

LAMPIRAN

I

Surat Pengantar Pembimbingan Usulan Penelitian dan Skripsi



UNIVERSITAS KUNINGAN
FAKULTAS EKONOMI DAN BISNIS

Jalan Tjut Nyak Dhien No. 36A Cijoho Kuningan Telp./Fax (0232) 872848 Kode Pos 45512

Nomor : 1745/FEB-UNIKU/KNG/AK/2024
Lampiran : 1 (satu) eksemplar
Perihal : Pengantar Pembimbingan Usulan Penelitian dan Skripsi

Kepada:
Yth. 1. Dr. Herma Wiharno, M. Si
2. Dodi, MM

di

Tempat

Dengan hormat,

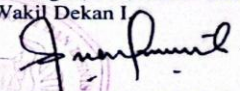
Bersama ini kami sampaikan mahasiswa yang akan melaksanakan pembimbingan Usulan Penelitian dan Skripsi dibawah bimbingan Bapak/Ibu.

N a m a : SAHRUL FAUZI
NIM : 20210510301
Program Studi : MANAJEMEN

Waktu bimbingan selama-lamanya 1 (satu) tahun atau 2 (dua) semester, terhitung mulai tanggal ditetapkannya surat ini, apabila proses pembimbingan melebihi dari 1 (satu) tahun atau 2 (dua) semester maka mahasiswa diwajibkan untuk melakukan kontrak kredit lagi untuk semester yang akan berlangsung.

Demikian surat pengantar ini dibuat, atas perhatiannya kami ucapkan terima kasih.

Kuningan, 30 Oktober 2024
Wakil Dekan I


Enung Nurhayati, S.E., M.Si., Ak., C.A
NIK. 41038071256

Tembusan :

Yth. 1. Pembimbing I, Pembimbing II.
2. Mahasiswa.

Berita Acara Bimbingan Skripsi

	UNIVERSITAS KUNINGAN FAKULTAS EKONOMI DAN BISNIS PROGRAM STUDI : MANAJEMEN, AKUNTANSI DAN BISNIS DIGITAL (TERAKREDITASI BAN PT.)		No. Dokumen : Berlaku Sejak : Revisi : Halaman :				
	BERITA ACARA BIMBINGAN USULAN PENELITIAN DAN SKRIPSI						
	Nama Mahasiswa : SAHRUL FAUZI NIM : 20210510301	Program Studi : MANAJEMEN Pembimbing I : Dr. Herma Wiharno, M. Si Pembimbing II : Dodi, MM Judul Skripsi :					
	Jerjang : Sarjana Tahun : 2024						
PEMBIMBING I				PEMBIMBING II			
No.	Tgl.	Sasaran Pembahasan	Paraf	No.	Tgl.	Sasaran Pembahasan	Paraf
1.		Revisi Bab I 1/11/24		1.	17/11/24	Penjabaran Umum	
2.		Revisi Bab I 1/11/24		2.	18/11/24	Revisi Bab 1	
3.		Revisi Bab I 1/11/24		3.	13/12/24	Revisi Bab 1-3	
4.		acc sup.		4.	30/12/24	Revisi Bab 1-3	
5.		Revisi Bab I 1/11/24		5.	3/1/25	Revisi Bab 1-3	
6.		Full draft		6.	31/1/25	ACC SUP	
7.		acc shp.		7.	30/1/25	Revisi Bab 1-5	
8.				8.	09/5/25	Revisi Bab 1-5	
9.				9.	07/5/25	Revisi Bab 1-5	
10.				10.	07/5/25	ACC SHP	
				Kuningan, Wakil Dekan I <i>Erung Nurhayati, S.E., M.Si., Ak., CA</i> NIP. 41038071256			

LAMPIRAN

II

Data Populasi Emiten Saham Indeks Kompas 100 Dari Periode 2022-2024

Kode Saham	Nama Perusahaan
ABMM	PT ABM Investama Tbk
ACES	PT Ace Hardware Indonesia Tbk
ADMR	PT Adaro Minerals Indonesia Tbk
ADRO	PT Adaro Energy Tbk
AGII	PT Aneka Gas Industri Tbk
AALI	PT Astra Agro Lestari Tbk
AKRA	PT AKR Corporindo Tbk
AMAR	PT Bank Amar Indonesia Tbk
AMMN	PT Amman Mineral Internasional Tbk
AMRT	PT Sumber Alfaria Trijaya Tbk
ANTM	PT Aneka Tambang (Persero) Tbk
APIC	PT Pacific Strategic Financial Tbk
APLN	PT Agung Podomoro Land Tbk
ARCI	PT Archi Indonesia Tbk
ARTO	PT Bank Jago Tbk
ASII	PT Astra International Tbk
ASRI	PT Alam Sutera Realty Tbk
AUTO	PT Astra Otoparts Tbk
AVIA	PT Avia Avian Tbk
BABP	PT Bank MNC Internasional Tbk
BACA	PT Bank Capital Indonesia Tbk
BBCA	PT Bank Central Asia Tbk
BBHI	PT Allo Bank Indonesia Tbk
BBKP	PT Bank KB Bukopin Tbk
BBNI	PT Bank Negara Indonesia (Persero) Tbk
BBRI	PT Bank Rakyat Indonesia (Persero) Tbk
BBTN	PT Bank Tabungan Negara (Persero) Tbk
BBYB	PT Bank Neo Commerce Tbk
BDMN	PT Bank Danamon Indonesia Tbk
BELI	PT Global Digital Niaga Tbk
BEST	PT Bekasi Fajar Industrial Estate Tbk
BFIN	PT BFI Finance Indonesia Tbk
BMRI	PT Bank Mandiri (Persero) Tbk
BMTR	PT Global Mediacom Tbk
BNBA	PT Bank Bumi Arta Tbk
BNGA	PT Bank CIMB Niaga Tbk
BRIS	PT Bank Syariah Indonesia Tbk
BRMS	PT Bumi Resources Minerals Tbk

Kode Saham	Nama Perusahaan
BRPT	PT Barito Pacific Tbk
BUKA	PT Bukalapak.com Tbk
BSSR	PT Baramulti Suksessarana Tbk
BSDE	PT Bumi Serpong Damai Tbk
BTPS	PT Bank BTPN Syariah Tbk
CENT	PT Centratama Telekomunikasi Indonesia Tbk
CFIN	PT Clipan Finance Indonesia Tbk
CMRY	PT Cisarua Mountain Dairy Tbk
CPIN	PT Charoen Pokphand Indonesia Tbk
CTRA	PT Ciputra Development Tbk
DGNS	PT Diagnos Laboratorium Utama Tbk
DMMX	PT Digital Mediatama Maxima Tbk
DMAS	PT Puradelta Lestari Tbk
DOID	PT Delta Dunia Makmur Tbk
DRMA	PT Dharma Polimetal Tbk
DSNG	PT Dharma Satya Nusantara Tbk
ELSA	PT Elnusa Tbk
EMTK	PT Elang Mahkota Teknologi Tbk
ENRG	PT Energi Mega Persada Tbk
ERAA	PT Erajaya Swasembada Tbk
ESSA	PT Surya Esa Perkasa Tbk
EXCL	PT XL Axiata Tbk
GGRM	PT Gudang Garam Tbk
GJTL	PT Gajah Tunggal Tbk
GOTO	PT GoTo Gojek Tokopedia Tbk
GTRA	PT Graha Teknologi Nusantara Tbk
HEAL	PT Medikaloka Hermina Tbk
HMSP	PT Hanjaya Mandala Sampoerna Tbk
HOKI	PT Buyung Poetra Sembada Tbk
HRTA	PT Hartadinata Abadi Tbk
HRUM	PT Harum Energy Tbk
ICBP	PT Indofood CBP Sukses Makmur Tbk
IMAS	PT Indomobil Sukses Internasional Tbk
INCO	PT Vale Indonesia Tbk
INDF	PT Indofood Sukses Makmur Tbk
INDY	PT Indika Energy Tbk
INKP	PT Indah Kiat Pulp & Paper Tbk
INTP	PT Indocement Tunggal Prakarsa Tbk
IPPE	PT Indo Pureco Pratama Tbk
IPTV	PT MNC Vision Networks Tbk
IRRA	PT Itama Ranoraya Tbk

Kode Saham	Nama Perusahaan
ISAT	PT Indosat Tbk
ISSP	PT Steel Pipe Industry of Indonesia Tbk
ITMG	PT Indo Tambangraya Megah Tbk
JKON	PT Jaya Konstruksi Manggala Pratama Tbk
JPFA	PT Japfa Comfeed Indonesia Tbk
JSMR	PT Jasa Marga (Persero) Tbk
KAEF	PT Kimia Farma Tbk
KIJA	PT Kawasan Industri Jababeka Tbk
KLBF	PT Kalbe Farma Tbk
LINK	PT Link Net Tbk
LPKR	PT Lippo Karawaci Tbk
LSIP	PT PP London Sumatra Indonesia Tbk
LPPF	PT Matahari Department Store Tbk
MAHA	PT Mahaka Media Tbk
MAPA	PT Map Aktif Adiperkasa Tbk
MAPI	PT Mitra Adiperkasa Tbk
MARK	PT Mark Dynamics Indonesia Tbk
MBMA	PT Merdeka Battery Materials Tbk
MCOR	PT Bank China Construction Bank Indonesia Tbk
MDKA	PT Merdeka Copper Gold Tbk
MEDC	PT Medco Energi Internasional Tbk
MIKA	PT Mitra Keluarga Karyasehat Tbk
MLPL	PT Multipolar Tbk
MMIX	PT Multistrada Arah Sarana Tbk
MMLP	PT Mega Manunggal
MNCN	PT Media Nusantara Citra Tbk
MPMX	PT Mitra Pinasthika Mustika Tbk
MSIN	PT MNC Digital Entertainment Tbk
MTDL	PT Metrodata Electronics Tbk
MTEL	PT Dayamitra Telekomunikasi Tbk
MTMH	PT Murni Sadar Tbk
MYOR	PT Mayora Indah Tbk
NCKL	PT Nickel Industries Limited Tbk
NISP	PT Bank OCBC NISP Tbk
OMED	PT Jayamas Medica Industri Tbk
PANI	PT Pratama Abadi Nusa Industri Tbk

