

# LAMPIRAN

Lampiran 1 perusahaan sampel penelitian

No.	NAMA PERUSAHAAN	KODE
1	Pelat Timah Nusantara Tbk.	NIKL
2	Aneka Tambang Tbk.	ANTM
3	Champion Pacific Indonesia Tbk	IGAR
4	Vale Indonesia Tbk.	INCO
5	Indocement Tunggul Prakarsa Tb	INTP
6	Lautan Luas Tbk.	LTLS
7	Semen Baturaja Tbk.	SMBR
8	Indo Acidatama Tbk	SRSN
9	Wijaya Karya Beton Tbk	WTON
10	Darmi Bersaudara Tbk.	WOOD
11	Saraswanti Anugerah Makmur Tbk	SAMF

## Lampiran 2 hasil perhitungan nilai perusahaan

No.	PERUSAHAAN	TAHUN	HARGA SAHAM	JUMLAH SAHAM BEREDAR	UTANG	ASET/AKTIVA	TOBINS'Q
1	NIKL	2018	360	2523350000	Rp1,471,971,459	Rp2,098,436,410	1.13
		2019	675	2523350000	Rp1,487,076,199	Rp2,105,443,014	1.52
		2020	1145	2523350000	Rp1,172,400,781	Rp1,887,056,744	2.15
		2021	975	2523350000	Rp1,899,690,563	Rp2,678,309,868	1.63
		2022	650	2523350000	Rp2,157,505,814	Rp3,104,494,398	1.22
2	ANTM	2018	765	24030765	Rp1,374,698,000	Rp3,219,535,000,000	0.43
		2019	840	24030765	Rp1,206,149,000	Rp3,019,491,000,000	0.40
		2020	1,935	24030765	Rp1,269,006,000	Rp3,172,951,000,000	0.40
		2021	2,250	24030765	Rp1,207,905,000	Rp3,291,615,000,000	0.37
		2022	1,985	24030765	Rp992,521,000	Rp3,363,727,000,000	0.30
3	IGAR	2018	384	972204500	Rp87,284,000	Rp570,198,000	0.81
		2019	340	972204500	Rp80,669,000	Rp617,595,000	0.67
		2020	354	972204500	Rp72,281,000	Rp665,863,000	0.63
		2021	440	972204500	Rp117,903,000	Rp809,372,000	0.67
		2022	466	972204500	Rp76,709,000	Rp863,639,000	0.61
4	INCO	2018	3260	9936338720	Rp4,653,385,000	Rp32,155,799,200	1.15
		2019	3640	9936338720	Rp3,921,285,225	Rp31,017,611,040	1.29
		2020	5100	9936338720	Rp4,129,785,180	Rp32,483,910,372	1.69
		2021	4680	9936338720	Rp4,541,505,255	Rp35,274,891,420	1.45
		2022	7100	9936338720	Rp4,795,438,824	Rp42,022,155,844	1.79
5	INTP	2018	18450	3681231699	Rp4,567,000,000	Rp27,789,000,000	2.61
		2019	19025	3681231699	Rp4,627,000,000	Rp27,708,000,000	2.69
		2020	14475	3681231699	Rp5,168,000,000	Rp27,345,000,000	2.14
		2021	12100	3549811099	Rp5,515,000,000	Rp26,136,000,000	1.85
		2022	9900	3431073399	Rp6,139,000,000	Rp25,706,000,000	1.56
6	LTLS	2018	615	1560000000	Rp4,193,399,000,000	Rp6,318,441,000,000	0.66
		2019	610	1560000000	Rp3,703,024,000,000	Rp5,863,204,000,000	0.63

