

LAMPIRAN

Lampiran 1 Indikator Pengukuran Variabel Sustainability Report

1. Aspek: Organisasi dan praktik pelaporan		
1	GRI 2: General Disclosures	2-1 Rincian organisasi
2		2-2 Entitas yang dimasukkan dalam pelaporan keberlanjutan organisasi
3		2-3 Periode, frekuensi, dan titik kontak pelaporan
4		2-4 Penyajian kembali informasi
5		2-5 Penjaminan eksternal
2. Aspek: Aktivitas dan Pekerja		
6	GRI 2: General Disclosures	2-6 Aktivitas, rantai nilai, dan hubungan bisnis lainnya
7		2-7 Tenaga kerja
8		2-8 Pekerja yang bukan pekerja langsung
3. Aspek: Tata Kelola		
9	GRI 2: General Disclosures	2-9 Struktur dan komposisi tata kelola
10		2-10 Pencalonan dan pemilihan badan tata kelola tertinggi
11		2-11 Ketua badan tata kelola tertinggi
12		2-12 Peran badan tata kelola tertinggi dalam mengawasi manajemen dampak
13		2-13 Delegasi tanggung jawab untuk mengelola dampak
14		2-14 Peran badan tata kelola tertinggi dalam pelaporan keberlanjutan
15		2-15 Konflik kepentingan
16		2-16 Komunikasi masalah penting
17		2-17 Pengetahuan kolektif badan tata kelola tertinggi
18		2-18 Evaluasi kinerja badan tata kelola tertinggi
19		2-19 Kebijakan remunerasi
20		2-20 Proses untuk menentukan remunerasi

21		2-21 Rasio kompensasi total tahunan
4. Aspek: Strategi, kebijakan, dan praktik		
22	GRI 2: General Disclosures	2-22 Pernyataan tentang strategi pembangunan berkelanjutan
23		2-23 Komitmen kebijakan
24		2-24 Menanamkan komitmen kebijakan
25		2-25 Proses untuk memperbaiki dampak negatif
26		2-26 Mekanisme untuk mencari nasihat dan mengemukakan masalah
27		2-27 Kepatuhan terhadap hukum dan peraturan
28		2-28 Asosiasi keanggotaan
29		2-29 Pendekatan untuk keterlibatan pemangku kepentingan
30		2-30 Perjanjian perundingan kolektif
31	GRI 3: Topik Material	3-1 Proses atau panduan untuk menentukan topik material
32		3-2 Daftar topik material
33		3-3 Manajemen topik material
34	GRI 201: Kinerja Ekonomi	201-1 Nilai ekonomi langsung yang dihasilkan dan didistribusikan
35		201-2 Implikasi finansial serta risiko dan peluang lain akibat dari perubahan iklim
36		201-3 Kewajiban program pensiun manfaat pasti dan program pensiun lainnya
37		201-4 Bantuan finansial yang diterima dari pemerintah
38	GRI 202: Keberadaan Pasar	202-1 Rasio standar upah karyawan pemula berdasarkan jenis kelamin terhadap upah minimum regional
39		202-2 Proporsi manajemen senior yang berasal dari masyarakat setempat

40	GRI 203: Dampak Ekonomi Tidak Langsung	203-1 Investasi infrastruktur dan dukungan layanan
41		203-2 Dampak ekonomi tidak langsung yang signifikan
42	GRI 204: Praktik Pengadaan	204-1 Proporsi pengeluaran untuk pemasok lokal
43	GRI 205: Antikorupsi	205-1 Operasi-operasi yang dinilai memiliki risiko terkait korupsi
44		205-2 Komunikasi dan pelatihan tentang kebijakan dan prosedur antikorupsi
45		205-3 Insiden korupsi yang terbukti dan tindakan yang diambil
46	GRI 206: Perilaku Antipersaingan	206-1 Langkah-langkah hukum untuk perilaku antipersaingan, praktik antipakat dan monopoli
47	GRI 207: Pajak	207-1 Pendekatan terhadap pajak
48		207-2 Tata kelola, pengontrolan, dan manajemen risiko pajak
49		207-3 Keterlibatan pemangku kepentingan dan pengelolaan kepedulian yang berkaitan dengan pajak
50		207-4 Laporan per negara
51	GRI 301: Material	301-1 Material yang digunakan berdasarkan berat atau volume
52		301-2 Material input dari daur ulang yang digunakan
53		301-3 Produk pemerolehan ulang dan material kemasannya
54	GRI 302: Energi	302-1 Konsumsi energi dalam organisasi
55		302-2 Konsumsi energi di luar organisasi

56		302-3 Intensitas energi
57		302-4 Pengurangan konsumsi energi
58		302-5 Pengurangan pada energi yang dibutuhkan untuk produk dan jasa
59		303-1 Interaksi dengan air sebagai sumber daya bersama
60	GRI 303: Air dan Efluen	303-2 Manajemen dampak yang berkaitan dengan pembuangan air
61		303-3 Pengambilan air
62		303-4 Pembuangan air
63		303-5 Konsumsi air
64	GRI 304: Keanekaragaman Hayati	304-1 Lokasi operasi yang dimiliki, disewa, dikelola, atau berdekatan dengan, kawasan lindung dan kawasan dengan nilai keanekaragaman hayati tinggi di luar kawasan lindung
65		304-2 Dampak signifikan dari aktivitas, produk, dan jasa pada keanekaragaman hayati
66		304-3 Habitat yang dilindungi atau direstorasi
67		304-4 Spesies Daftar Merah IUCN dan spesies daftar konservasi nasional dengan habitat dalam wilayah yang terkena efek operasi
68	GRI 305: Emisi	305-1 Emisi GRK (Cakupan 1) langsung
69		305-2 Emisi energi GRK (Cakupan 2) tidak langsung
70		305-3 Emisi GRK (Cakupan 3) tidak langsung lainnya
71		305-4 Intensitas emisi GRK
72		305-5 Pengurangan emisi GRK
73		305-6 Emisi zat perusak ozon (ODS)
74		305-7 Nitrogen oksida (NOx), belerang oksida (SOx), dan emisi udara signifikan lainnya
75	GRI 306: Limbah	306-1 Timbulan limbah dan dampak signifikan terkait limbah
76		306-2 Manajemen dampak signifikan terkait limbah
77		306-3 Timbulan limbah

78		306-4 Limbah yang dialihkan dari pembuangan akhir
79		306-5 Limbah yang dikirimkan ke pembuangan akhir
80	GRI 308: Penilaian Lingkungan Pemasok	308-1 Seleksi pemasok baru dengan menggunakan kriteria lingkungan
81		308-2 Dampak lingkungan negatif dalam rantai pasokan dan tindakan yang telah diambil
82		401-1 Perekrutan karyawan baru dan pergantian karyawan
83	GRI 401: Kepegawaian	401-2 Tunjangan yang diberikan kepada karyawan purnawaktu yang tidak diberikan kepada karyawan pada kurun waktu tertentu atau paruh waktu
84		401-3 Cuti melahirkan
85	GRI 402: Hubungan Tenaga Kerja/Manajemen	402-1 Periode pemberitahuan minimum terkait perubahan operasional
86	GRI 403: Kesehatan dan Keselamatan Kerja	403-1 Sistem manajemen kesehatan dan keselamatan kerja
87		403-2 Pengungkapan, Pengidentifikasian bahaya, penilaian risiko, dan investigasi Insiden
88		403-3 Layanan kesehatan kerja
89		403-4 Partisipasi, konsultasi, dan komunikasi pekerja tentang kesehatan dan keselamatan kerja
90		403-5 Pelatihan pekerja mengenai kesehatan dan keselamatan kerja
91		403-6 Peningkatan kualitas kesehatan pekerja
92		403-7 Pencegahan dan mitigasi dampak-dampak kesehatan dan keselamatan kerja yang secara langsung terkait hubungan bisnis
93		403-8 Pekerja yang tercakup dalam sistem manajemen kesehatan dan keselamatan kerja
94		403-9 Kecelakaan kerja
95		403-10 Penyakit Akibat Kerja

