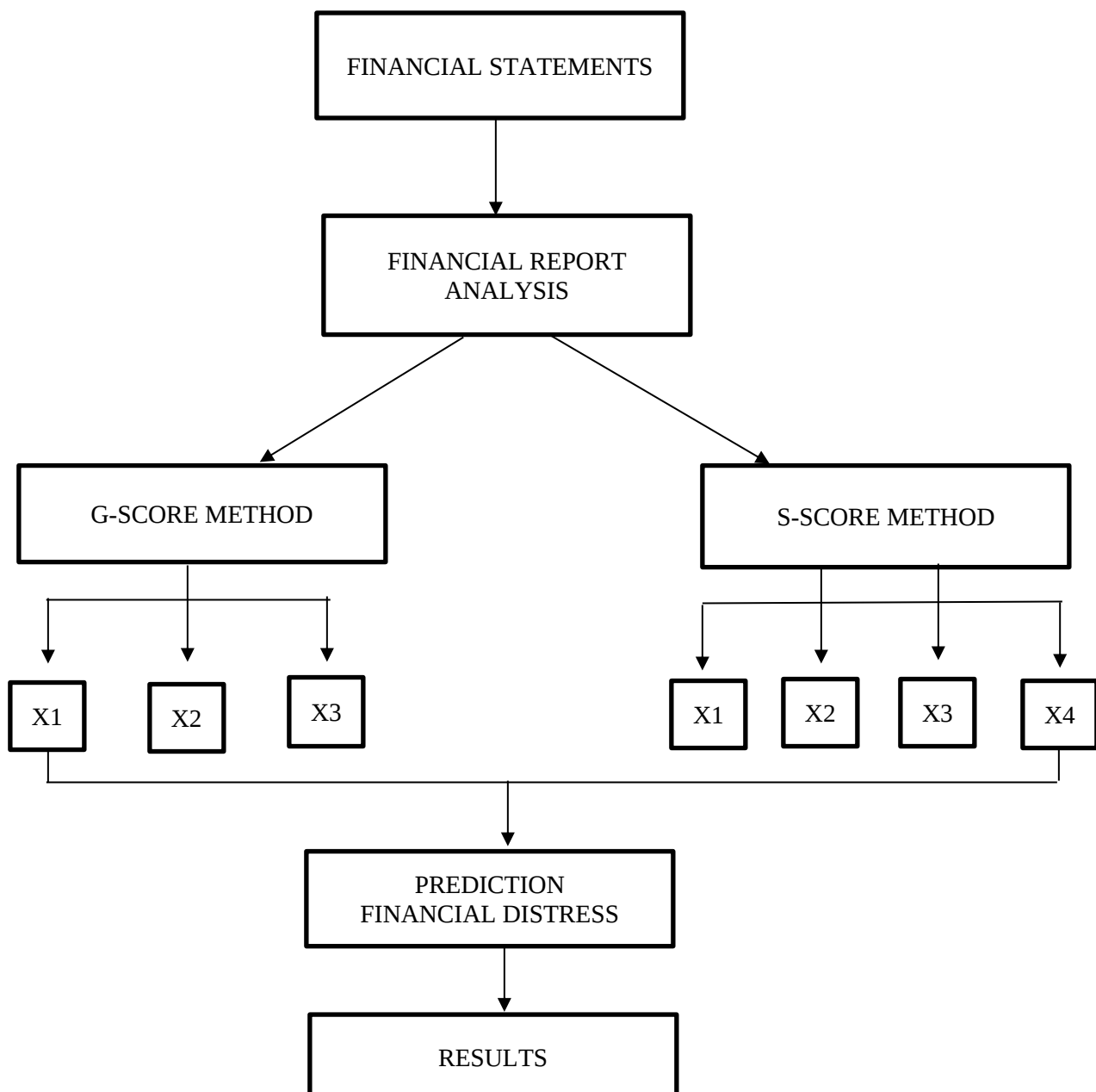
Grover method is a method created by designing and reassessment of the Altman Z-Score model According to Juan Carlos Pangestu *et al.* (2024). Grover 's method developed by Jeffrey S. Grover in 2001. Grover method is bankruptcy prediction model that is suitable for application to companies that have gone public. In the experiment study previous modify from the Altman Z-Score model which uses sample of 70 companies, namely 35 companies bankrupt and 35 companies healthy.

Grover's method adds 13 ratios finance new in the Altman Z-Score model. Where if method grover ≤ -0.02 then the Company in condition bankrupt and if ≥ 0.01 then the Company is included Healthy.

Springate Method (S – SCORE)

Springate method is the method used for predict bankruptcy a agency where method this merge a number of ratio finance. Gordon LV Springate developed the Springate model in 1978 so that the Springate Model uses analysis multidiscriminant and the Springate Model is known Because easy used and accurate in predict bankruptcy. The Springate model has cut-off value of 0.862. Companies with S-Score value is higher from 0.862 predicted healthy, while company with S-Score value is less from 0.862 predicted will bankrupt.

CONCEPTUAL FRAMEWORK



METHOD

According to Abubakar (2020:1), "research method is an effort to investigate and explore a problem using scientific methods careful and precise in collecting, processing, analyzing data and draw conclusions systematically and objectively in order to solve a problem or test a hypothesis to obtain knowledge that useful for human life". In research This use method quantitative where take in a way direct report LQ45 indexed finance on the IDX 2019 – 2022

Population

Population according to Margono (Hardani et al., 2020:361) is the whole object of research consisting of humans, objects, animals, plants, symptoms, test scores, or events as data sources that have certain characteristics in a study as for population in study This is There are 45 companies indexed on the Indonesian Stock Exchange in the LQ45 index.

Sample

According to Husain and Purnomo (Hardani et al., 2020:362), the sample is part member population taken with using sampling techniques. With thus, sample must truly Can represent condition population, so that results research that was raised from sample must is conclusion on population. The sample used in study This is with method purposive sampling approach means sample taken own criteria certain that have been determined researchers. The criteria are the sample that will take in this study include:

1. Company indexed in LQ45 in stock exchange effect Indonesia as many as 45 companies
2. Companies that publish financial reports on the Indonesian stock exchange from 2020 – 2023
3. Company financial reports with complete data to obtain calculation of financial ratios in accordance with *financial analysis methods distress*

so that in study This has 45 samples companies indexed in LQ45 on the Indonesian stock exchange.

NO	KODE Perusahaan	Nama Perusahaan	SEKTOR	SUB SEKTOR
1	ACES	Ace Hardware Indonesia Tbk	Consumer Cyclical	Retailing
2	ADRO	Adaro Energy Indonesia Tbk	Energy	Oil, Gas & Coal
3	AKRA	PT AKR Corporindo Tbk.	Energy	Oil, Gas & Coal
4	ANTM	Aneka Tambang Tbk.	Basic Materials	Basic Materials
5	ASII	Astra International Tbk	Industrials	Multi-sector Holdings
6	EMTK	Elang Mahkota Teknologi Tbk	Technology	Software & IT Services
7	ESSA	Surya Esa Perkasa Tbk	Basic Materials	Basic Materials
8	HRUM	Harum Energy Tbk	Energy	Oil, Gas & Coal
9	MDKA	PT Merdeka Copper Gold Tbk.	Basic Materials	Basic Materials
10	MEDC	PT Medco Energi Internasional Tbk	Energy	Oil, Gas & Coal
11	BRPT	Barito Pacific Tbk	Basic Materials	Basic Materials
12	BSDE	PT Bumi Serpong Damai Tbk	Properties & Real Estate	Properties & Real Estate
13	SIDO	PT Industri Jamu Dan Farmasi Sido Muncul Tbk	Healthcare	Pharmaceuticals & Health Care Research
14	CPIN	Charoen Pokphand Indonesia Tbk	Consumer Non-Cyclical	Food & Beverage
15	CTRA	Ciputra Development Tbk	Properties & Real Estate	Properties & Real Estate
16	ERAA	Erajaya Swasembada Tbk	Consumer Cyclical	Retailing
17	EXCL	PT XL Axiata Tbk	Infrastructures	Telecommunication
18	GGRM	Gudang Garam Tbk	Consumer Non-Cyclical	Tobacco
19	HMSP	HM Sampoerna Tbk	Consumer Non-Cyclical	Tobacco
20	ICBP	Indofood CBP Sukses Makmur Tbk	Consumer Non-Cyclical	Food & Beverage
21	INCO	Vale Indonesia Tbk	Basic Materials	Basic Materials
22	INDF	Indofood Sukses Makmur Tbk	Consumer Non-Cyclical	Food & Beverage
23	INKP	Indah Kiat Pulp & Paper Tbk	Basic Materials	Basic Materials
24	INTP	Indocement Tunggul Prakarsa Tbk	Basic Materials	Basic Materials
25	ITMG	Indo Tambangraya Megah Tbk	Energy	Oil, Gas & Coal
26	JPFA	JAPFA Comfeed Indonesia Tbk	Consumer Non-Cyclical	Food & Beverage
27	JSMR	PT Jasa Marga Tbk	Infrastructures	Transportation Infrastructure
28	KLBF	Kalbe Farma Tbk	Healthcare	Pharmaceuticals & Health Care Research
29	LPPF	Matahari Department Store Tbk	Consumer Cyclical	Retailing
30	MNCN	Media Nusantara Citra Tbk	Consumer Cyclical	Media & Entertainment
31	PGAS	PT Perusahaan Gas Negara Tbk.	Energy	Oil, Gas & Coal
32	PTBA	Bukit Asam Tbk	Energy	Oil, Gas & Coal
33	AMRT	PT Sumber Alfaria Trijaya Tbk.	Consumer Non-Cyclical	Food & Staples Retailing
34	PWON	Pakuwon Jati Tbk	Properties & Real Estate	Properties & Real Estate
35	SCMA	Surya Citra Media Tbk	Consumer Cyclical	Media & Entertainment
36	SMGR	Semen Indonesia (Persero) Tbk	Basic Materials	Basic Materials
37	SRIL	PT Sri Rejeki Isman Tbk	Consumer Cyclical	Apparel & Luxury Goods
38	TBIG	PT Tower Bersama Infrastructure Tbk	Infrastructures	Telecommunication
39	TKIM	Pabrik Kertas Tjiwi Kimia Tbk	Basic Materials	Basic Materials
40	TLKM	PT Telkom Indonesia (Persero) Tbk	Infrastructures	Telecommunication
41	TOWR	Sarana Menara Nusantara Tbk	Infrastructures	Telecommunication
42	UNTR	United Tractors Tbk	Industrials	Industrial Goods
43	UNVR	Unilever Indonesia Tbk	Consumer Non-Cyclical	Nondurable Household Products
44	WIKA	PT Wijaya Karya (Persero) Tbk	Infrastructures	Heavy Constructions & Civil Engineering
45	WSKT	PT Waskita Karya (Persero) Tbk	Infrastructures	Heavy Constructions & Civil Engineering

