

LAMPIRAN

Lampiran 1. Perhitungan Harga Saham

No	Emiten Perusahaan	Harga Saham				
		2020	2021	2022	2023	2024
1	ADRO	2.280	3.480	5.140	3.430	2.890
2	ANTM	1.816	2.128	1.906	1.705	1.525
3	PTBA	2.260	2.900	2.650	2.450	2.820
4	ITMG	14.400	20.400	25.650	26.700	26.700
5	INCO	4.987	4.618	7.006	4.310	3.230
6	MEDC	940	1.240	1.400	1.270	1.270
7	AKRA	636	822	1.400	1.475	1.120
8	MDKA	1.040	1.540	1.430	940	540
9	BRMS	97	107	125	366	346
10	BUMI	76	67	161	85	118

Lampiran 2. Perhitungan Current Ratio

No	Emiten Perusahaan	Tahun	Aset Lancar	Kewajiban Lancar	CR (%)
1	ADRO	2020	1731867	1144923	151,26
		2021	2838132	1361558	208,45
		2022	5319309	2447512	217,34
		2023	4302033	2135234	201,48
		2024	2605762	647395	402,50
2	ANTM	2020	9150514	7553261	121,15
		2021	11728143	6562383	178,72
		2022	11694779	5971662	195,84
		2023	20064546	8576440	233,95
		2024	17991975	9770898	184,14
3	PTBA	2020	8364356	3872457	216,00
		2021	18211500	7500647	242,80
		2022	24432148	10701780	228,30
		2023	15148356	9968101	151,97
		2024	15233514	11974820	127,21
4	ITMG	2020	409638	207300	197,61
		2021	988024	364743	270,88
		2022	1908545	585613	325,91
		2023	1279872	294254	434,95
		2024	1404754	313879	447,55
5	INCO	2020	695972	160710	433,06
		2021	836576	168430	496,69
		2022	989802	175039	565,48
		2023	1033119	216727	476,69

		2024	1004774	263471	381,36
6	MEDC	2020	1877223770	1367821211	137,24
		2021	1701563649	1006176448	169,11
		2022	1751396299	1379314476	126,98
		2023	1546648779	1422070168	108,76
		2024	1816976250	1505385643	120,70
7	AKRA	2020	8042418506	5102110055	157,63
		2021	12022678362	9306841393	129,18
		2022	15841294251	11280491593	140,43
		2023	18121051657	12533377808	144,58
		2024	20998111740	13454247427	156,07
8	MDKA	2020	199308697	192217456	103,69
		2021	411315044	297241459	138,38
		2022	895679542	604538725	148,16
		2023	1206831444	909461076	132,70
		2024	1227596758	1112398058	110,36
9	BRMS	2020	46991300	67109899	70,02
		2021	249283234	83918523	297,05
		2022	184398965	66496368	277,31
		2023	145832308	84387791	172,81
		2024	177105828	147218947	120,30
10	BUMI	2020	397376705	1298664634	30,60
		2021	75582880	2877190810	2,63
		2022	772731911	922761750	83,74
		2023	704716702	848168229	83,09
		2024	772663660	768495062	100,54

Lampiran 3. Perhitungan Debt to Equity Ratio

No	Emiten Perusahaan	Tahun	Total Hutang	Total Ekuitas	DER (%)
1	ADRO	2020	2429852	3951714	61,49
		2021	3128621	4458315	70,17
		2022	4254969	6527338	65,19
		2023	3063961	7408750	41,36
		2024	1331295	5370832	24,79
2	ANTM	2020	12690064	19039449	66,65
		2021	12079056	20837098	57,97
		2022	9925211	23712060	41,86
		2023	11685659	31165670	37,50

