

LAMPIRAN

Lampiran 1 : laba rugi (fenomena) perusahaan sub sektor *Technology*

No	Kode	2019	2020	2021	2022	2023
1	ATIC	56.534.429.370	526.026.907.367	-251.283.149.891	143.577.060.553	342.535.469.318
2	EMTK	-2.343.106.373	1.717.376.472	6.019.825.801	5.462.058.450	-239.979.947
3	KREN	233.798.432.846	240.407.734.912	-328.686.693.757	-61.853.930.426	-52.901.838.328
4	LMAS	799.725.045	-3.838.498.010	0	0	0
5	MLPT	125.178.000.000	160.646.000.000	260.870.000.000	539.050.000.000	224.469.000.000
6	MTDL	535.110.000.000	541.671.000.000	761.834.000.000	866.721.000.000	940.104.000.000
7	PTSN	901.196	4.834.180	5.820.485	9.925.108	11.168.318
8	SKYB	0	0	0	0	0
9	KIOS	-5.329.200.311	-41.857.334.776	2.463.885.853	819.110.464	-17.078.969.802
10	MCAS	152.268.376.499	72.398.107.264	141.358.466.492	40.648.046.814	2.863.738.841
11	NFCX	57.271.215.065	54.310.551.270	338.582.980.579	23.324.457.502	-477.757.489.174
12	DIVA	98.389.349.094	64.367.755.965	1.266.422.157.779	8.196.551.501	1.272.956.591.493
13	LUCK	7.000.740.791	-2.895.948.388	318.149.748	1.312.960.178	161.145.290
14	ENVY	6.009.546.634	-27.795.052.341	-252.037.077.953	-33.742.870.301	-30.878.971.139
15	HDIT	11.831.919.599	4.234.206.333	-7.224.006.253	-22.869.714.936	-42.158.663.403
16	TFAS	18.331.074.607	6.462.425.274	26.636.364.297	1.345.508.054	890.780.769
17	DMMX	16.583.016.352	32.021.177.407	239.152.839.217	4.771.913.020	-267.185.086.103
18	GLVA	37.633.000.000	30.451.000.000	39.694.000.000	90.384.000.000	78.336.000.000
19	PGJO	-4.435.179.361	-7.566.341.704	-10.517.499.360	-10.183.862.379	-6.677.147.496
20	CASH	-10.853.226.786	-7.130.077.955	-8.682.198.587	-9.808.612.348	-30.425.313.029
21	TECH	2.848.877.198	1.602.316.740	4.381.362.779	2.862.407.154	0
22	WIFI	2.170.457.109	924.320.699	24.808.986.328	58.256.721.105	58.176.272.067
23	DCII	106.635.000.000	183.141.000.000	261.451.000.000	367.842.000.000	514.487.000.000
24	EDGE	103.033.216.540	122.018.057.986	123.873.000.000	186.171.000.000	253.265.000.000
25	ZYRX	8.238.220.662	36.377.166.918	69.750.882.205	78.627.417.442	32.952.891.502
26	UVCR	0	1.576.232.372	5.572.267.609	11.885.663.594	6.940.325.093
27	BUKA	0	-1.349.042.153	-1.675.743.735	1.977.593.515	-1.377.543.709
28	RUNS	0	7.705.349.570	-10.908.493.265	3.440.159.399	-4.752.767.883
29	WGSB	0	144.180.242	3.960.992.608	4.776.725.716	4.458.357.156
30	WIRG	0	0	24.638.744.125	48.123.654.721	68.504.864.216
31	GOTO	0	-16.735.217	-22.429.242	-40.408.492	-90.518.726
32	AXIO	0	0	135.134.780.004	89.932.553.832	127.042.929.881

No	Kode	2019	2020	2021	2022	2023
33	BELI	0	0	3.356.939.000.000	5.536.305.000.000	3.681.262.000.000
34	NINE	0	0	325.974.961	1.806.830.970	-4.052.839.911
35	ELIT	0	0	4.891.941.918	9.639.739.921	0
36	IRSX	0	0	539.126.307	40.621.355.335	-2.321.176.470
37	CHIP	0	0	5.057.287.956	9.315.490.754	12.306.322.915
38	TRON	0	0	0	15.335.167.944	18.077.894.158
39	MENN	0	0	0	874.263.273	1.294.795.760
40	AWAN	0	0	9.135.659.000.000	7.448.178.000.000	624.896.000.000
41	JATI	0	0	0	24.566.470.372	2.681.274.381
42	CYBR	0	0	0	707.438.072	-35.671.304.056
43	IOTF	0	0	0	1.469.641.330	4.138.740.151
44	MSTI	0	0	0	398.942.031	447.725.741.887
45	TOSK	0	0	0	4.539.895.531	5.425.872.913
46	MPIX	0	0	0	14.340.349.029	18.602.398.938
47	AREA	0	0	0	0	0
	rata rata	33.121.378.421	9.848.710.338	184.158.032.873	95.244.844.123	-45.477.451.428

Lampiran 2 : Sampel Penelitian

perusahaan technology yang terdaftar periode 2019 - 2023

NO	Kode	Nama Perusahaan	Kriteria					Sampel
			2019	2020	2021	2022	2023	
1	ATIC	Anabatic Technologies Tbk.	✓	✓	✓	✓	✓	✓
2	EMTK	Elang Mahkota Teknologi Tbk.	✓	✓	✓	✓	✓	✓
3	KREN	Quantum Clovera Investama Tbk.	✓	✓	✓	✓	✓	✓
4	LMAS	Limas Indonesia Makmur Tbk	✓	✓	✓	✓	✕	✕
5	MLPT	Multipolar Technology Tbk.	✓	✓	✓	✓	✓	✓
6	MTDL	Metrodata	✓	✓	✓	✓	✓	✓

		Electronics Tbk.						
7	PTSN	Sat Nusapersada Tbk	✓	✓	✓	✓	✓	✓
8	SKYB	Northcliff Citranusa Indonesia	✓	✓	x	x	x	x
9	KIOS	Kioson Komersial Indonesia Tbk	✓	✓	✓	✓	✓	✓
10	MCAS	M Cash Integrasi Tbk.	✓	✓	✓	✓	✓	✓
11	NFCX	NFC Indonesia Tbk.	✓	✓	✓	✓	✓	✓
12	DIVA	Distribusi Voucher Nusantara Tbk.	✓	✓	✓	✓	✓	✓
13	LUCK	Sentral Mitra Informatika Tbk.	✓	✓	✓	✓	✓	✓
14	ENVY	Envy Technologies Indonesia Tbk.	✓	✓	x	x	x	x
15	HDIT	Hensel Davest Indonesia Tbk.	✓	✓	✓	✓	✓	✓
16	TFAS	Telefast Indonesia Tbk.	✓	✓	✓	✓	✓	✓
17	DMMX	Digital Mediatama Maxima Tbk.	✓	✓	✓	✓	✓	✓
18	GLVA	Galva Technologies Tbk.	✓	✓	✓	✓	✓	✓
		TOTAL						15

Perusahaan *Technology* yang terdapat laporan keuangan konsisten dan lengkap pada tahun 2019-2023

NO	Kode	Nama Perusahaan	Kriteria					Sampel
			2019	2020	2021	2022	2023	
1	ATIC	Anabatic Technologies Tbk.	✓	✓	✓	✓	✓	✓
2	EMTK	Elang Mahkota Teknologi Tbk.	✓	✓	✓	✓	✓	✓
3	KREN	Quantum Clovera Investama Tbk.	✓	✓	✓	✓	✓	✓
4	MLPT	Multipolar Technology Tbk.	✓	✓	✓	✓	✓	✓
5	MTDL	Metrodata Electronics Tbk.	✓	✓	✓	✓	✓	✓
6	PTSN	Sat Nusapersada Tbk	✗	✗	✗	✗	✗	✗
7	KIOS	Kioson Komersial Indonesia Tbk	✓	✓	✓	✓	✓	✓
8	MCAS	M Cash Integrasi Tbk.	✓	✓	✓	✓	✓	✓
9	NFCX	NFC Indonesia Tbk.	✓	✓	✓	✓	✓	✓
10	DIVA	Distribusi Voucher Nusantara T	✓	✓	✓	✓	✓	✓
11	LUCK	Sentral Mitra Informatika Tbk.	✓	✓	✓	✓	✓	✓
12	HDIT	Hensel Davest Indonesia Tbk.	✓	✓	✓	✓	✓	✓
13	TFAS	Telefast Indonesia Tbk.	✓	✓	✓	✓	✓	✓
14	DMM	Digital Mediatama	✓	✓	✓	✓	✓	✓

	X	Maxima Tbk.						
15	GLVA	Galva Technologies Tbk.	✓	✓	✓	✓	✓	✓
		TOTAL						14

Lampiran 3 : Tabulasi *Financial Distress*

Altman Z – Score

$$Z = 6,56X1 + 3,26X2 + 6,72X3 + 1,05X4$$

Dimana :

Z = *Financial Distress Ndex*

X1 = *Working Capital / Total Assets*

X2 = *Retained Earning / Total Assets*

X3 = *Earning Before Interest And Taxes / Total Assets*

X4 = *Book Value Of Equity / Book Value Of Liabilities*

X1							
NO	KODE	TAHUN	ASET LANCAR	LIABILITAS LANCAR	WORKING CAPITAL	TOTAL ASET	X1
1	ATIC	2019	3.233.535.554.684	2.784.179.007.474	449.356.547.210	4.611.481.543.436	0,097442989
		2020	3.023.298.467.255	3.081.662.799.321	-58.364.332.066	4.298.837.364.037	-0,013576771
		2021	2.856.377.027.832	3.272.632.857.196	-416.255.829.364	4.115.747.672.003	-0,101137354
		2022	3.001.327.114.972	3.353.753.528.335	-352.426.413.363	4.217.064.302.659	-0,083571506
		2023	4.559.536.624.528	4.288.592.581.441	270.944.043.087	5.437.647.837.080	0,049827435
2	EMTK	2019	8.606.558.382.000	2.689.303.079.000	5.917.255.303.000	17.540.637.852.000	0,337345503
		2020	7.330.342.675.000	2.864.848.927.000	4.465.493.748.000	17.884.145.634.000	0,24969008
		2021	12.961.204.931.000	3.213.609.433.000	9.747.595.498.000	38.168.511.114.000	0,255383174
		2022	16.503.758.500.000	3.129.319.807.000	13.374.438.693.000	44.469.025.417.000	0,30075853
		2023	15.825.106.228.000	3.208.074.535.000	12.617.031.693.000	42.891.250.530.000	0,294163298
3	KREN	2019	3.316.265.609.086	717.760.664.443	2.598.504.944.643	4.294.469.995.451	0,605081639
		2020	2.201.259.708.255	417.991.713.481	1.783.267.994.774	3.330.804.739.111	0,535386531
		2021	1.953.001.620.434	555.052.051.113	1.397.949.569.321	3.137.530.767.483	0,445557246
		2022	1.622.252.125.824	583.507.966.512	1.038.744.159.312	2.870.079.321.045	0,36192176
		2023	1.542.542.507.811	667.857.070.636	874.685.437.175	2.909.477.439.056	0,300633174
4	MLPT	2019	1.214.149.000.000	953.606.000.000	260.543.000.000	2.106.286.000.000	0,123697826
		2020	1.589.991.000.000	1.342.180.000.000	247.811.000.000	2.417.802.000.000	0,102494332

