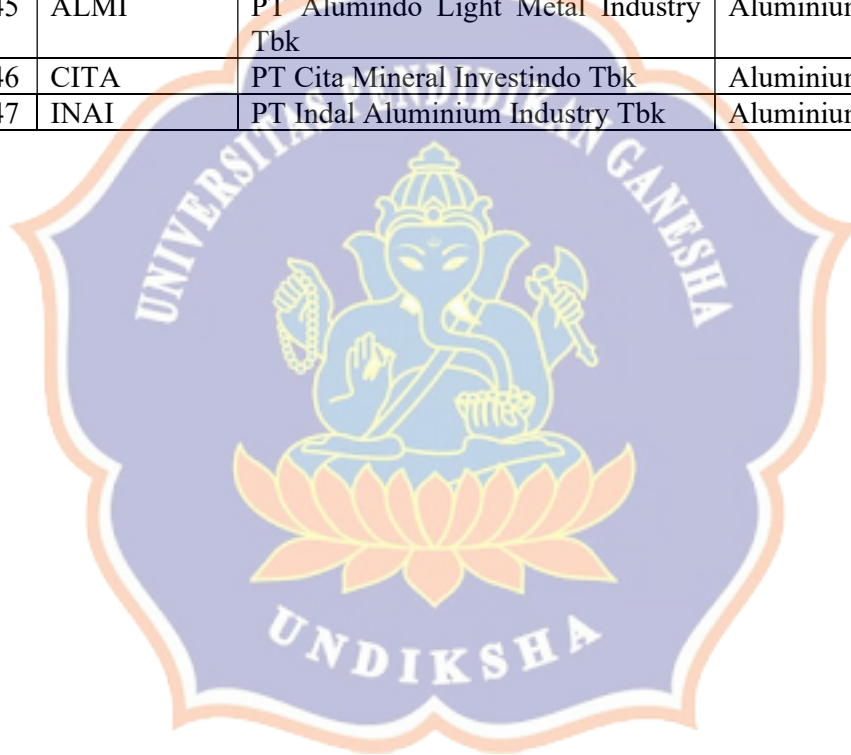


Lampiran 01. Populasi Penelitian

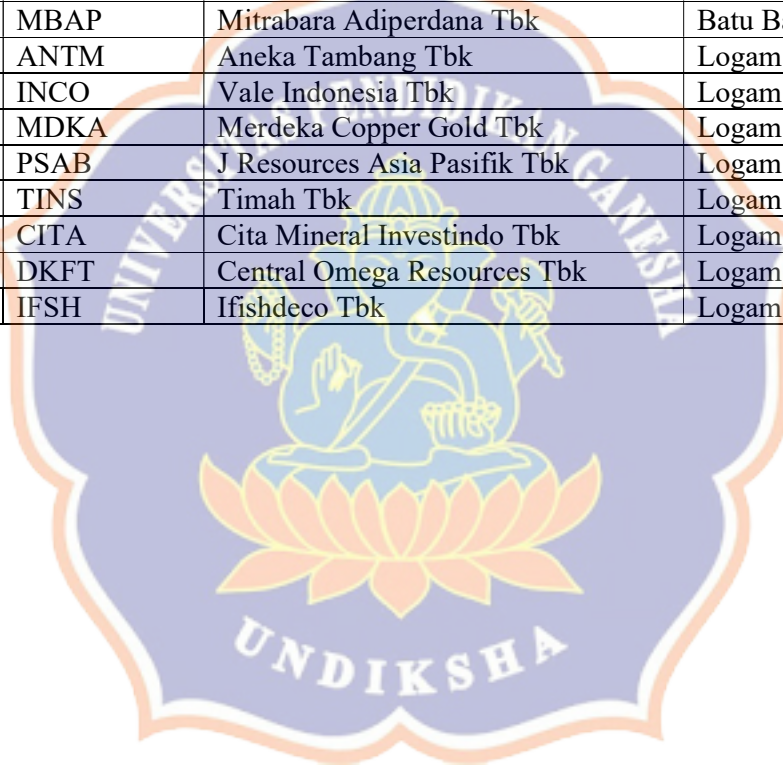
No	Kode Saham	Nama Perusahaan	Sub sektor
1	ADRO	PT Adaro Energy Tbk	Coal Production
2	AIMS	PT Akbar Indo Makmur Stimec Tbk	Coal Production
3	ARII	PT Atlas Resources Tbk	Coal Production
4	BOSS	PT Borneo Olah Sarana Sukses Tbk	Coal Production
5	BSSR	PT Baramulti Suksessarana Tbk	Coal Production
6	BUMI	PT Bumi Resources Tbk	Coal Production
7	BYAN	PT Bayan Resources Tbk	Coal Production
8	DSSA	PT Dian Swastatika Sentosa Tbk	Coal Production
9	GEMS	PT Golden Energy Mines Tbk	Coal Production
10	GTBO	PT Garda Tujuh Buana Tbk	Coal Production
11	HRUM	PT Harum Energy Tbk	Coal Production
12	INDY	PT Indika Energy Tbk	Coal Production
13	ITMG	PT Indo Tambangraya Megah Tbk	Coal Production
14	KKGI	PT Resource Alam Indonesia Tbk	Coal Production
15	MBAP	PT Mitrabara Adiperdana Tbk	Coal Production
16	PTBA	PT Bukit Asam Tbk	Coal Production
17	SMMT	PT Golden Eagle Energy Tbk	Coal Production
18	TOBA	PT TBS Energi Utama Tbk	Coal Production
19	TRAM	PT Trada Alam Mineral Tbk	Coal Production
20	BBRM	PT Pelayaran Nasional Bina Buana Raya Tbk	Coal Production
21	BESS	PT Batulicin Nusantara Maritim Tbk	Coal Production
22	CANI	PT Capitol Nusantara Indonesia Tbk	Coal Production
23	CNKO	PT Eksploitasi Energi Indonesia Tbk	Coal Production
24	DWGL	PT Dwi Guna Laksana Tbk	Coal Production
25	FIRE	PT Alfa Energi Investama Tbk	Coal Production
26	MBSS	PT Mitrabahtera Segara Sejati Tbk	Coal Production
27	PSSI	PT Pelita Samudera Shipping Tbk	Coal Production
28	PTIS	PT Indo Straits Tbk	Coal Production
29	RIGS	PT Rig Tenders Indonesia Tbk	Coal Production
30	SGER	PT Sumber Global Energy Tbk	Coal Production