Types of research

Types of research used is a quantitative analysis. Where data collection in study This nature secondary in the form of documentation that is take in a way direct report finances from www.idx.co.id which is indexed LQ45 on the Indonesian Stock Exchange for the period 2020 - 2023.

Definition Operational

The method that will be used to analyze a company's *financial distress* company are as follows:

1. Method Grover (G-SCORE)

Grover method is a method created by designing and reassessment of the Altman Z-Score model According to Juan Carlos Pangestu *et al.* (2024). Grover 's method developed by Jeffrey S. Grover in 2001. Grover method is bankruptcy prediction model that is suitable for application to

companies that have gone public.

Method This produce function equality namely

$$G = 1,650X_1 + 3.404X_2 - 0.016 X_3 + 0.057$$

$$X_1 = \frac{\text{Current assets} - \text{Liabilities fluent}}{\text{Total assets}}$$

$$X_2 = \frac{\text{EBIT}}{\text{Total assets}}$$

$$X_3 = \frac{\text{Net income}}{\text{Total assets}}$$

Method Grover categorize company in condition bankrupt with score less than or equal to -0.02 ($Z \leq -0.02$). While the value for companies that categorized as not bankrupt is more or equal to 0.01 ($Z \geq 0.01$). (Putri et all, 2023).

2. Springate Method (S – SCORE)

Springate is method with model for predict the survival of a company by combining several common financial ratios are given different weights to each other. Which other (Rudianto, 2013). Analysis prediction bankruptcy with method Springate This use method Multiple Discriminant Analysis (MDA) at first use 19 ratio Which famous in his research. However afterretesting, finally there are only 4 ratios used inthe test Which capable differentiate criteria company Which enter to in category company Which Healthy (non-Distress) or company Which potential bankruptcy (Distress). Where 4 ratio used in method This is capital Work to total asset, profit before flower and tax to total assets, profit before tax to debt current and sales to total assets. This model was developed in the year 1978 by GorgonL.V. Springate method own equality formula namely

$$S = 1.03 X_1 + 3.07 X_2 + 0.66 X_3 + 0.4 X_4$$

$$X_1 = \frac{\text{Current assets} - \text{Current liabilities}}{\text{Total assets}}$$

$$X_2 = \frac{\text{EBIT}}{\text{Total assets}}$$

$$X_3 = \frac{\text{Profit before tax (EBT)}}{\text{Liabilities fluent}}$$

$$X_4 = \frac{\text{Sales}}{\text{Total assets}}$$

The Springate model has cut-off value of 0.862. Companies with S-Score value is higher from 0.862 predicted healthy, while company with S-Score value is less from 0.862 predicted will bankrupt.

Data analysis techniques

data analysis techniques in study This is:

1. Report finance sample research of 45 companies indexed in LQ45 on the Indonesian stock exchange

2. Look for related ratio with method grover and method springate
3. Determine companies that have category based on method grover and springate
4. Research result

RESULTS AND DISCUSSION

Data analysis in this study is by collecting several financial reports from 2019 - 202 2 where each model requires several different financial reports. The data collection is needed in the Grover and Springate method equation. including:

1. Total current assets
2. Total current liabilities
3. Total assets
4. Amount profit (loss) before tax income
5. Net income
6. Seller

Table 1
Analysis Report finance 2019

NO	KODE PERUSAHAAN	TAHUN	Total aset lancar	Jumlah liabilitas lancar	Total Aset	Jumlah laba (rugi) sebelum pajak penghasilan	Net Income	Penjualan
1	ACES	2019	4,369,550,647,718	783,375,432,849	6,641,808,005,145	1,262,709,647,429	1,023,636,538,399	8,142,717,045,655
2	ADRO	2019	2,109,924	1,232,601	7,217,105	659,103	435,002	3,457,154
3	AKRA	2019	10,777,639,192	8,712,526,231	21,409,046,173	899,083,233	703,077,279	21,702,637,573
4	ANTM	2019	7,665,239,260	5,293,238,393	30,194,907,730	687,034,053	193,852,031	32,718,542,699
5	ASII	2019	129,058	99,962	351,958	34,054	26,621	237,166
6	EMTK	2019	8,606,558,382	2,689,303,079	17,540,637,852	563,135,270	(2,343,106,373)	11,030,044,792
7	ESSA	2019	190,464,232	82,084,677	895,312,424	(11,532,216)	589,943	221,911,797
8	HRUM	2019	288,389,905	31,270,572	447,001,954	25,627,895	20,122,589	262,590,669
9	MDKA	2019	204,759,644	254,068,583	951,253,163	108,471,334	69,253,653	402,039,388
10	MEDC	2019	1,694,682,717	705,581,042	5,997,523,421	156,861,514	(24,950,936)	1,375,721,763
11	BRPT	2019	1,828,133	1,105,635	7,182,435	276,669	137,380	2,402,466
12	BSDE	2019	24,263,878,305,808	6,177,662,471,577	54,540,978,397,964	3,166,472,037,878	3,130,076,103,452	7,084,864,038,574
13	SIDO	2019	1,716,235	408,870	3,529,557	1,073,835	807,689	3,067,434
14	CPIN	2019	12,995,504	5,120,390	29,109,408	4,608,641	3,642,226	42,501,146
15	CTRA	2019	18,195,176	8,368,689	36,196,024	1,555,103	1,283,281	7,608,237
16	ERAA	2019	6,944,525,743	4,615,531,135	9,747,703,198	472,719,996	325,583,191	32,944,902,671
17	EXCL	2019	7,145,648	21,292,684	62,725,242	1,144,117	712,579	25,132,628
18	GGRM	2019	52,081,133	25,258,727	78,647,274	14,487,736	10,880,704	110,523,819
19	HMSP	2019	41,697,015	12,727,676	50,902,806	18,259,423	13,721,513	106,055,176
20	ICBP	2019	16,624,925	6,556,359	38,709,314	7,436,972	5,360,029	42,296,703
21	INCO	2019	588,313	136,552	2,222,688	89,136	57,400	782,012
22	INDF	2019	31,403,445	24,686,862	96,198,559	8,749,397	5,902,729	76,592,955
23	INKP	2019	4,214,777	1,832,973	8,502,050	397,897	274,390	3,223,153
24	INTP	2019	12,829,494	3,907,492	27,707,749	2,274,427	1,835,305	15,939,348
25	ITMG	2019	469,389	233,288	1,209,041	185,908	126,502	1,715,592
26	JPFA	2019	12,873,148	7,741,958	26,650,895	2,584,420	1,883,857	38,872,084
27	JSMR	2019	11,612,566	41,526,417	99,679,570	3,097,603	2,073,888	26,345,260
28	KLBF	2019	11,222,490,978,401	2,577,108,805,851	20,264,726,862,584	3,402,616,824,533	2,537,601,823,645	22,633,476,361,038
29	LPPF	2019	2,748,781	2,597,839	4,832,910	1,763,009	1,366,884	10,276,431
30	MNCN	2019	7,636,544	2,139,487	17,836,430	2,939,118	2,352,529	8,353,365
31	PGAS	2019	2,204,651,127	1,123,361,297	7,373,713,156	279,902,491	112,981,195	3,848,717,684
32	PTBA	2019	11,668,127	4,691,251	26,098,052	5,455,162	4,040,394	21,787,564
33	AMRT	2019	14,782,817	13,167,601	23,992,313	1,453,898	1,138,888	72,944,988
34	PWON	2019	9,642,587,369	3,373,096,633	26,095,153,343	3,270,697,901	3,239,796,227	7,202,001,193
35	SCMA	2019	3,559,331,625	988,970,149	6,716,724,073	1,452,611,689	1,051,164,602	5,523,362,497
36	SMGR	2019	16,658,531	12,240,252	79,807,067	3,195,775	2,371,233	40,368,107
37	SRIL	2019	894,760,661	182,540,923	1,559,251,755	101,548,894	87,652,548	1,181,834,182
38	TBIG	2019	2,376,740	4,513,623	30,871,710	1,303,989	866,121	4,698,742
39	TKIM	2019	879,074	540,366	3,062,331	184,698	166,516	1,047,118
40	TLKM	2019	41,722	58,369	221,208	37,908	27,592	135,567
41	TOWR	2019	2,474,389	4,565,104	27,665,695	3,008,859	2,353,089	6,454,302
42	UNTR	2019	50,826,955	32,585,529	111,713,375	15,476,885	11,134,641	84,430,478
43	UNVR	2019	8,530,334	13,065,308	20,649,371	9,901,772	7,392,837	42,922,563
44	WIKA	2019	42,335,471,858	30,349,456,945	62,110,847,154	2,789,255,688	2,621,015,140	27,212,914,210
45	WSKT	2019	49,037,842,886,120	45,023,495,139,583	122,589,259,350,571	1,328,649,961,839	1,028,898,367,891	31,387,389,629,869