96	GRI 404: Pelatihan dan Pendidikan	404-1 Rata-rata jam pelatihan per tahun per karyawan
97		404-2 Program untuk meningkatkan keterampilan karyawan dan program bantuan peralihan
98		404-3 Persentase karyawan yang menerima tinjauan rutin terhadap kinerja dan pengembangan karier
99	GRI 405: Keanekaragaman dan Peluang Setara	405-1 Keanekaragaman badan tata kelola dan karyawan
100		405-2 Rasio gaji pokok dan remunerasi perempuan dibandingkan laki-laki
101	GRI 406: Nondiskriminasi	406-1 Insiden diskriminasi dan tindakan perbaikan yang dilakukan
102	GRI 407: Kebebasan Berserikat dan Perundingan Kolektif	407-1 Operasi dan pemasok di mana hak atas kebebasan berserikat dan perundingan kolektif mungkin berisiko
103	GRI 408: Pekerja anak	408-1 Operasi dan pemasok yang berisiko signifikan terhadap insiden pekerja anak
104	GRI 409: Kerja Paksa atau Wajib Kerja	409-1 Operasi dan pemasok yang berisiko signifikan terhadap
		insiden kerja paksa atau wajib kerja

105	GRI 410: Praktik Keamanan	410-1 Petugas keamanan yang dilatih mengenai kebijakan atau
		prosedur hak asasi manusia
106	GRI 411: Hak Masyarakat Adat	411-1 Insiden pelanggaran yang melibatkan hak-hak masyarakat adat
107	GRI 413: Masyarakat Setempat	413-1 Operasi dengan keterlibatan masyarakat setempat, penilaian dampak, dan program pengembangan
108		413-2 Operasi yang secara aktual dan yang berpotensi memiliki dampak negatif signifikan terhadap masyarakat setempat
109	GRI 414: Penilaian Sosial Pemasok	414-1 Seleksi pemasok baru dengan menggunakan kriteria sosial
110		414-2 Dampak sosial negatif dalam rantai pasokan dan tindakan yang telah diambil
111	GRI 415: Kebijakan Publik	415-1 Kontribusi politik
112	GRI 416: Kesehatan dan Keselamatan Pelanggan	416-1 Penilaian dampak kesehatan dan keselamatan dari berbagai kategori produk dan jasa
113		416-2 Insiden ketidakpatuhan sehubungan dengan dampak kesehatan dan keselamatan dari produk dan jasa

114	GRI 417: Pemasaran dan Pelabelan	417-1 Persyaratan untuk pelabelan dan informasi produk dan jasa
115		417-2 Insiden ketidakpatuhan terkait informasi dan pelabelan produk dan jasa
116		417-3 Insiden ketidakpatuhan terkait komunikasi pemasaran
117	GRI 418: Privasi Pelanggan	418-1 Pengaduan yang berdasar mengenai pelanggaran terhadap privasi pelanggan dan hilangnya data pelanggan



Lampiran 2 Perhitungan data variabel Sustainability Report

NO	1. ABMM				2. ADMR			3. ADRO					4. AKRA					5. ARII			6. BBR M	7. BESS			8. BSML		9. BSSR		
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ΣNi= 117	55	10 1	10 4	10 6	23	32	10 4	66	62	47	74	97	32	36	85	98	91	38	36	41	57	32	41	41	23	17	13	11	14		
	0.4 7	0.8 6	0.8 9	0.9 1	0.2	0.2 7	0.8 9	0.5 6	0.5 3	0.4	0.6 3	0.8 3	0.2 7	0.3 1	0.7 3	0.8 4	0.7 8	0.3 2	0.3 1	0.3 5	0.48 718	0.2 7	0.3 5	0.3 5	0.2	0.1 5	0.1 1	0.0 9	0.1 2		



NO	10. BUL L	11. BUMI				12. BYAN			13. DEWA				14. DOID			15. ELSA					16. ENRG			17. GEMS			18. GTSI	
	2023	2019	2021	2022	2023	2021	2022	2023	2019	2020	2021	2023	2021	2022	2023	2019	2020	2021	2022	2023	2021	2022	2023	2021	2022	2023	2022	2023
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$\Sigma Ni=$ 117	55	51	64	99	100	14	15	16	45	48	46	83	29	98	105	23	25	46	44	102	41	37	58	105	107	111	22	19
	0.47009	0.44	0.55	0.85	0.85	0.12	0.13	0.14	0.38	0.41	0.39	0.71	0.25	0.84	0.9	0.2	0.21	0.39	0.38	0.87	0.35	0.32	0.5	0.9	0.91	0.95	0.19	0.16



NO	19. HILL		20. HITS		21. HRUM			22. INDY			23. ITMA			24. ITMG					25. MBAP			26. MBSS			27. MEDC			28. PGAS			
	20 22	20 23	20 22	20 23	20 21	20 22	20 23	20 21	20 22	20 23	20 21	20 22	20 23	20 19	20 20	20 21	20 22	20 23	20 21	20 22	20 23	20 21	20 22	20 23	20 21	20 22	20 23	20 19	20 21	20 22	20 23
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ΣNi=117	49	65	52	51	12	67	73	10 2	10 4	96	14	11	14	29	51	79	97	11 7	11	12	15	35	32	43	10	11	13	69	71	10 1	97
	0. 42	0. 56	0. 44	0. 44	0. 1	0. 57	0. 62	0. 87	0. 89	0. 82	0. 12	0. 09	0. 12	0. 25	0. 44	0. 68	0. 83	1	0. 09	0. 1	0. 13	0. 3	0. 27	0. 37	0. 09	0. 09	0. 11	0. 59	0. 61	0. 86	0. 83



NO	29. PSSI					30.PTBA					31. PTRO					32. RAJA			33. RUIS			34. SHIP			35. SMMT			36. SUN I	37. TCPI		
	20 19	20 20	20 21	20 22	20 23	20 19	20 20	20 21	20 22	20 23	20 19	20 20	20 21	20 22	20 23	20 21	20 22	20 23	20 21	20 22	20 23	20 21	20 22	20 23	20 21	20 22	20 23	2023	20 21	20 22	20 23
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92	0	0	1	1	1	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	
93	0	0	1	1	1	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	
94	0	0	1	1	1	0	1	1	1	1	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	
95	0	0	1	1	1	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1	1	1	0	0	0
96	0	0	1	1	1	0	0	1	1	1	0	0	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
97	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0
98	0	0	0	0	0	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	0
99	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	1	1	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

106	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	0	1	1	0	1	1	1	1	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0
108	0	0	0	0	0	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	1	0	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ΣN_i =117	9	10	49	47	53	51	73	55	11 2	11 3	28	38	45	83	89	7	8	9	17	42	67	12	14	15	37	42	66	59	11	12	13		
	0. 08	0. 09	0. 42	0. 4	0. 45	0. 44	0. 62	0. 47	0. 96	0. 97	0. 24	0. 32	0. 38	0. 71	0. 76	0. 06	0. 07	0. 08	0. 15	0. 36	0. 57	0. 1	0. 12	0. 13	0. 32	0. 36	0. 56	0.504 274	0. 09	0. 1	0. 11		