		2021	2.190.889.000.000	1.922.610.000.000	268.279.000.000	2.993.102.000.000	0,089632428
		2022	2.071.273.000.000	1.762.829.000.000	308.444.000.000	2.720.784.000.000	0,113365853
		2023	1.988.687.000.000	2.058.916.000.000	-70.229.000.000	3.121.609.000.000	-0,022497693
5	MTDL	2019	5.015.457.000.000	2.436.976.000.000	2.578.481.000.000	5.625.277.000.000	0,45837405
		2020	5.177.469.000.000	2.202.841.000.000	2.974.628.000.000	5.866.642.000.000	0,507040996
		2021	6.960.341.000.000	3.524.803.000.000	3.435.538.000.000	7.588.792.000.000	0,452712105
		2022	7.898.375.000.000	4.028.949.000.000	3.869.426.000.000	8.582.896.000.000	0,450829883
		2023	9.313.853.000.000	4.849.005.000.000	4.464.848.000.000	10.146.570.000.000	0,440035204
6	KIOS	2019	247.730.118.201	166.247.720.397	81.482.397.804	274.525.987.806	0,296811236
		2020	166.504.261.852	12.029.671.375	154.474.590.477	187.967.965.333	0,821813388
		2021	61.814.045.704	17.509.836.255	44.304.209.449	79.197.568.853	0,559413756
		2022	84.169.048.697	11.206.897.675	72.962.151.022	180.163.505.051	0,404977418
		2023	68.666.781.093	14.039.011.707	54.627.769.386	166.289.310.390	0,328510409
7	MCAS	2019	1.974.839.172.618	463.162.247.757	1.511.676.924.861	2.229.863.816.342	0,677923429
		2020	1.403.596.487.054	407.710.377.464	995.886.109.590	1.835.183.217.104	0,542663043
		2021	1.625.320.495.074	553.134.149.383	1.072.186.345.691	2.134.534.261.341	0,502304585
		2022	1.326.260.435.302	583.495.864.253	742.764.571.049	1.911.368.459.547	0,388603551
		2023	1.276.232.504.419	661.462.748.671	614.769.755.748	1.989.974.666.238	0,308933458
8	NFCX	2019	1.257.937.730.321	282.957.848.823	974.979.881.498	1.341.118.244.979	0,726990245
		2020	1.117.816.587.759	337.680.268.108	780.136.319.651	1.403.992.329.735	0,555655685
		2021	1.580.381.529.470	485.003.423.552	1.095.378.105.918	1.926.693.143.204	0,568527536
		2022	1.440.632.539.350	452.066.147.373	988.566.391.977	1.859.955.040.345	0,531500155
		2023	1.040.256.272.179	532.705.391.800	507.550.880.379	1.577.860.513.306	0,32167031
9	DIVA	2019	955.609.543.741	230.878.773.231	724.730.770.510	1.087.962.023.939	0,666136092
		2020	967.321.260.042	244.030.808.271	723.290.451.771	1.154.965.011.840	0,62624447
		2021	2.206.333.656.195	191.386.988.866	2.014.946.667.329	2.360.148.812.115	0,853737128
		2022	2.122.401.225.916	176.810.002.246	1.945.591.223.670	2.337.996.948.614	0,832161575
		2023	811.621.410.682	130.742.163.373	680.879.247.309	1.013.433.103.200	0,671854161
10	LUCK	2019	106.793.756.502	45.158.762.831	61.634.993.671	187.032.662.030	0,329541338
		2020	73.091.614.014	19.457.563.778	53.634.050.236	154.846.852.480	0,346368359
		2021	78.932.797.047	21.118.109.618	57.814.687.429	165.176.869.255	0,35001685
		2022	103.198.353.142	29.155.171.262	74.043.181.880	174.737.311.360	0,423739963
		2023	109.432.399.768	28.611.824.746	80.820.575.022	174.606.530.258	0,462872579
11	HDIT	2019	273.017.186.353	9.543.075.613	263.474.110.740	362.564.253.300	0,726696326
		2020	337.295.869.414	49.009.407.060	288.286.462.354	413.960.473.608	0,696410601
		2021	387.817.408.606	10.707.632.905	377.109.775.701	464.610.776.693	0,811668163
		2022	286.310.134.767	15.024.420.555	271.285.714.212	354.517.406.317	0,765225372
		2023	287.216.031.994	34.341.152.046	252.874.879.948	348.031.994.919	0,726585152
12	TFAS	2019	223.914.340.107	76.705.623.446	147.208.716.661	231.175.973.850	0,636782076

		2020	211.499.886.509	61.938.860.347	149.561.026.162	223.989.846.219	0,66771342
		2021	224.219.118.528	75.415.238.184	148.803.880.344	275.050.727.818	0,541005223
		2022	219.870.829.003	69.163.398.766	150.707.430.237	263.610.786.449	0,571704338
		2023	216.937.832.815	60.193.977.217	156.743.855.598	256.087.538.810	0,612071389
13	DMMX	2019	696.378.579.324	30.249.944.505	666.128.634.819	710.349.799.459	0,93774734
		2020	606.951.264.766	57.971.774.759	548.979.490.007	800.066.753.874	0,686167107
		2021	851.351.704.159	92.444.835.607	758.906.868.552	1.085.765.859.340	0,698959966
		2022	837.394.864.046	163.404.160.376	673.990.703.670	1.134.699.436.917	0,593981703
		2023	473.901.489.726	182.935.487.210	290.966.002.516	867.985.361.202	0,335219942
14	GLVA	2019	902.659.000.000	763.992.000.000	138.667.000.000	934.944.000.000	0,148315835
		2020	437.290.000.000	264.504.000.000	172.786.000.000	470.855.000.000	0,366962228
		2021	566.833.000.000	384.203.000.000	182.630.000.000	619.387.000.000	0,294856043
		2022	834.009.000.000	544.900.000.000	289.109.000.000	920.342.000.000	0,314132138
		2023	844.310.000.000	511.720.000.000	332.590.000.000	931.719.000.000	0,356963849

X2					
NO	KODE	TAHUN	LABA DITAHAN	TOTAL ASET	X2
1	ATIC	2019	162.264.069.275	4.611.481.543.436	0,035187
		2020	-404.477.430.748	4.298.837.364.037	-0,09409
		2021	-797.083.794.694	4.115.747.672.003	-0,1936668
		2022	-706.636.940.566	4.217.064.302.659	-0,1675661
		2023	-467.184.085.121	5.437.647.837.080	-0,0859166
2	EMTK	2019	-3.151.096.924.000	17.540.637.852.000	-0,1796455
		2020	-1.092.923.431.000	17.884.145.634.000	-0,0611113
		2021	4.661.693.757.000	38.168.511.114.000	0,1221345
		2022	9.805.104.308.000	44.469.025.417.000	0,2204929
		2023	9.358.345.133.000	42.891.250.530.000	0,2181877
3	KREN	2019	1.268.128.250.944	4.294.469.995.451	0,2952933
		2020	952.582.731.828	3.330.804.739.111	0,2859918
		2021	498.525.349.049	3.137.530.767.483	0,158891
		2022	401.551.596.584	2.870.079.321.045	0,1399096
		2023	352.548.557.366	2.909.477.439.056	0,1211725
4	MLPT	2019	545.957.000.000	2.106.286.000.000	0,2592036
		2020	461.304.000.000	2.417.802.000.000	0,1907948
		2021	506.736.000.000	2.993.102.000.000	0,1693013
		2022	529.449.000.000	2.720.784.000.000	0,1945943
		2023	413.944.000.000	3.121.609.000.000	0,132606
5	MTDL	2019	1.589.497.000.000	5.625.277.000.000	0,2825633

		2020	1.832.244.000.000	5.866.642.000.000	0,3123156
		2021	2.250.277.000.000	7.588.792.000.000	0,2965264
		2022	2.701.866.000.000	8.582.896.000.000	0,3147965
		2023	3.174.617.000.000	10.146.570.000.000	0,3128759
6	KIOS	2019	-14.761.988.127	274.525.987.806	-0,0537726
		2020	-69.117.403.529	187.967.965.333	-0,3677084
		2021	-65.728.593.725	79.197.568.853	-0,829932
		2022	-64.929.093.670	180.163.505.051	-0,3603898
		2023	-82.195.539.985	166.289.310.390	-0,4942924
7	MCAS	2019	338.268.341.741	2.229.863.816.342	0,1516991
		2020	363.807.137.909	1.835.183.217.104	0,1982402
		2021	426.785.445.596	2.134.534.261.341	0,1999431
		2022	451.499.093.503	1.911.368.459.547	0,2362177
		2023	451.939.940.422	1.989.974.666.238	0,2271084
8	NFCX	2019	50.953.110.971	1.341.118.244.979	0,037993
		2020	74.803.096.951	1.403.992.329.735	0,0532789
		2021	236.783.516.984	1.926.693.143.204	0,1228963
		2022	260.181.511.021	1.859.955.040.345	0,1398859
		2023	-17.154.439.163	1.577.860.513.306	-0,010872
9	DIVA	2019	113.989.490.037	1.087.962.023.939	0,1047734
		2020	179.695.934.205	1.154.965.011.840	0,1555856
		2021	1.439.633.637.749	2.360.148.812.115	0,6099758
		2022	1.443.778.531.773	2.337.996.948.614	0,617528
		2023	165.979.091.717	1.013.433.103.200	0,163779
10	LUCK	2019	8.038.022.311	187.032.662.030	0,0429766
		2020	762.670.465	154.846.852.480	0,0049253
		2021	3.221.941.098	165.176.869.255	0,019506
		2022	5.955.370.510	174.737.311.360	0,0340818
		2023	7.909.403.709	174.606.530.258	0,0452984
11	HDIT	2019	46.569.290.016	362.564.253.300	0,1284442
		2020	50.432.049.582	413.960.473.608	0,1218282
		2021	42.995.283.595	464.610.776.693	0,0925404
		2022	20.131.193.958	354.517.406.317	0,0567848
		2023	-22.001.283.698	348.031.994.919	-0,0632163
12	TFAS	2019	47.894.126.090	231.175.973.850	0,2071761
		2020	54.279.383.691	223.989.846.219	0,2423297
		2021	80.806.616.829	275.050.727.818	0,293788
		2022	81.905.052.809	263.610.786.449	0,3107045
		2023	82.694.273.362	256.087.538.810	0,3229141
13	DMMX	2019	25.026.362.472	710.349.799.459	0,035231
		2020	56.939.551.867	800.066.753.874	0,0711685

		2021	296.187.973.995	1.085.765.859.340	0,2727918
		2022	301.620.787.893	1.134.699.436.917	0,2658156
		2023	37.349.864.970	867.985.361.202	0,0430305
14	GLVA	2019	40.640.000.000	934.944.000.000	0,0434678
		2020	64.151.000.000	470.855.000.000	0,1362436
		2021	87.345.000.000	619.387.000.000	0,1410185
		2022	154.657.000.000	920.342.000.000	0,168043
		2023	203.798.000.000	931.719.000.000	0,2187333

X3					
NO	KODE	TAHUN	EBIT	TOTAL ASET	X3
1	ATIC	2019	242.106.758.074	4.611.481.543.436	0,052501
		2020	158.701.992.670	4.298.837.364.037	0,036917
		2021	-43.436.037.540	4.115.747.672.003	-0,01055
		2022	309.044.518.624	4.217.064.302.659	0,073284
		2023	533.710.993.150	5.437.647.837.080	0,098151
2	EMTK	2019	717.144.164.000	17.540.637.852.000	0,040885
		2020	1.295.523.177.000	17.884.145.634.000	0,07244
		2021	1.356.191.338.000	38.168.511.114.000	0,035532
		2022	716.819.458.000	44.469.025.417.000	0,01612
		2023	-200.786.436.000	42.891.250.530.000	-0,00468
3	KREN	2019	285.536.279.779	4.294.469.995.451	0,066489
		2020	-206.976.487.206	3.330.804.739.111	-0,06214
		2021	-316.925.363.747	3.137.530.767.483	-0,10101
		2022	-53.994.817.242	2.870.079.321.045	-0,01881
		2023	-27.195.206.917	2.909.477.439.056	-0,00935
4	MLPT	2019	174.239.000.000	2.106.286.000.000	0,082723
		2020	226.903.000.000	2.417.802.000.000	0,093847
		2021	292.952.000.000	2.993.102.000.000	0,097876
		2022	321.410.000.000	2.720.784.000.000	0,118131
		2023	290.209.000.000	3.121.609.000.000	0,092968
5	MTDL	2019	716.958.000.000	5.625.277.000.000	0,127453
		2020	703.330.000.000	5.866.642.000.000	0,119886
		2021	983.477.000.000	7.588.792.000.000	0,129596
		2022	1.138.595.000.000	8.582.896.000.000	0,132659
		2023	1.217.695.000.000	10.146.570.000.000	0,120011
6	KIOS	2019	-4.151.644.141	274.525.987.806	-0,01512
		2020	-40.881.001.140	187.967.965.333	-0,21749
		2021	2.038.497.646	79.197.568.853	0,025739