31	TCPI	PT Transcoal Pacific Tbk	Coal Production
32	TEBE	PT Dana Brata Luhur Tbk	Coal Production
33	TPMA	PT Trans Power Marine Tbk	Coal Production
34	COAL	PT Black Diamond Resources Tbk	Coal Production
35	MDKA	PT Merdeka Copper Gold Tbk	Gold/Emas
36	PSAB	PT J Resources Asia Pasifik Tbk	Gold/Emas
37	SQMI	PT Wilton Makmur Indonesia Tbk	Gold/Emas
38	ANTM	PT Aneka Tambang Tbk	Diversified Metals & Minerals

No	Kode Saham	Nama Perusahaan	Sub sektor
39	BRMS	PT Bumi Resources Minerals Tbk	Diversified Metals & Minerals
40	DKFT	PT Central Omega Resources Tbk	Diversified Metals & Minerals
41	IFSH	PT Ifishdeco Tbk	Diversified Metals & Minerals
42	INCO	PT Vale Indonesia Tbk	Diversified Metals & Minerals
43	TBMS	PT Tembaga Mulia Semanan Tbk	Copper
44	ALKA	PT Alakasa Industrindo Tbk	Aluminium
45	ALMI	PT Alumindo Light Metal Industry Tbk	Aluminium
46	CITA	PT Cita Mineral Investindo Tbk	Aluminium
47	INAI	PT Indal Aluminium Industry Tbk	Aluminium



Lampiran 02. Sampel Penelitian

No	Kode	Nama Perusahaan	Subsektor
1	ADRO	Adaro Energy Tbk	Batu Bara
2	AIMS	Akbar Indo Makmur Stimec Tbk	Batu Bara
3	BUMI	Bumi Resources Tbk	Batu Bara
4	BYAN	Bayan Resources Tbk	Batu Bara
5	HRUM	Harum Energy Tbk	Batu Bara
6	INDY	Indika Energy Tbk	Batu Bara / Energi
7	ITMG	Indo Tambangraya Megah Tbk	Batu Bara
8	PTBA	Bukit Asam Tbk	Batu Bara
9	MBAP	Mitrabara Adiperdana Tbk	Batu Bara
10	ANTM	Aneka Tambang Tbk	Logam & Mineral
11	INCO	Vale Indonesia Tbk	Logam & Mineral
12	MDKA	Merdeka Copper Gold Tbk	Logam & Mineral
13	PSAB	J Resources Asia Pasifik Tbk	Logam & Mineral
14	TINS	Timah Tbk	Logam & Mineral
15	CITA	Cita Mineral Investindo Tbk	Logam & Mineral
16	DKFT	Central Omega Resources Tbk	Logam & Mineral
17	IFSH	Ifishdeco Tbk	Logam & Mineral