NO	38. TEBE			39. TOBA				40. TPMA			41. UNIQ		42. WINS		
	2021	2022	2023	2020	2021	2022	2023	2021	2022	2023	2022	2023	2021	2022	2023
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
3	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1
4	1	1	1	1	1	1	1	0	0	0	0	1	0	1	1
5	1	1	1	0	0	0	1	0	0	0	1	1	0	1	1
6	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
7	1	1	1	0	0	1	1	1	1	1	0	0	0	1	1
8	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
9	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1
10	1	1	1	0	0	0	1	0	0	0	0	0	0	1	1
11	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
12	1	1	1	0	0	1	1	0	0	0	1	1	0	1	1
13	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
14	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
15	1	1	1	0	0	1	1	0	0	0	1	1	0	1	1
16	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
17	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
18	1	1	1	0	0	0	1	0	0	0	1	1	0	1	1
19	1	1	1	0	0	0	1	1	1	1	0	0	1	1	1
20	1	1	1	0	0	0	1	0	0	0	1	1	0	1	1
21	1	1	1	0	0	0	1	0	0	0	0	0	0	1	1
22	1	1	1	0	0	1	1	0	0	0	0	1	0	1	1
23	1	1	1	0	0	1	1	1	1	1	0	0	0	1	1
24	1	1	1	0	0	1	1	0	0	0	0	1	0	1	1
25	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
26	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
27	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	1	1	1	0	0	1	1	0	1	1	1	0	0	1	1
30	1	1	1	0	0	0	1	0	0	0	0	0	0	1	1
31	1	1	1	0	0	1	1	0	0	0	0	0	1	1	1
32	1	1	1	0	1	1	1	0	0	0	1	0	1	1	1
33	1	1	1	0	0	1	1	1	1	1	0	0	1	1	1
34	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1
35	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1

36	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
37	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0
38	1	1	1	0	0	1	1	1	1	1	1	1	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0
41	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
44	0	0	0	0	0	1	1	0	0	0	0	0	1	1	1
45	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1
46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0
52	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
54	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1
55	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
56	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
57	0	0	0	1	1	0	0	0	0	0	1	1	0	1	1
58	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
59	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0
60	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
61	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
62	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0
63	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0
64	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0
65	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
66	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0
67	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0
68	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1
69	0	1	1	0	0	1	1	0	0	0	0	0	0	1	1
70	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
71	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
72	0	0	1	0	0	0	1	1	1	1	0	0	0	1	1

73	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
74	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
75	0	0	0	0	0	1	1	0	0	1	1	1	0	1	1
76	0	0	0	1	1	1	1	0	0	1	1	1	1	1	1
77	0	1	1	0	0	1	1	1	1	1	1	1	0	1	1
78	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
79	0	0	0	0	0	1	1	0	0	0	1	1	0	1	1
80	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
82	1	1	1	0	0	0	1	0	0	0	0	0	1	1	1
83	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1
84	1	1	1	0	0	0	1	0	0	0	0	0	0	1	1
85	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
86	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1
87	1	1	1	0	0	1	1	0	0	0	1	1	1	1	1
88	1	1	1	0	0	1	1	0	0	0	1	1	0	1	0
89	1	1	1	0	0	1	1	0	0	0	0	0	1	1	1
90	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1
91	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1
92	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
93	1	1	1	0	0	1	1	0	0	0	0	0	0	1	1
94	1	1	1	0	0	1	1	0	0	0	0	0	1	1	1
95	1	1	1	0	0	0	1	0	0	0	0	0	0	1	1
96	1	1	1	1	1	0	1	0	0	0	0	0	1	1	1
97	1	1	1	0	0	1	1	0	0	0	1	1	0	1	1
98	0	0	1	0	0	0	1	0	0	0	0	0	1	1	1
99	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1
100	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
101	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0
102	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
103	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
104	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
106	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
107	1	1	1	1	1	0	1	0	0	0	1	1	0	0	0
108	0	0	1	1	1	1	1	0	0	0	1	1	0	0	0
109	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0

110	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
113	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
114	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
115	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
116	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
117	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
$\Sigma N_i=117$	54	58	61	20	20	71	103	12	14	16	29	30	22	80	75
	0.46	0.5	0.52	0.17	0.17	0.61	0.88	0.1	0.12	0.14	0.25	0.26	0.19	0.68	0.64



Lampiran 3 Perhitungan data variabel free cash flow

Perusahaan	Tahun	Arus Kas Operasi	Arus Kas Investasi	Total Aset	FCF
ABMM	2019	834,935,082,205	- 1,226,454,811,560	11,864,383,317,085	0.1737
ABMM	2021	5,201,892,613,573	- 1,149,295,006,872	14,792,731,644,771	0.4293
ABMM	2022	7,876,960,568,354	- 13,797,770,956,357	31,187,943,390,284	0.6950
ABMM	2023	5,970,650,977,272	- 4,142,419,007,704	33,247,500,589,320	0.3042
ADMR	2021	2,288,158,476,540	- 5,630,079,285,048	13,796,026,272,150	0.5740
ADMR	2022	7,495,183,718,750	- 373,102,187,500	20,103,511,937,500	0.3914
ADMR	2023	4,562,960,578,855	- 2,164,413,678,220	26,084,030,792,160	0.2579
ADRO	2019	12,740,143,587	- 7,479,282,056	100,238,371,345	0.2017
ADRO	2020	10,372,630,635	- 5,061,233,475	89,884,357,110	0.1717
ADRO	2021	20,519,438,952	- 9,208,927,032	108,386,967,696	0.2743
ADRO	2022	60,378,968,750	- 11,987,437,500	168,473,546,875	0.4295
ADRO	2023	17,735,181,830	- 8,960,624,010	161,122,658,735	0.1657
AKRA	2019	687,979,553	- 779,297,473	21,409,046,173	0.0685
AKRA	2020	1,066,972,977	- 139,352,627	18,683,572,815	0.0646
AKRA	2021	2,944,557,443	- 208,357,987	23,508,585,736	0.1341
AKRA	2022	2,628,813,082	- 276,398,377	27,187,608,036	0.1069
AKRA	2023	3,501,897,695	- 583,534,794	30,254,623,117	0.1350
ARII	2021	254,105,082	- 158,917,464	5,278,248,420	0.0782
ARII	2022	527,671,875	- 406,484,375	7,011,328,125	0.1332
ARII	2023	671,524,480	- 357,547,400	8,119,433,750	0.1267
BBRM	2023	93,629,971,460	- 30,021,888,990	535,187,148,575	0.2310
BESS	2021	108,099,156,111	- 37,767,051,193	667,408,015,354	0.2186

Perusahaan	Tahun	Arus Kas Operasi	Arus Kas Investasi	Total Aset	FCF
BESS	2022	121,180,740,904	- 8,760,465,000	772,666,449,902	0.1682
BESS	2023	123,161,485,159	- 559,041,660	689,803,373,589	0.1794
BSML	2022	39,357,742,209	- 31,220,334,408	270,288,041,602	0.2611
BSML	2023	20,274,231,648	- 15,453,820,963	255,201,206,132	0.1400
BSSR	2021	3,386,149,393,052	- 327,091,782,905	6,211,543,780,834	0.5978
BSSR	2022	3,971,849,369,038	- 759,434,962,961	6,368,399,213,925	0.7429
BSSR	2023	1,755,914,264,872	- 536,127,504,272	6,296,735,697,368	0.3640
BULL	2023	500,090,661,072	- 151,503,597,504	5,768,812,902,960	0.1130
BUMI	2019	- 809,869,881,685	- 36,276,234,652	51,428,269,450,642	- 0.0150
BUMI	2021	- 1,063,114,127,350	- 2,466,064,333,475	60,336,801,380,510	0.0233
BUMI	2022	- 9,275,796,171,875	- 3,311,665,296,875	70,125,733,890,625	- 0.0850
BUMI	2023	- 1,782,539,480,184	646,814,049,480	64,654,247,818,944	- 0.0376
BYAN	2021	21,547,487,508,708	- 2,346,110,221,403	34,726,639,253,379	0.6880
BYAN	2022	33,501,241,401,006	- 2,871,848,795,847	62,066,013,405,315	0.5860
BYAN	2023	11,275,323,925,256	- 3,162,954,660,584	53,097,634,283,456	0.2719
DEWA	2019	- 226,488,714,673	- 532,534,815,800	7,632,263,793,733	0.0401
DEWA	2020	725,825,966,400	- 623,873,609,460	7,755,758,258,940	0.1740
DEWA	2021	963,151,619,790	- 229,932,984,282	8,050,112,399,028	0.1482
DEWA	2023	1,109,832,247	- 242,729,086	8,137,619,055	0.1662
DOID	2021	2,059,377,458,154	- 4,728,182,933,196	23,371,300,373,802	0.2904
DOID	2022	3,893,203,843,750	- 2,834,627,203,125	24,548,240,734,375	0.2741
DOID	2023	5,226,945,485,755	- 2,454,123,459,245	28,840,711,830,540	0.2663
ELSA	2019	575,797	- 671,113	6,805,037	0.1832
ELSA	2020	943,928	- 483,159	7,562,822	0.1887
ELSA	2021	1,004,197	- 361,321	7,234,857	0.1887