		2024	12323139	32199506	38,27
3	PTBA	2020	7117559	16939196	42,02
		2021	11869979	24253724	48,94
		2022	16443161	28916046	56,87
		2023	17201993	21563196	79,77
		2024	19141764	22643812	84,53
4	ITMG	2020	312339	846290	36,91
		2021	464680	1201559	38,67
		2022	689897	1950280	35,37
		2023	399307	1788540	22,33
		2024	472734	1933810	24,45
5	INCO	2020	294270	2020388	14,57
		2021	318367	2154461	14,78
		2022	303336	2354780	12,88
		2023	361462	2564537	14,09
		2024	443752	2732776	16,24
6	MEDC	2020	4687437991	1195304997	392,15
		2021	4454547678	1229336461	362,35
		2022	5184386501	1747519325	296,67
		2023	5440720277	2027595992	268,33
		2024	5575858796	2351031569	237,17
7	AKRA	2020	8127216543	10556356272	76,99
		2021	12209620623	111298965113	10,97
		2022	14032797261	13154810775	106,67
		2023	16211665604	14042957513	115,44
		2024	18484691894	14623992474	126,40
8	MDKA	2020	365960757	563645881	64,93
		2021	499182362	779410297	64,05
		2022	1851832467	2024833268	91,46
		2023	2200203593	2764055322	79,60
		2024	2320487740	2916576144	79,56
9	BRMS	2020	101439727	486703645	20,84
		2021	100815468	879628458	11,46
		2022	125116714	955117537	13,10
		2023	135516460	969351259	13,98
		2024	160402196	994466614	16,13
10	BUMI	2020	3295912298	132638029	2484,89
		2021	3577340599	646446687	553,39
		2022	1669538707	2818508262	59,23
		2023	1427918135	2774776081	51,46
		2024	1299156719	2864244358	45,36

Lampiran 4. Perhitungan Return on Assets

No	Emiten Perusahaan	Tahun	Lab a Bersih Setelah Pajak	Total Aset	ROA (%)
1	ADRO	2020	158505	6381566	2,48
		2021	1028593	7586936	13,56
		2022	2831123	10782307	26,26
		2023	1854878	10472711	17,71
		2024	1556132	6702127	23,22
2	ANTM	2020	1149354	31729513	3,62
		2021	1861740	32916154	5,66
		2022	3820964	33637271	11,36
		2023	3077648	42851329	7,18
		2024	3852218	44522645	8,65
3	PTBA	2020	2407927	24056755	10,01
		2021	8036888	36123703	22,25
		2022	12779427	45359207	28,17
		2023	6292521	38765189	16,23
		2024	5139423	41785576	12,30
4	ITMG	2020	37828	1158629	3,26
		2021	475390	1666239	28,53
		2022	1199345	2640177	45,43
		2023	499620	2187847	22,84
		2024	375601	2406544	15,61
5	INCO	2020	82819	2314658	3,58
		2021	165797	2472828	6,70
		2022	200401	2658116	7,54
		2023	274334	2925999	9,38
		2024	57761	3176528	1,82
6	MEDC	2020	181153195	5882742988	3,08
		2021	62600751	5683884139	1,10
		2022	551410338	6931905826	7,95
		2023	345768603	7468316269	4,63
		2024	380206515	7926890365	4,80
7	AKRA	2020	961997313	18683572815	5,15
		2021	1135001756	23508585736	4,83
		2022	2479059157	27187608036	9,12
		2023	3078469701	30254623117	10,18
		2024	2399467512	33108684368	7,25
8	MDKA	2020	28891683	929606638	3,11
		2021	33386800	1278592659	2,61
		2022	64844810	3876665735	1,67
		2023	5665022	4964258915	0,11
		2024	9801648	5237063884	0,19
9	BRMS	2020	4038209	588143372	0,69
		2021	69782445	980443926	7,12
		2022	13683786	1080234251	1,27

		2023	14188051	1104867719	1,28
		2024	25126645	1154868810	2,18
10	BUMI	2020	337350969	3428550327	9,84
		2021	223377014	4223787286	5,29
		2022	556664506	4488046969	12,40
		2023	26900967	4202694216	0,64
		2024	90133364	4163401077	2,16

Lampiran 5. Input Data Panel Variabel Penelitian

ID	TAHUN	(HS)Y	(CR)X1	(DER)X2	(ROA)X3
1	2020	2280	151,26	61,49	2,48
1	2021	3480	208,45	70,17	13,56
1	2022	5140	217,34	65,19	26,26
1	2023	3430	201,48	41,36	17,71
1	2024	2890	402,50	24,79	23,22
2	2020	1816	121,15	66,65	3,62
2	2021	2128	178,72	57,97	5,66
2	2022	1906	195,84	41,86	11,36
2	2023	1705	233,95	37,50	7,18
2	2024	1525	184,14	38,27	8,65
3	2020	2260	216,00	42,02	10,01
3	2021	2900	242,80	48,94	22,25
3	2022	2650	228,30	56,87	28,17
3	2023	2450	151,97	79,77	16,23
3	2024	2820	127,21	84,53	12,30
4	2020	14400	197,61	36,91	3,26
4	2021	20400	270,88	38,67	28,53
4	2022	25650	325,91	35,37	45,43