		2020	490	1560000000	Rp3,230,044,000,000	Rp5,514,332,000,000	0.59
		2021	715	1560000000	Rp3,480,106,000,000	Rp6,217,987,000,000	0.56
		2022	1390	1560000000	Rp3,107,428,000,000	Rp6,094,139,000,000	0.51
7	SMBR	2018	1750	9932534336	Rp2,064,408,000,000	Rp5,538,080,000,000	0.38
		2019	440	9932534336	Rp2,088,977,000,000	Rp5,571,270,000,000	0.38
		2020	1065	9932534336	Rp2,256,286,000,000	Rp5,203,207,000,000	0.44
		2021	620	9932534336	Rp2,271,787,000,000	Rp5,271,954,000,000	0.43
		2022	386	9932534336	Rp2,124,332,000,000	Rp5,211,249,000,000	0.41
8	SRSN	2018	63	6020000000	Rp208,989,000	Rp686,777,000	0.86
		2019	68	6020000000	Rp264,647,000	Rp779,247,000	0.86
		2020	58	6020000000	Rp318,959,000	Rp906,847,000	0.74
		2021	55	6020000000	Rp251,956,000	Rp860,163,000	0.68
		2022	52	6020000000	Rp218,260,000	Rp876,602,000	0.61
9	WTON	2018	376	8715466600	Rp496,880,000	Rp8,881,778,000	0.42
		2019	450	8715466600	Rp6,829,449,000	Rp10,337,895,000	1.04
		2020	386	8715466600	Rp5,245,175,000	Rp8,670,064,000	0.99
		2021	246	8715466600	Rp5,597,700,000	Rp9,082,511,000	0.85
		2022	191	8715466600	Rp5,809,708,000	Rp9,447,529,000	0.79
10	WOOD	2018	615	6306250000	Rp2,144,622,646	Rp4,591,658,755	1.31
		2019	685	6306250000	Rp2,817,941,634	Rp5,518,890,225	1.29
		2020	560	6306250000	Rp2,896,837,453	Rp5,856,758,922	1.10
		2021	810	6306250000	Rp3,158,497,024	Rp6,801,034,778	1.22
		2022	362	6306250000	Rp3,195,737,865	Rp6,956,345,266	0.79
11	SAMF	2018	400	5125000000	Rp827,658,000	Rp1,421,703,000	2.02
		2019	400	5125000000	Rp716,278,000	Rp1,347,469,000	2.05
		2020	398	5125000000	Rp558,300,000	Rp1,342,071,000	1.94
		2021	1,095	5125000000	Rp900,913,000	Rp1,763,124,000	3.69
		2022	470	5125000000	Rp1,977,461,000	Rp3,097,781,000	1.42
12	SMGR	2018	11500	5931520000	Rp18,168,521,000	Rp50,783,836,000	1.70
		2019	12000	5931520000	Rp43,915,143,000	Rp79,807,067,000	1.44
		2020	12425	5931520000	Rp42,672,589,000	Rp83,197,955,000	1.40
		2021	7250	5931520000	Rp37,110,080,000	Rp81,766,327,000	0.98
		2022	6575	6751540089	Rp33,270,652,000	Rp82,960,012,000	0.94

### Lampiran 3 hasil perhitungan inovasi perusahaan

No.	PERUSAHAAN	TAHUN	PENGELUARAN R&D	PENDAPATAN
1	NIKL	2018	Rp311,340,000.00	Rp2,262,440,000,000.00
		2019	Rp311,340,000.00	Rp2,262,440,000,000.00
		2020	Rp2,796,200,000.00	Rp2,013,264,000,000.00
		2021	Rp228,240,000.00	Rp2,995,650,000,000.00
		2022	Rp202,371,000.00	Rp3,969,585,000,000.00
2	ANTM	2018	Rp38,823,000,000.00	Rp32,718,542,000,000.00
		2019	Rp38,823,000,000.00	Rp32,718,542,000,000.00
		2020	Rp84,217,000,000.00	Rp27,372,461,000,000.00
		2021	Rp84,335,000,000.00	Rp38,445,595,000,000.00
		2022	Rp84,335,000,000.00	Rp45,930,356,000,000.00
3	IGAR	2018	Rp2,176,000,000.00	Rp776,541,000,000.00
		2019	Rp2,176,000,000.00	Rp776,541,000,000.00
		2020	Rp1,722,000,000.00	Rp739,402,000,000.00
		2021	Rp1,889,000,000.00	Rp970,111,000,000.00
		2022	Rp4,372,000,000.00	Rp1,083,672,000,000.00
4	INCO	2018	Rp52,882,800,000.00	Rp10,854,160,000,000.00
		2019	Rp52,882,800,000.00	Rp10,854,160,000,000.00
		2020	Rp7,157,340,000.00	Rp10,721,976,000,000.00
		2021	Rp111,267,000,000.00	Rp13,594,545,000,000.00
		2022	Rp111,267,000,000.00	Rp18,353,493,000,000.00
5	INTP	2018	Rp6,735,000,000.00	Rp15,939,348,000,000.00
		2019	Rp6,735,000,000.00	Rp15,939,348,000,000.00
		2020	Rp2,632,000,000.00	Rp15,939,348,000,000.00
		2021	Rp2,632,000,000.00	Rp14,771,906,000,000.00
		2022	Rp2,632,000,000.00	Rp16,328,278,000,000.00
6	LTLS	2018	Rp851,000,000.00	Rp6,534,734,000,000.00
		2019	Rp851,000,000.00	Rp6,534,734,000,000.00
		2020	Rp851,000,000.00	Rp5,592,338,000,000.00
		2021	Rp1,074,000,000.00	Rp6,635,544,000,000.00
		2022	Rp1,074,000,000.00	Rp7,879,115,000,000.00
7	SMBR	2018	Rp3,037,000,000.00	Rp1,999,516,000,000.00
		2019	Rp3,037,000,000.00	Rp1,999,516,000,000.00
		2020	Rp2,070,000,000.00	Rp1,721,907,000,000.00
		2021	Rp675,000,000.00	Rp1,751,585,000,000.00