Source : secondary data 2019

Analysis report finance 2019 shows that there is companies that experience minus net income so that can affect the health of a company like EMTK (2,343,106,373) and MEDC (24,950,936). The factors that influence the occurrence of minus net income is high Total assets that are not significant with relatively the same total sales will but in prediction *financial distress* can predicted with various variables so that company can increase its performance with other variables.

Table 2
Grover and springate method 2019

NO	KODE Perusahaan	METODE GROVER = $1,650X1 + 3,404X2 - 0,016X3 + 0,057$					METODE SPRINGATE = $1,03X1 + 3,07X2 + 0,66X3 + 0,4X4$					
		WCTA (X1)	EBITTA (X2)	ROA (X3)	Rata-rata	Prediksi	WCTA (X1)	EBITTA (X2)	EBTCL (X3)	STA (X4)	Rata-rata	Prediksi
1	ACES	0.891	0.647	0.002	1.593	Tidak bangkrut	0.556	0.584	1.064	0.490	2.694	Tidak bangkrut
2	ADRO	0.201	0.311	0.001	0.567	Tidak bangkrut	0.125	0.280	0.353	0.192	0.950	Tidak bangkrut
3	AKRA	0.159	0.143	0.001	0.359	Tidak bangkrut	0.099	0.129	0.068	0.405	0.702	Bangkrut
4	ANTM	0.130	0.077	0.000	0.264	Tidak bangkrut	0.081	0.070	0.086	0.433	0.670	Bangkrut
5	ASII	0.136	0.329	0.001	0.522	Tidak bangkrut	0.085	0.297	0.225	0.270	0.877	Tidak bangkrut
6	EMTK	0.557	0.109	(0.002)	0.725	Tidak bangkrut	0.347	0.099	0.138	0.252	0.836	Bangkrut
7	ESSA	0.200	(0.044)	0.000	0.213	Tidak bangkrut	0.125	(0.040)	(0.093)	0.099	0.092	Bangkrut
8	HRUM	0.949	0.195	0.001	1.201	Tidak bangkrut	0.592	0.176	0.541	0.235	1.544	Tidak bangkrut
9	MDKA	(0.086)	0.388	0.001	0.358	Tidak bangkrut	(0.053)	0.350	0.282	0.169	0.748	Bangkrut
10	MEDC	0.272	0.089	(0.000)	0.418	Tidak bangkrut	0.170	0.080	0.147	0.092	0.489	Bangkrut
11	BRPT	0.166	0.131	0.000	0.354	Tidak bangkrut	0.104	0.118	0.165	0.134	0.521	Bangkrut
12	BSDE	0.547	0.198	0.001	0.801	Tidak bangkrut	0.342	0.178	0.338	0.052	0.910	Tidak bangkrut
13	SIDO	0.611	1.036	0.004	1.700	Tidak bangkrut	0.382	0.934	1.733	0.348	3.397	Tidak bangkrut
14	CPIN	0.446	0.539	0.002	1.040	Tidak bangkrut	0.279	0.486	0.594	0.584	1.943	Tidak bangkrut
15	CTRA	0.448	0.146	0.001	0.651	Tidak bangkrut	0.280	0.132	0.123	0.084	0.618	Bangkrut
16	ERAA	0.394	0.165	0.001	0.616	Tidak bangkrut	0.246	0.149	0.068	1.352	1.814	Tidak bangkrut
17	EXCL	(0.372)	0.062	0.000	(0.253)	Bangkrut	(0.232)	0.056	0.035	0.160	0.019	Bangkrut
18	GGRM	0.563	0.627	0.002	1.245	Tidak bangkrut	0.351	0.566	0.379	0.562	1.857	Tidak bangkrut
19	HMSPT	0.939	1.221	0.004	2.213	Tidak bangkrut	0.586	1.101	0.947	0.833	3.468	Tidak bangkrut
20	ICBP	0.429	0.654	0.002	1.138	Tidak bangkrut	0.268	0.590	0.749	0.437	2.043	Tidak bangkrut
21	INCO	0.335	0.137	0.000	0.528	Tidak bangkrut	0.209	0.123	0.431	0.141	0.904	Tidak bangkrut
22	INDF	0.115	0.310	0.001	0.481	Tidak bangkrut	0.072	0.279	0.234	0.318	0.904	Tidak bangkrut
23	INKP	0.462	0.159	0.001	0.678	Tidak bangkrut	0.289	0.144	0.143	0.152	0.727	Bangkrut
24	INTP	0.531	0.279	0.001	0.867	Tidak bangkrut	0.332	0.252	0.384	0.230	1.198	Tidak bangkrut
25	ITMG	0.322	0.523	0.002	0.901	Tidak bangkrut	0.201	0.472	0.526	0.568	1.767	Tidak bangkrut
26	JPFA	0.318	0.330	0.001	0.704	Tidak bangkrut	0.198	0.298	0.220	0.583	1.300	Tidak bangkrut
27	JSMR	(0.495)	0.106	0.000	(0.333)	Bangkrut	(0.309)	0.095	0.049	0.106	(0.059)	Bangkrut
28	KLBF	0.704	0.572	0.002	1.330	Tidak bangkrut	0.439	0.515	0.871	0.447	2.273	Tidak bangkrut
29	LPPF	0.052	1.242	0.005	1.346	Tidak bangkrut	0.032	1.120	0.448	0.851	2.451	Tidak bangkrut
30	MNCN	0.509	0.561	0.002	1.124	Tidak bangkrut	0.317	0.506	0.907	0.187	1.917	Tidak bangkrut
31	PGAS	0.242	0.129	0.000	0.428	Tidak bangkrut	0.151	0.117	0.164	0.209	0.641	Bangkrut
32	PTBA	0.441	0.712	0.002	1.207	Tidak bangkrut	0.275	0.642	0.767	0.334	2.018	Tidak bangkrut
33	AMRT	0.111	0.206	0.001	0.374	Tidak bangkrut	0.069	0.186	0.073	1.216	1.544	Tidak bangkrut
34	PWON	0.396	0.427	0.002	0.878	Tidak bangkrut	0.247	0.385	0.640	0.110	1.383	Tidak bangkrut
35	SCMA	0.631	0.736	0.003	1.422	Tidak bangkrut	0.394	0.664	0.969	0.329	2.356	Tidak bangkrut
36	SMGR	0.091	0.136	0.000	0.284	Tidak bangkrut	0.057	0.123	0.172	0.202	0.555	Bangkrut
37	SRIL	0.754	0.222	0.001	1.031	Tidak bangkrut	0.470	0.200	0.367	0.303	1.341	Tidak bangkrut
38	TBIG	(0.114)	0.144	0.000	0.086	Tidak bangkrut	(0.071)	0.130	0.191	0.061	0.310	Bangkrut
39	TKIM	0.182	0.205	0.001	0.444	Tidak bangkrut	0.114	0.185	0.226	0.137	0.661	Bangkrut
40	TLKM	(0.124)	0.583	0.002	0.514	Tidak bangkrut	(0.078)	0.526	0.429	0.245	1.122	Tidak bangkrut
41	TOWR	(0.125)	0.370	0.001	0.301	Tidak bangkrut	(0.078)	0.334	0.435	0.093	0.784	Bangkrut
42	UNTR	0.269	0.472	0.002	0.796	Tidak bangkrut	0.168	0.425	0.313	0.302	1.209	Tidak bangkrut
43	UNVR	(0.362)	1.632	0.006	1.321	Tidak bangkrut	(0.226)	1.472	0.500	0.831	2.578	Tidak bangkrut
44	WIKA	0.318	0.153	0.001	0.528	Tidak bangkrut	0.199	0.138	0.061	0.175	0.573	Bangkrut
45	WSKT	0.054	0.037	0.000	0.148	Tidak bangkrut	0.034	0.033	0.019	0.102	0.189	Bangkrut

Source : by researcher

It can be seen in the table that difference results processing of data sourced from from 2019 secondary data there are two method namely grover and springate.