Perusahaan	Tahun	Arus Kas Operasi	Arus Kas Investasi	Total Aset	FCF
ELSA	2022	1,461,281	- 387,541	8,836,089	0.2092
ELSA	2023	1,389,990	- 487,739	9,601,482	0.1956
ENRG	2021	2,384,263,601,088	- 2,620,236,646,366	15,176,163,789,381	0.3298
ENRG	2022	2,482,122,992,605	- 1,048,603,652,213	18,788,011,648,248	0.1879
ENRG	2023	2,470,685,861,160	- 1,986,801,007,232	21,100,759,777,336	0.2112
GEMS	2021	5,320,072,297,370	- 142,726,434,750	11,842,649,795,045	0.4613
GEMS	2022	10,934,179,203,125	- 218,925,703,125	17,641,981,312,500	0.6322
GEMS	2023	6,011,037,564,264	- 1,512,392,748,024	20,184,457,897,080	0.3727
GTSI	2022	386,199,888,364	25,486,343,685	1,947,529,450,772	0.1852
GTSI	2023	92,853,944,104	- 50,395,166,072	1,662,466,496,448	0.0862
HILL	2022	819,296	471,381	3,458,221	0.1006
HILL	2023	966,573	202,115	4,977,374	0.1536
HITS	2022	626,604,884,459	- 69,887,421,536	3,616,877,796,669	0.1926
HITS	2023	267,882,552,472	- 190,024,059,888	4,190,383,348,064	0.1093
HRUM	2021	1,850,179,188,558	- 3,931,923,308,322	12,494,844,163,314	0.4628
HRUM	2022	6,643,318,847,053	- 1,719,821,679,079	21,313,857,201,952	0.3924
HRUM	2023	3,507,333,761,939	152,464,465,895	27,218,997,569,064	0.1233
INDY	2021	4,850,830,910,000	- 478,094,490,000	36,914,771,010,000	0.1444
INDY	2022	9,260,754,480,000	328,369,780,000	35,938,720,420,000	0.2485
INDY	2023	- 1,990,816,360,000	- 2,834,203,320,000	31,131,023,900,000	0.0271
ITMA	2021	- 3,493,122,545	-	2,614,005,102,955	- 0.0013
ITMA	2022	- 7,756,783,059	- 103,038,050,000	3,447,920,218,187	0.0276
ITMA	2023	- 6,471,683,048	-	3,494,744,318,136	- 0.0019
ITMG	2019	1,243,527,856	- 1,333,439,524	16,806,878,941	0.1533
ITMG	2020	2,436,540,015	- 632,425,885	16,342,462,045	0.1878

Perusahaan	Tahun	Arus Kas Operasi	Arus Kas Investasi	Total Aset	FCF
ITMG	2021	8,814,203,873	- 352,201,727	23,775,564,291	0.3855
ITMG	2022	20,851,000,032	- 1,120,849,481	41,532,624,387	0.5290
ITMG	2023	3,407,614,304	- 2,120,779,120	33,727,849,352	0.1639
MBAP	2021	1,535,261,736,216	- 608,937,515,768	3,688,494,922,968	0.5813
MBAP	2022	3,138,906,941,424	- 450,366,999,264	4,779,692,845,432	0.7509
MBAP	2023	64,571,965,527	1,205,873,933,178	3,543,260,535,350	- 0.3221
MBSS	2021	337,566,674,700	- 84,208,249,305	2,534,021,547,525	0.1664
MBSS	2022	731,577,652,497	388,891,707,174	3,317,456,649,456	0.1033
MBSS	2023	255,821,412,240	223,967,868,336	3,806,825,454,288	0.0084
MEDC	2021	6,613,394,242,325	1,183,733,610,360	81,194,284,925,615	0.0669
MEDC	2022	17,444,340,750,000	- 16,608,787,812,500	108,311,028,531,250	0.3144
MEDC	2023	11,126,107,907,112	- 9,680,397,768,600	114,892,577,482,296	0.1811
PGAS	2019	11,267,892,889,361	- 13,063,765,414,729	102,501,986,581,556	0.2374
PGAS	2021	8,314,621,326,402	- 1,686,286,719,191	107,173,729,882,638	0.0933
PGAS	2022	15,254,348,686,432	477,937,967,789	113,182,342,376,842	0.1306
PGAS	2023	11,173,028,357	- 890,328,347	101,885,642,722,891	0.0001
PSSI	2019	345,827,673,999	- 612,855,972,586	1,990,602,807,233	0.4816
PSSI	2020	379,451,708,545	- 151,097,837,800	2,071,120,270,765	0.2562
PSSI	2021	514,490,383,997	- 144,612,119,914	2,300,678,624,350	0.2865
PSSI	2022	755,080,748,009	- 95,022,429,067	2,821,424,805,757	0.3013
PSSI	2023	507,635,653,072	- 420,795,475,152	3,142,890,258,688	0.2954
PTBA	2019	4,296,479	- 3,784,778	26,098,052	0.3096
PTBA	2020	3,513,628	113,585	24,056,755	0.1413
PTBA	2021	10,795,075	- 9,838,749	36,123,703	0.5712
PTBA	2022	12,527,439	- 1,294,274	45,359,207	0.3047

Perusahaan	Tahun	Arus Kas Operasi	Arus Kas Investasi	Total Aset	FCF
PTBA	2023	3,104,707	7,248,649	38,765,189	- 0.1069
PTRO	2019	1,475,081,245	- 921,299,037	7,653,450,116	0.3131
PTRO	2020	1,513,616,355	- 440,733,735	7,460,655,480	0.2620
PTRO	2021	1,713,825,063	1,575,154,779	7,653,818,112	0.0181
PTRO	2022	1,688,876,145	1,387,228,455	850,793,130	0.3545
PTRO	2023	2,061,775,296	1,660,458,528	11,216,176,560	0.0358
RAJA	2021	- 49,408,067,704	- 1,034,003,498,801	3,504,268,802,888	0.2810
RAJA	2022	185,442,643,967	- 227,198,286,741	4,097,997,469,325	0.1007
RAJA	2023	672,818,971,784	- 822,037,342,152	5,066,439,541,248	0.2951
RUIS	2021	106,688,878,705	- 33,293,938,360	1,297,577,363,103	0.1079
RUIS	2022	102,563,356,303	- 34,108,331,593	1,267,549,300,138	0.1078
RUIS	2023	78,307,055,323	- 42,372,129,277	1,341,729,318,010	0.0899
SHIP	2021	530,954,141,694	- 793,706,475,646	4,644,079,062,770	0.2852
SHIP	2022	837,279,423,186	- 1,191,559,932,725	5,966,854,301,377	0.3400
SHIP	2023	834,172,139,048	- 1,244,583,057,448	6,662,495,420,464	0.3120
SMMT	2021	123,403,962,903	75,882,102,767	1,051,640,434,770	0.0452
SMMT	2022	419,153,735,412	- 129,421,692,860	1,182,852,785,319	0.4638
SMMT	2023	155,992,058,934	267,561,409,966	1,007,863,610,940	- 0.1107
SUNI	2023	- 21,120,143,647	- 29,672,268,711	788,904,760,873	0.0108
TCPI	2021	452,680	- 312,579	2,847,296	0.2688
TCPI	2022	445,367	- 332,633	2,809,869	0.2769
TCPI	2023	535,835	- 576,302	3,509,253	0.3169
TEBE	2021	281,080,742	- 9,373,654	989,060,914	0.2937
TEBE	2022	410,703,546	- 102,049,482	1,302,505,387	0.3937
TEBE	2023	214,813,512	7,459,516	1,150,900,654	0.1802