		2022	4.375.975.169	180.163.505.051	0,024289
		2023	-21.440.865.442	166.289.310.390	-0,12894
7	MCAS	2019	144.058.335.307	2.229.863.816.342	0,064604
		2020	115.559.417.888	1.835.183.217.104	0,062969
		2021	96.813.396.749	2.134.534.261.341	0,045356
		2022	53.686.511.272	1.911.368.459.547	0,028088
		2023	27.880.145.917	1.989.974.666.238	0,01401
8	NFCX	2019	64.823.500.515	1.341.118.244.979	0,048335
		2020	60.845.314.899	1.403.992.329.735	0,043337
		2021	59.508.379.497	1.926.693.143.204	0,030886
		2022	26.003.621.740	1.859.955.040.345	0,013981
		2023	18.464.985.862	1.577.860.513.306	0,011703
9	DIVA	2019	42.698.796.390	1.087.962.023.939	0,039247
		2020	22.473.251.437	1.154.965.011.840	0,019458
		2021	34.492.873.985	2.360.148.812.115	0,014615
		2022	12.335.863.129	2.337.996.948.614	0,005276
		2023	9.721.667.469	1.013.433.103.200	0,009593
10	LUCK	2019	7.508.382.416	187.032.662.030	0,040145
		2020	-5.140.430.527	154.846.852.480	-0,0332
		2021	-409.371.723	165.176.869.255	-0,00248
		2022	3.502.217.026	174.737.311.360	0,020043
		2023	-733.809.963	174.606.530.258	-0,0042
11	HDIT	2019	27.417.824.565	362.564.253.300	0,075622
		2020	20.181.227.561	413.960.473.608	0,048752
		2021	15.568.678.783	464.610.776.693	0,033509
		2022	11.415.755.884	354.517.406.317	0,032201
		2023	961.330.610	348.031.994.919	0,002762
12	TFAS	2019	29.318.556.851	231.175.973.850	0,126824
		2020	14.544.068.884	223.989.846.219	0,064932
		2021	9.726.521.505	275.050.727.818	0,035363
		2022	6.046.647.120	263.610.786.449	0,022938
		2023	7.891.027.059	256.087.538.810	0,030814
13	DMMX	2019	12.241.590.374	710.349.799.459	0,017233
		2020	25.585.341.517	800.066.753.874	0,031979
		2021	30.662.326.767	1.085.765.859.340	0,02824
		2022	15.309.255.852	1.134.699.436.917	0,013492
		2023	23.703.751.932	867.985.361.202	0,027309
14	GLVA	2019	98.297.000.000	934.944.000.000	0,105137
		2020	82.442.000.000	470.855.000.000	0,17509
		2021	61.863.000.000	619.387.000.000	0,099878
		2022	143.484.000.000	920.342.000.000	0,155903

		2023	130.956.000.000	931.719.000.000	0,140553
--	--	------	-----------------	-----------------	----------

X4					
NO	KODE	TAHUN	MODAL	UTANG	X4
1	ATIC	2019	934.379.661.287	3.679.458.075.988	0,253945
		2020	395.659.221.270	3.903.178.142.767	0,101368
		2021	51.699.591.997	4.064.048.080.006	0,012721
		2022	161.752.569.294	4.055.311.733.365	0,039887
		2023	393.356.223.636	5.044.291.613.444	0,07798
2	EMTK	2019	12.265.279.438.000	5.275.358.414.000	2,325013
		2020	12.399.039.151.000	5.485.106.483.000	2,260492
		2021	33.668.866.284.000	4.499.644.830.000	7,482561
		2022	39.896.588.483.000	4.572.436.934.000	8,725454
		2023	38.371.760.453.000	4.519.490.077.000	8,490285
3	KREN	2019	3.448.045.631.811	846.424.363.640	4,073661
		2020	2.745.296.758.850	585.507.980.261	4,688744
		2021	2.486.913.145.563	650.617.621.920	3,822388
		2022	2.242.033.671.531	628.045.649.514	3,569858
		2023	2.079.671.616.164	829.805.822.892	2,506215
4	MLPT	2019	978.574.000.000	1.127.712.000.000	0,867752
		2020	882.023.000.000	1.535.779.000.000	0,574316
		2021	958.856.000.000	2.034.246.000.000	0,471357
		2022	824.423.000.000	1.896.361.000.000	0,434739
		2023	713.749.000.000	2.407.860.000.000	0,296425
5	MTDL	2019	3.042.855.000.000	2.582.422.000.000	1,178295
		2020	3.415.710.000.000	2.450.932.000.000	1,393637
		2021	3.922.653.000.000	3.666.139.000.000	1,069968
		2022	4.416.863.000.000	4.166.033.000.000	1,060208
		2023	5.038.136.000.000	5.108.434.000.000	0,986239
6	KIOS	2019	104.395.724.608	170.130.263.198	0,613622
		2020	49.731.765.485	138.236.199.848	0,359759
		2021	61.626.292.295	17.571.276.558	3,507218
		2022	168.869.547.568	11.293.957.483	14,9522
		2023	151.672.137.710	14.617.172.680	10,3763
7	MCAS	2019	1.717.781.954.008	512.081.862.334	3,354507
		2020	1.331.916.693.551	503.266.523.553	2,646543
		2021	1.517.016.987.531	617.517.273.810	2,456639
		2022	1.294.390.152.940	616.978.306.607	2,097951
		2023	1.169.942.777.160	820.031.889.078	1,426704

8	NFCX	2019	1.057.267.281.489	283.850.963.490	3,724727
		2020	994.375.768.619	409.616.561.116	2,427577
		2021	1.387.195.795.764	539.497.347.440	2,571275
		2022	1.373.523.298.638	486.431.741.707	2,823671
		2023	892.017.506.507	685.843.006.799	1,300615
9	DIVA	2019	824.382.657.509	263.579.366.430	3,127645
		2020	881.994.832.925	272.970.178.915	3,231103
		2021	2.148.467.671.341	211.681.140.774	10,14955
		2022	2.149.664.222.842	188.332.725.772	11,41418
		2023	876.403.744.877	137.029.358.323	6,395737
10	LUCK	2019	134.098.856.837	52.933.805.193	2,533331
		2020	126.672.192.126	28.174.660.354	4,495962
		2021	135.317.296.521	29.859.572.734	4,531789
		2022	136.370.001.819	38.367.309.541	3,554328
		2023	136.594.715.545	38.011.814.713	3,593481
11	HDIT	2019	352.597.743.158	9.966.510.142	35,37826
		2020	360.831.817.195	53.128.656.413	6,791661
		2021	353.647.016.293	110.963.760.400	3,18705
		2022	330.707.993.298	23.809.413.019	13,8898
		2023	288.726.952.606	59.305.042.313	4,868506
12	TFAS	2019	153.291.033.494	77.884.940.356	1,968173
		2020	158.021.935.845	65.967.910.374	2,395436
		2021	196.056.678.599	78.994.049.219	2,481917
		2022	191.710.485.120	71.900.301.329	2,666338
		2023	193.381.547.319	62.705.991.491	3,083941
13	DMMX	2019	679.483.780.954	30.866.018.505	22,01398
		2020	684.422.611.741	115.644.142.133	5,918351
		2021	951.341.972.088	134.423.887.252	7,077179
		2022	944.568.190.409	190.131.246.508	4,96798
		2023	673.785.130.686	194.200.230.516	3,469538
14	GLVA	2019	165.540.000.000	769.404.000.000	0,215154
		2020	198.850.000.000	272.005.000.000	0,731053
		2021	229.749.000.000	389.638.000.000	0,589647
		2022	338.095.000.000	582.247.000.000	0,580673
		2023	392.433.000.000	539.286.000.000	0,72769

Z - SCORE							
NO	KODE	TAHUN	X1	X2	X3	X4	Z - SCORE
1	ATIC	2019	0,09744	0,035187	0,0525	0,25394	1,37338
		2020	-0,0136	-0,09409	0,03692	0,10137	-0,04127
		2021	-0,1011	-0,19367	-0,0106	0,01272	-1,35238
		2022	-0,0836	-0,16757	0,07328	0,03989	-0,56014
		2023	0,04983	-0,08592	0,09815	0,07798	0,78823
2	EMTK	2019	0,33735	-0,17965	0,04088	2,32501	4,34335
		2020	0,24969	-0,06111	0,07244	2,26049	4,29906
		2021	0,25538	0,122135	0,03553	7,48256	10,16893
		2022	0,30076	0,220493	0,01612	8,72545	11,96183
		2023	0,29416	0,218188	-0,0047	8,49029	11,52434
3	KREN	2019	0,60508	0,295293	0,06649	4,07366	9,65614
		2020	0,53539	0,285992	-0,0621	4,68874	8,95007
		2021	0,44556	0,158891	-0,101	3,82239	6,77555
		2022	0,36192	0,13991	-0,0188	3,56986	6,45224
		2023	0,30063	0,121172	-0,0093	2,50621	4,93589
4	MLPT	2019	0,1237	0,259204	0,08272	0,86775	3,12350
		2020	0,10249	0,190795	0,09385	0,57432	2,52804
		2021	0,08963	0,169301	0,09788	0,47136	2,29256
		2022	0,11337	0,194594	0,11813	0,43474	2,62838
		2023	-0,0225	0,132606	0,09297	0,29642	1,22070
5	MTDL	2019	0,45837	0,282563	0,12745	1,1783	6,02178
		2020	0,50704	0,312316	0,11989	1,39364	6,61329
		2021	0,45271	0,296526	0,1296	1,06997	5,93082
		2022	0,45083	0,314797	0,13266	1,06021	5,98837
		2023	0,44004	0,312876	0,12001	0,98624	5,74863
6	KIOS	2019	0,29681	-0,05377	-0,0151	0,61362	2,31446
		2020	0,82181	-0,36771	-0,2175	0,35976	3,10859
		2021	0,55941	-0,82993	0,02574	3,50722	4,81972
		2022	0,40498	-0,36039	0,02429	14,9522	17,34482
		2023	0,32851	-0,49429	-0,1289	10,3763	10,57229
7	MCAS	2019	0,67792	0,151699	0,0646	3,35451	8,89809
		2020	0,54266	0,19824	0,06297	2,64654	7,40815
		2021	0,5023	0,199943	0,04536	2,45664	6,83119
		2022	0,3886	0,236218	0,02809	2,09795	5,71091
		2023	0,30893	0,227108	0,01401	1,4267	4,35917
8	NFCX	2019	0,72699	0,037993	0,04834	3,72473	9,12869

		2020	0,55566	0,053279	0,04334	2,42758	6,65897
		2021	0,56853	0,122896	0,03089	2,57127	7,03758
		2022	0,5315	0,139886	0,01398	2,82367	7,00147
		2023	0,32167	-0,01087	0,0117	1,30061	3,51900
9	DIVA	2019	0,66614	0,104773	0,03925	3,12764	8,25918
		2020	0,62624	0,155586	0,01946	3,2311	8,13879
		2021	0,85374	0,609976	0,01461	10,1495	18,34427
		2022	0,83216	0,617528	0,00528	11,4142	19,49247
		2023	0,67185	0,163779	0,00959	6,39574	11,72127
10	LUCK	2019	0,32954	0,042977	0,04014	2,53333	5,23167
		2020	0,34637	0,004925	-0,0332	4,49596	6,78591
		2021	0,35002	0,019506	-0,0025	4,53179	7,10142
		2022	0,42374	0,034082	0,02004	3,55433	6,75757
		2023	0,46287	0,045298	-0,0042	3,59348	6,92903
11	HDIT	2019	0,7267	0,128444	0,07562	35,3783	42,84120
		2020	0,69641	0,121828	0,04875	6,79166	12,42447
		2021	0,81167	0,09254	0,03351	3,18705	9,19781
		2022	0,76523	0,056785	0,0322	13,8898	20,00568
		2023	0,72659	-0,06322	0,00276	4,86851	9,69081
12	TFAS	2019	0,63678	0,207176	0,12682	1,96817	7,77152
		2020	0,66771	0,24233	0,06493	2,39544	8,12174
		2021	0,54101	0,293788	0,03536	2,48192	7,35039
		2022	0,5717	0,310704	0,02294	2,66634	7,71707
		2023	0,61207	0,322914	0,03081	3,08394	8,51309
13	DMMX	2019	0,93775	0,035231	0,01723	22,014	29,49696
		2020	0,68617	0,071169	0,03198	5,91835	11,16243
		2021	0,69896	0,272792	0,02824	7,07718	13,09529
		2022	0,59398	0,265816	0,01349	4,96798	10,07012
		2023	0,33522	0,043031	0,02731	3,46954	6,16585
14	GLVA	2019	0,14832	0,043468	0,10514	0,21515	2,04709
		2020	0,36696	0,136244	0,17509	0,73105	4,79564
		2021	0,29486	0,141018	0,09988	0,58965	3,68428
		2022	0,31413	0,168043	0,1559	0,58067	4,26590
		2023	0,35696	0,218733	0,14055	0,72769	4,76334