1. Grover's Method

In Grover's method where there is a number of incoming company in category bankrupt namely

EXCL (0.253) & JSMR (0.333) p.s. This can predicted by X1 where WCTA (*Work Capital Total Asset*) also obtained minus results, namely EXCL (0.372) and JSMR (0.495). so that in 2019 two company predicted experience bankruptcy Because the score obtained is ≤ -0.02 if EXCL & JSMR are included in category No bankrupt so must be ≥ 0.01 . so that in 2019 can concluded in predict *financial distress* if have minus net income is not biased for made into in take decision will but can predicted with other variables such as WCTA, EBITTA and ROA.

2. Springate Method

2019 data processing results with using the springate method to obtain different results Where There are 18 companies that experienced bankrupt including AKRA 0.702, ANTM 0.670, EMTK 0.836, ESSA 0.092, MDKA 0.748, MEDC 0.489, BRPT 0.521, CTRA 0.618, EXCL 0.019, INKP 0.727, JSMR (0.059), PGAS 0.641, SMGR 0.555, TBIG 0.310, TKIM 0.661, TOWR 0.784, WIKA 0.573 and WSKT 0.189. so that in 2019 several company predicted experience bankruptcy Because the score obtained is ≤ 0.862 and score No shows ≥ 0.862 . in method this is the variable that becomes influence in predict FD is X4 STA in the two variables influenced by sales and total assets. so that in 2019 can concluded if have minus net income is not biased in take decision company experience *financial distress* so that prediction the can be predicted by other variables such as WCTA, EBITTA, EBTCL and STA.

Table 3
Analysis Report finance 2020

NO	KODE PERUSAHAAN	TAHUN	Total aset lancar	Jumlah liabilitas lancar	Total Aset	Jumlah laba (rugi) sebelum pajak penghasilan	Net Income	Penjualan
1	ACES	2020	5,034,737,166,320	844,928,054,206	7,247,063,894,294	923,335,768,686	731,310,571,351	7,412,766,872,302
2	ADRO	2020	1,731,619	1,144,923	6,381,566	222,165	158,505	2,534,842
3	AKRA	2020	8,042,418,506	5,102,110,055	18,683,572,815	1,226,718,840	961,997,313	17,715,928,111
4	ANTM	2020	9,150,514,439	7,553,261,301	31,729,512,995	1,641,178,012	1,149,353,693	27,372,461,091
5	ASII	2020	132,308	85,736	338,203	21,741	18,571	175,046
6	EMTK	2020	7,330,342,675	2,864,848,927	17,884,145,634	3,702,417,493	1,717,376,472	11,936,381,982
7	ESSA	2020	103,415,874	94,894,567	792,053,460	(39,420,425)	(33,568,693)	175,514,454
8	HRUM	2020	249,455,822	24,761,588	498,702,216	64,171,397	60,292,315	157,819,047
9	MDKA	2020	199,308,697	192,217,456	929,606,638	56,204,449	28,891,683	321,860,885
10	MEDC	2020	2,021,925,790	1,372,820,769	5,900,822,955	(98,283,621)	(177,303,520)	1,093,274,485
11	BRPT	2020	2,056,677	1,099,536	7,683,159	244,472	141,383	2,334,170
12	BSDE	2020	28,364,288,311,886	11,965,625,224,530	60,862,926,586,750	502,148,296,818	486,257,814,158	6,180,589,086,059
13	SIDO	2020	2,052,081	560,043	3,849,516	1,199,548	934,016	3,335,411
14	CPIN	2020	13,531,817	5,356,453	31,159,291	4,767,698	3,845,833	42,518,782
15	CTRA	2020	20,645,596	11,609,414	39,255,187	1,659,121	1,370,686	8,070,737
16	ERAA	2020	7,546,995,255	5,142,950,705	11,211,369,042	917,316,742	671,172,137	34,113,454,845
17	EXCL	2020	7,571,123	18,857,026	67,744,797	146,211	371,598	26,009,095
18	GGRM	2020	49,537,929	17,009,992	78,191,409	9,663,133	7,647,729	114,477,311
19	HMSP	2020	41,091,638	16,743,834	49,674,030	11,161,466	8,581,378	92,425,210
20	ICBP	2020	20,716,223	9,176,164	103,588,325	9,958,647	7,418,574	46,641,048
21	INCO	2020	695,972	160,710	2,314,658	104,645	82,819	764,744
22	INDF	2020	38,418,238	27,975,875	163,136,516	12,426,334	8,752,066	81,731,469
23	INKP	2020	4,341,593	1,922,866	8,496,277	383,437	294,041	2,986,033
24	INTP	2020	12,299,306	4,215,956	27,344,672	2,148,328	1,806,337	14,184,322
25	ITMG	2020	419,933	207,300	1,158,629	72,553	37,828	1,185,336
26	JPFA	2020	11,745,138	6,007,679	25,951,760	1,459,563	1,002,376	36,964,948
27	JSMR	2020	10,705,995	14,928,687	104,086,646	696,451	(41,629)	13,704,021
28	KLBF	2020	13,075,331,880,715	3,176,726,211,674	22,564,300,317,374	3,627,632,574,744	2,799,622,515,814	23,112,654,991,224
29	LPPF	2020	1,610,213	2,856,300	6,319,074	(934,404)	(873,181)	4,839,058
30	MNCN	2020	8,315,808	2,159,171	18,923,235	2,339,661	1,871,028	7,956,238
31	PGAS	2020	2,005,785,786	1,183,155,336	7,533,986,395	(175,355,545)	(215,767,814)	2,885,536,105
32	PTBA	2020	8,364,356	3,872,457	24,056,755	3,231,685	2,407,927	17,325,192
33	AMRT	2020	13,558,536	15,326,139	25,970,743	1,388,967	1,088,477	75,826,880
34	PWON	2020	8,590,023,831	4,336,698,236	26,458,805,377	1,148,979,421	1,119,113,010	3,977,211,311
35	SCMA	2020	3,609,040,737	1,542,474,950	6,766,903,494	1,488,100,052	1,150,063,239	5,101,113,259
36	SMGR	2020	15,564,604	11,506,163	78,006,244	3,488,650	2,674,343	35,171,668
37	SRIL	2020	1,151,048,437	398,345,886	1,851,988,840	101,700,548	85,325,108	1,282,569,384
38	TBIG	2020	3,227,394	13,777,876	36,521,303	1,665,177	1,066,576	5,327,689
39	TKIM	2020	837,038	605,512	3,073,164	152,979	148,334	866,453
40	TLKM	2020	46,503	69,093	246,943	38,775	29,563	136,462
41	TOWR	2020	3,002,332	7,225,188	34,249,550	3,398,921	2,853,617	7,445,426
42	UNTR	2020	44,195,782	20,943,824	99,800,963	7,011,186	5,632,425	60,346,784
43	UNVR	2020	8,828,360	13,357,536	20,534,632	9,206,869	7,163,536	42,972,474
44	WKA	2020	47,980,945,725	44,168,467,736	68,109,185,213	310,275,688	322,342,513	16,536,381,639
45	WSKT	2020	32,538,762,593,246	48,237,835,913,277	105,588,960,060,005	(9,729,421,929,853)	(9,495,726,146,546)	16,190,456,515,103

Source : secondary data 2020

Analysis report finance 2020 shows that there is companies that experience minus net income so that can affect the health of a company. As for the company from 2019 to 2020 still experiencing minus net income is MEDC (177,303,520) and there is a number of Companies that experienced minus net income included JSMR (41,629), LPPF (873,181), PGAS (215,767,814) and WSKT (9,495,726,146,546). The factors that influenced the occurrence of minus net income is the high total assets so that amount profit before tax will decrease. will but in prediction *financial distress* can predicted with various variables so that company can increase its performance with other variables.