4	2023	26700	434,95	22,33	22,84
4	2024	26700	447,55	24,45	15,61
5	2020	4987	433,06	14,57	3,58
5	2021	4618	496,69	14,78	6,70
5	2022	7006	565,48	12,88	7,54
5	2023	4310	476,69	14,09	9,38
5	2024	3230	381,36	16,24	1,82
6	2020	940	137,24	392,15	3,08
6	2021	1240	169,11	362,35	1,10
6	2022	1400	126,98	296,67	7,95
6	2023	1270	108,76	268,33	4,63
6	2024	1270	120,70	237,17	4,80
7	2020	636	157,63	76,99	5,15
7	2021	822	129,18	10,97	4,83
7	2022	1400	140,43	106,67	9,12
7	2023	1475	144,58	115,44	10,18
7	2024	1120	156,07	126,40	7,25
8	2020	1040	103,69	64,93	3,11
8	2021	1540	138,38	64,05	2,61
8	2022	1430	148,16	91,46	1,67
8	2023	940	132,70	79,60	0,11
8	2024	540	110,36	79,56	0,19
9	2020	97	70,02	20,84	0,69
9	2021	107	297,05	11,46	7,12
9	2022	125	277,31	13,10	1,27
9	2023	366	172,81	13,98	1,28
9	2024	346	120,30	16,13	2,18
10	2020	76	30,60	2484,89	9,84

10	2021	67	26,96	553,39	5,29
10	2022	161	83,74	59,23	12,40
10	2023	85	83,09	51,46	0,64
10	2024	118	100,54	45,36	2,16

Lampiran 6. Output Common Effect Model

Source	SS	df	MS	Number of obs	=	50
Model	1.0909e+09	3	363628728	F(3, 46)	=	15.09
Residual	1.1085e+09	46	24097788.8	Prob > F	=	0.0000
				R-squared	=	0.4960
				Adj R-squared	=	0.4631
Total	2.1994e+09	49	44885397.3	Root MSE	=	4908.9

Y	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
X1	19.36735	6.201805	3.12	0.003	6.88376	31.85093
X2	-.1140257	2.080671	-0.05	0.957	-4.302199	4.074148
X3	355.3934	80.49944	4.41	0.000	193.3565	517.4304
_cons	-3368.383	1527.468	-2.21	0.032	-6443.017	-293.7493

Lampiran 7. Output Fixed Effect Model

Fixed-effects (within) regression	Number of obs	=	50
Group variable: ID	Number of groups	=	10
R-squared:	Obs per group:		
Within = 0.3842	min =		5
Between = 0.5252	avg =		5.0
Overall = 0.4590	max =		5
corr(u_i, Xb) = 0.4822	F(3,37)	=	7.70
	Prob > F	=	0.0004

Y	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
X1	11.49987	3.845337	2.99	0.005	3.708477	19.29126
X2	.0808243	.7052469	0.11	0.909	-1.348142	1.50979
X3	93.58231	36.78956	2.54	0.015	19.03959	168.125
_cons	657.5205	799.4801	0.82	0.416	-962.38	2277.421
sigma_u	5670.7948					
sigma_e	1464.5004					
rho	.93747539	(fraction of variance due to u_i)				

F test that all u_i=0: F(9, 37) = 53.32 Prob > F = 0.0000

Lampiran 8. Output Random Effect Model

```
Number of obs      =      50
Number of groups   =      10
```

```
Obs per group:
      min =      5
      avg =     5.0
      max =      5
```

```
Wald chi2(3)      =    26.84
Prob > chi2       =    0.0000
```

Y	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
X1	12.27182	3.827251	3.21	0.001	4.770545	19.77309
X2	.0517244	.7213759	0.07	0.943	-1.362146	1.465595
X3	102.9334	37.29377	2.76	0.006	29.83893	176.0278
_cons	414.7927	1796.856	0.23	0.817	-3106.981	3936.566
sigma_u	4962.1408					
sigma_e	1464.5004					
rho	.91987473	(fraction of variance due to u_i)				

Lampiran 9. Output Uji Chow

```
Number of obs      =      50
Number of groups   =      10
```

```
Obs per group:
      min =      5
      avg =     5.0
      max =      5
```

F(3,37)	=	7.70
Prob > F	=	0.0004

Y	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
X1	11.49987	3.845337	2.99	0.005	3.708477	19.29126
X2	.0808243	.7052469	0.11	0.909	-1.348142	1.50979
X3	93.58231	36.78956	2.54	0.015	19.03959	168.125
_cons	657.5205	799.4801	0.82	0.416	-962.38	2277.421
sigma_u	5670.7948					
sigma_e	1464.5004					
rho	.93747539	(fraction of variance due to u_i)				