Lampiran 4 : Tabulasi Manajemen Laba

Discretionary Accruals

1) Menentukan skor total accruals (Langkah 1)

$$TAC_{it} = NI_{it} - CFO_{it}$$

- 2) Menentukan nilai *accruals* diperkirakan dengan persamaan regresi OLS (Langkah 2)

$$Tait/Ait-1 = \beta_1 (1/Ait-1) + \beta_2 (\Delta Rev_t / Ait-1) + \beta_3 (PPE_{it}/Ait-1) + e$$

- 3) Menentukan skor *Non Discretionary accruals* (NDA) (Langkah 3)

$$NDA_{it} = \beta_1 (1/Ait-1) + \beta_2 (\Delta Rev_t/Ait-1 - \Delta Rect/Ait-1) + \beta_3 (PPE_{it}/Ait-1) + e$$

- 4) Menghitung nilai DA (*Discretionary Accruals*) yang menjadi ukuran manajemen laba (Langkah 4)

$$DA_{it} = T_{Ait}/Ait-1 - NDA_{it}$$

Dimana :

Rev_{t it} = Pendapatan Tahun Sekarang

Rev_{t it -1} = Pendapatan Tahun Lalu

Rect_{it} = Piutang Tahun Sekarang

Rect_{it - 1} = Piutang Tahun Lalu

PPE_{it} = Aset Tetap

Dait = *Discretionary Accruals* Tahun T

NDA_{it} = *Nondiscretionary Accruals* Pada Tahun T

TAC = *Total Accrual*

Niit = Laba Bersih Setelah Pajak Pada Tahun t

CFO = Arus Kas Operasi Periode t

Ait-1 = Total Aset Periode t-1

laba bersih - arus kas operasi						
NO	KODE	TAHUN	Nit (laba bersih)	CFOit (arus kas operasi)	TAC	Ait-1 (total asset tahun lalu)
1.	ATIC	2019	65.756.538.184	-29.452.826.513	95.209.364.697	3.960.978.683.647
		2020	-526.026.907.367	466.394.922.854	-992.421.830.221	4.611.481.543.436
		2021	-251.283.149.891	-16.291.346.596	-234.991.803.295	4.298.837.364.037
		2022	143.577.060.553	269.599.884.159	-126.022.823.606	4.115.747.672.003
		2023	342.535.469.318	-583.609.723.413	926.145.192.731	4.217.064.302.659
2.	EMTK	2019	-2.343.106.373.000	-1.602.098.413.000	-741.007.960.000	19.525.411.684.000
		2020	1.717.376.472.000	1.812.827.233.000	-95.450.761.000	17.540.637.852.000
		2021	6.019.825.801.000	1.571.868.880.000	4.447.956.921.000	17.884.145.634.000
		2022	5.462.058.450.000	-810.999.249.000	6.273.057.699.000	38.168.511.114.000
		2023	-239.979.947.000	1.138.470.338.000	-1.378.450.285.000	44.469.025.417.000
3.	KREN	2019	233.798.432.846	-178.406.243.262	412.204.676.108	3.504.180.020.837
		2020	-240.407.734.912	-124.494.646.488	-115.913.088.424	4.294.469.995.451
		2021	-328.686.693.757	209.730.698.034	-538.417.391.791	3.330.804.739.111
		2022	-61.853.930.426	36.679.604.769	-98.533.535.195	3.137.530.767.483
		2023	-52.901.838.328	131.809.759.243	-184.711.597.571	2.870.079.321.045
4.	MLPT	2019	125.178.000.000	150.130.000.000	-24.952.000.000	2.059.020.000.000
		2020	160.646.000.000	580.494.000.000	-419.848.000.000	2.106.286.000.000
		2021	260.870.000.000	487.141.000.000	-226.271.000.000	2.417.802.000.000
		2022	556.089.000.000	263.590.000.000	292.499.000.000	2.993.102.000.000
		2023	224.469.000.000	564.881.000.000	-340.412.000.000	2.720.784.000.000
5.	MTDL	2019	535.110.000.000	174.538.000.000	360.572.000.000	4.852.776.000.000
		2020	541.671.000.000	1.382.910.000.000	-841.239.000.000	5.625.277.000.000
		2021	761.834.000.000	79.593.000.000	682.241.000.000	5.866.642.000.000
		2022	866.721.000.000	126.871.000.000	739.850.000.000	7.588.792.000.000
		2023	940.104.000.000	-74.070.000.000	1.014.174.000.000	8.582.896.000.000
6.	KIOS	2019	-5.329.200.311	-21.209.732.947	15.880.532.636	263.816.745.508
		2020	-41.857.334.776	3.036.404.593	-44.893.739.369	274.525.987.806
		2021	2.463.885.853	-7.703.025.241	10.166.911.094	187.967.965.333
		2022	819.110.464	-17.932.611.945	18.751.722.409	79.197.568.853
		2023	-17.078.969.802	1.652.434.213	-18.731.404.015	180.163.505.051
7.	MCAS	2019	152.268.376.499	-182.495.453.427	334.763.829.926	1.449.199.404.929
		2020	72.398.107.264	-14.672.850.111	87.070.957.375	2.229.863.816.342
		2021	141.358.466.402	273.859.953.530	-132.501.487.128	1.835.183.217.104

		2022	40.648.046.814	100.094.471.658	-59.446.424.844	2.134.534.261.341
		2023	2.863.738.841	85.767.097.144	-82.903.358.303	1.911.368.459.547
8.	NFCX	2019	57.271.215.065	-129.726.315.466	186.997.530.531	521.611.987.032
		2020	54.310.551.270	-136.137.932.696	190.448.483.966	1.341.118.244.979
		2021	338.582.980.579	281.233.034.206	57.349.946.373	1.403.992.329.735
		2022	23.324.457.502	-22.717.849.612	46.042.307.114	1.926.693.143.204
		2023	-477.757.489.174	123.566.145.302	-601.323.634.476	1.859.955.040.345
9.	DIVA	2019	98.389.349.094	-65.248.530.236	163.637.879.330	855.696.370.699
		2020	64.367.755.965	-37.607.607.105	101.975.363.070	1.087.962.023.939
		2021	1.266.422.157.779	191.317.372.216	1.075.104.785.563	1.154.965.011.840
		2022	8.430.213.951	45.512.334.327	-37.082.120.376	2.360.148.812.115
		2023	-1.272.956.591.493	-53.321.955.587	-1.219.634.635.906	2.337.996.948.614
10.	LUCK	2019	7.000.740.791	15.503.721.946	-8.502.981.155	148.201.761.019
		2020	-2.895.948.388	2.832.686.206	-5.728.634.594	187.032.662.030
		2021	318.149.748	13.918.612.484	-13.600.462.736	154.846.852.480
		2022	1.312.960.178	3.747.220.178	-2.434.260.000	165.176.869.255
		2023	161.145.290	15.416.496.453	-15.255.351.163	174.737.311.360
11.	HDIT	2019	11.831.919.599	-121.678.216.118	133.510.135.717	184.497.238.229
		2020	4.234.206.333	-49.128.698.330	53.362.904.663	362.564.253.300
		2021	-7.224.006.253	22.547.798.187	-29.771.804.440	413.960.473.608
		2022	-22.869.714.936	-26.533.656.635	3.663.941.699	464.610.776.693
		2023	-42.158.663.403	-11.867.568.785	-30.291.094.618	354.517.406.317
12.	TFAS	2019	18.331.074.607	-68.906.358.348	87.237.432.955	104.659.881.729
		2020	6.462.425.274	6.608.608.912	-146.183.638	231.175.973.850
		2021	26.636.364.297	5.945.309.340	20.691.054.957	223.989.846.219
		2022	1.345.508.054	5.886.664.825	-4.541.156.771	275.050.727.818
		2023	890.780.769	-17.212.749.452	18.103.530.221	263.610.786.449
13.	DMMX	2019	16.583.016.352	-25.136.073.021	41.719.089.373	33.506.508.170
		2020	32.021.177.407	-199.697.430.666	231.718.608.073	710.349.799.459
		2021	239.152.839.217	69.564.622.085	169.588.217.132	800.066.753.874
		2022	4.772.913.020	-36.515.671.043	41.288.584.063	1.085.765.859.340
		2023	-267.185.086.103	116.244.195.138	-383.429.281.241	1.134.699.436.917
14.	GLVA	2019	37.633.000.000	1.045.791.000.000	-1.008.158.000.000	308.746.206.874
		2020	30.451.000.000	908.225.000.000	-877.774.000.000	934.944.000.000
		2021	39.694.000.000	995.120.000.000	-955.426.000.000	470.855.000.000
		2022	90.384.000.000	1.330.113.000.000	-1.239.729.000.000	619.387.000.000
		2023	78.336.000.000	1.218.494.000.000	-1.140.158.000.000	920.342.000.000

NO	KODE	TAHUN	ΔREVit (pendapatan tahun sekarang)	ΔREVit-1 (pendapatan tahun lalu)	ΔREV (perubahan pendapatan)	PPE (aktiva tetap)
1.	ATIC	2019	5.552.209.122.095	5.433.508.833.578	118.700.288.517	1.377.945.988.752
		2020	6.157.619.315.277	5.552.209.122.095	605.410.193.182	1.275.538.896.782
		2021	6.459.797.692.062	6.157.619.315.277	302.178.376.785	1.259.370.644.171
		2022	7.809.976.522.248	6.459.797.692.062	1.350.178.830.186	1.215.737.187.687
		2023	10.207.024.936.502	7.809.976.522.248	2.397.048.414.254	878.111.212.552
2.	EMTK	2019	11.030.044.792.000	8.959.710.884.000	2.070.333.908.000	8.934.079.470.000
		2020	11.936.381.982.000	11.030.044.792.000	906.337.190.000	10.553.802.959.000
		2021	12.840.734.345.000	11.936.381.982.000	904.352.363.000	25.207.306.183.000
		2022	15.524.642.337.000	12.840.734.345.000	2.683.907.992.000	27.965.266.917.000
		2023	9.241.419.373.000	15.524.642.337.000	-6.283.222.964.000	27.066.144.302.000
3.	KREN	2019	11.454.686.801.268	7.210.108.479.931	4.244.578.321.337	978.204.386.365
		2020	11.181.911.606.407	11.454.686.801.268	-272.775.194.861	1.129.545.030.856
		2021	12.403.099.860.716	11.181.911.606.407	1.221.188.254.309	1.184.529.147.049
		2022	12.272.140.714.358	12.403.099.860.716	-130.959.146.358	1.247.827.195.221
		2023	11.675.104.332.787	12.272.140.714.358	-597.036.381.571	1.366.934.931.245
4.	MLPT	2019	2.455.526.000.000	2.435.494.000.000	20.032.000.000	892.137.000.000
		2020	2.685.797.000.000	2.455.526.000.000	230.271.000.000	827.811.000.000
		2021	2.996.710.000.000	2.685.797.000.000	310.913.000.000	802.213.000.000
		2022	3.442.223.000.000	2.996.710.000.000	445.513.000.000	649.511.000.000
		2023	3.297.221.000.000	3.442.223.000.000	-145.002.000.000	1.132.922.000.000
5.	MTDL	2019	15.069.692.000.000	12.713.412.000.000	2.356.280.000.000	609.820.000.000
		2020	14.021.687.000.000	15.069.692.000.000	-1.048.005.000.000	689.173.000.000
		2021	18.500.587.000.000	14.021.687.000.000	4.478.900.000.000	628.451.000.000
		2022	20.988.297.000.000	18.500.587.000.000	2.487.710.000.000	684.521.000.000
		2023	22.086.390.000.000	20.988.297.000.000	1.098.093.000.000	832.717.000.000
6.	KIOS	2019	2.900.162.397.309	1.276.339.292.791	1.623.823.104.518	26.795.869.605
		2020	912.535.369.280	2.900.162.397.309	-1.987.627.028.029	21.463.703.481
		2021	339.032.343.268	912.535.369.280	-573.503.026.012	17.383.523.149
		2022	363.872.667.991	339.032.343.268	24.840.324.723	95.994.456.354
		2023	271.291.628.739	363.872.667.991	-92.581.039.252	97.622.529.297
7.	MCAS	2019	11.090.421.731.942	6.358.847.199.021	4.731.574.532.921	255.024.643.724
		2020	11.334.436.937.908	11.090.421.731.942	244.015.205.966	431.586.730.050
		2021	12.675.430.974.543	11.334.436.937.908	1.340.994.036.635	509.213.766.267
		2022	12.314.877.728.637	12.675.430.974.543	-360.553.245.906	585.108.024.245
		2023	11.697.145.185.042	12.314.877.728.637	-617.732.543.595	713.742.161.819
8.	NFCX	2019	6.153.637.893.298	880.254.837.423	5.273.383.055.875	83.180.514.658
		2020	7.597.266.302.278	6.153.637.893.298	1.443.628.408.980	286.175.741.976