Kode Saham	Nama Perusahaan
PGAS	PT Perusahaan Gas Negara Tbk
PGEO	PT Pertamina Geothermal Energy Tbk
PMMP	PT Panca Mitra Multiperdana Tbk
PNBN	PT Bank Pan Indonesia Tbk
PNIN	PT Paninvest Tbk
PNLF	PT Panin Financial Tbk
POWR	PT Cikarang Listrindo Tbk
PRDA	PT Prodia Widyahusada Tbk
PTBA	PT Bukit Asam Tbk
PTMP	PT Panca Tunggal Knitting Mill Tbk
PTPP	PT PP (Persero) Tbk
PTRO	PT Petrosea Tbk
PWON	PT Pakuwon Jati Tbk
RAJA	PT Rukun Raharja Tbk
RALS	PT Ramayana Lestari Sentosa Tbk
RMKE	PT RMK Energy Tbk
SCMA	PT Surya Citra Media Tbk
SGER	PT Sumber Global Energy Tbk
SIDO	PT Industri Jamu dan Farmasi Sido Muncul Tbk
SILO	PT Siloam International Hospitals Tbk
SMBR	PT Semen Baturaja (Persero) Tbk
SMDR	PT Samudera Indonesia Tbk
SMGR	PT Semen Indonesia (Persero) Tbk
SMIL	PT Sarana Mitra Luas Tbk
SMRA	PT Summarecon Agung Tbk
SMSM	PT Selamat Sempurna Tbk
SRTG	PT Saratoga Investama Sedaya Tbk
SSIA	PT Surya Semesta Internusa Tbk
SSMS	PT Sawit Sumbermas Sarana Tbk
TAPG	PT Triputra Agro Persada Tbk
TBIG	PT Tower Bersama Infrastructure Tbk
TINS	PT Timah Tbk
TKIM	PT Pabrik Kertas Tjiwi Kimia Tbk
TLKM	PT Telkom Indonesia (Persero) Tbk
TOBA	PT TBS Energi Utama Tbk
TOWR	PT Sarana Menara Nusantara Tbk
TPIA	PT Chandra Asri Petrochemical Tbk
TRON	PT Teknologi Karya Digital Nusa Tbk
ULTJ	PT Ultrajaya Milk Industry & Trading Company Tbk
UNTR	PT United Tractors Tbk

Kode Saham	Nama Perusahaan
UNVR	PT Unilever Indonesia Tbk
VKTR	PT VKTR Teknologi Mobilitas Tbk
WEGE	PT Wijaya Karya Bangunan Gedung Tbk
WIFI	PT Solusi Sinergi Digital Tbk
WIIM	PT Wisnilak Inti Makmur Tbk
WIKA	PT Wijaya Karya (Persero) Tbk
WOOD	PT Integra Indocabinet Tbk
WSKT	PT Waskita Karya (Persero) Tbk
WTON	PT Wijaya Karya Beton Tbk
ZYRX	PT Zyrexindo Mandiri Buana Tbk

(Sumber : Data Diolah Bursa Efek Indonesia)

Data Keluar Masuk Emiten Saham Indeks Kompas 100

DATA KELUAR MASUK INDEKS KOMPAS 100					
KELUAR			MASUK		
2022	2023	2024	2022	2023	2024
APLN	AMAR	AALI	ARCI	ABMM	AUTO
BEST	BACA	AGII	ARTO	ADMR	CFIN
BNGA	BNBA	AVIA	BUKA	APIC	DRMA
BRIS	CENT	BBKP	DGNS	BABP	GTRA
IMAS	DMMX	BDMN	EMTK	BBKP	HRTA
IPTV	IPTV	BELI	HEAL	BMTR	IMAS
MCOR	IRRA	BSSR	ISSP	BSSR	MAPA
PNBN	LINK	HMSP	MMLP	MTMH	MARK
PNLF	LPKR	JKON	MTDL	MYOR	MBMA
POWR	MARI	LSIP	PMMP	PNBN	NISP
PSAB	MMLP	MMIX	PRDA	RAJA	PGEO
RAJA	MTDL	MSIN	TAPG	RMKE	PTMP
WEGE	PMMP	OMED	WMUU	SGER	PTRO
WTON	PRDA	PNBN	ZYRX	TOBA	SILO
ARCI	SAME	PNIN	AGRO	WIFI	SMIL
ASRI	APIC	RMKE	AMAR	BDMN	SMSM
BDMN	BABP	SMDR	AVIA	BELI	SSIA
BJBR	BBHI	TAPG	BACA	JKON	TRON
BJTM	IPPE	WIKA	BBHI	MMIX	WIIM
BMTR	MLPL	ADHI	BNBA	MSIN	AMMN
DGNS	SGER	AGRO	BRIS	OMED	AVIA
DMAS	TOBA	ASSA	BRMS	PNIN	BBYB
GJTL	WSKT	CFIN	CENT	SSMS	BNGA
HOKI		DRMA	DMMX		CMRY
ISSP		GTRA	ENRG		GJTL
KAEF		HRTA	GOTO		HMSP
MYOR		IMAS	IPPE		KIJA
RALS		LPPF	IPTV		MAHA
SMBR		MTMH	IRRA		NCKL
SSIA		RAJA	MARI		PANI
SSMS		TRON	MLPL		ULTJ
WIIM		WIIM	MTEL		VKTR
WMUU			PNLF		
WOOD			SAME		
ZYRX			SMDR		

(Sumber : Data Diolah Bursa Efek Indonesia)

Data Expected Return dari emiten yang terpilih berdasarkan Kriteria sebelumnya

No	Emoten	Nama Perusahaan	E(Ri)	No	Emoten	Nama Perusahaan	E(Ri)
1	ACES	Ace Hardware Indonesia Tbk	-0.0072	31	INTP	Indocement Tunggul Prakarsa Tbk	-0.0116
2	ADRO	Adaro Energy Indonesia Tbk	0.0124	32	ISAT	Indosat Tbk	0.0182
3	AKRA	AKR Corporindo Tbk	0.0128	33	ITMG	Indo Tambangraya Megah Tbk	0.0139
4	AMRT	Sumber Alfaria Trijaya Tbk	0.0285	34	JPFA	Japfa Comfeed Indonesia Tbk	0.0075
5	ANTM	Aneka Tambang Tbk	-0.0052	35	JSMR	Jasa Marga Tbk	0.0054
6	ASII	Astra International Tbk	-0.0018	36	KLBF	Kalbe Farma Tbk	-0.0038
7	BBCA	Bank Central Asia Tbk	0.0086	37	MAPI	Mitra Adiperkasa Tbk	0.0248
8	BBNI	Bank Negara Indonesia Tbk	0.0097	38	MDKA	Merdeka Copper Gold Tbk	-0.0155
9	BBRI	Bank Rakyat Indonesia Tbk	0.0022	39	MEDC	Medco Energi Internasional Tbk	0.0350
10	BBTN	Bank Tabungan Negara Tbk	-0.0064	40	MIKA	Mitra Keluarga Karyasehat Tbk	0.0054
11	BFIN	BFI Finance Indonesia Tbk	-0.0025	41	MNCN	Media Nusantara Citra Tbk	-0.0296
12	BMRI	Bank Mandiri Tbk	0.0155	42	MPMX	Mitra Pinasthika Mustika Tbk	-0.0024
13	BRPT	Barito Pacific Tbk	0.0088	43	PGAS	Perusahaan Gas Negara Tbk	0.0076
14	BSDE	Bumi Serpong Damai Tbk	0.0006	44	PTBA	Bukit Asam Tbk	0.0054
15	BTPS	Bank BTPN Syariah Tbk	-0.0340	45	PTPP	Pembangunan Perumahan Tbk	-0.0204
16	CPIN	Charoen Pokphand Indonesia Tbk	-0.0040	46	PWON	Pakuwon Jati Tbk	-0.0017
17	CTRA	Ciputra Development Tbk	0.0029	47	SCMA	Surya Citra Media Tbk	-0.0128
18	DOID	Delta Dunia Makmur Tbk	0.0348	48	SIDO	Industri Jamu dan Farmasi Sido Muncul Tbk	-0.0068
19	DSNG	Dharma Satya Nusantara Tbk	0.0232	49	SMGR	Semen Indonesia Tbk	-0.0175
20	ELSA	Elnusa Tbk	0.0150	50	SMRA	Summarecon Agung Tbk	-0.0106
21	ERAA	Erajaya Swasembada Tbk	-0.0076	51	SRTG	Saratoga Investama Sedaya Tbk	-0.0016
22	ESSA	Surya Esa Perkasa Tbk	0.0292	52	TBIG	Tower Bersama Infrastructure Tbk	-0.0081
23	EXCL	XL Axiata Tbk	-0.0056	53	TINS	Timah Tbk	-0.0019
24	GGRM	Gudang Garam Tbk	-0.0195	54	TKIM	Pabrik Kertas Tjiwi Kimia Tbk	-0.0018
25	HRUM	Harum Energy Tbk	-0.0119	55	TLKM	Telkom Indonesia Tbk	-0.0094
26	ICBP	Indofood CBP Sukses Makmur Tbk	0.0097	56	TOWR	Sarana Menara Nusantara Tbk	-0.0125
27	INCO	Vale Indonesia Tbk	-0.0013	57	TPIA	Chandra Asri Petrochemical Tbk	0.0509
28	INDF	Indofood Sukses Makmur Tbk	0.0066	58	UNTR	United Tractors Tbk	0.0095
29	INDY	Indika Energy Tbk	0.0075	59	UNVR	Unilever Indonesia Tbk	-0.0185
30	INKP	Indah Kiat Pulp & Paper Tbk	-0.0002				

Data Rf /Return Bebas risiko (Bunga Bi)

No	Bulan	Rf	
		Tahunan	Bulanan
1	Jan-22	3.50 %	0.0029
2	Feb-22	3.50%	0.0029
3	Mar-22	3.50 %	0.0029
4	Apr-22	3.50 %	0.0029
5	May-22	3.50 %	0.0029
6	Jun-22	3.50 %	0.0029
7	Jul-22	3.50 %	0.0029
8	Aug-22	3.75 %	0.0031
9	Sep-22	4.25 %	0.0035
10	Oct-22	4.75%	0.0040
11	Nov-22	5.25%	0.0044
12	Dec-22	5.50%	0.0046
13	Jan-23	5.75%	0.0048
14	Feb-23	5.75%	0.0048
15	Mar-23	5.75%	0.0048
16	Apr-23	5.75%	0.0048
17	May-23	5.75%	0.0048
18	Jun-23	5.75%	0.0048
19	Jul-23	5.75%	0.0048
20	Aug-23	5.75%	0.0048
21	Sep-23	5.75%	0.0048
22	Oct-23	6.00%	0.0050
23	Nov-23	6.00%	0.0050
24	Dec-23	6.00%	0.0050
25	Jan-24	6.00 %	0.0050
26	Feb-24	6.00 %	0.0050
27	Mar-24	6.00 %	0.0050
28	Apr-24	6.25 %	0.0052
29	May-24	6.25 %	0.0052
30	Jun-24	6.25 %	0.0052
31	Jul-24	6.25 %	0.0052
32	Aug-24	6.25 %	0.0052
33	Sep-24	6.00 %	0.0050
34	Oct-24	6.00 %	0.0050
35	Nov-24	6.00 %	0.0050
36	Dec-24	6.00 %	0.0050
Rata Rata Rf selama 3 Tahun			0.0044

Data IHSG (Indeks Market /Pasar)