		2022	Rp555,000,000.00	Rp1,881,767,000,000.00
8	SRSN	2018	Rp1,636,000,000.00	Rp684,464,000,000.00
		2019	Rp1,636,000,000.00	Rp684,464,000,000.00
		2020	Rp1,636,000,000.00	Rp890,996,000,000.00
		2021	Rp1,009,000,000.00	Rp907,832,000,000.00
		2022	Rp680,000,000.00	Rp977,707,000,000.00
9	WTON	2018	Rp8,219,000,000.00	Rp7,083,384,000,000.00
		2019	Rp8,219,000,000.00	Rp7,083,384,000,000.00
		2020	Rp3,995,000,000.00	Rp4,803,359,000,000.00
		2021	Rp3,941,000,000.00	Rp4,458,987,000,000.00
		2022	Rp4,100,000,000.00	Rp6,003,788,000,000.00
10	WOOD	2018	Rp3,752,000,000.00	Rp2,136,286,000,000.00
		2019	Rp3,752,000,000.00	Rp2,136,286,000,000.00
		2020	Rp3,752,000,000.00	Rp2,929,365,000,000.00
		2021	Rp5,472,000,000.00	Rp5,416,331,000,000.00
		2022	Rp4,957,000,000.00	Rp4,526,699,000,000.00
11	SMGR	2018	Rp27,369,000,000.00	Rp40,368,107,000,000.00
		2019	Rp27,369,000,000.00	Rp40,368,107,000,000.00
		2020	Rp16,797,000,000.00	Rp35,171,668,000,000.00
		2021	Rp33,910,000,000.00	Rp36,702,301,000,000.00
		2022	Rp24,966,000,000.00	Rp36,378,597,000,000.00