Perusahaan	Tahun	Arus Kas Operasi	Arus Kas Investasi	Total Aset	FCF
TOBA	2020	- 1,576,398,031,155	95,358,957,165	10,871,814,119,895	- 0.1538
TOBA	2021	311,370,343,110	626,572,778,760	12,240,823,375,260	- 0.0258
TOBA	2022	1,686,122,554,797	- 461,163,765,960	14,140,158,624,711	0.1519
TOBA	2023	573,556,806,288	- 1,569,269,592,720	14,604,283,713,024	0.1467
TPMA	2021	238,855,440,354	- 62,922,794,095	1,416,289,286,220	0.2131
TPMA	2022	409,575,053,194	- 229,646,486,540	1,689,220,641,764	0.3784
TPMA	2023	474,397,184,640	- 310,675,688,128	1,809,944,816,648	0.4338
UNIQ	2022	76,503,963,923	26,277,120,824	581,518,014,122	0.0864
UNIQ	2023	70,235,554,481	17,228,142,071	726,265,910,969	0.0730
WINS	2021	101,057,823,846	263,111,613,103	2,797,887,151,804	- 0.0579
WINS	2022	203,291,791,655	- 180,512,186,754	2,980,170,873,016	0.1288
WINS	2023	356,381,399,496	- 182,100,806,280	3,002,966,194,720	0.1793



Lampiran 4 Perhitungan data variabel pertumbuhan penjualan

Kode Perusahaan	Tahun	Penjualan(t)	Penjualan(t-1)	Penjualan(t-1)	SG
ABMM	2019	8,227,773,488,328	10,736,990,492,459	10,736,990,492,459	- 0.2337
ABMM	2021	14,580,998,448,506	8,652,826,848,144	8,652,826,848,144	0.6851
ABMM	2022	22,739,591,073,201	16,074,965,771,494	16,074,965,771,494	0.4146
ABMM	2023	23,016,070,364,096	22,284,249,951,336	22,284,249,951,336	0.0328
ADMR	2021	6,573,999,305,928	1,761,520,043,982	1,761,520,043,982	2.7320
ADMR	2022	14,189,719,468,750	7,190,167,937,500	7,190,167,937,500	0.9735
ADMR	2023	16,707,524,154,585	13,971,765,377,710	13,971,765,377,710	0.1958
ADRO	2019	48,016,411,906	50,274,721,639	50,274,721,639	- 0.0449
ADRO	2020	35,703,249,570	48,694,014,090	48,694,014,090	- 0.2668
ADRO	2021	57,039,969,348	36,212,752,812	36,212,752,812	0.5751
ADRO	2022	126,599,984,375	62,386,218,750	62,386,218,750	1.0293
ADRO	2023	100,272,599,060	124,655,408,615	124,655,408,615	- 0.1956
AKRA	2019	21,702,637,573	23,548,144,117	23,548,144,117	- 0.0784
AKRA	2020	17,715,928,111	21,702,637,573	21,702,637,573	- 0.1837
AKRA	2021	25,463,445,015	17,491,507,353	17,491,507,353	0.4558
AKRA	2022	47,269,426,164	25,463,445,015	25,463,445,015	0.8564
AKRA	2023	41,817,425,630	47,269,426,164	47,269,426,164	- 0.1153
ARII	2021	1,647,804,384	602,297,760	602,297,760	1.7359
ARII	2022	3,843,453,125	1,802,250,000	1,802,250,000	1.1326
ARII	2023	4,317,169,465	3,784,417,685	3,784,417,685	0.1408
BBRM	2023	162,243,363,675	143,553,188,740	143,553,188,740	0.1302
BESS	2021	404,097,297,862	295,532,059,811	295,532,059,811	0.3674
BESS	2022	406,469,609,964	404,097,297,862	404,097,297,862	0.0059

Kode Perusahaan	Tahun	Penjualan(t)	Penjualan(t-1)	Penjualan(t-1)	SG
BESS	2023	363,741,176,938	406,469,609,964	406,469,609,964	- 0.1051
BSML	2022	346,765,538,330	61,158,765,960	61,158,765,960	4.6699
BSML	2023	317,055,920,205	346,765,538,330	346,765,538,330	- 0.0857
BSSR	2021	9,865,195,415,365	4,729,659,316,585	4,729,659,316,585	1.0858
BSSR	2022	16,187,448,556,584	10,875,982,134,635	10,875,982,134,635	0.4884
BSSR	2023	17,486,933,118,096	15,863,308,559,424	15,863,308,559,424	0.1024
BULL	2023	2,283,679,647,936	1,754,183,419,776	1,754,183,419,776	0.3018
BUMI	2019	15,452,437,757,402	15,442,073,702,268	15,442,073,702,268	0.0007
BUMI	2021	14,402,322,348	11,291,383,931	11,291,383,931	0.2755
BUMI	2022	28,594,998,859	15,753,327,734	15,753,327,734	0.8152
BUMI	2023	25,844,331,801	28,153,949,597	28,153,949,597	- 0.0820
BYAN	2021	40,698,326,153	19,906,871,221	19,906,871,221	1.0444
BYAN	2022	73,992,678,280	44,868,271,687	44,868,271,687	0.6491
BYAN	2023	55,210,483,213	72,511,037,338	72,511,037,338	- 0.2386
DEWA	2019	4,786,808,558,051	3,834,712,608,011	3,834,712,608,011	0.2483
DEWA	2020	4,270,503,560,985	4,854,359,460,015	4,854,359,460,015	- 0.1203
DEWA	2021	4,610,645,639,640	4,331,445,784,326	4,331,445,784,326	0.0645
DEWA	2023	7,372,668,455	6,068,500,852	6,068,500,852	0.2149
DOID	2021	13,008,036,769,818	8,595,771,469,134	8,595,771,469,134	0.5133
DOID	2022	24,276,713,703,125	14,227,255,671,875	14,227,255,671,875	0.7064
DOID	2023	28,205,635,923,270	23,903,823,380,645	23,903,823,380,645	0.1800
ELSA	2019	8,385,122	6,624,774	6,624,774	0.2657
ELSA	2020	7,726,945	8,385,122	8,385,122	- 0.0785
ELSA	2021	8,136,563	7,726,945	7,726,945	0.0530
ELSA	2022	12,305,690	8,136,563	8,136,563	0.5124