Table 4
Grover and springate method 2020

NO	KODE Perusahaan	METODE GROVER = $1,650X1 + 3,404X2 - 0,016X3 + 0,057$					METODE SPRINGATE = $1,03X1 + 3,07X2 + 0,66X3 + 0,4X4$					
		WCTA (X1)	EBITTA (X2)	ROA (X3)	Rata-rata	Prediksi	WCTA (X1)	EBITTA (X2)	EBTCL (X3)	STA (X4)	Rata-rata	Prediksi
1	ACES	0.954	0.434	0.002	1.443	Tidak bangkrut	0.595	0.391	0.721	0.409	2.117	Tidak bangkrut
2	ADRO	0.152	0.119	0.000	0.327	Tidak bangkrut	0.095	0.107	0.128	0.159	0.489	Bangkrut
3	AKRA	0.260	0.223	0.001	0.539	Tidak bangkrut	0.162	0.202	0.159	0.379	0.902	Tidak bangkrut
4	ANTM	0.083	0.176	0.001	0.316	Tidak bangkrut	0.052	0.159	0.143	0.345	0.699	Bangkrut
5	ASII	0.227	0.219	0.001	0.502	Tidak bangkrut	0.142	0.197	0.167	0.207	0.714	Bangkrut
6	EMTK	0.412	0.705	0.002	1.172	Tidak bangkrut	0.257	0.636	0.853	0.267	2.013	Tidak bangkrut
7	ESSA	0.018	(0.169)	(0.001)	(0.094)	Bangkrut	0.011	(0.153)	(0.274)	0.089	(0.327)	Bangkrut
8	HRUM	0.743	0.438	0.002	1.237	Tidak bangkrut	0.464	0.395	1.710	0.127	2.696	Tidak bangkrut
9	MDKA	0.013	0.206	0.000	0.275	Tidak bangkrut	0.008	0.186	0.193	0.138	0.525	Bangkrut
10	MEDC	0.182	(0.057)	(0.000)	0.182	Tidak bangkrut	0.113	(0.051)	(0.047)	0.074	0.089	Bangkrut
11	BRPT	0.206	0.108	0.000	0.371	Tidak bangkrut	0.128	0.098	0.147	0.122	0.494	Bangkrut
12	BSDE	0.445	0.028	0.000	0.530	Tidak bangkrut	0.278	0.025	0.028	0.041	0.371	Bangkrut
13	SIDO	0.640	1.061	0.004	1.753	Tidak bangkrut	0.399	0.957	1.414	0.347	3.116	Tidak bangkrut
14	CPIN	0.433	0.521	0.002	1.009	Tidak bangkrut	0.270	0.470	0.587	0.546	1.873	Tidak bangkrut
15	CTRA	0.380	0.144	0.001	0.580	Tidak bangkrut	0.237	0.130	0.094	0.082	0.543	Bangkrut
16	ERAA	0.354	0.279	0.001	0.688	Tidak bangkrut	0.221	0.251	0.118	1.217	1.807	Tidak bangkrut
17	EXCL	(0.275)	0.007	0.000	(0.211)	Bangkrut	(0.172)	0.007	0.005	0.154	(0.006)	Bangkrut
18	GGRM	0.686	0.421	0.002	1.163	Tidak bangkrut	0.428	0.379	0.375	0.586	1.768	Tidak bangkrut
19	HMSP	0.809	0.765	0.003	1.628	Tidak bangkrut	0.505	0.690	0.440	0.744	2.379	Tidak bangkrut
20	ICBP	0.184	0.327	0.001	0.567	Tidak bangkrut	0.115	0.295	0.716	0.180	1.306	Tidak bangkrut
21	INCO	0.382	0.154	0.001	0.592	Tidak bangkrut	0.238	0.139	0.430	0.132	0.939	Tidak bangkrut
22	INDF	0.106	0.259	0.001	0.421	Tidak bangkrut	0.066	0.234	0.293	0.200	0.793	Bangkrut
23	INKP	0.470	0.154	0.001	0.680	Tidak bangkrut	0.293	0.139	0.132	0.141	0.704	Bangkrut
24	INTP	0.488	0.267	0.001	0.811	Tidak bangkrut	0.304	0.241	0.336	0.207	1.089	Tidak bangkrut
25	ITMG	0.303	0.213	0.001	0.572	Tidak bangkrut	0.189	0.192	0.231	0.409	1.021	Tidak bangkrut
26	JPFA	0.365	0.191	0.001	0.613	Tidak bangkrut	0.228	0.173	0.160	0.570	1.130	Tidak bangkrut
27	JSMR	(0.067)	0.023	(0.000)	0.013	Bangkrut	(0.042)	0.021	0.031	0.053	0.062	Bangkrut
28	KLBF	0.724	0.547	0.002	1.326	Tidak bangkrut	0.452	0.494	0.754	0.410	2.109	Tidak bangkrut
29	LPPF	(0.325)	(0.503)	(0.002)	(0.770)	Bangkrut	(0.203)	(0.454)	(0.216)	0.306	(0.567)	Bangkrut
30	MNCN	0.537	0.421	0.002	1.013	Tidak bangkrut	0.335	0.380	0.715	0.168	1.598	Tidak bangkrut
31	PGAS	0.180	(0.079)	(0.000)	0.158	Tidak bangkrut	0.112	(0.071)	(0.098)	0.153	0.096	Bangkrut
32	PTBA	0.308	0.457	0.002	0.821	Tidak bangkrut	0.192	0.412	0.551	0.288	1.444	Tidak bangkrut
33	AMRT	(0.112)	0.182	0.001	0.126	Tidak bangkrut	(0.070)	0.164	0.060	1.168	1.322	Tidak bangkrut
34	PWON	0.265	0.148	0.001	0.469	Tidak bangkrut	0.166	0.133	0.175	0.060	0.534	Bangkrut
35	SCMA	0.504	0.749	0.003	1.307	Tidak bangkrut	0.315	0.675	0.637	0.302	1.928	Tidak bangkrut
36	SMGR	0.086	0.152	0.001	0.295	Tidak bangkrut	0.054	0.137	0.200	0.180	0.571	Bangkrut
37	SRIL	0.671	0.187	0.001	0.914	Tidak bangkrut	0.419	0.169	0.169	0.277	1.033	Tidak bangkrut
38	TBIG	(0.477)	0.155	0.000	(0.265)	Bangkrut	(0.298)	0.140	0.080	0.058	(0.019)	Bangkrut
39	TKIM	0.124	0.169	0.001	0.350	Tidak bangkrut	0.078	0.153	0.167	0.113	0.510	Bangkrut
40	TLKM	(0.151)	0.534	0.002	0.439	Tidak bangkrut	(0.094)	0.482	0.370	0.221	0.979	Tidak bangkrut
41	TOWR	(0.203)	0.338	0.001	0.190	Tidak bangkrut	(0.127)	0.305	0.310	0.087	0.575	Bangkrut
42	UNTR	0.384	0.239	0.001	0.680	Tidak bangkrut	0.240	0.216	0.221	0.242	0.918	Tidak bangkrut
43	UNVR	(0.364)	1.526	0.006	1.214	Tidak bangkrut	(0.227)	1.376	0.455	0.837	2.441	Tidak bangkrut
44	WIKA	0.092	0.016	0.000	0.165	Tidak bangkrut	0.058	0.014	0.005	0.097	0.173	Bangkrut
45	WSKT	(0.245)	(0.314)	(0.001)	(0.501)	Bangkrut	(0.153)	(0.283)	(0.133)	0.061	(0.508)	Bangkrut

Source : by researcher

It can be seen in the table that difference results processing of data sourced from from 2020 secondary data there are two method namely grover and springate.

1. Grover's Method

In Grover's method where There are 6 companies that entered in category bankrupt namely ESSA (0.094), EXCL (0.211), JSMR 0.013, LPPF (0.770), TBIG (0.265) and WSKT (0.501) p. This can predicted by X2 EBITTA where profit before tax experience decline to the total assets that increased. So that in 2020 6 companies predicted experience bankruptcy Because the score obtained is $\leq - 0.02$ if in category No bankrupt so must be ≥ 0.01 . So that in 2020 can concluded in predict *financial distress* if have minus net income is not biased for made into in take decision will but can predicted with other variables such as WCTA, EBITTA and ROA.

2. Springate Method

2020 data processing results with using the springate method to obtain different results Where There are 22 companies that experienced bankrupt among them ADRO 0.489 , ANTM 0.699, ASII 0.714, ESSA (0.327), MDKA 0.525, MEDC 0.089, BRPT 0.494, BSDE 0.371, CTRA 0.543, EXCL (0.006), INDF 0.793, INKP 0.704 JSMR 0.062, LPPF (0.567) , PGAS 0.096, PWON 0.534 , SMGR 0.571, TBIG (0.019), TKIM 0.510, TOWR 0.575, WIKA 0.173 and WSKT (0.508) . So in 2020 several company predicted experience bankruptcy Because the score obtained is ≤ 0.862 and score No shows ≥ 0.862 . In the method this is the variable that becomes influence in predicting FD is X4 STA in the variable influenced by sales and total assets with relatively declining sales and total assets experiencing rise and fall from year then . So that in 2020 can concluded if have minus net income is not biased in take decision company experience *financial distress* so that prediction the can be predicted by other variables such as WCTA, EBITTA, EBTCL and STA.