Bulan	IHSG	Rm	Rm-Rf
Dec-21	6,586		
Jan-22	6,631	0.0068	0.0039
Feb-22	6,888	0.0388	0.0358
Mar-22	7,071	0.0266	0.0237
Apr-22	7,229	0.0223	0.0194
May-22	7,149	-0.0111	-0.0140
Jun-22	6,912	-0.0332	-0.0361
Jul-22	6,951	0.0057	0.0028
Aug-22	7,179	0.0327	0.0296
Sep-22	7,041	-0.0192	-0.0227
Oct-22	7,099	0.0083	0.0043
Nov-22	7,081	-0.0025	-0.0069
Dec-22	6,851	-0.0326	-0.0372
Jan-23	6,839	-0.0016	-0.0064
Feb-23	6,843	0.0006	-0.0042
Mar-23	6,805	-0.0055	-0.0103
Apr-23	6,916	0.0162	0.0114
May-23	6,633	-0.0408	-0.0456
Jun-23	6,662	0.0043	-0.0005
Jul-23	6,931	0.0405	0.0357
Aug-23	6,953	0.0032	-0.0016
Sep-23	6,940	-0.0019	-0.0067
Oct-23	6,752	-0.0270	-0.0320
Nov-23	7,081	0.0487	0.0437
Dec-23	7,273	0.0271	0.0221
Jan-24	7,208	-0.0089	-0.0139
Feb-24	7,316	0.0150	0.0100
Mar-24	7,289	-0.0037	-0.0087
Apr-24	7,234	-0.0075	-0.0127
May-24	6,971	-0.0364	-0.0416
Jun-24	7,064	0.0133	0.0081
Jul-24	7,256	0.0272	0.0220
Aug-24	7,671	0.0572	0.0520
Sep-24	7,528	-0.0186	-0.0236
Oct-24	7,574	0.0061	0.0011
Nov-24	7,114	-0.0607	-0.0657
Dec-24	7,080	-0.0048	-0.0098
E(Rm)			0.0023
Expected Exsees Return			-0.0021
Varians Market			0.0007

Data Penutupan Harga Saham Sampel Indeks Kompas 100 Periode 2022 -2024

CLOSING PRICE														
Bulan	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
Dec-21	2,250	822	1,215	7,300	3,375	4,110	3,513	850	1,010	970	264	500	276	530
Jan-22	2,240	730	1,165	7,625	3,663	4,070	3,738	885	905	875	252	600	276	595
Feb-22	2,450	755	1,090	8,050	4,000	4,550	3,850	885	915	925	406	625	312	670
Mar-22	2,690	910	1,520	7,975	4,125	4,660	3,950	900	1,020	1,040	400	640	294	1,215
Apr-22	3,340	1070	1,710	8,125	4,613	4,870	4,475	845	965	1,065	545	605	292	1,240
May-22	3,270	1120	1,820	7,750	4,588	4,630	4,250	830	945	985	436	555	308	1,175
Jun-22	2,860	1030	2,040	7,250	3,925	4,150	3,963	751	910	860	348	494	302	835
Jul-22	3,250	1250	1,875	7,350	3,925	4,360	4,138	895	920	925	392	530	302	1,035
Aug-22	3,540	1200	2,180	8,200	4,263	4,340	4,425	815	920	950	376	505	318	1,115
Sep-22	3,960	1350	2,390	8,550	4,488	4,490	4,713	790	905	950	376	484	308	995
Oct-22	3,980	1560	2,820	8,800	4,700	4,650	5,275	820	930	940	392	555	376	1,065
Nov-22	3,870	1385	3,090	9,300	4,950	4,980	5,263	785	915	1,010	360	610	328	1,065
Dec-22	3,850	1400	2,650	8,550	4,613	4,940	4,963	754	920	940	304	600	312	915
Jan-23	2,960	1310	2,830	8,475	4,575	4,580	4,975	824	935	975	292	680	312	990
Feb-23	2,990	1385	2,900	8,750	4,388	4,670	5,000	934	990	990	306	665	308	1,070
Mar-23	2,900	1550	2,880	8,750	4,675	4,730	5,163	824	980	995	304	710	312	945
Apr-23	3,130	1620	2,900	9,050	4,713	5,100	5,175	834	1,065	995	324	620	322	700
May-23	2,040	1365	2,640	9,050	4,525	5,575	5,050	759	1,050	1,070	300	570	330	488
Jun-23	2,230	1420	2,580	9,150	4,575	5,425	5,200	744	1,095	1,060	364	535	334	580
Jul-23	2,410	1385	2,700	9,125	4,438	5,650	5,725	774	1,185	1,115	398	585	390	590
Aug-23	2,670	1400	2,900	9,175	4,588	5,550	6,025	1,068	1,135	1,140	412	595	390	605
Sep-23	2,850	1545	2,960	8,825	5,163	5,225	6,025	1,298	1,020	1,020	494	610	418	795
Oct-23	2,560	1490	2,890	8,750	4,790	4,960	5,675	1,123	1,005	1,110	346	570	432	600
Nov-23	2,620	1435	2,870	8,975	5,275	5,275	5,850	1,043	1,060	1,130	356	560	416	555
Dec-23	2,380	1475	2,930	9,400	5,375	5,725	6,050	1,328	1,080	1,170	352	555	388	530
Jan-24	2,400	1620	2,650	9,550	5,750	5,700	6,650	1,058	1,035	1,250	380	510	402	492
Feb-24	2,420	1700	2,750	9,875	6,000	6,125	7,000	973	1,015	1,270	330	515	406	515
Mar-24	2,700	1720	2,910	10,075	5,900	6,050	7,250	943	985	1,300	410	650	386	675
Apr-24	2,710	1675	2,930	9,800	5,250	4,940	6,900	1,018	930	1,205	500	635	428	780
May-24	2,770	1600	2,650	9,250	4,400	4,340	5,900	1,063	945	1,100	555	635	406	770
Jun-24	2,790	1620	2,750	9,925	4,660	4,600	6,150	990	955	1,130	575	620	444	770
Jul-24	3,220	1515	2,840	10,275	4,970	4,670	6,400	1,090	1,035	1,255	765	685	510	840
Aug-24	3,560	1495	2,900	10,325	5,350	5,150	7,125	1,145	1,285	1,300	730	790	480	890
Sep-24	3,810	1550	3,160	10,325	5,350	4,950	6,925	1,050	1,190	1,330	755	820	474	885
Oct-24	3,620	1350	3,320	10,250	5,250	4,800	6,700	995	1,220	1,340	670	1,100	478	985
Nov-24	2,080	1230	2,850	10,000	4,980	4,250	6,150	855	1,000	1,070	690	1,135	442	820
Dec-24	2,430	1120	2,850	9,675	4,350	4,080	5,700	920	945	980	555	950	432	810

CLOSING PRICE														
Bulan	ICBP	INDF	INDY	ISAT	ITMG	JPFA	JSMR	MAPI	MEDC	MIKA	PGAS	PTBA	TPIA	UNTR
Dec-21	8,700	6,325	1,545	1,550	20,400	1,720	3,890	710	466	2,260	1,375	2,710	1,831	22,150
Jan-22	8,725	6,325	2,090	1,431	21,650	1,665	3,290	780	555	2,520	1,380	2,850	2,206	23,125
Feb-22	8,500	6,200	2,230	1,369	26,675	1,570	3,380	785	600	2,220	1,440	3,140	2,256	24,900
Mar-22	7,350	5,950	2,230	1,294	28,550	1,650	3,850	880	555	2,170	1,405	3,290	2,525	25,550
Apr-22	7,625	6,300	2,690	1,750	28,400	1,450	4,030	900	550	2,530	1,450	3,820	2,513	30,275
May-22	8,575	6,600	2,890	1,331	35,000	1,425	4,000	900	585	2,610	1,800	4,530	2,556	31,300
Jun-22	9,550	7,050	2,330	1,638	30,675	1,540	3,540	980	635	2,750	1,590	3,820	2,250	28,400
Jul-22	8,825	6,800	2,670	1,669	39,600	1,445	3,560	890	610	2,490	1,680	4,300	2,375	32,300
Aug-22	8,300	6,225	2,870	1,794	39,300	1,585	3,440	1,010	860	2,660	1,840	4,250	2,440	33,850
Sep-22	8,650	6,025	3,000	1,813	41,425	1,515	3,240	1,060	915	2,900	1,755	4,170	2,400	32,825
Oct-22	9,725	6,450	3,260	1,694	45,050	1,385	3,410	1,205	1,155	2,760	1,975	3,910	2,440	32,300
Nov-22	10,100	6,450	2,900	1,488	41,750	1,330	3,110	1,450	1,065	2,840	1,880	3,800	2,390	30,800
Dec-22	10,000	6,725	2,730	1,544	39,025	1,295	2,980	1,445	1,015	3,190	1,760	3,690	2,570	26,075
Jan-23	10,100	6,725	2,410	1,525	36,200	1,350	3,160	1,300	1,395	2,990	1,545	3,400	2,310	24,550
Feb-23	10,125	6,475	2,300	1,706	37,200	1,345	3,250	1,510	1,150	2,990	1,565	3,860	2,310	27,900
Mar-23	9,975	6,200	2,410	1,738	39,400	1,125	3,220	1,510	1,010	2,930	1,380	3,990	2,340	29,100
Apr-23	10,575	6,450	2,600	1,750	33,300	1,040	3,290	1,370	1,010	2,890	1,430	4,140	2,360	28,900
May-23	11,700	7,100	1,715	2,075	22,125	1,195	3,330	1,775	905	2,710	1,430	3,060	2,140	22,225
Jun-23	11,325	7,350	1,910	2,156	24,125	1,340	3,800	1,690	890	2,690	1,305	2,680	2,100	23,275
Jul-23	11,200	7,325	1,975	2,300	27,200	1,335	3,870	1,980	1,130	2,910	1,365	2,770	2,120	27,525
Aug-23	11,200	7,100	2,000	2,400	28,925	1,290	4,300	1,935	1,070	2,830	1,375	2,860	2,180	26,000
Sep-23	11,075	6,625	2,200	2,456	28,975	1,285	4,290	1,820	1,610	2,700	1,375	2,800	2,530	28,250
Oct-23	10,350	6,650	1,815	2,363	26,525	1,225	4,260	1,735	1,275	2,740	1,255	2,480	2,980	25,125
Nov-23	11,550	6,425	1,475	2,381	24,550	1,175	4,650	1,745	1,155	2,800	1,115	2,420	2,950	21,900
Dec-23	10,575	6,450	1,435	2,344	25,650	1,180	4,870	1,790	1,155	2,850	1,130	2,440	5,250	22,625
Jan-24	11,775	6,375	1,380	2,394	27,050	1,060	5,000	1,955	1,220	2,690	1,165	2,610	5,400	22,950
Feb-24	11,550	6,625	1,360	2,856	26,200	1,150	5,425	1,920	1,310	2,580	1,090	2,560	4,580	23,525
Mar-24	11,600	6,375	1,495	2,794	26,700	1,190	5,550	1,820	1,430	2,740	1,360	2,970	5,825	24,175
Apr-24	10,875	6,250	1,435	2,750	25,225	1,145	5,400	1,575	1,350	2,900	1,470	3,030	7,575	24,825
May-24	9,750	5,875	1,430	2,550	24,975	1,370	4,780	1,270	1,395	2,890	1,580	2,490	9,175	22,075
Jun-24	10,300	6,075	1,265	2,675	23,900	1,425	4,980	1,475	1,335	3,020	1,540	2,450	9,225	21,975
Jul-24	10,925	6,125	1,390	2,775	26,300	1,640	5,550	1,450	1,320	3,020	1,600	2,680	9,650	25,800
Aug-24	11,475	6,850	1,460	2,594	27,225	1,595	5,350	1,495	1,255	3,060	1,540	2,730	9,975	27,050
Sep-24	12,325	7,050	1,710	2,738	26,475	1,440	4,930	1,760	1,265	3,170	1,435	3,080	8,475	27,150
Oct-24	12,325	7,600	1,555	2,500	25,075	1,830	4,850	1,580	1,280	2,710	1,565	2,960	8,750	27,450
Nov-24	11,900	7,550	1,405	2,400	26,650	1,710	4,450	1,575	1,090	2,580	1,520	2,700	6,950	26,775
Dec-24	11,375	7,700	1,495	2,480	26,700	1,940	4,330	1,410	1,100	2,540	1,590	2,750	7,500	26,775