		2021	8.885.891.410.028	7.597.266.302.278	1.288.625.107.750	346.311.613.734
		2022	9.836.622.374.855	8.885.891.410.028	950.730.964.827	419.322.500.995
		2023	9.526.101.865.748	9.836.622.374.855	-310.520.509.107	537.604.241.127
9.	DIVA	2019	3.550.041.010.067	1.487.298.121.359	2.062.742.888.708	132.352.480.198
		2020	3.687.861.850.042	3.550.041.010.067	137.820.839.975	187.643.751.798
		2021	4.852.117.401.195	3.687.861.850.042	1.164.255.551.153	153.815.155.920
		2022	4.868.380.395.335	4.852.117.401.195	16.262.994.140	215.595.722.698
		2023	3.853.437.447.573	4.868.380.395.335	-1.014.942.947.762	201.811.692.518
10.	LUCK	2019	133.545.749.744	102.737.452.478	30.808.297.266	80.238.905.528
		2020	99.250.082.878	133.545.749.744	-34.295.666.866	81.755.238.466
		2021	102.316.904.804	99.250.082.878	3.066.821.926	86.244.072.208
		2022	136.370.430.067	102.316.904.804	34.053.525.263	71.538.958.218
		2023	106.699.011.283	136.370.430.067	-29.671.418.784	65.174.130.490
11.	HDIT	2019	9.629.825.396.769	4.000.103.631.801	5.629.721.764.968	89.547.066.947
		2020	3.156.659.950.866	9.629.825.396.769	-6.473.165.445.903	76.664.604.194
		2021	3.489.267.765.180	3.156.659.950.866	332.607.814.314	76.793.368.087
		2022	4.116.137.837.804	3.489.267.765.180	626.870.072.624	68.207.271.550
		2023	2.154.529.401.286	4.116.137.837.804	-1.961.608.436.518	60.815.962.925
12.	TFAS	2019	665.609.561.999	621.868.167.237	43.741.394.762	7.261.633.743
		2020	568.485.276.455	665.609.561.999	-97.124.285.544	12.489.959.710
		2021	644.576.393.167	568.485.276.455	76.091.116.712	50.831.609.290
		2022	765.515.933.170	644.576.393.167	120.939.540.003	43.739.957.446
		2023	633.417.100.629	765.515.933.170	-132.098.832.541	39.149.705.995
13.	DMMX	2019	211.001.743.239	58.550.399.668	152.451.343.571	13.971.220.135
		2020	517.197.997.739	211.001.743.239	306.196.254.500	193.115.489.108
		2021	1.150.441.212.932	517.197.997.739	633.243.215.193	234.414.155.181
		2022	1.938.153.436.211	1.150.441.212.932	787.712.223.279	297.304.572.871
		2023	1.945.055.730.713	1.938.153.436.211	6.902.294.502	394.083.871.476
14.	GLVA	2019	2.156.639.000.000	400.181.684.539	1.756.457.315.461	32.285.000.000
		2020	1.934.973.000.000	2.156.639.000.000	-221.666.000.000	33.565.000.000
		2021	1.749.414.000.000	1.934.973.000.000	-185.559.000.000	52.554.000.000
		2022	2.326.621.000.000	1.749.414.000.000	577.207.000.000	86.333.000.000
		2023	2.061.598.000.000	2.326.621.000.000	-265.023.000.000	87.409.000.000

NO	KODE	TAHUN	RECI (piutang tahun sekarang)	RECI-1 (piutang tahun lalu)	ΔREC (perubahan piutang)	Angka	1/Ait-1 (X1)
1.	ATIC	2019	1.229.329.073.586	1.303.013.532.288	-73.684.458.702	1	0,000000000000025
		2020	1.517.130.402.214	1.229.329.073.586	287.801.328.628	1	0,000000000000021
		2021	1.285.424.612.917	1.517.130.402.214	-231.705.789.297	1	0,000000000000023
		2022	1.468.697.876.475	1.285.424.612.917	183.273.263.558	1	0,000000000000024
		2023	2.077.209.477.581	1.468.697.876.475	608.511.601.106	1	0,000000000000023
2.	EMTK	2019	2.185.361.442.000	1.978.867.412.000	206.494.030.000	1	0,000000000000005
		2020	2.396.616.652.000	2.185.361.442.000	211.255.210.000	1	0,000000000000005
		2021	2.478.087.790.000	2.396.616.652.000	81.471.138.000	1	0,000000000000005
		2022	3.046.763.606.000	2.478.087.790.000	568.675.816.000	1	0,000000000000002
		2023	3.136.484.741.000	3.046.763.606.000	89.721.135.000	1	0,000000000000002
3.	KREN	2019	721.192.233.991	930.850.531.078	-209.658.297.087	1	0,000000000000028
		2020	440.763.761.666	721.192.233.991	-280.428.472.325	1	0,000000000000023
		2021	316.130.825.805	440.763.761.666	-124.632.935.861	1	0,000000000000030
		2022	355.689.919.484	316.130.825.805	39.559.093.679	1	0,000000000000031
		2023	360.110.984.099	355.689.919.484	4.421.064.615	1	0,000000000000034
4.	MLPT	2019	179.912.000.000	417.399.000.000	-237.487.000.000	1	0,000000000000048
		2020	399.745.000.000	179.912.000.000	219.833.000.000	1	0,000000000000047
		2021	788.754.000.000	399.745.000.000	389.009.000.000	1	0,000000000000041
		2022	642.706.000.000	788.754.000.000	-146.048.000.000	1	0,000000000000033
		2023	382.073.000.000	642.706.000.000	-260.633.000.000	1	0,000000000000036
5.	MTDL	2019	2.235.915.000.000	1.913.769.000.000	322.146.000.000	1	0,000000000000020
		2020	1.582.372.000.000	2.235.915.000.000	-653.543.000.000	1	0,000000000000017
		2021	2.379.080.000.000	1.582.372.000.000	796.708.000.000	1	0,000000000000017
		2022	2.727.427.000.000	2.379.080.000.000	348.347.000.000	1	0,000000000000013
		2023	3.648.977.000.000	2.727.427.000.000	921.550.000.000	1	0,000000000000011
6.	KIOS	2019	98.464.473.380	75.740.254.236	22.724.219.144	1	0,000000000000379
		2020	59.739.958.768	98.464.473.380	-38.724.514.612	1	0,000000000000364
		2021	17.602.384.082	59.739.958.768	-42.137.574.686	1	0,000000000000532
		2022	5.618.197.473	17.602.384.082	-11.984.186.609	1	0,00000000001262
		2023	2.711.431.346	5.618.197.473	-2.906.766.127	1	0,00000000000555
7.	MCAS	2019	402.176.158.222	353.018.323.883	49.157.834.339	1	0,000000000000069
		2020	347.312.298.936	402.176.158.222	-54.863.859.286	1	0,000000000000044
		2021	292.053.632.175	347.312.298.936	-55.258.666.761	1	0,000000000000054
		2022	334.051.681.008	292.053.632.175	41.998.048.833	1	0,000000000000046
		2023	327.585.702.499	334.051.681.008	-6.465.978.509	1	0,000000000000052
8.	NFCX	2019	317.305.397.332	209.466.132.434	107.839.264.898	1	0,000000000000191
		2020	380.533.718.850	317.305.397.332	63.228.321.518	1	0,000000000000074

		2021	265.936.329.704	380.533.718.850	-114.597.389.146	1	0,00000000000071
		2022	266.161.595.644	265.936.329.704	225.265.940	1	0,00000000000051
		2023	264.636.853.585	266.161.595.644	-1.524.742.059	1	0,00000000000053
9.	DIVA	2019	242.251.607.132	187.903.958.299	54.347.648.833	1	0,00000000000116
		2020	232.249.304.883	242.251.607.132	-10.002.302.249	1	0,00000000000091
		2021	197.216.510.054	232.249.304.883	-35.032.794.829	1	0,00000000000086
		2022	167.728.094.577	197.216.510.054	-29.488.415.477	1	0,00000000000042
		2023	251.634.676.483	167.728.094.577	83.906.581.906	1	0,00000000000042
10.	LUCK	2019	49.659.980.984	32.457.213.893	17.202.767.091	1	0,000000000000674
		2020	21.175.201.840	49.659.980.984	-28.484.779.144	1	0,000000000000534
		2021	19.304.844.161	21.175.201.840	-1.870.357.679	1	0,000000000000645
		2022	22.454.454.840	19.304.844.161	3.149.610.679	1	0,000000000000605
		2023	15.979.496.225	22.454.454.840	-6.474.958.615	1	0,000000000000572
11.	HDIT	2019	103.500.884.548	7.829.808.978	95.671.075.570	1	0,000000000000542
		2020	90.579.691.731	103.500.884.548	-12.921.192.817	1	0,000000000000275
		2021	199.377.334.168	90.579.691.731	108.797.642.437	1	0,000000000000241
		2022	115.339.567.349	199.377.334.168	-84.037.766.819	1	0,000000000000215
		2023	136.506.463.848	115.339.567.349	21.166.896.499	1	0,000000000000282
12.	TFAS	2019	36.984.112.514	70.317.298.816	-33.333.186.302	1	0,000000000000955
		2020	48.497.096.508	36.984.112.514	11.512.983.994	1	0,000000000000432
		2021	53.981.679.947	48.497.096.508	5.484.583.439	1	0,000000000000446
		2022	53.258.697.396	53.981.679.947	-722.982.551	1	0,000000000000363
		2023	54.249.285.195	53.258.697.396	990.587.799	1	0,000000000000379
13.	DMMX	2019	33.013.048.664	8.143.373.291	24.869.675.373	1	0,000000000002984
		2020	209.119.528.610	33.013.048.664	176.106.479.946	1	0,00000000000140
		2021	106.061.299.778	209.119.528.610	-103.058.228.832	1	0,00000000000125
		2022	248.845.281.851	106.061.299.778	142.783.982.073	1	0,000000000000092
		2023	158.615.011.815	248.845.281.851	-90.230.270.036	1	0,000000000000088
14.	GLVA	2019	376.527.000.000	98.914.271.009	277.612.728.991	1	0,000000000000323
		2020	220.062.000.000	376.527.000.000	-156.465.000.000	1	0,00000000000107
		2021	270.523.000.000	220.062.000.000	50.461.000.000	1	0,000000000000212
		2022	326.911.000.000	270.523.000.000	56.388.000.000	1	0,000000000000161
		2023	301.500.000.000	326.911.000.000	-25.411.000.000	1	0,000000000000108