Lampiran 4 hasil perhitungan investasi asing

PERUSAHAAN	TAHUN	SAHAM ASING	HARGA	SAHAM BEREDAR	TOTAL SAHAM
NIKL	2018	1009340000	Rp360	2523350000	Rp2,546,918,089,000,000,000
	2019	1009340000	Rp675	2523350000	Rp2,546,918,089,000,000,000
	2020	1009340000	Rp1,145	2523350000	Rp2,546,918,089,000,000,000
	2021	1024438700	Rp975	2523350000	Rp2,585,017,393,645,000,000
	2022	1387842500	Rp650	2523350000	Rp3,502,012,372,375,000,000
ANTM	2018	167550440	Rp765	2523350000	Rp422,788,402,774,000,000
	2019	167550440	Rp840	24030765000	Rp4,026,365,249,286,600,000
	2020	1936879659	Rp1,935	24030765000	Rp46,544,699,918,709,100,000
	2021	2888497953	Rp2,250	24030765000	Rp69,412,815,511,524,000,000
	2022	3104774838	Rp1,985	24030765000	Rp74,610,114,509,891,100,000
IGAR	2018	772124814	Rp384	972204500	Rp750,663,218,635,242,000
	2019	772124814	Rp340	972204500	Rp750,663,218,635,242,000
	2020	785541236	Rp354	972204500	Rp763,706,724,574,762,000
	2021	774652546	Rp440	972204500	Rp753,120,690,768,775,000
	2022	772124814	Rp466	972204500	Rp750,663,218,635,242,000
INCO	2018	8729073566	Rp3,260	9936338720	Rp86,735,031,658,804,800,000
	2019	8615799304	Rp3,640	9936338720	Rp85,609,500,229,197,100,000
	2020	6706035002	Rp5,100	9936338720	Rp66,633,435,249,319,700,000
	2021	6822290165	Rp4,680	9936338720	Rp67,788,585,927,075,000,000
	2022	7051819590	Rp7,100	9936338720	Rp70,069,268,034,438,000,000
INTP	2018	3397776858	Rp18,450	3681231699	Rp12,508,003,876,449,800,000
	2019	3342558383	Rp19,025	3681231699	Rp12,304,731,874,124,000,000
	2020	3217396505	Rp14,475	3681231699	Rp11,843,982,002,185,400,000
	2021	3102534901	Rp12,100	3549811099	Rp11,013,412,824,922,100,000
	2022	2998758151	Rp9,900	3431073399	Rp10,288,959,320,990,400,000
LTLS	2018	282360000	Rp615	1560000000	Rp440,481,600,000,000,000
	2019	265200000	Rp610	1560000000	Rp413,712,000,000,000,000
	2020	265200000	Rp490	1560000000	Rp413,712,000,000,000,000
	2021	269880000	Rp715	1560000000	Rp421,012,800,000,000,000
	2022	261924000	Rp1,390	1560000000	Rp408,601,440,000,000,000
SMBR	2018	49662672	Rp1,750	9932534336	Rp493,276,191,679,095,000
	2019	198650687	Rp440	9932534336	Rp1,973,104,766,716,380,000
	2020	29797603	Rp1,065	9932534336	Rp295,965,715,007,457,000
	2021	29797603	Rp620	9932534336	Rp295,965,715,007,457,000
	2022	29797603	Rp386	9932534336	Rp295,965,715,007,457,000
SRSN	2018	190232000	Rp63	6020000000	Rp1,145,196,640,000,000,000
	2019	243208000	Rp68	6020000000	Rp1,464,112,160,000,000,000
	2020	142072000	Rp58	6020000000	Rp855,273,440,000,000,000
	2021	146286000	Rp55	6020000000	Rp880,641,720,000,000,000
	2022	143276000	Rp52	6020000000	Rp862,521,520,000,000,000
WTON	2018	1451125189	Rp376	8715466600	Rp12,647,233,116,276,600,000
	2019	1685571240	Rp450	8715466600	Rp14,690,539,847,975,400,000
	2020	2198912223	Rp386	8715466600	Rp19,164,546,037,457,000,000
	2021	261463998	Rp246	8715466600	Rp2,278,780,741,671,470,000
	2022	261463998	Rp191	8715466600	Rp2,278,780,741,671,470,000
WOOD	2018	324141250	Rp615	6306250000	Rp2,044,115,757,812,500,000
	2019	350627500	Rp685	6306250000	Rp2,211,144,671,875,000,000
	2020	664048125	Rp560	6306250000	Rp4,187,653,488,281,250,000
	2021	610445000	Rp810	6306250000	Rp3,849,618,781,250,000,000
	2022	348735625	Rp362	6306250000	Rp2,199,214,035,156,250,000
SMGR	2018	2197628160	Rp11,500	5931520000	Rp13,035,275,383,603,200,000
	2019	2089674496	Rp12,000	5931520000	Rp12,394,946,066,513,900,000
	2020	2050526464	Rp12,425	5931520000	Rp12,162,738,731,745,300,000
	2021	1815045120	Rp7,250	5931520000	Rp10,765,976,430,182,400,000
	2022	2065971267	Rp6,575	6751540089	Rp13,948,487,833,452,500,000

Lampiran 5 hasil uji statistik deskriptif

	X1_FOREIGN_	X2_R_D_	Y_TOBINSQ_
Mean	0.33769556...	0.00146018...	1.02075799...
Median	0.181	0.00109505...	0.85653567...
Maximum	0.923	0.00818467...	2.69461646...
Minimum	0.003	5.09803921...	0.29508004...
Std. Dev.	0.32492248...	0.00160162...	0.58139019...
Skewness	0.64199464...	2.14848859...	0.99186884...
Kurtosis	1.84183408...	8.22763249...	3.48305934...
Jarque-Bera	6.85203010...	104.940353...	9.55295357...
Probability	0.03251625...	1.63114168...	0.00842563...
Sum	18.5732559...	0.08031035...	56.1416897...
Sum Sq. Dev.	5.70102955...	0.00013852...	18.2527860...
Observations	55	55	55