Data Return Individual emiten Indeks Kompas 100 Periode 2022 -2024

RETURN INDIVIDUAL (R_i)														
Bulan	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
Jan-22	-0.0044	-0.1119	-0.0412	0.0445	0.0852	-0.0097	0.0641	0.0409	-0.1040	-0.0979	-0.0455	0.2000	0.0000	0.1226
Feb-22	0.0938	0.0342	-0.0644	0.0557	0.0922	0.1179	0.0301	0.0000	0.0110	0.0571	0.6111	0.0417	0.1304	0.1261
Mar-22	0.0980	0.2053	0.3945	-0.0093	0.0313	0.0242	0.0260	0.0169	0.1148	0.1243	-0.0148	0.0240	-0.0577	0.8134
Apr-22	0.2416	0.1758	0.1250	0.0188	0.1182	0.0451	0.1329	-0.0608	-0.0539	0.0240	0.3625	-0.0547	-0.0068	0.0206
May-22	-0.0210	0.0467	0.0643	-0.0462	-0.0054	-0.0493	-0.0503	-0.0176	-0.0207	-0.0751	-0.2000	-0.0826	0.0548	-0.0524
Jun-22	-0.1254	-0.0804	0.1209	-0.0645	-0.1444	-0.1037	-0.0676	-0.0958	-0.0370	-0.1269	-0.2018	-0.1099	-0.0195	-0.2894
Jul-22	0.1364	0.2136	-0.0809	0.0138	0.0000	0.0506	0.0442	0.1921	0.0110	0.0756	0.1264	0.0729	0.0000	0.2395
Aug-22	0.0892	-0.0400	0.1627	0.1156	0.0860	-0.0046	0.0695	-0.0889	0.0000	0.0270	-0.0408	-0.0472	0.0530	0.0773
Sep-22	0.1186	0.1250	0.0963	0.0427	0.0528	0.0346	0.0650	-0.0305	-0.0163	0.0000	0.0000	-0.0416	-0.0314	-0.1076
Oct-22	0.0051	0.1556	0.1799	0.0292	0.0474	0.0356	0.1194	0.0377	0.0276	-0.0105	0.0426	0.1467	0.2208	0.0704
Nov-22	-0.0276	-0.1122	0.0957	0.0568	0.0532	0.0710	-0.0024	-0.0424	-0.0161	0.0745	-0.0816	0.0991	-0.1277	0.0000
Dec-22	-0.0052	0.0108	-0.1424	-0.0806	-0.0682	-0.0080	-0.0570	-0.0403	0.0055	-0.0693	-0.1556	-0.0164	-0.0488	-0.1408
Jan-23	-0.2312	-0.0643	0.0679	-0.0088	-0.0081	-0.0729	0.0025	0.0927	0.0163	0.0372	-0.0395	0.1333	0.0000	0.0820
Feb-23	0.0101	0.0573	0.0247	0.0324	-0.0410	0.0197	0.0050	0.1333	0.0588	0.0154	0.0479	-0.0221	-0.0128	0.0808
Mar-23	-0.0301	0.1191	-0.0069	0.0000	0.0655	0.0128	0.0325	-0.1177	-0.0101	0.0051	-0.0065	0.0677	0.0130	-0.1168
Apr-23	0.0793	0.0452	0.0069	0.0343	0.0080	0.0782	0.0024	0.0121	0.0867	0.0000	0.0658	-0.1268	0.0321	-0.2593
May-23	-0.3482	-0.1574	-0.0897	0.0000	-0.0398	0.0931	-0.0242	-0.0898	-0.0141	0.0754	-0.0741	-0.0806	0.0248	-0.3029
Jun-23	0.0931	0.0403	-0.0227	0.0110	0.0110	-0.0269	0.0297	-0.0197	0.0429	-0.0093	0.2133	-0.0614	0.0121	0.1885
Jul-23	0.0807	-0.0246	0.0465	-0.0027	-0.0301	0.0415	0.1010	0.0403	0.0822	0.0519	0.0934	0.0935	0.1677	0.0172
Aug-23	0.1079	0.0108	0.0741	0.0055	0.0338	-0.0177	0.0524	0.3806	-0.0422	0.0224	0.0352	0.0171	0.0000	0.0254
Sep-23	0.0674	0.1036	0.0207	-0.0381	0.1253	-0.0586	0.0000	0.2150	-0.1013	-0.1053	0.1990	0.0252	0.0718	0.3140
Oct-23	-0.1018	-0.0356	-0.0236	-0.0085	-0.0722	-0.0507	-0.0581	-0.1346	-0.0147	0.0882	-0.2996	-0.0656	0.0335	-0.2453
Nov-23	0.0234	-0.0369	-0.0069	0.0257	0.1013	0.0635	0.0308	-0.0711	0.0547	0.0180	0.0289	-0.0175	-0.0370	-0.0750
Dec-23	-0.0916	0.0279	0.0209	0.0474	0.0190	0.0853	0.0342	0.2727	0.0189	0.0354	-0.0112	-0.0089	-0.0673	-0.0450
Jan-24	0.0084	0.0983	-0.0956	0.0160	0.0698	-0.0044	0.0992	-0.2030	-0.0417	0.0684	0.0795	-0.0811	0.0361	-0.0717
Feb-24	0.0083	0.0494	0.0377	0.0340	0.0435	0.0746	0.0526	-0.0802	-0.0193	0.0160	-0.1316	0.0098	0.0100	0.0467
Mar-24	0.1157	0.0118	0.0582	0.0203	-0.0167	-0.0122	0.0357	-0.0308	-0.0296	0.0236	0.2424	0.2621	-0.0493	0.3107
Apr-24	0.0037	-0.0262	0.0069	-0.0273	-0.1102	-0.1835	-0.0483	0.0794	-0.0558	-0.0731	0.2195	-0.0231	0.1088	0.1556
May-24	0.0221	-0.0448	-0.0956	-0.0561	-0.1619	-0.1215	-0.1449	0.0441	0.0161	-0.0871	0.1100	0.0000	-0.0514	-0.0128
Jun-24	0.0072	0.0125	0.0377	0.0730	0.0591	0.0599	0.0424	-0.0689	0.0106	0.0273	0.0360	-0.0236	0.0936	0.0000
Jul-24	0.1541	-0.0648	0.0327	0.0353	0.0665	0.0152	0.0407	0.1010	0.0838	0.1106	0.3304	0.1048	0.1486	0.0909
Aug-24	0.1056	-0.0132	0.0211	0.0049	0.0765	0.1028	0.1133	0.0505	0.2415	0.0359	-0.0458	0.1533	-0.0588	0.0595
Sep-24	0.0702	0.0368	0.0897	0.0000	0.0000	-0.0388	-0.0281	-0.0830	-0.0739	0.0231	0.0342	0.0380	-0.0125	-0.0056
Oct-24	-0.0499	-0.1290	0.0506	-0.0073	-0.0187	-0.0303	-0.0325	-0.0524	0.0252	0.0075	-0.1126	0.3415	0.0084	0.1130
Nov-24	-0.4254	-0.0889	-0.1416	-0.0244	-0.0514	-0.1146	-0.0821	-0.1407	-0.1803	-0.2015	0.0299	0.0318	-0.0753	-0.1675
Dec-24	0.1683	-0.0894	0.0000	-0.0325	-0.1265	-0.0400	-0.0732	0.0760	-0.0550	-0.0841	-0.1957	-0.1630	-0.0226	-0.0122