Kode Perusahaan	Tahun	Penjualan(t)	Penjualan(t-1)	Penjualan(t-1)	SG
ELSA	2023	12,564,391	12,305,690	12,305,690	0.0210
ENRG	2021	5,794,589,003,647	4,635,736,549,230	4,635,736,549,230	0.2500
ENRG	2022	7,109,464,899,414	6,388,301,886,353	6,388,301,886,353	0.1129
ENRG	2023	6,486,670,853,184	6,967,103,864,304	6,967,103,864,304	- 0.0690
GEMS	2021	22,655,347,047,435	15,162,240,092,945	15,162,240,092,945	0.4942
GEMS	2022	45,624,443,796,875	24,780,524,859,375	24,780,524,859,375	0.8411
GEMS	2023	44,641,849,577,664	44,920,732,375,752	44,920,732,375,752	- 0.0062
GTSI	2022	648,532,419,745	483,876,262,979	483,876,262,979	0.3403
GTSI	2023	495,780,795,320	635,546,105,320	635,546,105,320	- 0.2199
HILL	2022	3,265,509	1,983,781	1,983,781	0.6461
HILL	2023	4,249,943	3,265,509	3,265,509	0.3015
HITS	2022	1,765,628,956,075	1,336,929,521,678	1,336,929,521,678	0.3207
HITS	2023	1,733,868,182,424	1,730,273,726,200	1,730,273,726,200	0.0021
HRUM	2021	4,802,603,435,862	2,254,602,905,442	2,254,602,905,442	1.1301
HRUM	2022	15,074,264,729,265	5,603,037,341,839	5,603,037,341,839	1.6904
HRUM	2023	15,425,647,506,780	15,074,264,729,265	15,074,264,729,265	0.0233
INDY	2021	30,691,611,190,000	18,138,265,600,000	18,138,265,600,000	0.6921
INDY	2022	43,349,107,250,000	30,691,611,190,000	30,691,611,190,000	0.4124
INDY	2023	30,268,391,900,000	43,349,107,250,000	43,349,107,250,000	- 0.3018
ITMA	2021	2,917,411,202	1,520,633,061	1,520,633,061	0.9186
ITMA	2022	3,118,387,592	3,216,328,798	3,216,328,798	- 0.0305
ITMA	2023	3,786,832,488	3,055,944,512	3,055,944,512	0.2392
ITMG	2019	23,848,444,392	27,908,064,630	27,908,064,630	- 0.1455
ITMG	2020	16,719,164,280	24,198,425,160	24,198,425,160	- 0.3091
ITMG	2021	29,634,044,697	16,913,559,384	16,913,559,384	0.7521

Kode Perusahaan	Tahun	Penjualan(t)	Penjualan(t-1)	Penjualan(t-1)	SG
ITMG	2022	57,201,266,703	32,670,345,303	32,670,345,303	0.7509
ITMG	2023	36,602,440,040	56,055,859,608	56,055,859,608	- 0.3470
MBAP	2021	4,434,431,883,312	2,879,678,691,544	2,879,678,691,544	0.5399
MBAP	2022	7,009,159,137,568	4,831,027,244,592	4,831,027,244,592	0.4509
MBAP	2023	3,459,679,285,634	6,940,380,190,156	6,940,380,190,156	- 0.5015
MBSS	2021	1,047,124,222,245	782,618,312,745	782,618,312,745	0.3380
MBSS	2022	1,389,504,810,798	1,154,148,906,159	1,154,148,906,159	0.2039
MBSS	2023	973,581,952,464	1,361,666,992,608	1,361,666,992,608	- 0.2850
MEDC	2021	18,902,506,027,440	15,712,113,226,485	15,712,113,226,485	0.2031
MEDC	2022	36,128,556,281,250	20,675,649,750,000	20,675,649,750,000	0.7474
MEDC	2023	34,603,809,299,952	35,571,309,429,168	35,571,309,429,168	- 0.0272
PGAS	2019	53,501,024,525,284	53,800,577,924,938	53,800,577,924,938	- 0.0056
PGAS	2021	43,322,124,541,164	41,173,714,682,245	41,173,714,682,245	0.0522
PGAS	2022	45,392,368,467,755	47,760,904,138,836	47,760,904,138,836	- 0.0496
PGAS	2023	56,295,290,003,435	44,549,791,925,095	44,549,791,925,095	0.2636
PSSI	2019	1,047,093,561,753	883,602,774,772	883,602,774,772	0.1850
PSSI	2020	964,147,500,680	1,062,459,872,565	1,062,459,872,565	- 0.0925
PSSI	2021	1,551,520,394,774	975,357,723,304	975,357,723,304	0.5907
PSSI	2022	1,876,401,608,424	1,710,488,985,226	1,710,488,985,226	0.0970
PSSI	2023	1,578,465,930,312	1,838,828,249,664	1,838,828,249,664	- 0.1416
PTBA	2019	21,787,564	21,166,993	21,166,993	0.0293
PTBA	2020	17,325,192	21,787,564	21,787,564	- 0.2048
PTBA	2021	29,261,468	17,325,192	17,325,192	0.6890
PTBA	2022	42,648,590	29,261,468	29,261,468	0.4575
PTBA	2023	38,488,867	42,648,590	42,648,590	- 0.0975

Kode Perusahaan	Tahun	Penjualan(t)	Penjualan(t-1)	Penjualan(t-1)	SG
PTRO	2019	6,617,289,049	6,468,690,638	6,468,690,638	0.0230
PTRO	2020	4,798,590,480	6,710,671,485	6,710,671,485	- 0.2849
PTRO	2021	5,972,893,479	4,894,664,496	4,894,664,496	0.2203
PTRO	2022	6,794,662,005	5,930,488,305	5,930,488,305	0.1457
PTRO	2023	8,899,922,736	7,339,092,336	7,339,092,336	0.2127
RAJA	2021	1,400,454,263,470	1,409,273,846,756	1,409,273,846,756	- 0.0063
RAJA	2022	1,992,898,850,328	1,543,944,636,530	1,543,944,636,530	0.2908
RAJA	2023	3,140,947,719,360	1,952,992,732,608	1,952,992,732,608	0.6083
RUIS	2021	1,645,636,804,155	1,616,390,151,557	1,616,390,151,557	0.0181
RUIS	2022	1,706,092,477,346	1,645,636,804,155	1,645,636,804,155	0.0367
RUIS	2023	1,779,907,291,848	1,706,092,477,346	1,706,092,477,346	0.0433
SHIP	2021	1,447,075,624,012	1,223,103,492,646	1,223,103,492,646	0.1831
SHIP	2022	2,118,304,557,532	1,595,342,815,988	1,595,342,815,988	0.3278
SHIP	2023	2,522,543,943,968	2,075,887,296,352	2,075,887,296,352	0.2152
SMMT	2021	508,273,589,516	209,445,719,950	209,445,719,950	1.4268
SMMT	2022	1,049,271,370,556	508,273,589,516	508,273,589,516	1.0644
SMMT	2023	1,016,267,098,417	1,049,271,370,556	1,049,271,370,556	- 0.0315
SUNI	2023	762,424,927,875	540,272,575,371	540,272,575,371	0.4112
TCPI	2021	1,670,829	1,672,368	1,672,368	- 0.0009
TCPI	2022	1,758,131	1,670,829	1,670,829	0.0523
TCPI	2023	1,825,584	1,758,131	1,758,131	0.0384
TEBE	2021	448,008,428	197,952,877	197,952,877	1.2632
TEBE	2022	781,793,751	448,008,428	448,008,428	0.7450
TEBE	2023	632,232,808	781,793,751	781,793,751	- 0.1913
TOBA	2020	4,675,267,910,340	7,402,012,568,415	7,402,012,568,415	- 0.3684

Kode Perusahaan	Tahun	Penjualan(t)	Penjualan(t-1)	Penjualan(t-1)	SG
TOBA	2021	6,599,934,954,945	4,735,015,743,060	4,735,015,743,060	0.3939
TOBA	2022	9,996,533,088,120	7,274,502,439,299	7,274,502,439,299	0.3742
TOBA	2023	7,723,456,467,408	9,796,259,099,520	9,796,259,099,520	- 0.2116
TPMA	2021	599,528,958,034	567,360,952,972	567,360,952,972	0.0567
TPMA	2022	987,931,969,600	660,956,621,966	660,956,621,966	0.4947
TPMA	2023	1,026,433,615,512	968,149,465,600	968,149,465,600	0.0602
UNIQ	2022	424,781,798,011	318,296,247,836	318,296,247,836	0.3345
UNIQ	2023	571,540,783,292	424,781,798,011	424,781,798,011	0.3455
WINS	2021	602,909,926,239	618,858,872,685	618,858,872,685	- 0.0258
WINS	2022	959,601,445,384	664,684,003,761	664,684,003,761	0.4437
WINS	2023	1,118,602,981,304	940,386,236,224	940,386,236,224	0.1895