Lampiran 6 hasil estimasi pemilihan model

1. Random effect

Dependent Variable: Y  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 07/14/23 Time: 15:35  
 Sample: 2018 2022  
 Periods included: 5  
 Cross-sections included: 11  
 Total panel (balanced) observations: 55  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.750810	0.176244	4.260055	0.0001
X1	0.804199	0.352977	2.278332	0.0268
X2	-1.114186	37.43349	-0.029764	0.9764

Effects Specification		S.D.	Rho
Cross-section random		0.400124	0.7066
Idiosyncratic random		0.257845	0.2934

Weighted Statistics			
R-squared	0.087724	Mean dependent var	0.282668
Adjusted R-squared	0.052637	S.D. dependent var	0.272321
S.E. of regression	0.265057	Sum squared resid	3.653282
F-statistic	2.500159	Durbin-Watson stat	0.979823
Prob(F-statistic)	0.091892		

Unweighted Statistics			
R-squared	0.346620	Mean dependent var	1.020758
Sum squared resid	11.92601	Durbin-Watson stat	0.300148



UJI CHOW

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.767627	(10,42)	0.0000
Cross-section Chi-square	73.451336	10	0.0000

Cross-section fixed effects test equation:

Dependent Variable: Y

Method: Panel Least Squares

Date: 07/13/23 Time: 22:00

Sample: 2018 2022

Periods included: 5

Cross-sections included: 11

Total panel (balanced) observations: 55

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.732384	0.096451	7.593294	0.0000
X1	1.211109	0.198184	6.111045	0.0000
X2	-82.60045	40.20568	-2.054447	0.0450
R-squared	0.418393	Mean dependent var		1.020758
Adjusted R-squared	0.396023	S.D. dependent var		0.581390
S.E. of regression	0.451833	Akaike info criterion		1.301992
Sum squared resid	10.61595	Schwarz criterion		1.411483
Log likelihood	-32.80479	Hannan-Quinn criter.		1.344333
F-statistic	18.70372	Durbin-Watson stat		0.357930
Prob(F-statistic)	0.000001			

## UJI HAUSMAN

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.949630	2	0.0842

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
X1	-0.379457	0.804199	0.445500	0.0762
X2	18.255654	-1.114186	225.171685	0.1968

Cross-section random effects test equation:

Dependent Variable: Y

Method: Panel Least Squares

Date: 07/13/23 Time: 22:10

Sample: 2018 2022

Periods included: 5

Cross-sections included: 11

Total panel (balanced) observations: 55

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.122242	0.260924	4.301031	0.0001
X1	-0.379457	0.755045	-0.502562	0.6179
X2	18.25565	40.32912	0.452667	0.6531

### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.847019	Mean dependent var	1.020758
Adjusted R-squared	0.803310	S.D. dependent var	0.581390
S.E. of regression	0.257845	Akaike info criterion	0.330150
Sum squared resid	2.792336	Schwarz criterion	0.804610
Log likelihood	3.920882	Hannan-Quinn criter.	0.513627
F-statistic	19.37860	Durbin-Watson stat	1.262952
Prob(F-statistic)	0.000000		

## Lampiran 7 Hasil Asusmsi Klasik

### 1. Uji Normalitas

Series: Standardized Residuals	
Sample 2018 2022	
Observations 55	
Mean	2.32e-17
Median	-0.048973
Maximum	0.551508
Minimum	-0.405544
Std. Dev.	0.236690
Skewness	0.666255
Kurtosis	2.899037
Jarque-Bera	4.092403
Probability	0.129225

### 2. Uji multikolinieritas

	X2_R_D_	X1_FOREIGN_
X2_R_D_	1	0.29710085...
X1_FO...	0.29710085...	1

VARIABEL	INOVASI	
	PERUSAHAAN	INVESTASI ASING
INVESTASI ASING	0.29710085	1
INOVASI PERUSAHAAN	1	0.29710085

### 3. Uji Autokorelasi

Probabiliti Chi Squares	Kesimpulan
0.412	Tidak Terdapat Autokorelasi