RETURN INDIVIDUAL (R_i)														
Bulan	ICBP	INDF	INDY	ISAT	ITMG	JPFA	JSMR	MAPI	MEDC	MIKA	PGAS	PTBA	TPIA	UNTR
Jan-22	0.0029	0.0000	0.3528	-0.0766	0.0613	-0.0320	-0.1542	0.0986	0.1910	0.1150	0.0036	0.0517	0.2048	0.0440
Feb-22	-0.0258	-0.0198	0.0670	-0.0437	0.2321	-0.0571	0.0274	0.0064	0.0811	-0.1190	0.0435	0.1018	0.0227	0.0768
Mar-22	-0.1353	-0.0403	0.0000	-0.0548	0.0703	0.0510	0.1391	0.1210	-0.0750	-0.0225	-0.0243	0.0478	0.1191	0.0261
Apr-22	0.0374	0.0588	0.2063	0.3527	-0.0053	-0.1212	0.0468	0.0227	-0.0090	0.1659	0.0320	0.1611	-0.0050	0.1849
May-22	0.1246	0.0476	0.0743	-0.2393	0.2324	-0.0172	-0.0074	0.0000	0.0636	0.0316	0.2414	0.1859	0.0174	0.0339
Jun-22	0.1137	0.0682	-0.1938	0.2300	-0.1236	0.0807	-0.1150	0.0889	0.0855	0.0536	-0.1167	-0.1567	-0.1198	-0.0927
Jul-22	-0.0759	-0.0355	0.1459	0.0191	0.2910	-0.0617	0.0056	-0.0918	-0.0394	-0.0945	0.0566	0.1257	0.0556	0.1373
Aug-22	-0.0595	-0.0846	0.0749	0.0749	-0.0076	0.0969	-0.0337	0.1348	0.4098	0.0683	0.0952	-0.0116	0.0274	0.0480
Sep-22	0.0422	-0.0321	0.0453	0.0105	0.0541	-0.0442	-0.0581	0.0495	0.0640	0.0902	-0.0462	-0.0188	-0.0164	-0.0303
Oct-22	0.1243	0.0705	0.0867	-0.0655	0.0875	-0.0858	0.0525	0.1368	0.2623	-0.0483	0.1254	-0.0624	0.0167	-0.0160
Nov-22	0.0386	0.0000	-0.1104	-0.1218	-0.0733	-0.0397	-0.0880	0.2033	-0.0779	0.0290	-0.0481	-0.0281	-0.0205	-0.0464
Dec-22	-0.0099	0.0426	-0.0586	0.0378	-0.0653	-0.0263	-0.0418	-0.0034	-0.0469	0.1232	-0.0638	-0.0289	0.0753	-0.1534
Jan-23	0.0100	0.0000	-0.1172	-0.0121	-0.0724	0.0425	0.0604	-0.1003	0.3744	-0.0627	-0.1222	-0.0786	-0.1012	-0.0585
Feb-23	0.0025	-0.0372	-0.0456	0.1189	0.0276	-0.0037	0.0285	0.1615	-0.1756	0.0000	0.0129	0.1353	0.0000	0.1365
Mar-23	-0.0148	-0.0425	0.0478	0.0183	0.0591	-0.1636	-0.0092	0.0000	-0.1217	-0.0201	-0.1182	0.0337	0.0130	0.0430
Apr-23	0.0602	0.0403	0.0788	0.0072	-0.1548	-0.0756	0.0217	-0.0927	0.0000	-0.0137	0.0362	0.0376	0.0085	-0.0069
May-23	0.1064	0.1008	-0.3404	0.1857	-0.3356	0.1490	0.0122	0.2956	-0.1040	-0.0623	0.0000	-0.2609	-0.0932	-0.2310
Jun-23	-0.0321	0.0352	0.1137	0.0392	0.0904	0.1213	0.1411	-0.0479	-0.0166	-0.0074	-0.0874	-0.1242	-0.0187	0.0472
Jul-23	-0.0110	-0.0034	0.0340	0.0667	0.1275	-0.0037	0.0184	0.1716	0.2697	0.0818	0.0460	0.0336	0.0095	0.1826
Aug-23	0.0000	-0.0307	0.0127	0.0435	0.0634	-0.0337	0.1111	-0.0227	-0.0531	-0.0275	0.0073	0.0325	0.0283	-0.0554
Sep-23	-0.0112	-0.0669	0.1000	0.0234	0.0017	-0.0039	-0.0023	-0.0594	0.5047	-0.0459	0.0000	-0.0210	0.1606	0.0865
Oct-23	-0.0655	0.0038	-0.1750	-0.0382	-0.0846	-0.0467	-0.0070	-0.0467	-0.2081	0.0148	-0.0873	-0.1143	0.1779	-0.1106
Nov-23	0.1159	-0.0338	-0.1873	0.0079	-0.0745	-0.0408	0.0915	0.0058	-0.0941	0.0219	-0.1116	-0.0242	-0.0101	-0.1284
Dec-23	-0.0844	0.0039	-0.0271	-0.0157	0.0448	0.0043	0.0473	0.0258	0.0000	0.0179	0.0135	0.0083	0.7797	0.0331
Jan-24	0.1135	-0.0116	-0.0383	0.0213	0.0546	-0.1017	0.0267	0.0922	0.0563	-0.0561	0.0310	0.0697	0.0286	0.0144
Feb-24	-0.0191	0.0392	-0.0145	0.1932	-0.0314	0.0849	0.0850	-0.0179	0.0738	-0.0409	-0.0644	-0.0192	-0.1519	0.0251
Mar-24	0.0043	-0.0377	0.0993	-0.0219	0.0191	0.0348	0.0230	-0.0521	0.0916	0.0620	0.2477	0.1602	0.2718	0.0276
Apr-24	-0.0625	-0.0196	-0.0401	-0.0157	-0.0552	-0.0378	-0.0270	-0.1346	-0.0559	0.0584	0.0809	0.0202	0.3004	0.0269
May-24	-0.1034	-0.0600	-0.0035	-0.0727	-0.0099	0.1965	-0.1148	-0.1937	0.0333	-0.0034	0.0748	-0.1782	0.2112	-0.1108
Jun-24	0.0564	0.0340	-0.1154	0.0490	-0.0430	0.0401	0.0418	0.1614	-0.0430	0.0450	-0.0253	-0.0161	0.0054	-0.0045
Jul-24	0.0607	0.0082	0.0988	0.0374	0.1004	0.1509	0.1145	-0.0169	-0.0112	0.0000	0.0390	0.0939	0.0461	0.1741
Aug-24	0.0503	0.1184	0.0504	-0.0653	0.0352	-0.0274	-0.0360	0.0310	-0.0492	0.0132	-0.0375	0.0187	0.0337	0.0484
Sep-24	0.0741	0.0292	0.1712	0.0554	-0.0275	-0.0972	-0.0785	0.1773	0.0080	0.0359	-0.0682	0.1282	-0.1504	0.0037
Oct-24	0.0000	0.0780	-0.0906	-0.0868	-0.0529	0.2708	-0.0162	-0.1023	0.0119	-0.1451	0.0906	-0.0390	0.0324	0.0110
Nov-24	-0.0345	-0.0066	-0.0965	-0.0400	0.0628	-0.0656	-0.0825	-0.0032	-0.1484	-0.0480	-0.0288	-0.0878	-0.2057	-0.0246
Dec-24	-0.0441	0.0199	0.0641	0.0333	0.0019	0.1345	-0.0270	-0.1048	0.0092	-0.0155	0.0461	0.0185	0.0791	0.0000

Data Exceeds Return ($R_i - R_f$)

EXCEEDS RETURN ($R_i - R_f$)														
Bulan	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
Jan-22	-0.0074	-0.1148	-0.0441	0.0416	0.0823	-0.0126	0.0611	0.0380	-0.1069	-0.1009	-0.0484	0.1971	-0.0029	0.1197
Feb-22	0.0908	0.0313	-0.0673	0.0528	0.0892	0.1150	0.0272	-0.0029	0.0081	0.0542	0.6082	0.0388	0.1275	0.1231
Mar-22	0.0950	0.2024	0.3916	-0.0122	0.0283	0.0213	0.0231	0.0139	0.1118	0.1214	-0.0177	0.0211	-0.0606	0.8105
Apr-22	0.2387	0.1729	0.1221	0.0159	0.1153	0.0421	0.1300	-0.0637	-0.0568	0.0211	0.3596	-0.0576	-0.0097	0.0177
May-22	-0.0239	0.0438	0.0614	-0.0491	-0.0083	-0.0522	-0.0532	-0.0206	-0.0236	-0.0780	-0.2029	-0.0856	0.0519	-0.0553
Jun-22	-0.1283	-0.0833	0.1180	-0.0674	-0.1473	-0.1066	-0.0706	-0.0987	-0.0400	-0.1298	-0.2048	-0.1128	-0.0224	-0.2923
Jul-22	0.1334	0.2107	-0.0838	0.0109	-0.0029	0.0477	0.0412	0.1891	0.0081	0.0727	0.1235	0.0700	-0.0029	0.2366
Aug-22	0.0861	-0.0431	0.1595	0.1125	0.0829	-0.0077	0.0664	-0.0920	-0.0031	0.0239	-0.0439	-0.0503	0.0499	0.0742
Sep-22	0.1151	0.1215	0.0928	0.0391	0.0492	0.0310	0.0614	-0.0340	-0.0198	-0.0035	-0.0035	-0.0451	-0.0350	-0.1112
Oct-22	0.0011	0.1516	0.1760	0.0253	0.0434	0.0317	0.1154	0.0338	0.0237	-0.0145	0.0386	0.1427	0.2168	0.0664
Nov-22	-0.0320	-0.1166	0.0914	0.0524	0.0488	0.0666	-0.0067	-0.0468	-0.0205	0.0701	-0.0860	0.0947	-0.1320	-0.0044
Dec-22	-0.0098	0.0062	-0.1470	-0.0852	-0.0728	-0.0126	-0.0616	-0.0449	0.0009	-0.0739	-0.1601	-0.0210	-0.0534	-0.1454
Jan-23	-0.2360	-0.0691	0.0631	-0.0136	-0.0129	-0.0777	-0.0023	0.0879	0.0115	0.0324	-0.0443	0.1285	-0.0048	0.0772
Feb-23	0.0053	0.0525	0.0199	0.0277	-0.0458	0.0149	0.0002	0.1285	0.0540	0.0106	0.0432	-0.0269	-0.0176	0.0760
Mar-23	-0.0349	0.1143	-0.0117	-0.0048	0.0607	0.0081	0.0277	-0.1224	-0.0149	0.0003	-0.0113	0.0629	0.0082	-0.1216
Apr-23	0.0745	0.0404	0.0022	0.0295	0.0032	0.0734	-0.0024	0.0073	0.0819	-0.0048	0.0610	-0.1316	0.0273	-0.2641
May-23	-0.3530	-0.1622	-0.0944	-0.0048	-0.0446	0.0883	-0.0289	-0.0946	-0.0189	0.0706	-0.0789	-0.0854	0.0201	-0.3076
Jun-23	0.0883	0.0355	-0.0275	0.0063	0.0063	-0.0317	0.0249	-0.0245	0.0381	-0.0141	0.2085	-0.0662	0.0073	0.1837
Jul-23	0.0759	-0.0294	0.0417	-0.0075	-0.0348	0.0367	0.0962	0.0355	0.0774	0.0471	0.0886	0.0887	0.1629	0.0124
Aug-23	0.1031	0.0060	0.0693	0.0007	0.0290	-0.0225	0.0476	0.3759	-0.0470	0.0176	0.0304	0.0123	-0.0048	0.0206
Sep-23	0.0626	0.0988	0.0159	-0.0429	0.1205	-0.0634	-0.0048	0.2102	-0.1061	-0.1101	0.1942	0.0204	0.0670	0.3093
Oct-23	-0.1068	-0.0406	-0.0286	-0.0135	-0.0772	-0.0557	-0.0631	-0.1396	-0.0197	0.0832	-0.3046	-0.0706	0.0285	-0.2503
Nov-23	0.0184	-0.0419	-0.0119	0.0207	0.0963	0.0585	0.0258	-0.0761	0.0497	0.0130	0.0239	-0.0225	-0.0420	-0.0800
Dec-23	-0.0966	0.0229	0.0159	0.0424	0.0140	0.0803	0.0292	0.2677	0.0139	0.0304	-0.0162	-0.0139	-0.0723	-0.0500
Jan-24	0.0034	0.0933	-0.1006	0.0110	0.0648	-0.0094	0.0942	-0.2080	-0.0467	0.0634	0.0745	-0.0861	0.0311	-0.0767
Feb-24	0.0033	0.0444	0.0327	0.0290	0.0385	0.0696	0.0476	-0.0852	-0.0243	0.0110	-0.1366	0.0048	0.0050	0.0417
Mar-24	0.1107	0.0068	0.0532	0.0153	-0.0217	-0.0172	0.0307	-0.0358	-0.0346	0.0186	0.2374	0.2571	-0.0543	0.3057
Apr-24	-0.0015	-0.0314	0.0017	-0.0325	-0.1154	-0.1887	-0.0535	0.0742	-0.0610	-0.0783	0.2143	-0.0283	0.1036	0.1503
May-24	0.0169	-0.0500	-0.1008	-0.0613	-0.1671	-0.1267	-0.1501	0.0389	0.0109	-0.0923	0.1048	-0.0052	-0.0566	-0.0180
Jun-24	0.0020	0.0073	0.0325	0.0678	0.0539	0.0547	0.0372	-0.0741	0.0054	0.0221	0.0308	-0.0288	0.0884	-0.0052
Jul-24	0.1489	-0.0700	0.0275	0.0301	0.0613	0.0100	0.0354	0.0958	0.0786	0.1054	0.3252	0.0996	0.1434	0.0857
Aug-24	0.1004	-0.0184	0.0159	-0.0003	0.0713	0.0976	0.1081	0.0453	0.2363	0.0306	-0.0510	0.1481	-0.0640	0.0543
Sep-24	0.0652	0.0318	0.0847	-0.0050	-0.0050	-0.0438	-0.0331	-0.0880	-0.0789	0.0181	0.0292	0.0330	-0.0175	-0.0106
Oct-24	-0.0549	-0.1340	0.0456	-0.0123	-0.0237	-0.0353	-0.0375	-0.0574	0.0202	0.0025	-0.1176	0.3365	0.0034	0.1080
Nov-24	-0.4304	-0.0939	-0.1466	-0.0294	-0.0564	-0.1196	-0.0871	-0.1457	-0.1853	-0.2065	0.0249	0.0268	-0.0803	-0.1725
Dec-24	0.1633	-0.0944	-0.0050	-0.0375	-0.1315	-0.0450	-0.0782	0.0710	-0.0600	-0.0891	-0.2007	-0.1680	-0.0276	-0.0172