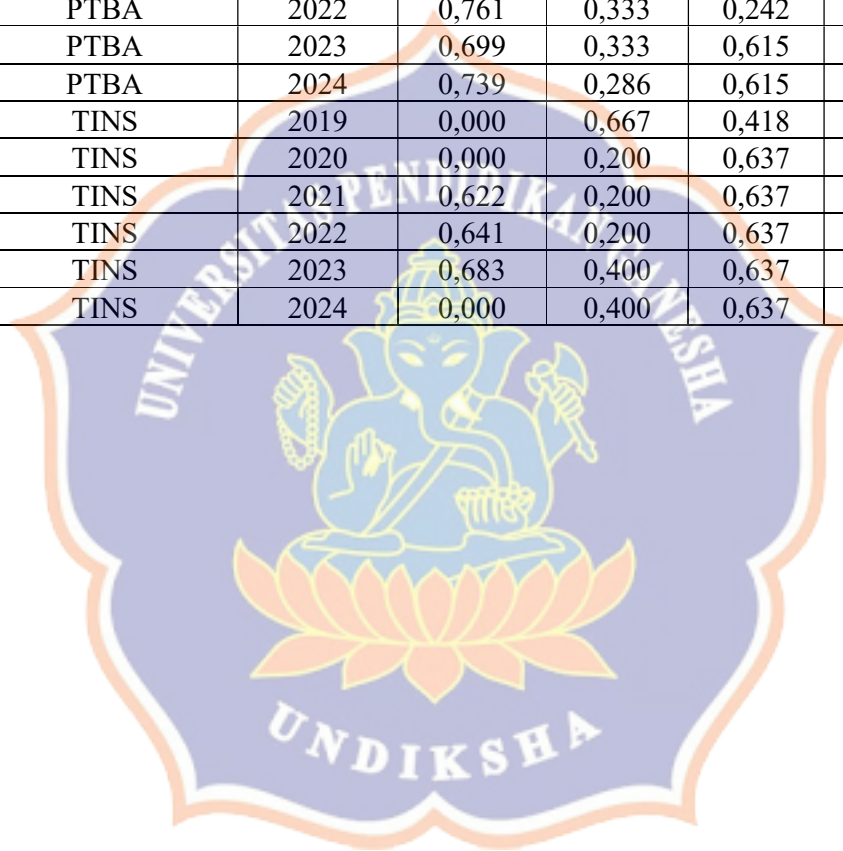


Lampiran 03. Tabulasi Data

KODE	TAHUN	TAV (Y)	GCG (X ₁)	CSR (X ₂)	KPO (Z)
ADRO	2019	0,532	0,200	0,319	0,400
ADRO	2020	0,673	0,200	0,308	0,400
ADRO	2021	0,541	0,200	0,308	0,400
ADRO	2022	0,578	0,333	0,308	0,500
ADRO	2023	0,787	0,333	0,308	0,500
ADRO	2024	0,800	0,333	0,319	0,500
ANTM	2019	0,653	0,333	0,670	1,000
ANTM	2020	0,799	0,400	0,648	1,000
ANTM	2021	0,515	0,400	0,648	1,000
ANTM	2022	0,633	0,600	0,648	1,000
ANTM	2023	0,575	0,600	0,648	1,000
ANTM	2024	0,552	0,600	0,648	1,000
BUMI	2019	0,000	0,429	0,264	0,429
BUMI	2020	0,000	0,429	0,297	0,429
BUMI	2021	1,322	0,429	0,297	0,429
BUMI	2022	1,899	0,286	0,341	0,143
BUMI	2023	1,256	0,286	0,341	0,143
BUMI	2024	1,252	0,286	0,341	0,143
BYAN	2019	0,698	0,600	0,187	0,600
BYAN	2020	0,698	0,600	0,176	0,600
BYAN	2021	0,685	0,600	0,176	0,600
BYAN	2022	0,746	0,600	0,341	0,600
BYAN	2023	0,765	0,600	0,176	0,600
BYAN	2024	0,817	0,500	0,176	0,667
CITA	2019	0,622	0,400	0,209	0,400
CITA	2020	0,631	0,400	0,187	0,400
CITA	2021	0,579	0,400	0,187	0,400
CITA	2022	0,673	0,400	0,187	0,400
CITA	2023	0,644	0,400	0,187	0,400
CITA	2024	0,630	0,400	0,187	0,400
DKFT	2019	0,000	0,400	0,121	0,400
DKFT	2020	0,857	0,400	0,176	0,400
DKFT	2021	0,375	0,400	0,176	0,600
DKFT	2022	0,326	0,400	0,176	0,600
DKFT	2023	0,598	0,400	0,176	0,600
DKFT	2024	0,710	0,000	0,176	1,000
HRUM	2019	0,710	0,400	0,176	0,600
HRUM	2020	0,883	0,400	0,209	0,400
HRUM	2021	0,778	0,400	0,209	0,400