Lampiran 5 Perhitungan data variabel kinerja keuangan

Kode Perusahaan	Tahun	Laba Bersih	Total Aset	ROA
ABMM	2019	54,083,265,996	11,864,383,317,085	0.0046
ABMM	2021	2,656,658,111,907	14,792,731,644,771	0.1796
ABMM	2022	5,378,484,068,617	31,187,943,390,284	0.1725
ABMM	2023	4,865,657,934,488	33,247,500,589,320	0.1463
ADMR	2021	2,238,782,660,472	13,796,026,272,150	0.1623
ADMR	2022	5,245,917,781,250	20,103,511,937,500	0.2609
ADMR	2023	6,782,371,724,285	26,084,030,792,160	0.2600
ADRO	2019	6,041,742,778	100,238,371,345	0.0603
ADRO	2020	2,232,542,925	89,884,357,110	0.0248
ADRO	2021	14,694,479,598	108,386,967,696	0.1356
ADRO	2022	44,236,296,875	168,473,546,875	0.2626
ADRO	2023	28,537,298,030	161,122,658,735	0.1771
AKRA	2019	703,077,279	21,409,046,173	0.0328
AKRA	2020	961,997,313	18,683,572,815	0.0515
AKRA	2021	1,135,001,756	23,508,585,736	0.0483
AKRA	2022	2,479,059,157	27,187,608,036	0.0912
AKRA	2023	3,078,469,701	30,254,623,117	0.1018
ARII	2021	13,114,548	5,278,248,420	0.0025
ARII	2022	407,421,875	7,011,328,125	0.0581
ARII	2023	11,200,280	8,119,433,750	0.0014
BBRM	2023	62,156,569,260	535,187,148,575	0.1161
BESS	2021	112,465,300,664	667,408,015,354	0.1685
BESS	2022	55,922,236,073	772,666,449,902	0.0724

Kode Perusahaan	Tahun	Laba Bersih	Total Aset	ROA
BESS	2023	79,450,034,686	689,803,373,589	0.1152
BSML	2022	16,021,015,616	270,288,041,602	0.0593
BSML	2023	17,071,810,215	255,201,206,132	0.0669
BSSR	2021	2,927,489,810,501	6,211,543,780,834	0.4713
BSSR	2022	3,773,804,274,889	6,368,399,213,925	0.5926
BSSR	2023	2,501,545,979,944	6,296,735,697,368	0.3973
BULL	2023	429,105,619,872	5,768,812,902,960	0.0744
BUMI	2019	131,535,524,498	51,428,269,450,642	0.0026
BUMI	2021	3,190,940,645	60,336,801,380,510	0.0529
BUMI	2022	8,697,882,906	70,125,733,890,625	0.1240
BUMI	2023	413,844,476	64,654,247,818,944	0.0064
BYAN	2021	18,063,945,313	34,726,639,253,379	0.5202
BYAN	2022	36,206,556,860	62,066,013,405,315	0.5834
BYAN	2023	19,726,018,260	53,097,634,283,456	0.3715
DEWA	2019	52,416,794,331	7,632,263,793,733	0.0069
DEWA	2020	23,210,558,820	7,755,758,258,940	0.0030
DEWA	2021	15,603,912,072	8,050,112,399,028	0.0019
DEWA	2023	35,294,692	8,137,619,055	0.0043
DOID	2021	4,007,880,156	23,371,300,373,802	0.0002
DOID	2022	447,479,843,750	24,548,240,734,375	0.0182
DOID	2023	554,016,788,535	28,840,711,830,540	0.0192
ELSA	2019	356,477	6,805,037	0.0524
ELSA	2020	249,085	7,562,822	0.0329
ELSA	2021	108,852	7,234,857	0.0150
ELSA	2022	378,058	8,836,089	0.0428

Kode Perusahaan	Tahun	Laba Bersih	Total Aset	ROA
ELSA	2023	503,131	9,601,482	0.0524
ENRG	2021	566,684,545,296	15,176,163,789,381	0.0373
ENRG	2022	1,049,832,243,313	18,788,011,648,248	0.0559
ENRG	2023	1,050,992,845,112	21,100,759,777,336	0.0498
GEMS	2021	5,057,238,125	11,842,649,795,045	0.0004
GEMS	2022	10,873,563,031	17,641,981,312,500	0.0006
GEMS	2023	8,134,265,570	20,184,457,897,080	0.0004
GTSI	2022	80,641,117,405	1,947,529,450,772	0.0414
GTSI	2023	120,232,112,632	1,662,466,496,448	0.0723
HILL	2022	380,779	3,458,221	0.1101
HILL	2023	438,955	4,977,374	0.0882
HITS	2022	177,497,482,183	3,616,877,796,669	0.0491
HITS	2023	142,472,297,936	4,190,383,348,064	0.0340
HRUM	2021	1,404,122,167,596	12,494,844,163,314	0.1124
HRUM	2022	6,329,661,707,369	21,313,857,201,952	0.2970
HRUM	2023	3,261,267,090,704	27,218,997,569,064	0.1198
INDY	2021	633,165,960,000	36,914,771,010,000	0.0172
INDY	2022	5,107,760,970,000	35,938,720,420,000	0.1421
INDY	2023	1,510,430,910,000	31,131,023,900,000	0.0485
ITMA	2021	174,880,978,152	2,614,005,102,955	0.0669
ITMA	2022	480,578,809,414	3,447,920,218,187	0.1394
ITMA	2023	32,174,718,184	3,494,744,318,136	0.0092
ITMG	2019	1,758,504,302	16,806,878,941	0.1046
ITMG	2020	533,563,940	16,342,462,045	0.0326
ITMG	2021	6,783,339,910	23,775,564,291	0.2853

Kode Perusahaan	Tahun	Lab a Bersih	Total Aset	ROA
ITMG	2022	18,866,896,195	41,532,624,387	0.4543
ITMG	2023	7,702,141,920	33,727,849,352	0.2284
MBAP	2021	1,439,306,016,248	3,688,494,922,968	0.3902
MBAP	2022	2,797,074,871,864	4,779,692,845,432	0.5852
MBAP	2023	334,824,465,953	3,543,260,535,350	0.0945
MBSS	2021	173,205,772,650	2,534,021,547,525	0.0684
MBSS	2022	402,281,429,697	3,317,456,649,456	0.1213
MBSS	2023	379,634,830,704	3,806,825,454,288	0.0997
MEDC	2021	894,251,728,035	81,194,284,925,615	0.0110
MEDC	2022	8,615,786,531,250	108,311,028,531,250	0.0795
MEDC	2023	5,319,304,188,552	114,892,577,482,296	0.0463
PGAS	2019	1,570,551,591,695	102,501,986,581,556	0.0153
PGAS	2021	5,201,537,572,315	107,173,729,882,638	0.0485
PGAS	2022	6,313,519,512,471	113,182,342,376,842	0.0558
PGAS	2023	5,814,572,895,539	101,885,642,722,891	0.0571
PSSI	2019	184,725,078,818	1,990,602,807,233	0.0928
PSSI	2020	118,908,253,100	2,071,120,270,765	0.0574
PSSI	2021	357,321,529,814	2,300,678,624,350	0.1553
PSSI	2022	665,929,773,113	2,821,424,805,757	0.2360
PSSI	2023	630,370,291,232	3,142,890,258,688	0.2006
PTBA	2019	4,040,394	26,098,052	0.1548
PTBA	2020	2,407,927	24,056,755	0.1001
PTBA	2021	8,036,888	36,123,703	0.2225
PTBA	2022	12,779,427	45,359,207	0.2817
PTBA	2023	6,292,521	38,765,189	0.1623