EXCEES RETURN ($R_i - R_f$)														
Bulan	ICBP	INDF	INDY	ISAT	ITMG	JPFA	JSMR	MAPI	MEDC	MIKA	PGAS	PTBA	TPIA	UNTR
Jan-22	0.0000	-0.0029	0.3498	-0.0795	0.0584	-0.0349	-0.1572	0.0957	0.1881	0.1121	0.0007	0.0487	0.2019	0.0411
Feb-22	-0.0287	-0.0227	0.0641	-0.0466	0.2292	-0.0600	0.0244	0.0035	0.0782	-0.1220	0.0406	0.0988	0.0197	0.0738
Mar-22	-0.1382	-0.0432	-0.0029	-0.0577	0.0674	0.0480	0.1361	0.1181	-0.0779	-0.0254	-0.0272	0.0449	0.1162	0.0232
Apr-22	0.0345	0.0559	0.2034	0.3497	-0.0082	-0.1241	0.0438	0.0198	-0.0119	0.1630	0.0291	0.1582	-0.0079	0.1820
May-22	0.1217	0.0447	0.0714	-0.2422	0.2295	-0.0202	-0.0104	-0.0029	0.0607	0.0287	0.2385	0.1829	0.0145	0.0309
Jun-22	0.1108	0.0653	-0.1967	0.2271	-0.1265	0.0778	-0.1179	0.0860	0.0826	0.0507	-0.1196	-0.1596	-0.1227	-0.0956
Jul-22	-0.0788	-0.0384	0.1430	0.0162	0.2880	-0.0646	0.0027	-0.0948	-0.0423	-0.0975	0.0537	0.1227	0.0526	0.1344
Aug-22	-0.0626	-0.0877	0.0718	0.0718	-0.0107	0.0938	-0.0368	0.1317	0.4067	0.0651	0.0921	-0.0148	0.0242	0.0449
Sep-22	0.0386	-0.0357	0.0418	0.0069	0.0505	-0.0477	-0.0617	0.0460	0.0604	0.0867	-0.0497	-0.0224	-0.0199	-0.0338
Oct-22	0.1203	0.0666	0.0827	-0.0695	0.0835	-0.0898	0.0485	0.1328	0.2583	-0.0522	0.1214	-0.0663	0.0127	-0.0200
Nov-22	0.0342	-0.0044	-0.1148	-0.1261	-0.0776	-0.0441	-0.0924	0.1989	-0.0823	0.0246	-0.0525	-0.0325	-0.0249	-0.0508
Dec-22	-0.0145	0.0381	-0.0632	0.0332	-0.0699	-0.0309	-0.0464	-0.0080	-0.0515	0.1187	-0.0684	-0.0335	0.0707	-0.1580
Jan-23	0.0052	-0.0048	-0.1220	-0.0169	-0.0772	0.0377	0.0556	-0.1051	0.3696	-0.0675	-0.1270	-0.0834	-0.1060	-0.0633
Feb-23	-0.0023	-0.0420	-0.0504	0.1141	0.0228	-0.0085	0.0237	0.1567	-0.1804	-0.0048	0.0082	0.1305	-0.0048	0.1317
Mar-23	-0.0196	-0.0473	0.0430	0.0135	0.0543	-0.1684	-0.0140	-0.0048	-0.1265	-0.0249	-0.1230	0.0289	0.0082	0.0382
Apr-23	0.0554	0.0355	0.0740	0.0024	-0.1596	-0.0803	0.0169	-0.0975	-0.0048	-0.0184	0.0314	0.0328	0.0038	-0.0117
May-23	0.1016	0.0960	-0.3452	0.1809	-0.3404	0.1442	0.0074	0.2908	-0.1088	-0.0671	-0.0048	-0.2657	-0.0980	-0.2358
Jun-23	-0.0368	0.0304	0.1089	0.0344	0.0856	0.1165	0.1363	-0.0527	-0.0214	-0.0122	-0.0922	-0.1290	-0.0235	0.0425
Jul-23	-0.0158	-0.0082	0.0292	0.0619	0.1227	-0.0085	0.0136	0.1668	0.2649	0.0770	0.0412	0.0288	0.0047	0.1778
Aug-23	-0.0048	-0.0355	0.0079	0.0387	0.0586	-0.0385	0.1063	-0.0275	-0.0579	-0.0323	0.0025	0.0277	0.0235	-0.0602
Sep-23	-0.0160	-0.0717	0.0952	0.0186	-0.0031	-0.0087	-0.0071	-0.0642	0.4999	-0.0507	-0.0048	-0.0258	0.1558	0.0817
Oct-23	-0.0705	-0.0012	-0.1800	-0.0432	-0.0896	-0.0517	-0.0120	-0.0517	-0.2131	0.0098	-0.0923	-0.1193	0.1729	-0.1156
Nov-23	0.1109	-0.0388	-0.1923	0.0029	-0.0795	-0.0458	0.0865	0.0008	-0.0991	0.0169	-0.1166	-0.0292	-0.0151	-0.1334
Dec-23	-0.0894	-0.0011	-0.0321	-0.0207	0.0398	-0.0007	0.0423	0.0208	-0.0050	0.0129	0.0085	0.0033	0.7747	0.0281
Jan-24	0.1085	-0.0166	-0.0433	0.0163	0.0496	-0.1067	0.0217	0.0872	0.0513	-0.0611	0.0260	0.0647	0.0236	0.0094
Feb-24	-0.0241	0.0342	-0.0195	0.1882	-0.0364	0.0799	0.0800	-0.0229	0.0688	-0.0459	-0.0694	-0.0242	-0.1569	0.0201
Mar-24	-0.0007	-0.0427	0.0943	-0.0269	0.0141	0.0298	0.0180	-0.0571	0.0866	0.0570	0.2427	0.1552	0.2668	0.0226
Apr-24	-0.0677	-0.0248	-0.0453	-0.0209	-0.0605	-0.0430	-0.0322	-0.1398	-0.0612	0.0532	0.0757	0.0150	0.2952	0.0217
May-24	-0.1087	-0.0652	-0.0087	-0.0779	-0.0151	0.1913	-0.1200	-0.1989	0.0281	-0.0087	0.0696	-0.1834	0.2060	-0.1160
Jun-24	0.0512	0.0288	-0.1206	0.0438	-0.0483	0.0349	0.0366	0.1562	-0.0482	0.0398	-0.0305	-0.0213	0.0002	-0.0097
Jul-24	0.0555	0.0030	0.0936	0.0322	0.0952	0.1457	0.1092	-0.0222	-0.0164	-0.0052	0.0338	0.0887	0.0409	0.1689
Aug-24	0.0451	0.1132	0.0452	-0.0705	0.0300	-0.0326	-0.0412	0.0258	-0.0545	0.0080	-0.0427	0.0134	0.0285	0.0432
Sep-24	0.0691	0.0242	0.1662	0.0504	-0.0325	-0.1022	-0.0835	0.1723	0.0030	0.0309	-0.0732	0.1232	-0.1554	-0.0013
Oct-24	-0.0050	0.0730	-0.0956	-0.0918	-0.0579	0.2658	-0.0212	-0.1073	0.0069	-0.1501	0.0856	-0.0440	0.0274	0.0060
Nov-24	-0.0395	-0.0116	-0.1015	-0.0450	0.0578	-0.0706	-0.0875	-0.0082	-0.1534	-0.0530	-0.0338	-0.0928	-0.2107	-0.0296
Dec-24	-0.0491	0.0149	0.0591	0.0283	-0.0031	0.1295	-0.0320	-0.1098	0.0042	-0.0205	0.0411	0.0135	0.0741	-0.0050