KODE	TAHUN	TAV (Y)	GCG (X ₁)	CSR (X ₂)	KPO (Z)
HRUM	2022	0,629	0,400	0,209	0,400
HRUM	2023	0,864	0,400	0,209	0,400
HRUM	2024	0,834	0,400	0,209	0,400
IFSH	2019	0,000	0,400	0,165	0,600
IFSH	2020	0,939	0,400	0,165	0,600
IFSH	2021	0,536	0,333	0,176	0,167
IFSH	2022	0,602	0,333	0,176	0,167
IFSH	2023	0,554	0,333	0,176	0,167
IFSH	2024	0,574	0,333	0,176	0,167
INCO	2019	2,319	0,333	0,484	0,333
INCO	2020	1,976	0,286	0,615	0,429
INCO	2021	1,754	0,286	0,615	0,429
INCO	2022	1,732	0,286	0,615	0,429
INCO	2023	1,526	0,300	0,615	0,400
INCO	2024	1,508	0,300	0,615	0,400
INDY	2019	0,000	0,429	0,637	0,429
INDY	2020	0,000	0,429	0,648	0,429
INDY	2021	0,000	0,429	0,648	0,429
INDY	2022	0,780	0,429	0,648	0,429
INDY	2023	0,995	0,429	0,648	0,429
INDY	2024	0,964	0,429	0,648	0,429
ITMG	2019	0,457	0,333	0,659	0,333
ITMG	2020	0,629	0,333	0,659	0,333
ITMG	2021	0,578	0,333	0,670	0,333
ITMG	2022	0,702	0,429	0,670	0,143
ITMG	2023	0,790	0,429	0,670	0,143
ITMG	2024	0,806	0,429	0,670	0,143
MBAP	2019	0,671	0,333	0,297	0,167
MBAP	2020	0,568	0,333	0,242	0,167
MBAP	2021	0,649	0,333	0,242	0,167
MBAP	2022	0,622	0,333	0,242	0,167
MBAP	2023	0,729	0,333	0,242	0,167
MBAP	2024	0,797	0,500	0,242	0,000
MDKA	2019	0,856	0,500	0,297	0,500
MDKA	2020	1,441	0,500	0,593	0,500
MDKA	2021	1,112	0,500	0,593	0,750
MDKA	2022	0,796	0,500	0,593	0,750
MDKA	2023	0,783	0,429	0,593	0,571
MDKA	2024	0,911	0,429	0,593	0,571
PSAB	2019	0,819	0,500	0,242	0,333
PSAB	2020	0,820	0,500	0,242	0,333

KODE	TAHUN	TAV (Y)	GCG (X ₁)	CSR (X ₂)	KPO (Z)
PSAB	2021	1,279	0,500	0,242	0,333
PSAB	2022	2,068	0,400	0,242	0,200
PSAB	2023	1,292	0,400	0,242	0,200
PSAB	2024	1,258	0,400	0,242	0,200
PTBA	2019	0,558	0,333	0,319	1,000
PTBA	2020	0,589	0,333	0,560	0,833
PTBA	2021	0,527	0,333	0,615	0,833
PTBA	2022	0,761	0,333	0,242	0,833
PTBA	2023	0,699	0,333	0,615	0,833
PTBA	2024	0,739	0,286	0,615	1,000
TINS	2019	0,000	0,667	0,418	0,333
TINS	2020	0,000	0,200	0,637	1,000
TINS	2021	0,622	0,200	0,637	1,000
TINS	2022	0,641	0,200	0,637	1,000
TINS	2023	0,683	0,400	0,637	0,600
TINS	2024	0,000	0,400	0,637	0,600



Lampiran 04. Hasil Pengujian STATA

Uji Statistik Deskriptif

Variable	Obs	Mean	Std. dev.	Min	Max
Y	96	.7617913	.4535323	0	2.319106
X1	96	.390625	.1072777	0	.6666667
X2	96	.3907967	.201355	.1208791	.6703297
Z	96	.4886409	.2610463	0	1