NO	KODE	TAHUN	TACit/Ait-1 (Y)	ΔREV/Ait-1 (X2)	PPE/Ait-1 (X3)	ΔREC/Ait-1	(ΔREV/Ait-1) - (ΔREC/Ait-1)
1.	ATIC	2019	0,024036828	0,0299674141	0,3478801829	-0,0186025891	0,0485700032
		2020	-0,215206723	0,1312832302	0,2766006726	0,0624097323	0,0688734979
		2021	-0,054664037	0,0702930470	0,2929561036	-0,0538996407	0,1241926877
		2022	-0,030619667	0,3280518967	0,2953867157	0,0445297618	0,2835221349
		2023	0,219618466	0,5684163774	0,2082280823	0,1442974442	0,4241189332
2.	EMTK	2019	-0,037950952	0,1060327916	0,4575616440	0,0105756556	0,0954571360
		2020	-0,005441693	0,0516707088	0,6016772621	0,0120437587	0,0396269500
		2021	0,248709500	0,0505672668	1,4094777966	0,0045554951	0,0460117716
		2022	0,164351648	0,0703173353	0,7326790095	0,0148990830	0,0554182522
		2023	-0,030997987	-0,1412943707	0,6086516187	0,0020176097	-0,1433119804
3.	KREN	2019	0,117632277	1,2112900296	0,2791535767	-0,0598309150	1,2711209447
		2020	-0,026991244	-0,0635177787	0,2630231512	-0,0652999026	0,0017821239
		2021	-0,161647840	0,3666345973	0,3556285162	-0,0374182654	0,4040528628
		2022	-0,031404803	-0,0417395577	0,3977099470	0,0126083524	-0,0543479101
		2023	-0,064357663	-0,2080208645	0,4762707850	0,0015403981	-0,2095612626
4.	MLPT	2019	-0,012118386	0,0097289002	0,4332823382	-0,1153398219	0,1250687220
		2020	-0,199330955	0,1093256092	0,3930192766	0,1043699669	0,0049556423
		2021	-0,093585414	0,1285932430	0,3317943322	0,1608936546	-0,0323004117
		2022	0,097724368	0,1488465812	0,2170026280	-0,0487948623	0,1976414436
		2023	-0,125115408	-0,0532941976	0,4163954213	-0,0957933449	0,0424991473
5.	MTDL	2019	0,074302214	0,4855530113	0,1256641559	0,0663838595	0,4191691518
		2020	-0,149546236	-0,1863028256	0,1225136113	-0,1161797010	-0,0701231246
		2021	0,116291568	0,7634520736	0,1071227799	0,1358030710	0,6276490026
		2022	0,097492460	0,3278137021	0,0902015762	0,0459028262	0,2819108759
		2023	0,118162215	0,1279396838	0,0970205162	0,1073705192	0,0205691645
6.	KIOS	2019	0,060195317	6,1551176419	0,1015700105	0,0861363789	6,0689812631
		2020	-0,163531838	-7,2402144654	0,0781845961	-0,1410595584	-7,0991549069
		2021	0,054088531	-3,0510679040	0,0924813072	-0,2241742342	-2,8268936698
		2022	0,236771440	0,3136500916	1,2120884232	-0,1513201325	0,4649702240
		2023	-0,103968914	-0,5138723252	0,5418551847	-0,0161340452	-0,4977382800
7.	MCAS	2019	0,230999149	3,2649575461	0,1759762272	0,0339206835	3,2310368626
		2020	0,039047657	0,1094305420	0,1935484700	-0,0246041300	0,1340346720
		2021	-0,072200686	0,7307139822	0,2774729855	-0,0301107084	0,7608246906
		2022	-0,027849834	-0,1689142463	0,2741150774	0,0196755094	-0,1885897556
		2023	-0,043373824	-0,3231886246	0,3734194515	-0,0033829053	-0,3198057193
8.	NFCX	2019	0,358499297	10,1097811917	0,1594681808	0,2067423057	9,9030388860
		2020	0,142007228	1,0764363354	0,2133859136	0,0471459707	1,0292903647

		2021	0,040847763	0,9178291651	0,2466620411	-0,0816225180	0,9994516830
		2022	0,023897063	0,4934521972	0,2176384457	0,0001169184	0,4933352788
		2023	-0,323300091	-0,1669505458	0,2890415249	-0,0008197736	-0,1661307722
9.	DIVA	2019	0,191233579	2,4106014228	0,1546722468	0,0635127724	2,3470886504
		2020	0,093730627	0,1266779878	0,1724727037	-0,0091936134	0,1358716012
		2021	0,930854852	1,0080440007	0,1331773295	-0,0303323429	1,0383763436
		2022	-0,015711772	0,0068906647	0,0913483597	-0,0124943035	0,0193849682
		2023	-0,521657925	-0,4341079009	0,0863182018	0,0358882341	-0,4699961351
10.	LUCK	2019	-0,057374360	0,2078807772	0,5414166807	0,1160766712	0,0918041060
		2020	-0,030629060	-0,1833672605	0,4371174402	-0,1522984212	-0,0310688393
		2021	-0,087831703	0,0198055167	0,5569636762	-0,0120787581	0,0318842749
		2022	-0,014737293	0,2061640072	0,4331051832	0,0190681098	0,1870958974
		2023	-0,087304486	-0,1698058563	0,3729834801	-0,0370553865	-0,1327504698
11.	HDIT	2019	0,723643004	30,5138538604	0,4853572216	0,5185501772	29,9953036832
		2020	0,147181925	-17,8538435242	0,2114510835	-0,0356383529	-17,8182051713
		2021	-0,071919438	0,8034772292	0,1855089386	0,2628213305	0,5406558987
		2022	0,007886045	1,3492370476	0,1468051861	-0,1808777821	1,5301148297
		2023	-0,085443180	-5,5331794760	0,1715457742	0,0597062263	-5,5928857023
12.	TFAS	2019	0,833532692	0,4179385075	0,0693831640	-0,3184905787	0,7364290862
		2020	-0,000632348	-0,4201314000	0,0540279316	0,0498018189	-0,4699332190
		2021	0,092374968	0,3397078841	0,2269371141	0,0244858574	0,3152220266
		2022	-0,016510252	0,4396990365	0,1590250562	-0,0026285426	0,4423275791
		2023	0,068675226	-0,5011131537	0,1485132931	0,0037577666	-0,5048709202
13.	DMMX	2019	1,245104060	4,5499024487	0,4169703409	0,7422341727	3,8076682760
		2020	0,326203524	0,4310499626	0,2718597081	0,2479151540	0,1831348086
		2021	0,211967584	0,7914879754	0,2929932459	-0,1288120377	0,9203000130
		2022	0,038027153	0,7254899539	0,2738201522	0,1315053157	0,5939846383
		2023	-0,337912639	0,0060829276	0,3473024297	-0,0795190930	0,0856020206
14.	GLVA	2019	-3,265329185	5,6890004682	0,1045680863	0,8991615858	4,7898388824
		2020	-0,938851953	-0,2370901359	0,0359005459	-0,1673522692	-0,0697378667
		2021	-2,029129987	-0,3940894755	0,1116139788	0,1071688736	-0,5012583492
		2022	-2,001541847	0,9319004112	0,1393845851	0,0910383976	0,8408620136
		2023	-1,238841648	-0,2879614317	0,0949744769	-0,0276103883	-0,2603510434

NO	KODE	TAHUN	β_1	β_2	β_3	$\beta_1^*(1/\text{Ait}-1)$	$\beta_2^*(\Delta\text{REV}/\text{Ait}-1)$	$\beta_3^*(\text{PPE}/\text{Ait}-1)$
1.	ATIC	2019	31865,147	0,001	0,043	0,0000000080	0,0000198016	0,0150879619
		2020	31865,147	0,001	0,043	0,0000000069	0,0000867482	0,0119964879
		2021	31865,147	0,001	0,043	0,0000000074	0,0000464476	0,0127058417
		2022	31865,147	0,001	0,043	0,0000000077	0,0002167673	0,0128112601
		2023	31865,147	0,001	0,043	0,0000000076	0,0003755932	0,0090310904
2.	EMTK	2019	31865,147	0,001	0,043	0,0000000016	0,0000700634	0,0198449725
		2020	31865,147	0,001	0,043	0,0000000018	0,0000341425	0,0260954319
		2021	31865,147	0,001	0,043	0,0000000018	0,0000334134	0,0611306661
		2022	31865,147	0,001	0,043	0,0000000008	0,0000464637	0,0317771277
		2023	31865,147	0,001	0,043	0,0000000007	-0,0000933633	0,0263979177
3.	KREN	2019	31865,147	0,001	0,043	0,0000000091	0,0008003857	0,0121072103
		2020	31865,147	0,001	0,043	0,0000000074	-0,0000419707	0,0114076153
		2021	31865,147	0,001	0,043	0,0000000096	0,0002422616	0,0154240160
		2022	31865,147	0,001	0,043	0,0000000102	-0,0000275803	0,0172491358
		2023	31865,147	0,001	0,043	0,0000000111	-0,0001374542	0,0206564093
4.	MLPT	2019	31865,147	0,001	0,043	0,0000000155	0,0000064286	0,0187919512
		2020	31865,147	0,001	0,043	0,0000000151	0,0000722392	0,0170456961
		2021	31865,147	0,001	0,043	0,0000000132	0,0000849707	0,0143903001
		2022	31865,147	0,001	0,043	0,0000000106	0,0000983536	0,0094116525
		2023	31865,147	0,001	0,043	0,0000000117	-0,0000352153	0,0180595463
5.	MTDL	2019	31865,147	0,001	0,043	0,0000000066	0,0003208395	0,0054501983
		2020	31865,147	0,001	0,043	0,0000000057	-0,0001231036	0,0053135556
		2021	31865,147	0,001	0,043	0,0000000054	0,0005044672	0,0046460376
		2022	31865,147	0,001	0,043	0,0000000042	0,0002166099	0,0039121457
		2023	31865,147	0,001	0,043	0,0000000037	0,0000845389	0,0042078909
6.	KIOS	2019	31865,147	0,001	0,043	0,0000001208	0,0040671252	0,0044052077
		2020	31865,147	0,001	0,043	0,0000001161	-0,0047841260	0,0033909555
		2021	31865,147	0,001	0,043	0,0000001695	-0,0020160582	0,0040110202
		2022	31865,147	0,001	0,043	0,0000004024	0,0002072510	0,0525696629
		2023	31865,147	0,001	0,043	0,0000001769	-0,0003395521	0,0235008799
7.	MCAS	2019	31865,147	0,001	0,043	0,0000000220	0,0021573903	0,0076322905
		2020	31865,147	0,001	0,043	0,0000000143	0,0000723086	0,0083944188
		2021	31865,147	0,001	0,043	0,0000000174	0,0004828348	0,0120343211
		2022	31865,147	0,001	0,043	0,0000000149	-0,0001116137	0,0118886848
		2023	31865,147	0,001	0,043	0,0000000167	-0,0002135538	0,0161956292
8.	NFCX	2019	31865,147	0,001	0,043	0,0000000611	0,0066802534	0,0069163176
		2020	31865,147	0,001	0,043	0,0000000238	0,0007112783	0,0092547914
		2021	31865,147	0,001	0,043	0,0000000227	0,0006064752	0,0106980152
		2022	31865,147	0,001	0,043	0,0000000165	0,0003260591	0,0094392286

		2023	31865,147	0,001	0,043	0,0000000171	-0,0001103161	0,0125360619
9.	DIVA	2019	31865,147	0,001	0,043	0,0000000372	0,0015928563	0,0067083125
		2020	31865,147	0,001	0,043	0,0000000293	0,0000837052	0,0074803387
		2021	31865,147	0,001	0,043	0,0000000276	0,0006660866	0,0057760533
		2022	31865,147	0,001	0,043	0,0000000135	0,0000045532	0,0039618830
		2023	31865,147	0,001	0,043	0,0000000136	-0,0002868460	0,0037437193
10.	LUCK	2019	31865,147	0,001	0,043	0,0000002150	0,0001373617	0,0234818614
		2020	31865,147	0,001	0,043	0,0000001704	-0,0001211638	0,0189582839
		2021	31865,147	0,001	0,043	0,0000002058	0,0000130869	0,0241561524
		2022	31865,147	0,001	0,043	0,0000001929	0,0001362273	0,0187842678
		2023	31865,147	0,001	0,043	0,0000001824	-0,0001122028	0,0161767206
11.	HDIT	2019	31865,147	0,001	0,043	0,0000001727	0,0201626794	0,0210504985
		2020	31865,147	0,001	0,043	0,0000000879	-0,0117973077	0,0091708756
		2021	31865,147	0,001	0,043	0,0000000770	0,0005309147	0,0080457351
		2022	31865,147	0,001	0,043	0,0000000686	0,0008915371	0,0063671090
		2023	31865,147	0,001	0,043	0,0000000899	-0,0036561663	0,0074401367
12.	TFAS	2019	31865,147	0,001	0,043	0,0000003045	0,0002761618	0,0030092273
		2020	31865,147	0,001	0,043	0,0000001378	-0,0002776108	0,0023432533
		2021	31865,147	0,001	0,043	0,0000001423	0,0002244692	0,0098425225
		2022	31865,147	0,001	0,043	0,0000001159	0,0002905405	0,0068970988
		2023	31865,147	0,001	0,043	0,0000001209	-0,0003311212	0,0064411916
13.	DMMX	2019	31865,147	0,001	0,043	0,0000009510	0,0030064450	0,0180844812
		2020	31865,147	0,001	0,043	0,0000000449	0,0002848255	0,0117908669
		2021	31865,147	0,001	0,043	0,0000000398	0,0005229926	0,0127074526
		2022	31865,147	0,001	0,043	0,0000000293	0,0004793830	0,0118758936
		2023	31865,147	0,001	0,043	0,0000000281	0,0000040194	0,0150629041
14.	GLVA	2019	31865,147	0,001	0,043	0,0000001032	0,0037591283	0,0045352376
		2020	31865,147	0,001	0,043	0,0000000341	-0,0001566624	0,0015570478
		2021	31865,147	0,001	0,043	0,0000000677	-0,0002604030	0,0048408261
		2022	31865,147	0,001	0,043	0,0000000514	0,0006157731	0,0060452691
		2023	31865,147	0,001	0,043	0,0000000346	-0,0001902767	0,0041191518