Table 5
Analysis Report finance year 2021

NO	KODE PERUSAHAAN	TAHUN	Total aset lancar	Jumlah liabilitas lancar	Total Aset	Jumlah laba (rugi) sebelum pajak penghasilan	Net Income	Penjualan
1	ACES	2021	5,192,108,153,404	722,537,447,543	7,171,138,470,214	844,868,009,667	704,808,586,631	6,543,362,698,900
2	ADRO	2021	2,838,132	1,361,558	7,586,936	1,486,251	1,028,593	3,992,718
3	AKRA	2021	12,022,678,362	9,306,841,393	23,508,585,736	1,436,743,040	1,135,001,756	25,707,068,900
4	ANTM	2021	11,728,143	6,562,383	32,916,154	3,043,509	1,861,740	38,445,595
5	ASII	2021	160,262	103,778	367,311	32,350	25,586	233,485
6	EMTK	2021	12,961,204,931	3,213,609,433	38,168,511,114	6,436,822,691	6,019,825,801	12,840,734,345
7	ESSA	2021	158,000,533	97,776,656	809,293,023	10,094,942	14,354,428	303,437,230
8	HRUM	2021	247,611,806	80,577,513	874,657,582	127,569,867	98,313,145	336,175,517
9	MDKA	2021	411,315,044	297,241,459	1,278,592,659	56,718,350	33,386,800	380,956,549
10	MEDC	2021	1,701,563,649	1,006,176,448	5,683,884,139	269,379,241	62,600,751	1,252,106,573
11	BRPT	2021	3,564,431	1,132,850	9,241,551	481,320	296,007	3,155,656
12	BSDE	2021	28,397,757,188,620	10,967,892,740,436	61,469,712,165,656	1,547,006,489,870	1,538,840,956,173	7,654,802,250,986
13	SIDO	2021	2,244,707	543,370	4,068,970	1,613,231	1,260,898	4,020,980
14	CPIN	2021	15,715,060	7,836,101	35,446,051	4,633,546	3,619,010	51,698,249
15	CTRA	2021	21,916,840	10,963,375	40,668,411	2,396,714	2,087,716	9,729,651
16	ERAA	2021	6,624,347,489	4,279,452,623	11,372,225,256	1,495,064,863	1,117,917,248	43,466,976,696
17	EXCL	2021	7,733,191	20,953,921	72,753,282	1,707,540	1,287,807	26,754,050
18	GGRM	2021	59,312,578	28,369,283	89,964,369	7,286,846	5,605,321	124,881,266
19	HMSF	2021	41,323,105	21,964,259	53,090,428	9,152,166	7,137,097	98,874,784
20	ICBP	2021	33,997,637	18,896,133	118,015,311	9,950,170	7,911,943	56,803,733
21	INCO	2021	836,576	168,430	2,472,828	220,645	165,977	953,174
22	INDF	2021	54,183,399	40,403,404	179,271,840	14,488,653	11,229,695	99,345,618
23	INKP	2021	4,702,128	2,265,121	8,978,445	660,747	526,359	3,516,586
24	INTP	2021	11,336,733	4,646,506	26,136,114	2,234,002	1,788,496	14,771,906
25	ITMG	2021	988,024	364,743	1,666,239	621,089	475,390	2,076,813
26	JPFA	2021	14,161,153	7,064,166	28,589,656	2,793,847	2,130,896	44,878,300
27	JSMR	2021	10,361,876	12,014,583	101,242,884	2,072,453	871,236	15,169,552
28	KLBF	2021	15,712,209,507,638	3,534,656,089,431	25,666,635,156,271	4,143,264,634,774	3,232,007,683,281	26,261,194,512,313
29	LPPF	2021	1,513,483	2,070,044	5,851,229	1,102,899	912,854	5,585,975
30	MNCN	2021	9,524,188	2,334,035	20,874,784	3,279,880	2,629,530	10,012,880
31	PGAS	2021	2,191,174,530	863,911,451	7,510,948,902	467,938,895	364,534,135	3,036,100,956
32	PTBA	2021	18,211,500	7,500,647	36,123,703	10,358,675	8,036,888	29,261,468
33	AMRT	2021	14,211,903	16,376,061	27,370,210	2,395,909	1,963,050	84,904,301
34	PWON	2021	11,453,040,378	3,018,980,942	28,866,081,129	1,564,246,044	1,550,434,339	5,713,272,952
35	SCMA	2021	6,660,356,466	1,697,696,732	9,913,440,970	1,725,634,233	1,337,985,791	5,930,261,093
36	SMGR	2021	16,185,508	14,632,232	81,766,327	3,537,704	2,117,236	36,702,301
37	SRIL	2021	589,321,220	1,571,358,369	1,233,819,635	(1,179,074,221)	(1,074,402,760)	847,523,131
38	TBIG	2021	3,021,253	8,432,425	41,870,435	2,220,471	1,601,353	6,179,584
39	TKIM	2021	805,333	677,560	3,161,820	256,738	248,362	1,024,459
40	TLKM	2021	61,277	69,131	277,184	43,678	33,948	143,210
41	TOWR	2021	7,398,138	21,880,264	65,828,670	4,050,968	3,447,875	8,635,346
42	UNTR	2021	60,604,068	30,489,218	112,561,356	14,462,250	10,608,267	79,460,503
43	UNVR	2021	7,642,208	12,445,152	19,068,532	7,496,592	5,758,148	39,545,959
44	WKA	2021	37,186,634,112	36,969,569,903	69,385,794,346	196,664,427	214,424,794	17,809,717,726
45	WSKT	2021	42,588,609,406,325	27,201,562,416,697	103,601,611,883,340	(1,086,240,733,799)	(1,838,733,441,975)	12,224,128,315,553

Source : Secondary data year 2021

Analysis report finance 2021 shows that there is companies that experience minus net income so that can affect the health of a company such as SRIL (1,074,402,760) & WSKT (1,086,240,733,799). The factors that influence the occurrence of minus net income is high total assets and liabilities fluent so that net income decreases but in prediction *financial distress* can predicted with various variables so that company can increase its performance with other variables.

Table 6
Grover and springate method year 2021

NO	KODE Perusahaan	METODE GROVER = $1,650X_1 + 3,404X_2 - 0,016X_3 + 0,057$					METODE SPRINGATE = $1,03X_1 + 3,07X_2 + 0,66X_3 + 0,4X_4$					
		WCTA (X1)	EBITTA (X2)	ROA (X3)	Rata-rata	Prediksi	WCTA (X1)	EBITTA (X2)	EBTCL (X3)	STA (X4)	Rata-rata	Prediksi
1	ACES	1.028	0.401	0.002	1.485	Tidak bangkrut	0.642	0.362	0.772	0.365	2.140	Tidak bangkrut
2	ADRO	0.321	0.667	0.002	1.043	Tidak bangkrut	0.200	0.601	0.720	0.211	1.733	Tidak bangkrut
3	AKRA	0.191	0.208	0.001	0.455	Tidak bangkrut	0.119	0.188	0.102	0.437	0.846	Bangkrut
4	ANTM	0.259	0.315	0.001	0.630	Tidak bangkrut	0.162	0.284	0.306	0.467	1.219	Tidak bangkrut
5	ASII	0.254	0.300	0.001	0.609	Tidak bangkrut	0.158	0.270	0.206	0.254	0.889	Tidak bangkrut
6	EMTK	0.421	0.574	0.003	1.050	Tidak bangkrut	0.263	0.518	1.322	0.135	2.237	Tidak bangkrut
7	ESSA	0.123	0.042	0.000	0.222	Tidak bangkrut	0.077	0.038	0.068	0.150	0.333	Bangkrut
8	HRUM	0.315	0.496	0.002	0.867	Tidak bangkrut	0.197	0.448	1.045	0.154	1.843	Tidak bangkrut
9	MDKA	0.147	0.151	0.000	0.355	Tidak bangkrut	0.092	0.136	0.126	0.119	0.473	Bangkrut
10	MEDC	0.202	0.161	0.000	0.420	Tidak bangkrut	0.126	0.145	0.177	0.088	0.536	Bangkrut
11	BRPT	0.434	0.177	0.001	0.668	Tidak bangkrut	0.271	0.160	0.280	0.137	0.848	Bangkrut
12	BSDE	0.468	0.086	0.000	0.610	Tidak bangkrut	0.292	0.077	0.093	0.050	0.512	Bangkrut
13	SIDO	0.690	1.350	0.005	2.092	Tidak bangkrut	0.431	1.217	1.959	0.395	4.003	Tidak bangkrut
14	CPIN	0.367	0.445	0.002	0.867	Tidak bangkrut	0.229	0.401	0.390	0.583	1.604	Tidak bangkrut
15	CTRA	0.444	0.201	0.001	0.701	Tidak bangkrut	0.277	0.181	0.144	0.096	0.698	Bangkrut
16	ERAA	0.340	0.448	0.002	0.843	Tidak bangkrut	0.212	0.404	0.231	1.529	2.375	Tidak bangkrut
17	EXCL	(0.300)	0.080	0.000	(0.163)	Bangkrut	(0.187)	0.072	0.054	0.147	0.086	Bangkrut
18	GGRM	0.568	0.276	0.001	0.899	Tidak bangkrut	0.354	0.249	0.170	0.555	1.328	Tidak bangkrut
19	HMSP	0.602	0.587	0.002	1.243	Tidak bangkrut	0.376	0.529	0.275	0.745	1.925	Tidak bangkrut
20	ICBP	0.211	0.287	0.001	0.554	Tidak bangkrut	0.132	0.259	0.348	0.193	0.931	Tidak bangkrut
21	INCO	0.446	0.304	0.001	0.805	Tidak bangkrut	0.278	0.274	0.865	0.154	1.571	Tidak bangkrut
22	INDF	0.127	0.275	0.001	0.458	Tidak bangkrut	0.079	0.248	0.237	0.222	0.786	Bangkrut
23	INKP	0.448	0.251	0.001	0.754	Tidak bangkrut	0.280	0.226	0.193	0.157	0.855	Bangkrut
24	INTP	0.422	0.291	0.001	0.769	Tidak bangkrut	0.264	0.262	0.317	0.226	1.069	Tidak bangkrut
25	ITMG	0.617	1.269	0.005	1.938	Tidak bangkrut	0.385	1.144	1.124	0.499	3.152	Tidak bangkrut
26	JPFA	0.410	0.333	0.001	0.798	Tidak bangkrut	0.256	0.300	0.261	0.628	1.445	Tidak bangkrut
27	JSMR	(0.027)	0.070	0.000	0.100	Tidak bangkrut	(0.017)	0.063	0.114	0.060	0.220	Bangkrut
28	KLBF	0.783	0.549	0.002	1.387	Tidak bangkrut	0.489	0.496	0.774	0.409	2.167	Tidak bangkrut
29	LPPF	(0.157)	0.642	0.002	0.539	Tidak bangkrut	(0.098)	0.579	0.352	0.382	1.214	Tidak bangkrut
30	MNCN	0.568	0.535	0.002	1.158	Tidak bangkrut	0.355	0.482	0.927	0.192	1.956	Tidak bangkrut
31	PGAS	0.292	0.212	0.001	0.560	Tidak bangkrut	0.182	0.191	0.357	0.162	0.892	Tidak bangkrut
32	PTBA	0.489	0.976	0.004	1.519	Tidak bangkrut	0.305	0.880	0.911	0.324	2.421	Tidak bangkrut
33	AMRT	(0.130)	0.298	0.001	0.223	Tidak bangkrut	(0.081)	0.269	0.097	1.241	1.525	Tidak bangkrut
34	PWON	0.482	0.184	0.001	0.723	Tidak bangkrut	0.301	0.166	0.342	0.079	0.888	Tidak bangkrut
35	SCMA	0.826	0.593	0.002	1.473	Tidak bangkrut	0.516	0.534	0.671	0.239	1.960	Tidak bangkrut
36	SMGR	0.031	0.147	0.000	0.235	Tidak bangkrut	0.020	0.133	0.160	0.180	0.492	Bangkrut
37	SRIL	(1.313)	(3.253)	(0.014)	(4.495)	Bangkrut	(0.820)	(2.934)	(0.495)	0.275	(3.974)	Bangkrut
38	TBIG	(0.213)	0.181	0.001	0.024	Tidak bangkrut	(0.133)	0.163	0.174	0.059	0.263	Bangkrut
39	TKIM	0.067	0.276	0.001	0.399	Tidak bangkrut	0.042	0.249	0.250	0.130	0.671	Bangkrut
40	TLKM	(0.047)	0.536	0.002	0.545	Tidak bangkrut	(0.029)	0.484	0.417	0.207	1.078	Tidak bangkrut
41	TOWR	(0.363)	0.209	0.001	(0.097)	Bangkrut	(0.227)	0.189	0.122	0.052	0.137	Bangkrut
42	UNTR	0.441	0.437	0.002	0.934	Tidak bangkrut	0.276	0.394	0.313	0.282	1.265	Tidak bangkrut
43	UNVR	(0.416)	1.338	0.005	0.975	Tidak bangkrut	(0.259)	1.207	0.398	0.830	2.175	Tidak bangkrut
44	WIKA	0.005	0.010	0.000	0.072	Tidak bangkrut	0.003	0.009	0.004	0.103	0.118	Bangkrut
45	WSKT	0.245	(0.036)	(0.000)	0.267	Tidak bangkrut	0.153	(0.032)	(0.026)	0.047	0.142	Bangkrut