Model CEM

Source	SS	df	MS	Number of obs	=	96
Model	1.71270739	3	.570902464	F(3, 92)	=	2.95
Residual	17.8279922	92	.193782524	Prob > F	=	0.0370
				R-squared	=	0.0876
				Adj R-squared	=	0.0579
				Root MSE	=	.44021
Y	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
X1	-.4758776	.4217803	-1.13	0.262	-1.31357	.3618146
X2	.3550622	.2390356	1.49	0.141	-.1196832	.8298075
Z	-.4839429	.184127	-2.63	0.010	-.8496349	-.1182508
_cons	1.045398	.2029821	5.15	0.000	.6422582	1.448538

Model FEM

Fixed-effects (within) regression	Number of obs	=	96
Group variable: ID	Number of groups	=	16
R-squared:	Obs per group:		
Within = 0.1211	min =		6
Between = 0.0688	avg =		6.0
Overall = 0.0783	max =		6
	F(3,77)	=	3.54
corr(u_i, Xb) = -0.2813	Prob > F	=	0.0186

Y	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
X1	-1.312738	.4761603	-2.76	0.007	-2.260894	-.3645815
X2	.3151418	.5697703	0.55	0.582	-.8194159	1.449699
Z	-.7051516	.2946485	-2.39	0.019	-1.291872	-.1184316
_cons	1.495989	.377023	3.97	0.000	.7452403	2.246738
sigma_u	.36306694					
sigma_e	.30334439					
rho	.58890413	(fraction of variance due to u_i)				

F test that all u_i=0: F(15, 77) = 7.78

Prob > F = 0.0000

Model REM

Random-effects GLS regression
Group variable: ID

Number of obs = 96
Number of groups = 16

R-squared:
Within = 0.1205
Between = 0.0730
Overall = 0.0815

Obs per group:
min = 6
avg = 6.0
max = 6

corr(u_i, X) = 0 (assumed)

Wald chi2(3) = 10.85
Prob > chi2 = 0.0126

Y	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
X1	-1.068854	.4152843	-2.57	0.010	-1.882796	-.2549115
X2	.3743673	.3753918	1.00	0.319	-.3613871	1.110122
Z	-.5852049	.2362196	-2.48	0.013	-1.048187	-.122223
_cons	1.318966	.2789029	4.73	0.000	.7723262	1.865606
sigma_u	.3558635					
sigma_e	.30334439					
rho	.57916753	(fraction of variance due to u_i)				

Uji Chow

F test that all u_i=0: F(15, 77) = 7.78 Prob > F = 0.0000

Uji Hausman Test

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
	(b) fe	(B) re		
X1	-1.312738	-1.068854	-.2438841	.2329541
X2	.3151418	.3743673	-.0592255	.4286248
Z	-.7051516	-.5852049	-.1199467	.1761194

b = Consistent under H0 and Ha; obtained from xtreg.
B = Inconsistent under Ha, efficient under H0; obtained from xtreg.

Test of H0: Difference in coefficients not systematic

chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 1.28
Prob > chi2 = 0.7332

Uji Lagrange Multiplier

Breusch and Pagan Lagrangian multiplier test for random effects

$$Y[ID,t] = Xb + u[ID] + e[ID,t]$$

Estimated results:

	Var	SD = sqrt(Var)
Y	.2056916	.4535323
e	.0920178	.3033444
u	.1266388	.3558635

Test: Var(u) = 0

chibar2(01) = 60.79
Prob > chibar2 = 0.0000

Uji Normalitas

Variable	Obs	Pr(skewness)	Pr(kurtosis)	----- Joint test -----	
				Adj chi2(2)	Prob>chi2
Y	96	0.0000	0.0000	7.25	0.1000
X1	96	0.7743	0.0206	5.31	0.0701
X2	96	0.2137	0.0217	4.22	0.0562
Z	96	0.0130	0.5675	4.13	0.0566

Uji Heteroskedastisitas

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of Y

H0: Constant variance

chi2(1) = 14.90
Prob > chi2 = 0.0701

Uji Multikolinearitas

Variable	VIF	1/VIF
X2	1.14	0.880524
Z	1.13	0.882919
X1	1.00	0.996321
Mean VIF	1.09	

Uji Moderasi

Source	SS	df	MS	Number of obs	=	96
Model	.844374453	2	.422187226	F(2, 93)	=	2.10
Residual	18.6963251	93	.201035754	Prob > F	=	0.1282
				R-squared	=	0.0432
				Adj R-squared	=	0.0226
Total	19.5406996	95	.205691575	Root MSE	=	.44837

Y	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
X1Z	-.8500061	.4957996	-1.71	0.090	-1.834566	.1345535
X2Z	.0877092	.322596	0.27	0.786	-.5529025	.728321
_cons	.9059601	.0852168	10.63	0.000	.7367365	1.075184