NO	KODE	TAHUN	TACit/Ait-1	$\beta 2^*(\Delta REV/Ait-1) - (\Delta REC/Ait-1)$	$\beta 3^*(PPE/Ait-1)$	NDA
1.	ATIC	2019	0,0151077716	0,0000320937	0,0150879619	0,0151200636
		2020	0,0120832430	0,0000455096	0,0119964879	0,0120420045
		2021	0,0127522967	0,0000820630	0,0127058417	0,0127879121
		2022	0,0130280351	0,0001873433	0,0128112601	0,0129986112
		2023	0,0094066912	0,0002802456	0,0090310904	0,0093113436

2.	EMTK	2019	0,0199150375	0,0000630753	0,0198449725	0,0199080494
		2020	0,0261295762	0,0000261844	0,0260954319	0,0261216180
		2021	0,0611640813	0,0000304033	0,0611306661	0,0611610711
		2022	0,0318235922	0,0000366188	0,0317771277	0,0318137473
		2023	0,0263045551	-0,0000946964	0,0263979177	0,0263032220
3.	KREN	2019	0,0129076051	0,0008399203	0,0121072103	0,0129471396
		2020	0,0113656520	0,0000011776	0,0114076153	0,0114088003
		2021	0,0156662872	0,0002669865	0,0154240160	0,0156910121
		2022	0,0172215657	-0,0000359115	0,0172491358	0,0172132344
		2023	0,0205189662	-0,0001384721	0,0206564093	0,0205179484
4.	MLPT	2019	0,0187983952	0,0000826418	0,0187919512	0,0188746085
		2020	0,0171179504	0,0000032745	0,0170456961	0,0170489858
		2021	0,0144752840	-0,0000213432	0,0143903001	0,0143689701
		2022	0,0095100167	0,0001305958	0,0094116525	0,0095422589
		2023	0,0180243427	0,0000280822	0,0180595463	0,0180876402
5.	MTDL	2019	0,0057710444	0,0002769750	0,0054501983	0,0057271799
		2020	0,0051904577	-0,0000463353	0,0053135556	0,0052672259
		2021	0,0051505103	0,0004147325	0,0046460376	0,0050607755
		2022	0,0041287597	0,0001862786	0,0039121457	0,0040984285
		2023	0,0042924335	0,0000135915	0,0042078909	0,0042214861
6.	KIOS	2019	0,0084724536	0,0040102087	0,0044052077	0,0084155372
		2020	- 0,0013930545	-0,0046909179	0,0033909555	-0,0012998464
		2021	0,0019951316	-0,0018679303	0,0040110202	0,0021432595
		2022	0,0527773163	0,0003072390	0,0525696629	0,0528773043
		2023	0,0231615046	-0,0003288912	0,0235008799	0,0231721655
7.	MCAS	2019	0,0097897028	0,0021349765	0,0076322905	0,0097672890
		2020	0,0084667416	0,0000885663	0,0083944188	0,0084829993
		2021	0,0125171733	0,0005027311	0,0120343211	0,0125370696
		2022	0,0117770860	-0,0001246147	0,0118886848	0,0117640850
		2023	0,0159820921	-0,0002113184	0,0161956292	0,0159843275
8.	NFCX	2019	0,0135966321	0,0065436440	0,0069163176	0,0134600227
		2020	0,0099660934	0,0006801255	0,0092547914	0,0099349407
		2021	0,0113045131	0,0006604090	0,0106980152	0,0113584469
		2022	0,0097653042	0,0003259818	0,0094392286	0,0097652270
		2023	0,0124257629	-0,0001097744	0,0125360619	0,0124263046
9.	DIVA	2019	0,0083012060	0,0015508889	0,0067083125	0,0082592386
		2020	0,0075640731	0,0000897801	0,0074803387	0,0075701480
		2021	0,0064421674	0,0006861293	0,0057760533	0,0064622102

		2022	0,0039664496	0,0000128090	0,0039618830	0,0039747055
		2023	0,0034568868	-0,0003105600	0,0037437193	0,0034331729
10.	LUCK	2019	0,0236194381	0,0000606615	0,0234818614	0,0235427380
		2020	0,0188372905	-0,0000205294	0,0189582839	0,0189379249
		2021	0,0241694451	0,0000210682	0,0241561524	0,0241774264
		2022	0,0189206879	0,0001236276	0,0187842678	0,0189080883
		2023	0,0160647002	-0,0000877177	0,0161767206	0,0160891853
11.	HDIT	2019	0,0412133506	0,0198200363	0,0210504985	0,0408707075
		2020	- 0,0026263442	-0,0117737589	0,0091708756	-0,0026027954
		2021	0,0085767268	0,0003572499	0,0080457351	0,0084030620
		2022	0,0072587148	0,0010110560	0,0063671090	0,0073782336
		2023	0,0037840603	-0,0036956184	0,0074401367	0,0037446081
12.	TFAS	2019	0,0032856935	0,0004866112	0,0030092273	0,0034961430
		2020	0,0020657803	-0,0003105184	0,0023432533	0,0020328727
		2021	0,0100671340	0,0002082897	0,0098425225	0,0100509544
		2022	0,0071877552	0,0002922774	0,0068970988	0,0071894920
		2023	0,0061101913	-0,0003336042	0,0064411916	0,0061077082
13.	DMMX	2019	0,0210918772	0,0025159980	0,0180844812	0,0206014302
		2020	0,0120757372	0,0001210102	0,0117908669	0,0119119219
		2021	0,0132304850	0,0006081079	0,0127074526	0,0133156003
		2022	0,0123553059	0,0003924880	0,0118758936	0,0122684109
		2023	0,0150669516	0,0000565634	0,0150629041	0,0151194955
14.	GLVA	2019	0,0082944692	0,0031649881	0,0045352376	0,0077003290
		2020	0,0014004195	-0,0000460808	0,0015570478	0,0015110011
		2021	0,0045804907	-0,0003312171	0,0048408261	0,0045096766
		2022	0,0066610936	0,0005556175	0,0060452691	0,0066009380
		2023	0,0039289098	-0,0001720325	0,0041191518	0,0039471539

NO	KODE	TAHUN	TACit/Ait-1	NDA	DA=TACit/Ait-1-NDA
1.	ATIC	2019	0,0151077716	0,0151200636	-0,0000122921
		2020	0,0120832430	0,0120420045	0,0000412386
		2021	0,0127522967	0,0127879121	-0,0000356153
		2022	0,0130280351	0,0129986112	0,0000294240
		2023	0,0094066912	0,0093113436	0,0000953476
2.	EMTK	2019	0,0199150375	0,0199080494	0,0000069881
		2020	0,0261295762	0,0261216180	0,0000079582
		2021	0,0611640813	0,0611610711	0,0000030101

		2022	0,0318235922	0,0318137473	0,0000098449
		2023	0,0263045551	0,0263032220	0,0000013332
3.	KREN	2019	0,0129076051	0,0129471396	-0,0000395346
		2020	0,0113656520	0,0114088003	-0,0000431483
		2021	0,0156662872	0,0156910121	-0,0000247249
		2022	0,0172215657	0,0172132344	0,0000083312
		2023	0,0205189662	0,0205179484	0,0000010179
4.	MLPT	2019	0,0187983952	0,0188746085	-0,0000762132
		2020	0,0171179504	0,0170489858	0,0000689647
		2021	0,0144752840	0,0143689701	0,0001063139
		2022	0,0095100167	0,0095422589	-0,0000322422
		2023	0,0180243427	0,0180876402	-0,0000632975
5.	MTDL	2019	0,0057710444	0,0057271799	0,0000438646
		2020	0,0051904577	0,0052672259	-0,0000767682
		2021	0,0051505103	0,0050607755	0,0000897348
		2022	0,0041287597	0,0040984285	0,0000303313
		2023	0,0042924335	0,0042214861	0,0000709474
6.	KIOS	2019	0,0084724536	0,0084155372	0,0000569164
		2020	- 0,0013930545	-0,0012998464	-0,0000932081
		2021	0,0019951316	0,0021432595	-0,0001481279
		2022	0,0527773163	0,0528773043	-0,0000999880
		2023	0,0231615046	0,0231721655	-0,0000106609
7.	MCAS	2019	0,0097897028	0,0097672890	0,0000224138
		2020	0,0084667416	0,0084829993	-0,0000162577
		2021	0,0125171733	0,0125370696	-0,0000198963
		2022	0,0117770860	0,0117640850	0,0000130010
		2023	0,0159820921	0,0159843275	-0,0000022353
8.	NFCX	2019	0,0135966321	0,0134600227	0,0001366094
		2020	0,0099660934	0,0099349407	0,0000311527
		2021	0,0113045131	0,0113584469	-0,0000539338
		2022	0,0097653042	0,0097652270	0,0000000773
		2023	0,0124257629	0,0124263046	-0,0000005417
9.	DIVA	2019	0,0083012060	0,0082592386	0,0000419674
		2020	0,0075640731	0,0075701480	-0,0000060749
		2021	0,0064421674	0,0064622102	-0,0000200427
		2022	0,0039664496	0,0039747055	-0,0000082559
		2023	0,0034568868	0,0034331729	0,0000237139
10.	LUCK	2019	0,0236194381	0,0235427380	0,0000767001

		2020	0,0188372905	0,0189379249	-0,0001006344
		2021	0,0241694451	0,0241774264	-0,0000079813
		2022	0,0189206879	0,0189080883	0,0000125997
		2023	0,0160647002	0,0160891853	-0,0000244851
11.	HDIT	2019	0,0412133506	0,0408707075	0,0003426431
		2020	- 0,0026263442	-0,0026027954	-0,0000235488
		2021	0,0085767268	0,0084030620	0,0001736648
		2022	0,0072587148	0,0073782336	-0,0001195189
		2023	0,0037840603	0,0037446081	0,0000394522
12.	TFAS	2019	0,0032856935	0,0034961430	-0,0002104494
		2020	0,0020657803	0,0020328727	0,0000329076
		2021	0,0100671340	0,0100509544	0,0000161796
		2022	0,0071877552	0,0071894920	-0,0000017369
		2023	0,0061101913	0,0061077082	0,0000024830
13.	DMMX	2019	0,0210918772	0,0206014302	0,0004904471
		2020	0,0120757372	0,0119119219	0,0001638152
		2021	0,0132304850	0,0133156003	-0,0000851153
		2022	0,0123553059	0,0122684109	0,0000868949
		2023	0,0150669516	0,0151194955	-0,0000525439
14.	GLVA	2019	0,0082944692	0,0077003290	0,0005941402
		2020	0,0014004195	0,0015110011	-0,0001105816
		2021	0,0045804907	0,0045096766	0,0000708141
		2022	0,0066610936	0,0066009380	0,0000601556
		2023	0,0039289098	0,0039471539	-0,0000182442

Lampiran 5 : Tabulasi Strategi Bisnis

Profit Margin

$$PM = \frac{\text{Operating Income} + \text{R\&D expenditure}}{\text{Sales}}$$

NO	KODE	TAHUN	Operating Income	R&D	Sales	Profit Margin
1.	ATIC	2019	237.302.212.637	0	5.552.209.122.095	0,04274
		2020	158.701.992.570	0	6.157.619.315.277	0,02577
		2021	98.832.064.469	0	6.459.797.692.062	0,01530