Source : by researcher

It can be seen in the table that difference results processing of data sourced from 2020 secondary data there are two method namely grover and springate.

1. Grover's Method

In Grover's method where There are 3 companies that entered in category bankrupt namely EXCL

(0.163), SRIL (4.495) and TOWR (0.097). This can predicted by X2 EBITTA where profit before tax experience decline to the total assets that increased. so that in 2021 2 companies predicted experience bankruptcy Because the score obtained is ≤ -0.02 if in category No bankrupt so must be ≥ 0.01 . so that in 2021 can concluded in predict *financial distress* if have minus net income is not biased for made into in take decision will but can predicted with other variables such as WCTA, EBITTA and ROA.

2. Springate Method

2021 data processing results with using the springate method to obtain different results Where There are 18 companies that experienced bankrupt including AKRA 0.846, ESSA 0.333, MDKA 0.473, MEDC 0.536, BRPT 0.848, BSDE 0.512, CTRA 0.698, EXCL 0.086, INDF 0.786, INKP 0.855, JSMR 0.220, SMGR 0.492, SRIL (3.974), TBIG 0.263, TKIM 0.671, TOWR 0.137, WIKA 0.118 and WSKT 0.142. so that in 2021 several company predicted experience bankruptcy Because the score obtained is ≤ 0.862 and score No shows ≥ 0.862 . in method this is the variable that becomes influence in predicting FD is X4 STA in the variable influenced by sales and total assets with relatively declining sales and total assets experiencing rise and fall from year then. so that in 2021 can concluded if have minus net income is not biased in take decision company experience *financial distress* so that prediction the can be predicted by other variables such as WCTA, EBITTA, EBTCL and STA.

Table 7
Analysis Report finance year 2022

KODE Perusahaan	Jumlah aset lancar	Jumlah liabilitas jangka pendek	Jumlah aset	Jumlah laba (rugi) sebelum pajak penghasilan	Jumlah laba (rugi)	Penjualan dan pendapatan usaha
ACES	5,362,930,145,158	669,768,766,924	7,249,254,612,049	820,831,199,512	673,646,864,480	6,762,803,342,146
ADRO	5,319,309	2,447,512	10,782,307	4,476,219	2,831,123	8,102,399
AKRA	15,841,294,251	11,280,491,593	27,187,608,036	3,085,916,786	2,479,059,157	47,539,986,604
ANTM	11,694,779	5,971,662	33,637,271	5,214,771	3,820,964	45,930,356
ASII	179,818	119,198	413,297	50,390	40,420	301,379
EMTK	16,503,758,500	3,129,319,807	44,469,025,417	6,216,438,790	5,462,058,450	15,524,642,337
ESSA	261,075,367	121,797,408	831,295,165	276,061,020	220,790,326	731,490,734
HRUM	519,290,111	225,718,203	1,278,805,856	477,547,194	379,772,107	904,437,795
MDKA	895,679,542	604,538,725	3,876,665,735	89,940,056	64,844,810	869,878,995
MEDC	1,751,396,299	1,379,314,476	6,931,905,826	1,045,601,581	551,410,338	2,312,227,602
BRPT	2,878,122	778,629	9,248,254	155,423	32,210	2,961,532
BSDE	29,586,676,145,282	11,332,854,264,009	64,999,403,480,787	2,661,691,654,486	2,656,885,590,302	10,235,479,955,727
SIDO	2,194,242	541,048	4,081,442	1,419,852	1,104,714	3,865,523
CPIN	18,031,436	10,109,335	39,847,545	3,537,180	2,930,357	56,867,544
CTRA	23,571,974	10,780,802	41,902,382	2,309,573	2,003,028	9,126,799
ERAA	11,217,075,937	9,021,226,534	17,058,217,814	1,497,339,515	1,076,555,292	49,471,483,883
EXCL	10,408,358	26,350,500	87,277,780	1,353,030	1,121,188	29,141,994
GGRM	55,445,127	29,125,010	88,562,617	3,646,521	2,779,742	124,682,692
HMSB	41,362,998	24,545,594	54,786,992	8,273,059	6,323,744	111,211,321
ICBP	31,070,365	10,033,935	115,305,536	7,525,385	5,722,194	64,797,516
INCO	989,802	175,039	2,658,116	275,819	200,401	1,179,452
INDF	54,876,668	30,725,942	180,433,300	12,318,765	9,192,569	110,830,272
INKP	5,476,557	2,239,843	9,640,721	1,047,499	857,462	4,002,632
INTP	10,312,090	4,822,152	25,706,169	2,289,309	1,842,434	16,328,278
ITMG	1,908,545	585,613	2,640,177	1,544,792	1,199,345	3,636,213
JPFA	17,001,468	9,412,440	32,690,887	1,954,529	1,490,931	48,972,085
JSMR	12,487,212	12,142,988	91,139,182	3,725,795	2,323,708	16,582,849
KLBF	16,710,229,570,163	4,431,038,459,634	27,241,313,025,674	4,458,896,905,350	3,450,083,412,291	28,933,502,646,719
LPFF	1,445,948	2,355,863	5,750,217	1,636,886	1,383,222	6,454,583
MNCN	9,713,156	2,058,461	22,421,559	2,781,845	2,244,174	9,065,210
PGAS	2,212,365,073	992,569,576	7,194,859,813	542,704,261	401,342,541	3,568,594,775
PTBA	24,432,148	10,701,780	45,359,207	16,202,314	12,779,427	42,648,590
AMRT	15,664,200	17,389,232	30,746,266	3,566,789	2,907,478	96,924,686
PWON	12,253,466,079	2,633,500,064	30,602,179,916	1,840,056,301	1,831,130,001	5,987,432,707
SCMA	7,629,132,798	2,082,974,919	10,959,097,127	1,095,325,911	679,875,021	7,132,533,909
SMGR	18,878,979	13,061,027	82,960,012	3,298,835	2,499,083	36,378,597
SRIL	273,097,960	99,697,450	764,552,039	(296,487,480)	(395,563,161)	524,565,291
TBIG	3,565,804	8,728,182	43,139,968	2,405,199	1,689,441	6,524,369
TKIM	850,762	694,306	3,545,180	470,249	463,345	1,143,593
TLKM	55,057	70,388	275,192	36,339	27,680	147,306
TOWR	3,651,134	14,446,084	65,625,136	4,459,251	3,496,535	11,035,650
UNTR	78,930,048	42,037,402	140,478,220	29,446,041	22,993,673	123,607,460
UNVR	7,567,768	12,442,223	18,318,114	6,993,803	5,364,761	41,218,881
WKA	39,634,794,697	36,135,331,415	75,069,604,222	176,080,896	12,586,435	21,480,791,864
WSKT	33,430,242,924,449	21,452,886,385,290	98,232,316,628,846	(1,240,774,727,573)	(1,672,733,807,060)	15,302,872,338,467

Source: Secondary data year 2022

Analysis report finance 2022 shows that there is companies that experience minus net income so that can affect the health of a company such as SRIL (395,563,161) & WSKT (1,672,733,807,060). The factors that influence the occurrence of minus net income is the high total assets so that net income decreases. but in prediction *financial distress* can predicted with various variables so that company can increase its performance with other variables.