Hasil Perhitungan $(R_i - (E(R_i)))$

$(R_i - (E(R_i)))$															
Bulan	IHSG	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
Jan-22	0.0045	-0.0169	-0.1247	-0.0696	0.0359	0.0754	-0.0119	0.0486	0.0321	-0.1046	-0.1008	-0.0802	0.1768	-0.0150	0.0935
Feb-22	0.0364	0.0813	0.0215	-0.0928	0.0471	0.0824	0.1158	0.0146	-0.0088	0.0105	0.0543	0.5763	0.0184	0.1154	0.0969
Mar-22	0.0243	0.0856	0.1925	0.3660	-0.0179	0.0215	0.0220	0.0105	0.0081	0.1142	0.1214	-0.0495	0.0008	-0.0727	0.7843
Apr-22	0.0199	0.2292	0.1630	0.0965	0.0102	0.1084	0.0429	0.1174	-0.0696	-0.0545	0.0212	0.3277	-0.0779	-0.0218	-0.0086
May-22	-0.0134	-0.0334	0.0339	0.0359	-0.0548	-0.0152	-0.0515	-0.0657	-0.0265	-0.0213	-0.0780	-0.2348	-0.1059	0.0398	-0.0816
Jun-22	-0.0355	-0.1378	-0.0931	0.0924	-0.0731	-0.1542	-0.1058	-0.0831	-0.1046	-0.0376	-0.1298	-0.2366	-0.1331	-0.0345	-0.3185
Jul-22	0.0034	0.1240	0.2008	-0.1093	0.0052	-0.0097	0.0484	0.0287	0.1832	0.0104	0.0727	0.0917	0.0496	-0.0150	0.2104
Aug-22	0.0304	0.0768	-0.0528	0.1342	0.1070	0.0762	-0.0068	0.0540	-0.0977	-0.0006	0.0241	-0.0756	-0.0704	0.0380	0.0481
Sep-22	-0.0215	0.1062	0.1122	0.0679	0.0341	0.0430	0.0324	0.0495	-0.0393	-0.0169	-0.0029	-0.0348	-0.0648	-0.0465	-0.1368
Oct-22	0.0059	-0.0074	0.1428	0.1515	0.0206	0.0376	0.0335	0.1039	0.0289	0.0270	-0.0134	0.0078	0.1235	0.2058	0.0412
Nov-22	-0.0048	-0.0400	-0.1250	0.0673	0.0482	0.0434	0.0688	-0.0178	-0.0512	-0.0167	0.0716	-0.1164	0.0759	-0.1427	-0.0292
Dec-22	-0.0349	-0.0176	-0.0020	-0.1709	-0.0893	-0.0779	-0.0102	-0.0725	-0.0491	0.0049	-0.0722	-0.1903	-0.0396	-0.0638	-0.1700
Jan-23	-0.0040	-0.2436	-0.0771	0.0395	-0.0174	-0.0179	-0.0750	-0.0129	0.0839	0.0157	0.0344	-0.0742	0.1101	-0.0150	0.0528
Feb-23	-0.0018	-0.0023	0.0445	-0.0037	0.0238	-0.0507	0.0175	-0.0104	0.1245	0.0582	0.0125	0.0132	-0.0453	-0.0278	0.0516
Mar-23	-0.0079	-0.0425	0.1063	-0.0354	-0.0086	0.0558	0.0107	0.0170	-0.1265	-0.0107	0.0022	-0.0413	0.0444	-0.0020	-0.1460
Apr-23	0.0139	0.0669	0.0324	-0.0215	0.0257	-0.0017	0.0761	-0.0130	0.0033	0.0861	-0.0029	0.0310	-0.1500	0.0170	-0.2884
May-23	-0.0432	-0.3606	-0.1702	-0.1181	-0.0086	-0.0495	0.0910	-0.0396	-0.0986	-0.0147	0.0725	-0.1088	-0.1039	0.0098	-0.3320
Jun-23	0.0020	0.0807	0.0275	-0.0512	0.0024	0.0013	-0.0291	0.0142	-0.0286	0.0423	-0.0122	0.1786	-0.0846	-0.0029	0.1594
Jul-23	0.0381	0.0683	-0.0374	0.0181	-0.0114	-0.0398	0.0393	0.0855	0.0315	0.0816	0.0490	0.0586	0.0702	0.1527	-0.0119
Aug-23	0.0008	0.0955	-0.0020	0.0456	-0.0031	0.0241	-0.0199	0.0369	0.3718	-0.0428	0.0195	0.0004	-0.0061	-0.0150	-0.0037
Sep-23	-0.0043	0.0550	0.0908	-0.0078	-0.0468	0.1156	-0.0607	-0.0155	0.2061	-0.1019	-0.1081	0.1643	0.0020	0.0568	0.2849
Oct-23	-0.0294	-0.1142	-0.0484	-0.0521	-0.0171	-0.0819	-0.0529	-0.0736	-0.1434	-0.0153	0.0854	-0.3344	-0.0888	0.0185	-0.2744
Nov-23	0.0463	0.0110	-0.0497	-0.0354	0.0171	0.0915	0.0613	0.0154	-0.0799	0.0541	0.0151	-0.0059	-0.0408	-0.0521	-0.1042
Dec-23	0.0248	-0.1040	0.0151	-0.0076	0.0387	0.0092	0.0831	0.0187	0.2639	0.0183	0.0325	-0.0460	-0.0322	-0.0823	-0.0742
Jan-24	-0.0113	-0.0040	0.0855	-0.1240	0.0073	0.0600	-0.0065	0.0837	-0.2118	-0.0423	0.0655	0.0448	-0.1043	0.0211	-0.1009
Feb-24	0.0127	-0.0041	0.0366	0.0093	0.0254	0.0337	0.0724	0.0372	-0.0890	-0.0199	0.0131	-0.1663	-0.0134	-0.0051	0.0176
Mar-24	-0.0061	0.1033	-0.0010	0.0297	0.0116	-0.0264	-0.0144	0.0202	-0.0396	-0.0302	0.0207	0.2077	0.2389	-0.0643	0.2815
Apr-24	-0.0098	-0.0087	-0.0389	-0.0216	-0.0359	-0.1199	-0.1856	-0.0637	0.0706	-0.0564	-0.0760	0.1847	-0.0463	0.0938	0.1264
May-24	-0.0388	0.0097	-0.0576	-0.1240	-0.0647	-0.1717	-0.1236	-0.1604	0.0353	0.0155	-0.0900	0.0752	-0.0232	-0.0664	-0.0420
Jun-24	0.0110	-0.0052	-0.0003	0.0093	0.0643	0.0493	0.0577	0.0269	-0.0777	0.0100	0.0244	0.0013	-0.0469	0.0786	-0.0292
Jul-24	0.0249	0.1417	-0.0776	0.0043	0.0266	0.0568	0.0130	0.0252	0.0922	0.0832	0.1077	0.2957	0.0816	0.1336	0.0617
Aug-24	0.0549	0.0932	-0.0260	-0.0073	-0.0038	0.0667	0.1006	0.0978	0.0416	0.2409	0.0330	-0.0805	0.1301	-0.0738	0.0304
Sep-24	-0.0210	0.0578	0.0240	0.0612	-0.0086	-0.0097	-0.0410	-0.0435	-0.0918	-0.0745	0.0202	-0.0005	0.0147	-0.0275	-0.0348
Oct-24	0.0038	-0.0623	-0.1418	0.0222	-0.0159	-0.0284	-0.0325	-0.0480	-0.0612	0.0246	0.0046	-0.1474	0.3182	-0.0066	0.0838
Nov-24	-0.0630	-0.4378	-0.1017	-0.1700	-0.0330	-0.0612	-0.1168	-0.0976	-0.1495	-0.1809	-0.2044	-0.0049	0.0086	-0.0903	-0.1967
Dec-24	-0.0072	0.1559	-0.1022	-0.0285	-0.0411	-0.1363	-0.0422	-0.0886	0.0672	-0.0556	-0.0870	-0.2304	-0.1862	-0.0376	-0.0414

$(R_i - (E(R_i)))$														
Bulan	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
Jan-22	-0.0169	-0.1247	-0.0696	0.0359	0.0754	-0.0119	0.0486	0.0321	-0.1046	-0.1008	-0.0802	0.1768	-0.0150	0.0935
Feb-22	0.0813	0.0215	-0.0928	0.0471	0.0824	0.1158	0.0146	-0.0088	0.0105	0.0543	0.5763	0.0184	0.1154	0.0969
Mar-22	0.0856	0.1925	0.3660	-0.0179	0.0215	0.0220	0.0105	0.0081	0.1142	0.1214	-0.0495	0.0008	-0.0727	0.7843
Apr-22	0.2292	0.1630	0.0965	0.0102	0.1084	0.0429	0.1174	-0.0696	-0.0545	0.0212	0.3277	-0.0779	-0.0218	-0.0086
May-22	-0.0334	0.0339	0.0359	-0.0548	-0.0152	-0.0515	-0.0657	-0.0265	-0.0213	-0.0780	-0.2348	-0.1059	0.0398	-0.0816
Jun-22	-0.1378	-0.0931	0.0924	-0.0731	-0.1542	-0.1058	-0.0831	-0.1046	-0.0376	-0.1298	-0.2366	-0.1331	-0.0345	-0.3185
Jul-22	0.1240	0.2008	-0.1093	0.0052	-0.0097	0.0484	0.0287	0.1832	0.0104	0.0727	0.0917	0.0496	-0.0150	0.2104
Aug-22	0.0768	-0.0528	0.1342	0.1070	0.0762	-0.0068	0.0540	-0.0977	-0.0006	0.0241	-0.0756	-0.0704	0.0380	0.0481
Sep-22	0.1062	0.1122	0.0679	0.0341	0.0430	0.0324	0.0495	-0.0393	-0.0169	-0.0029	-0.0348	-0.0648	-0.0465	-0.1368
Oct-22	-0.0074	0.1428	0.1515	0.0206	0.0376	0.0335	0.1039	0.0289	0.0270	-0.0134	0.0078	0.1235	0.2058	0.0412
Nov-22	-0.0400	-0.1250	0.0673	0.0482	0.0434	0.0688	-0.0178	-0.0512	-0.0167	0.0716	-0.1164	0.0759	-0.1427	-0.0292
Dec-22	-0.0176	-0.0020	-0.1709	-0.0893	-0.0779	-0.0102	-0.0725	-0.0491	0.0049	-0.0722	-0.1903	-0.0396	-0.0638	-0.1700
Jan-23	-0.2436	-0.0771	0.0395	-0.0174	-0.0179	-0.0750	-0.0129	0.0839	0.0157	0.0344	-0.0742	0.1101	-0.0150	0.0528
Feb-23	-0.0023	0.0445	-0.0037	0.0238	-0.0507	0.0175	-0.0104	0.1245	0.0582	0.0125	0.0132	-0.0453	-0.0278	0.0516
Mar-23	-0.0425	0.1063	-0.0354	-0.0086	0.0558	0.0107	0.0170	-0.1265	-0.0107	0.0022	-0.0413	0.0444	-0.0020	-0.1460
Apr-23	0.0669	0.0324	-0.0215	0.0257	-0.0017	0.0761	-0.0130	0.0033	0.0861	-0.0029	0.0310	-0.1500	0.0170	-0.2884
May-23	-0.3606	-0.1702	-0.1181	-0.0086	-0.0495	0.0910	-0.0396	-0.0986	-0.0147	0.0725	-0.1088	-0.1039	0.0098	-0.3320
Jun-23	0.0807	0.0275	-0.0512	0.0024	0.0013	-0.0291	0.0142	-0.0286	0.0423	-0.0122	0.1786	-0.0846	-0.0029	0.1594
Jul-23	0.0683	-0.0374	0.0181	-0.0114	-0.0398	0.0393	0.0855	0.0315	0.0816	0.0490	0.0586	0.0702	0.1527	-0.0119
Aug-23	0.0955	-0.0020	0.0456	-0.0031	0.0241	-0.0199	0.0369	0.3718	-0.0428	0.0195	0.0004	-0.0061	-0.0150	-0.0037
Sep-23	0.0550	0.0908	-0.0078	-0.0468	0.1156	-0.0607	-0.0155	0.2061	-0.1019	-0.1081	0.1643	0.0020	0.0568	0.2849
Oct-23	-0.1142	-0.0484	-0.0521	-0.0171	-0.0819	-0.0529	-0.0736	-0.1434	-0.0153	0.0854	-0.3344	-0.0888	0.0185	-0.2744
Nov-23	0.0110	-0.0497	-0.0354	0.0171	0.0915	0.0613	0.0154	-0.0799	0.0541	0.0151	-0.0059	-0.0408	-0.0521	-0.1042
Dec-23	-0.1040	0.0151	-0.0076	0.0387	0.0092	0.0831	0.0187	0.2639	0.0183	0.0325	-0.0460	-0.0322	-0.0823	-0.0742
Jan-24	-0.0040	0.0855	-0.1240	0.0073	0.0600	-0.0065	0.0837	-0.2118	-0.0423	0.0655	0.0448	-0.1043	0.0211	-0.1009
Feb-24	-0.0041	0.0366	0.0093	0.0254	0.0337	0.0724	0.0372	-0.0890	-0.0199	0.0131	-0.1663	-0.0134	-0.0051	0.0176
Mar-24	0.1033	-0.0010	0.0297	0.0116	-0.0264	-0.0144	0.0202	-0.0396	-0.0302	0.0207	0.2077	0.2389	-0.0643	0.2815
Apr-24	-0.0087	-0.0389	-0.0216	-0.0359	-0.1199	-0.1856	-0.0637	0.0706	-0.0564	-0.0760	0.1847	-0.0463	0.0938	0.1264
May-24	0.0097	-0.0576	-0.1240	-0.0647	-0.1717	-0.1236	-0.1604	0.0353	0.0155	-0.0900	0.0752	-0.0232	-0.0664	-0.0420
Jun-24	-0.0052	-0.0003	0.0093	0.0643	0.0493	0.0577	0.0269	-0.0777	0.0100	0.0244	0.0013	-0.0469	0.0786	-0.0292
Jul-24	0.1417	-0.0776	0.0043	0.0266	0.0568	0.0130	0.0252	0.0922	0.0832	0.1077	0.2957	0.0816	0.1336	0.0617
Aug-24	0.0932	-0.0260	-0.0073	-0.0038	0.0667	0.1006	0.0978	0.0416	0.2409	0.0330	-0.0805	0.1301	-0.0738	0.0304
Sep-24	0.0578	0.0240	0.0612	-0.0086	-0.0097	-0.0410	-0.0435	-0.0918	-0.0745	0.0202	-0.0005	0.0147	-0.0275	-0.0348
Oct-24	-0.0623	-0.1418	0.0222	-0.0159	-0.0284	-0.0325	-0.0480	-0.0612	0.0246	0.0046	-0.1474	0.3182	-0.0066	0.0838
Nov-24	-0.4378	-0.1017	-0.1700	-0.0330	-0.0612	-0.1168	-0.0976	-0.1495	-0.1809	-0.2044	-0.0049	0.0086	-0.0903	-0.1967
Dec-24	0.1559	-0.1022	-0.0285	-0.0411	-0.1363	-0.0422	-0.0886	0.0672	-0.0556	-0.0870	-0.2304	-0.1862	-0.0376	-0.0414