		2022	361.007.372.140	0	7.809.976.522.248	0,04622
		2023	534.541.711.984	0	10.207.024.936.502	0,05237
2.	EMTK	2019	865.808.113.000	0	11.030.044.792.000	0,07850
		2020	1.225.314.848.000	0	11.936.381.982.000	0,10265
		2021	1.331.201.392.000	0	12.840.734.345.000	0,10367
		2022	299.137.951.000	0	15.524.642.337.000	0,01927
		2023	-53.543.401.000	0	9.241.419.373.000	-0,00579
3.	KREN	2019	265.254.585.877	0	11.454.686.801.268	0,02316
		2020	-229.492.988.472	0	11.181.911.606.407	-0,02052
		2021	-338.147.112.464	0	12.403.099.860.716	-0,02726
		2022	-72.680.461.352	0	12.272.140.714.358	-0,00592
		2023	-47.071.426.617	0	11.675.104.332.787	-0,00403
4.	MLPT	2019	169.102.000.000	0	2.455.526.000.000	0,06887
		2020	210.039.000.000	0	2.685.797.000.000	0,07820
		2021	290.673.000.000	0	2.996.710.000.000	0,09700
		2022	310.462.000.000	0	3.442.223.000.000	0,09019
		2023	287.073.000.000	0	3.297.221.000.000	0,08707
5.	MTDL	2019	695.683.000.000	0	15.069.692.000.000	0,04616
		2020	707.375.000.000	0	14.021.687.000.000	0,05045
		2021	946.717.000.000	0	18.500.587.000.000	0,05117
		2022	1.111.913.000.000	0	20.988.297.000.000	0,05298
		2023	1.161.852.000.000	0	22.086.390.000.000	0,05260
6.	KIOS	2019	-4.264.026.236	0	2.900.162.397.309	-0,00147
		2020	-40.910.123.447	0	912.535.369.280	-0,04483
		2021	2.026.148.759	0	339.032.343.268	0,00598
		2022	4.348.161.957	0	363.872.667.991	0,01195
		2023	-21.442.981.916	0	271.291.628.739	-0,07904
7.	MCAS	2019	144.058.335.307	0	11.090.421.731.942	0,01299
		2020	115.559.417.888	0	11.334.436.937.908	0,01020
		2021	96.813.396.749	0	12.675.430.974.543	0,00764
		2022	53.686.511.272	0	12.314.877.728.637	0,00436
		2023	27.880.145.917	0	11.697.145.185.042	0,00238
8.	NFCX	2019	64.823.500.515	0	6.153.637.893.298	0,01053
		2020	60.845.314.899	0	7.597.266.302.278	0,00801
		2021	59.508.379.497	0	8.885.891.410.028	0,00670
		2022	26.003.621.740	0	9.836.622.374.855	0,00264
		2023	18.464.985.862	0	9.526.101.865.748	0,00194
9.	DIVA	2019	42.698.796.390	0	3.550.041.010.067	0,01203
		2020	22.473.251.437	0	3.687.861.850.042	0,00609

		2021	34.492.873.985	0	4.852.117.401.195	0,00711
		2022	12.335.863.129	0	4.868.380.395.335	0,00253
		2023	9.721.667.469	0	3.853.437.447.573	0,00252
10.	LUCK	2019	7.508.382.416	1.799.464.671	133.545.749.744	0,06970
		2020	-5.140.430.527	1.808.255.896	99.250.082.878	-0,03357
		2021	-409.371.723	0	102.316.904.804	-0,00400
		2022	3.502.217.026	0	136.370.430.067	0,02568
		2023	-733.809.963	0	106.699.011.283	-0,00688
11.	HDIT	2019	10.911.110.391	0	9.629.825.396.769	0,00113
		2020	-1.660.077.317	0	3.156.659.950.866	-0,00053
		2021	-6.468.636.469	0	3.489.267.765.180	-0,00185
		2022	-23.260.853.702	0	4.116.137.837.804	-0,00565
		2023	-42.312.499.200	0	2.154.529.401.286	-0,01964
12.	TFAS	2019	29.318.556.851	0	665.609.561.999	0,04405
		2020	14.544.068.884	0	568.485.276.455	0,02558
		2021	9.726.521.505	0	644.576.393.167	0,01509
		2022	6.046.647.120	0	765.515.933.170	0,00790
		2023	7.891.027.059	0	633.417.100.629	0,01246
13.	DMMX	2019	12.241.590.374	0	211.001.743.239	0,05802
		2020	25.585.341.517	0	517.197.997.739	0,04947
		2021	30.662.326.767	0	1.150.441.212.932	0,02665
		2022	15.309.255.852	0	1.938.153.436.211	0,00790
		2023	23.703.751.932	0	1.945.055.730.713	0,01219
14.	GLVA	2019	44.739.000.000	0	2.156.639.000.000	0,02074
		2020	57.653.000.000	0	1.934.973.000.000	0,02980
		2021	50.439.000.000	0	1.749.414.000.000	0,02883
		2022	88.844.000.000	0	2.326.621.000.000	0,03819
		2023	96.169.000.000	0	2.061.598.000.000	0,04665

Lampiran 6 : Tabulasi Kepemilikan Manajerial

$$KM = \frac{\text{jumlah saham yang dimiliki pihak manajemen}}{\text{Total saham yang beredar}} \times 100\%$$

NO	KODE	TAHUN	jumlah saham yang dimiliki pihak manajemen	saham yang beredar	100%	KM
1.	ATIC	2019	296.031.808	2.315.361.355	1,00	0,12786
		2020	59.497.285	2.315.361.355	1,00	0,02570

		2021	59.497.285	2.315.361.355	1,00	0,02570
		2022	59.497.285	2.315.361.355	1,00	0,02570
		2023	59.939.685	2.315.361.355	1,00	0,02589
2.	EMTK	2019	2.423.628.450.000	5.642.275.242.000	1,00	0,42955
		2020	2.425.273.350.000	5.643.957.342.000	1,00	0,42971
		2021	24.174.230.500.000	61.241.751.483.000	1,00	0,39473
		2022	20.644.982.544.000	61.241.751.483.000	1,00	0,33711
		2023	20.712.982.544.000	61.316.751.483.000	1,00	0,33780
3.	KREN	2019	3.152.372.900	18.208.470.100	1,00	0,17313
		2020	3.152.683.300	18.208.470.100	1,00	0,17314
		2021	2.473.462.350	18.208.470.100	1,00	0,13584
		2022	1.573.860.600	18.208.470.100	1,00	0,08644
		2023	0	18.208.470.100	1,00	0
4.	MLPT	2019	0	1.875.000	1,00	0
		2020	0	1.875.000	1,00	0
		2021	0	1.875.000	1,00	0
		2022	0	1.875.000	1,00	0
		2023	0	1.875.000	1,00	0
5.	MTDL	2019	9.140.868	2.455.376.917	1,00	0,00372
		2020	9.140.868	2.455.376.917	1,00	0,00372
		2021	9.140.868	2.455.376.917	1,00	0,00372
		2022	45.704.340	12.276.884.585	1,00	0,00372
		2023	45.837.340	12.276.884.585	1,00	0,00373
6.	KIOS	2019		717.239.900	1,00	0
		2020		717.239.900	1,00	0
		2021		717.239.900	1,00	0
		2022		1.075.859.850	1,00	0
		2023		1.075.862.550	1,00	0
7.	MCAS	2019	8.340.400	867.933.300	1,00	0,00961
		2020	5.355.400	867.933.300	1,00	0,00617
		2021	89.350.200	867.933.300	1,00	0,10295
		2022	74.502.200	867.933.300	1,00	0,08584
		2023	79.542.700	867.933.300	1,00	0,09165
8.	NFCX	2019	0	666.667.500	1,00	0
		2020	0	666.667.500	1,00	0
		2021	1.000.000	666.667.500	1,00	0,00150
		2022	0	666.667.500	1,00	0
		2023	1.040.000	666.667.500	1,00	0,00156
9.	DIVA	2019	100.000.000	714.285.700	1,00	0,14000

		2020	58.335.000	714.285.700	1,00	0,08167
		2021	116.670.000	1.428.571.400	1,00	0,08167
		2022	116.670.000	1.428.571.400	1,00	0,08167
		2023	122.876.800	1.428.571.400	1,00	0,08601
10.	LUCK	2019	417.997.800	715.749.640	1,00	0,58400
		2020	417.997.800	715.749.640	1,00	0,58400
		2021	0	715.749.640	1,00	0
		2022	104.499.450	715.749.640	1,00	0,14600
		2023	313.498.350	715.749.640	1,00	0,43800
11.	HDIT	2019	10.000	1.524.680.000	1,00	0,00001
		2020	10.000	1.524.680.000	1,00	0,00001
		2021	10.000	1.524.680.000	1,00	0,00001
		2022	1.459.200	1.524.680.000	1,00	0,00096
		2023	1.459.200	1.524.680.000	1,00	0,00096
12.	TFAS	2019	0	1.666.666.500	1,00	0
		2020	11.300	1.666.666.500	1,00	0,00001
		2021	0	1.666.666.500	1,00	0
		2022	0	1.666.666.500	1,00	0
		2023	0	1.666.666.500	1,00	0
13.	DMMX	2019	0	7.692.307.700	1,00	0
		2020	10.009.500	7.692.307.700	1,00	0,00130
		2021	45.271.600	7.692.307.700	1,00	0,00589
		2022	150.974.200	7.692.307.700	1,00	0,01963
		2023	238.774.800	7.692.307.700	1,00	0,03104
14.	GLVA	2019	12.000.000	1.500.000.000	1,00	0,00800
		2020	33.000.000	1.500.000.000	1,00	0,02200
		2021	35.651.200	1.500.000.000	1,00	0,02377
		2022	36.177.100	1.500.000.000	1,00	0,02412
		2023	36.777.700	1.500.000.000	1,00	0,02452

Lampiran 7 : Hasil uji Fixed effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.620862	1.082572	7.039588	0.0000
X1	0.138926	0.056689	2.450676	0.0176
X2	7.17E-05	0.000301	0.238506	0.8124
X3	-3.11E-05	8.84E-05	-0.351746	0.7264

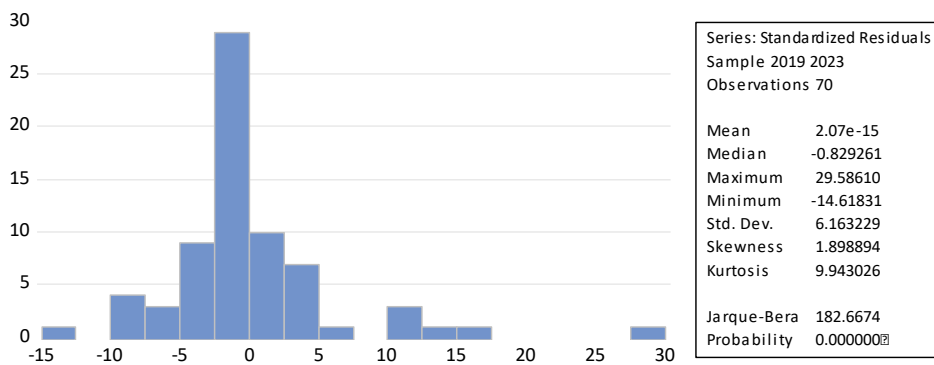
Lampiran 8 : Hasil uji Random effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.044143	1.368409	5.878466	0.0000
X1	0.154002	0.055236	2.788078	0.0069
X2	-0.000222	0.000246	-0.901865	0.3704
X3	-5.40E-06	6.50E-05	-0.083001	0.9341

Lampiran 9 : Hasil Uji Cammon effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.468488	0.958370	8.836348	0.0000
X1	0.186359	0.063656	2.927596	0.0047
X2	-0.000514	0.000219	-2.343230	0.0221
X3	1.49E-05	5.31E-05	0.280400	0.7800

Lampiran 10 : Hasil Uji normalitas tidak normal



Lampiran 11 : Hasil Uji heteroskedastisitas sebelum transform data

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.637744	0.836595	4.348273	0.0000
X1	0.181449	0.042828	4.236660	0.0001
X2	4.22E-05	0.000172	0.244857	0.8073
X3	-3.27E-05	4.37E-05	-0.749693	0.4561