Table 8
Grover and springgate method year 2022

NO	KODE Perusahaan	METODE GROVER = $1,650X1 + 3,404X2 - 0,016X3 + 0,057$					METODE SPRINGATE = $1,03X1 + 3,07X2 + 0,66X3 + 0,4X4$				
		WCTA (X1)	EBITTA (X2)	ROA (X3)	Rata-rata	Prediksi	WCTA (X1)	EBITTA (X2)	ROA (X3)	Rata-rata	Prediksi
1	ACES	1.068	0.385	0.001	1.509	Tidak bangkrut	0.667	0.348	0.001	1.070	Tidak bangkrut
2	ADRO	0.439	1.413	0.004	1.905	Tidak bangkrut	0.274	1.274	0.004	1.602	Tidak bangkrut
3	AKRA	0.277	0.386	0.001	0.719	Tidak bangkrut	0.173	0.348	0.001	0.577	Tidak bangkrut
4	ANTM	0.281	0.528	0.002	0.864	Tidak bangkrut	0.175	0.476	0.002	0.706	Tidak bangkrut
5	ASII	0.242	0.415	0.002	0.712	Tidak bangkrut	0.151	0.374	0.002	0.581	Tidak bangkrut
6	EMTK	0.496	0.476	0.002	1.027	Tidak bangkrut	0.310	0.429	0.002	0.794	Tidak bangkrut
7	ESSA	0.276	1.130	0.004	1.460	Tidak bangkrut	0.173	1.020	0.004	1.245	Tidak bangkrut
8	HRUM	0.379	1.271	0.005	1.702	Tidak bangkrut	0.236	1.146	0.005	1.435	Tidak bangkrut
9	MDKA	0.124	0.079	0.000	0.260	Tidak bangkrut	0.077	0.071	0.000	0.205	Tidak bangkrut
10	MEDC	0.089	0.513	0.001	0.658	Tidak bangkrut	0.055	0.463	0.001	0.574	Tidak bangkrut
11	BRPT	0.375	0.057	0.000	0.489	Tidak bangkrut	0.234	0.052	0.000	0.342	Tidak bangkrut
12	BSDE	0.463	0.139	0.001	0.659	Tidak bangkrut	0.289	0.126	0.001	0.471	Tidak bangkrut
13	SIDO	0.668	1.184	0.004	1.905	Tidak bangkrut	0.417	1.068	0.004	1.538	Tidak bangkrut
14	CPIN	0.328	0.302	0.001	0.686	Tidak bangkrut	0.205	0.273	0.001	0.533	Tidak bangkrut
15	CTRA	0.504	0.188	0.001	0.748	Tidak bangkrut	0.314	0.169	0.001	0.540	Tidak bangkrut
16	ERAA	0.212	0.299	0.001	0.567	Tidak bangkrut	0.133	0.269	0.001	0.458	Tidak bangkrut
17	EXCL	(0.301)	0.053	0.000	(0.192)	Bangkrut	(0.188)	0.048	0.000	(0.084)	Bangkrut
18	GGRM	0.490	0.140	0.001	0.687	Tidak bangkrut	0.306	0.126	0.001	0.489	Tidak bangkrut
19	HMSP	0.506	0.514	0.002	1.076	Tidak bangkrut	0.316	0.464	0.002	0.835	Tidak bangkrut
20	ICBP	0.301	0.222	0.001	0.579	Tidak bangkrut	0.188	0.200	0.001	0.444	Tidak bangkrut
21	INCO	0.506	0.353	0.001	0.915	Tidak bangkrut	0.316	0.319	0.001	0.690	Tidak bangkrut
22	INDF	0.221	0.232	0.001	0.509	Tidak bangkrut	0.138	0.210	0.001	0.404	Tidak bangkrut
23	INKP	0.554	0.370	0.001	0.979	Tidak bangkrut	0.346	0.334	0.001	0.735	Tidak bangkrut
24	INTP	0.352	0.303	0.001	0.711	Tidak bangkrut	0.220	0.273	0.001	0.549	Tidak bangkrut
25	ITMG	0.827	1.992	0.007	2.868	Tidak bangkrut	0.516	1.796	0.007	2.362	Tidak bangkrut
26	JPFA	0.383	0.204	0.001	0.643	Tidak bangkrut	0.239	0.184	0.001	0.479	Tidak bangkrut
27	JSMR	0.006	0.139	0.000	0.202	Tidak bangkrut	0.004	0.126	0.000	0.186	Tidak bangkrut
28	KLBF	0.744	0.557	0.002	1.356	Tidak bangkrut	0.464	0.503	0.002	1.022	Tidak bangkrut
29	LPPF	(0.261)	0.969	0.004	0.761	Tidak bangkrut	(0.163)	0.874	0.004	0.764	Tidak bangkrut
30	MNCN	0.563	0.422	0.002	1.041	Tidak bangkrut	0.352	0.381	0.002	0.788	Tidak bangkrut
31	PGAS	0.280	0.257	0.001	0.593	Tidak bangkrut	0.175	0.232	0.001	0.462	Tidak bangkrut
32	PTBA	0.499	1.216	0.005	1.768	Tidak bangkrut	0.312	1.097	0.005	1.461	Tidak bangkrut
33	AMRT	(0.093)	0.395	0.002	0.358	Tidak bangkrut	(0.058)	0.356	0.002	0.354	Tidak bangkrut
34	PWON	0.519	0.205	0.001	0.779	Tidak bangkrut	0.324	0.185	0.001	0.564	Tidak bangkrut
35	SCMA	0.835	0.340	0.001	1.231	Tidak bangkrut	0.521	0.307	0.001	0.884	Tidak bangkrut
36	SMGR	0.116	0.135	0.000	0.308	Tidak bangkrut	0.072	0.122	0.000	0.251	Tidak bangkrut
37	SRIL	0.374	(1.320)	(0.008)	(0.881)	Bangkrut	0.234	(1.191)	(0.008)	(0.892)	Bangkrut
38	TBIG	(0.197)	0.190	0.001	0.049	Tidak bangkrut	(0.123)	0.171	0.001	0.104	Tidak bangkrut
39	TKIM	0.073	0.452	0.002	0.579	Tidak bangkrut	0.045	0.407	0.002	0.508	Tidak bangkrut
40	TLKM	(0.092)	0.449	0.002	0.413	Tidak bangkrut	(0.057)	0.405	0.002	0.403	Tidak bangkrut
41	TOWR	(0.271)	0.231	0.001	0.016	Bangkrut	(0.169)	0.209	0.001	0.095	Tidak bangkrut
42	UNTR	0.433	0.714	0.003	1.201	Tidak bangkrut	0.271	0.644	0.003	0.968	Tidak bangkrut
43	UNVR	(0.439)	1.300	0.005	0.913	Tidak bangkrut	(0.274)	1.172	0.005	0.950	Tidak bangkrut
44	WIKA	0.077	0.008	0.000	0.142	Tidak bangkrut	0.048	0.007	0.000	0.112	Tidak bangkrut
45	WSKT	0.201	(0.043)	(0.000)	0.215	Tidak bangkrut	0.126	(0.039)	(0.000)	0.144	Tidak bangkrut

Source : by researcher

1. Grover's Method

In Grover's method where There are 3 companies that entered in category bankrupt namely EXCL (0.192), SRIL (0.881) and TOWR 0.016. This can predicted by X2 EBITTA where profit before tax experience decline to the total assets that increased. so that in 2022 2 companies predicted

experience bankruptcy Because the score obtained is ≤ -0.02 if in category No bankrupt so must be ≥ 0.01 . so that in 2022 can concluded in predict *financial distress* if have minus net income is not biased for made into in take decision will but can predicted with other variables such as WCTA, EBITTA and ROA.

2. Springate Method

2022 data processing results with using the springate method to obtain different results Where There are 2 companies that are experiencing bankrupt among them EXCL (0.081) & SRIL (2.634). so that in 2022 some company predicted experience bankruptcy Because the score obtained is ≤ 0.862 and score No shows ≥ 0.862 . in method this is the variable that becomes influence in predicting FD is X1 WCTA and X4 STA in the variables influenced by sales, current assets and total assets where relatively declining sales and total assets experiencing increase. so that in 2022 can concluded if have minus net income is not biased in take decision company experience *financial distress* so that prediction the can be predicted by other variables such as WCTA, EBITTA, EBTCL and STA.

CONCLUSION

conclusion from research *financial distress* in 45 companies indexed in the LQ 45 on the Indonesian stock exchange with prone to 2019 – 2022, namely need the holding of evaluation on pattern finance on EXCL & SRIL companies so that can to obtain a healthy company. With use method GorgonL.V or S-SCORE is consistent method in predict *financial distress* in EXCL & SRIL companies from 2019 – 2022, namely with do approach to sales and total assets. with the holding of prediction company *financial distress* can to know and prove the existence of company factors experience bankrupt. With increase proper sales and management of total assets can make company to obtain high profit.

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