Prob > F = 0.0000

Lampiran 10. Output Uji Hausman

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
	(b) fe	(B) re		
X1	11.49987	12.27182	-.7719498	.9520187
X2	.0808243	.0517244	.0290998	.0529964
X3	93.58231	102.9334	-9.35106	5.736294

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

$\chi^2(3) = (b-B)'[(V_b-V_B)^{-1}](b-B)$
= 5.12
Prob > χ^2 = 0.1631

Lampiran 11. Output Uji LM

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	4.49e+07	6699.657
e	2144761	1464.5
u	2.46e+07	4962.141

Test: Var(u) = 0

$\chi^2_{(01)} = 53.97$
Prob > χ^2 = 0.0000

Lampiran 12. Output Uji Multikolinearitas

Variable	VIF	1/VIF
X3	2.19	0.456302
X1	2.13	0.469011
X2	1.05	0.951050
Mean VIF	1.79	

Lampiran 13. Output Uji Heteroskedastisitas

White's test

H0: Homoskedasticity

Ha: Unrestricted heteroskedasticity

$\chi^2(9) = 28.55$
Prob > χ^2 = 0.0008

Cameron & Trivedi's decomposition of IM-test

Source	χ^2	df	p
Heteroskedasticity	28.55	9	0.0008
Skewness	11.87	3	0.0078
Kurtosis	4.59	1	0.0321
Total	45.02	13	0.0000

Wooldridge test for autocorrelation in panel data
H0: no first-order autocorrelation

$$F(1, 9) = 5.220$$
$$\text{Prob} > F = 0.0482$$

Lampiran 15. Output Robust

Random-effects GLS regression
Group variable: ID

```
Number of obs      =      50
Number of groups   =      10
```

```
R-squared:
  Within   = 0.3842
  Between  = 0.5288
  Overall  = 0.4613
```

```
Obs per group:
      min =      5
      avg =     5.0
      max =      5
```

$$\text{corr}(u_i, X) = 0 \text{ (assumed)}$$

```
Wald chi2(3)      =      16.15
Prob > chi2       =      0.0011
```

(Std. err. adjusted for 10 clusters in ID)

Y	Coefficient	Robust std. err.	z	P> z	[95% conf. interval]	
X1	12.27182	10.72963	1.14	0.253	-8.757862	33.3015
X2	.0517244	.1967711	0.26	0.793	-.3339399	.4373888
X3	102.9334	30.60863	3.36	0.001	42.94155	162.9252
_cons	414.7927	1040.994	0.40	0.690	-1625.518	2455.104
sigma_u	4962.1408					
sigma_e	1464.5004					
rho	.91987473	(fraction of variance due to u_i)				

Lampiran 16. Tabel Distribusi F

df Untuk Penyebut (N2)	df Untuk Pembilang (N1)				
	1	2	3	4	5
30	4.17	3.32	2.92	2.69	2.53
31	4.16	3.30	2.91	2.68	2.52
32	4.15	3.29	2.90	2.67	2.51
33	4.14	3.28	2.89	2.66	2.50
34	4.13	3.28	2.88	2.65	2.49
35	4.12	3.27	2.87	2.64	2.49
36	4.11	3.26	2.87	2.63	2.48
37	4.11	3.25	2.86	2.63	2.47
38	4.10	3.24	2.85	2.62	2.46
39	4.09	3.24	2.85	2.61	2.46
40	4.08	3.23	2.84	2.61	2.45
41	4.08	3.23	2.83	2.60	2.44
42	4.07	3.22	2.83	2.59	2.44
43	4.07	3.21	2.82	2.59	2.43
44	4.06	3.21	2.82	2.58	2.43
45	4.06	3.20	2.81	2.58	2.42
46	4.05	3.20	2.81	2.57	2.42
47	5.05	3.20	2.80	2.57	2.41
48	4.04	3.19	2.80	2.57	2.41
49	4.04	3.19	2.79	2.56	2.40
50	4.03	3.18	2.79	2.56	2.40

Lampiran 17. Tabel Distribusi t

Pr	0.25	0.10	0.05
df	0.50	0.20	0.10

40	0.68067	1.30308	1.6835
41	0.68052	1.30254	1.68288
42	0.68038	1.30204	1.68195
43	0.68024	1.30155	1.68107
44	0.68011	1.30109	1.68023
45	0.67998	1.30065	1.67943
46	0.67986	1.30023	1.67866
47	0.67975	1.29982	1.67793
48	0.67964	1.29944	1.67722
49	0.67953	1.29907	1.67655
50	0.67943	1.29871	1.67591