Kode Perusahaan	Tahun	Laba Bersih	Total Aset	ROA
PTRO	2019	435,059,036	7,653,450,116	0.0568
PTRO	2020	457,734,330	7,460,655,480	0.0614
PTRO	2021	487,803	7,653,818,112	0.0637
PTRO	2022	587,233	850,793,130	0.0690
PTRO	2023	191,645	11,216,176,560	0.0171
RAJA	2021	48,467,954,639	3,504,268,802,888	0.0138
RAJA	2022	170,513,704,733	4,097,997,469,325	0.0416
RAJA	2023	418,536,383,680	5,066,439,541,248	0.0826
RUIS	2021	18,335,466,460	1,297,577,363,103	0.0141
RUIS	2022	20,111,351,869	1,267,549,300,138	0.0159
RUIS	2023	14,188,438,899	1,341,729,318,010	0.0106
SHIP	2021	295,405,042,675	4,644,079,062,770	0.0636
SHIP	2022	410,882,393,680	5,966,854,301,377	0.0689
SHIP	2023	397,169,561,024	6,662,495,420,464	0.0596
SMMT	2021	249,957,731,407	1,051,640,434,770	0.2377
SMMT	2022	402,880,164,172	1,182,852,785,319	0.3406
SMMT	2023	255,974,588,686	1,007,863,610,940	0.2540
SUNI	2023	100,859,838,442	788,904,760,873	0.1278
TCPI	2021	84,578	2,847,296	0.0297
TCPI	2022	115,667	2,809,869	0.0412
TCPI	2023	188,678	3,509,253	0.0538
TEBE	2021	165,614,881	989,060,914	0.1674
TEBE	2022	327,830,339	1,302,505,387	0.2517
TEBE	2023	221,711,596	1,150,900,654	0.1926
TOBA	2020	504,297,452,610	10,871,814,119,895	0.0464

Kode Perusahaan	Tahun	Lab a Bersih	Total Aset	ROA
TOBA	2021	935,889,660,855	12,240,823,375,260	0.0765
TOBA	2022	1,476,159,420,942	14,140,158,624,711	0.1044
TOBA	2023	321,199,328,160	14,604,283,713,024	0.0220
TPMA	2021	56,495,537,080	1,416,289,286,220	0.0399
TPMA	2022	224,892,940,153	1,689,220,641,764	0.1331
TPMA	2023	303,630,036,568	1,809,944,816,648	0.1678
UNIQ	2022	22,935,664,021	581,518,014,122	0.0394
UNIQ	2023	42,484,604,236	726,265,910,969	0.0585
WINS	2021	1,856,354,093	2,797,887,151,804	0.0007
WINS	2022	13,545,885,445	2,980,170,873,016	0.0045
WINS	2023	102,217,745,832	3,002,966,194,720	0.0340



Lampiran 6 Data yang digunakan untuk perhitungan

NO	SR	FCF	SG	ROA
1	0.3248	0.0782	1.7359	0.0025
2	0.5726	0.3924	1.6904	0.2970
3	0.3162	0.0452	1.4268	0.2377
4	0.4615	0.2937	1.2632	0.1674
5	0.3077	0.1332	1.1326	0.0581
6	0.1026	0.4628	1.1301	0.1124
7	0.3590	0.4638	1.0644	0.3406
8	0.6325	0.4295	1.0293	0.2626
9	0.2735	0.3914	0.9735	0.2609
10	0.8376	0.1069	0.8564	0.0912
11	0.8462	- 0.0850	0.8152	0.1240
12	0.6752	0.3855	0.7521	0.2853
13	0.0940	0.3144	0.7474	0.0795
14	0.4957	0.3937	0.7450	0.2517
15	0.8376	0.2741	0.7064	0.0182
16	0.8718	0.1444	0.6921	0.0172
17	0.4701	0.5712	0.6890	0.2225
18	0.8632	0.4293	0.6851	0.1796
19	0.4188	0.1006	0.6461	0.1101
20	0.0769	0.2951	0.6083	0.0826
21	0.4188	0.2865	0.5907	0.1553
22	0.4017	0.2743	0.5751	0.1356
23	0.2479	0.2904	0.5133	0.0002
24	0.3761	0.2092	0.5124	0.0428
25	0.1197	0.3784	0.4947	0.1331
26	0.9573	0.3047	0.4575	0.2817
27	0.7265	0.1341	0.4558	0.0483
28	0.6838	0.1288	0.4437	0.0045
29	0.8889	0.6950	0.4146	0.1725
30	0.8889	0.2485	0.4124	0.1421
31	0.5043	0.0108	0.4112	0.1278
32	0.6068	0.1519	0.3742	0.1044
33	0.2735	0.2186	0.3674	0.1685
34	0.2564	0.0730	0.3455	0.0585
35	0.1880	0.1852	0.3403	0.0414
36	0.2991	0.1664	0.3380	0.0684
37	0.2479	0.0864	0.3345	0.0394
38	0.1197	0.3400	0.3278	0.0689
39	0.4444	0.1926	0.3207	0.0491
40	0.4701	0.1130	0.3018	0.0744
41	0.5556	0.1536	0.3015	0.0882
42	0.0684	0.1007	0.2908	0.0416

NO	SR	FCF	SG	ROA
43	0.5470	0.0233	0.2755	0.0529
44	0.1966	0.1832	0.2657	0.0524
45	0.3504	0.3298	0.2500	0.0373
46	0.3846	0.0401	0.2483	0.0069
47	0.3846	0.0181	0.2203	0.0637
48	0.1282	0.3120	0.2152	0.0596
49	0.7094	0.1662	0.2149	0.0043
50	0.7607	0.0358	0.2127	0.0171
51	0.2735	0.1033	0.2039	0.1213
52	0.0855	0.0669	0.2031	0.0110
53	0.8889	0.2579	0.1958	0.2600
54	0.6410	0.1793	0.1895	0.0340
55	0.0769	0.4816	0.1850	0.0928
56	0.1026	0.2852	0.1831	0.0636
57	0.8974	0.2663	0.1800	0.0192
58	0.7094	0.3545	0.1457	0.0690
59	0.3504	0.1267	0.1408	0.0014
60	0.4872	0.2310	0.1302	0.1161
61	0.3162	0.1879	0.1129	0.0559
62	0.1197	0.3640	0.1024	0.3973
63	0.4017	0.3013	0.0970	0.2360
64	0.3932	0.1482	0.0645	0.0019
65	0.1368	0.4338	0.0602	0.1678
66	0.1026	0.2131	0.0567	0.0399
67	0.3932	0.1887	0.0530	0.0150
68	0.1026	0.2769	0.0523	0.0412
69	0.6068	0.0933	0.0522	0.0485
70	0.5726	0.0899	0.0433	0.0106
71	0.1111	0.3169	0.0384	0.0538
72	0.3590	0.1078	0.0367	0.0159
73	0.9060	0.3042	0.0328	0.1463
74	0.4359	0.3096	0.0293	0.1548
75	0.6239	0.1233	0.0233	0.1198
76	0.2393	0.3131	0.0230	0.0568
77	0.8718	0.1956	0.0210	0.0524
78	0.1453	0.1079	0.0181	0.0141
79	0.3504	0.1682	0.0059	0.0724
80	0.5897	0.2374	- 0.0056	0.0153
81	0.0940	0.0276	- 0.0305	0.1394
82	0.0855	0.2562	- 0.0925	0.0574
83	0.3504	0.1794	- 0.1051	0.1152
84	0.4103	0.1740	- 0.1203	0.0030
85	0.4530	0.2954	- 0.1416	0.2006

NO	SR	FCF	SG	ROA
86	0.2479	0.1533	- 0.1455	0.1046
87	0.3077	0.0646	- 0.1837	0.0515
88	0.5214	0.1802	- 0.1913	0.1926
89	0.8291	0.1657	- 0.1956	0.1771
90	0.6239	0.1413	- 0.2048	0.1001
91	0.8803	0.1467	- 0.2116	0.0220
92	0.1624	0.0862	- 0.2199	0.0723
93	0.4701	0.1737	- 0.2337	0.0046
94	0.3675	0.0084	- 0.2850	0.0997
95	0.8205	0.0271	- 0.3018	0.0485