Hasil Perhitungan $(R_i - (E(R_i)))^2$

$(R_i - (E(R_i)))^2$															
Bulan	IHSG	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
Jan-22	0.0000	0.0003	0.0156	0.0048	0.0013	0.0057	0.0001	0.0024	0.0010	0.0109	0.0102	0.0064	0.0312	0.0002	0.0087
Feb-22	0.0013	0.0066	0.0005	0.0086	0.0022	0.0068	0.0134	0.0002	0.0001	0.0001	0.0029	0.3322	0.0003	0.0133	0.0094
Mar-22	0.0006	0.0073	0.0371	0.1340	0.0003	0.0005	0.0005	0.0001	0.0001	0.0130	0.0147	0.0025	0.0000	0.0053	0.6151
Apr-22	0.0004	0.0525	0.0266	0.0093	0.0001	0.0118	0.0018	0.0138	0.0048	0.0030	0.0004	0.1074	0.0061	0.0005	0.0001
May-22	0.0002	0.0011	0.0012	0.0013	0.0030	0.0002	0.0026	0.0043	0.0007	0.0005	0.0061	0.0551	0.0112	0.0016	0.0067
Jun-22	0.0013	0.0190	0.0087	0.0085	0.0053	0.0238	0.0112	0.0069	0.0109	0.0014	0.0168	0.0560	0.0177	0.0012	0.1015
Jul-22	0.0000	0.0154	0.0403	0.0120	0.0000	0.0001	0.0023	0.0008	0.0336	0.0001	0.0053	0.0084	0.0025	0.0002	0.0442
Aug-22	0.0009	0.0059	0.0028	0.0180	0.0115	0.0058	0.0000	0.0029	0.0095	0.0000	0.0006	0.0057	0.0050	0.0014	0.0023
Sep-22	0.0005	0.0113	0.0126	0.0046	0.0012	0.0019	0.0010	0.0025	0.0015	0.0003	0.0000	0.0012	0.0042	0.0022	0.0187
Oct-22	0.0000	0.0001	0.0204	0.0229	0.0004	0.0014	0.0011	0.0108	0.0008	0.0007	0.0002	0.0001	0.0152	0.0423	0.0017
Nov-22	0.0000	0.0016	0.0156	0.0045	0.0023	0.0019	0.0047	0.0003	0.0026	0.0003	0.0051	0.0135	0.0058	0.0204	0.0009
Dec-22	0.0012	0.0003	0.0000	0.0292	0.0080	0.0061	0.0001	0.0053	0.0024	0.0000	0.0052	0.0362	0.0016	0.0041	0.0289
Jan-23	0.0000	0.0593	0.0059	0.0016	0.0003	0.0003	0.0056	0.0002	0.0070	0.0002	0.0012	0.0055	0.0121	0.0002	0.0028
Feb-23	0.0000	0.0000	0.0020	0.0000	0.0006	0.0026	0.0003	0.0001	0.0155	0.0034	0.0002	0.0002	0.0021	0.0008	0.0027
Mar-23	0.0001	0.0018	0.0113	0.0012	0.0001	0.0031	0.0001	0.0003	0.0160	0.0001	0.0000	0.0017	0.0020	0.0000	0.0213
Apr-23	0.0002	0.0045	0.0010	0.0005	0.0007	0.0000	0.0058	0.0002	0.0000	0.0074	0.0000	0.0010	0.0225	0.0003	0.0832
May-23	0.0019	0.1301	0.0290	0.0140	0.0001	0.0025	0.0083	0.0016	0.0097	0.0002	0.0053	0.0118	0.0108	0.0001	0.1102
Jun-23	0.0000	0.0065	0.0008	0.0026	0.0000	0.0000	0.0008	0.0002	0.0008	0.0018	0.0001	0.0319	0.0072	0.0000	0.0254
Jul-23	0.0015	0.0047	0.0014	0.0003	0.0001	0.0016	0.0015	0.0073	0.0010	0.0067	0.0024	0.0034	0.0049	0.0233	0.0001
Aug-23	0.0000	0.0091	0.0000	0.0021	0.0000	0.0006	0.0004	0.0014	0.1383	0.0018	0.0004	0.0000	0.0000	0.0002	0.0000
Sep-23	0.0000	0.0030	0.0082	0.0001	0.0022	0.0134	0.0037	0.0002	0.0425	0.0104	0.0117	0.0270	0.0000	0.0032	0.0812
Oct-23	0.0009	0.0130	0.0023	0.0027	0.0003	0.0067	0.0028	0.0054	0.0206	0.0002	0.0073	0.1118	0.0079	0.0003	0.0753
Nov-23	0.0021	0.0001	0.0025	0.0013	0.0003	0.0084	0.0038	0.0002	0.0064	0.0029	0.0002	0.0000	0.0017	0.0027	0.0109
Dec-23	0.0006	0.0108	0.0002	0.0001	0.0015	0.0001	0.0069	0.0004	0.0697	0.0003	0.0011	0.0021	0.0010	0.0068	0.0055
Jan-24	0.0001	0.0000	0.0073	0.0154	0.0001	0.0036	0.0000	0.0070	0.0449	0.0018	0.0043	0.0020	0.0109	0.0004	0.0102
Feb-24	0.0002	0.0000	0.0013	0.0001	0.0006	0.0011	0.0052	0.0014	0.0079	0.0004	0.0002	0.0277	0.0002	0.0000	0.0003
Mar-24	0.0000	0.0107	0.0000	0.0009	0.0001	0.0007	0.0002	0.0004	0.0016	0.0009	0.0004	0.0431	0.0571	0.0041	0.0793
Apr-24	0.0001	0.0001	0.0015	0.0005	0.0013	0.0144	0.0345	0.0041	0.0050	0.0032	0.0058	0.0341	0.0021	0.0088	0.0160
May-24	0.0015	0.0001	0.0033	0.0154	0.0042	0.0295	0.0153	0.0257	0.0012	0.0002	0.0081	0.0057	0.0005	0.0044	0.0018
Jun-24	0.0001	0.0000	0.0000	0.0001	0.0041	0.0024	0.0033	0.0007	0.0060	0.0001	0.0006	0.0000	0.0022	0.0062	0.0009
Jul-24	0.0006	0.0201	0.0060	0.0000	0.0007	0.0032	0.0002	0.0006	0.0085	0.0069	0.0116	0.0874	0.0067	0.0179	0.0038
Aug-24	0.0030	0.0087	0.0007	0.0001	0.0000	0.0045	0.0101	0.0096	0.0017	0.0581	0.0011	0.0065	0.0169	0.0055	0.0009
Sep-24	0.0004	0.0033	0.0006	0.0037	0.0001	0.0001	0.0017	0.0019	0.0084	0.0056	0.0004	0.0000	0.0002	0.0008	0.0012
Oct-24	0.0000	0.0039	0.0201	0.0005	0.0003	0.0008	0.0011	0.0023	0.0037	0.0006	0.0000	0.0217	0.1013	0.0000	0.0070
Nov-24	0.0040	0.1917	0.0103	0.0289	0.0011	0.0037	0.0136	0.0095	0.0224	0.0327	0.0418	0.0000	0.0001	0.0082	0.0387
Dec-24	0.0001	0.0243	0.0104	0.0008	0.0017	0.0186	0.0018	0.0079	0.0045	0.0031	0.0076	0.0531	0.0347	0.0014	0.0017

$(R_i - (E(R_i))^2$														
Tanggal	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
Jan-22	0.0000	0.0000	0.1192	0.0090	0.0022	0.0016	0.0255	0.0054	0.0243	0.0120	0.0000	0.0021	0.0237	0.0012
Feb-22	0.0013	0.0007	0.0035	0.0038	0.0476	0.0042	0.0005	0.0003	0.0021	0.0155	0.0013	0.0093	0.0008	0.0045
Mar-22	0.0210	0.0022	0.0001	0.0053	0.0032	0.0019	0.0179	0.0093	0.0121	0.0008	0.0010	0.0018	0.0047	0.0003
Apr-22	0.0008	0.0027	0.0395	0.1119	0.0004	0.0166	0.0017	0.0000	0.0019	0.0258	0.0006	0.0242	0.0031	0.0308
May-22	0.0132	0.0017	0.0045	0.0663	0.0477	0.0006	0.0002	0.0006	0.0008	0.0007	0.0546	0.0326	0.0011	0.0006
Jun-22	0.0108	0.0038	0.0405	0.0449	0.0189	0.0054	0.0145	0.0041	0.0025	0.0023	0.0154	0.0263	0.0291	0.0104
Jul-22	0.0073	0.0018	0.0192	0.0000	0.0768	0.0048	0.0000	0.0136	0.0055	0.0100	0.0024	0.0145	0.0000	0.0163
Aug-22	0.0048	0.0083	0.0045	0.0032	0.0005	0.0080	0.0015	0.0121	0.1405	0.0040	0.0077	0.0003	0.0006	0.0015
Sep-22	0.0011	0.0015	0.0014	0.0001	0.0016	0.0027	0.0040	0.0006	0.0008	0.0072	0.0029	0.0006	0.0045	0.0016
Oct-22	0.0131	0.0041	0.0063	0.0070	0.0054	0.0087	0.0022	0.0125	0.0517	0.0029	0.0139	0.0046	0.0012	0.0006
Nov-22	0.0008	0.0000	0.0139	0.0196	0.0076	0.0022	0.0087	0.0319	0.0128	0.0006	0.0031	0.0011	0.0051	0.0031
Dec-22	0.0004	0.0013	0.0044	0.0004	0.0063	0.0011	0.0022	0.0008	0.0067	0.0139	0.0051	0.0012	0.0006	0.0265
Jan-23	0.0000	0.0000	0.0156	0.0009	0.0074	0.0012	0.0030	0.0157	0.1152	0.0046	0.0168	0.0071	0.0231	0.0046
Feb-23	0.0001	0.0019	0.0028	0.0101	0.0002	0.0001	0.0005	0.0187	0.0444	0.0000	0.0000	0.0169	0.0026	0.0161
Mar-23	0.0006	0.0024	0.0016	0.0000	0.0020	0.0293	0.0002	0.0006	0.0246	0.0006	0.0158	0.0008	0.0014	0.0011
Apr-23	0.0025	0.0011	0.0051	0.0001	0.0285	0.0069	0.0003	0.0138	0.0012	0.0004	0.0008	0.0010	0.0018	0.0003
May-23	0.0093	0.0089	0.1210	0.0281	0.1221	0.0200	0.0000	0.0733	0.0193	0.0046	0.0001	0.0709	0.0208	0.0578
Jun-23	0.0017	0.0008	0.0113	0.0004	0.0059	0.0129	0.0184	0.0053	0.0027	0.0002	0.0090	0.0168	0.0048	0.0014
Jul-23	0.0004	0.0001	0.0007	0.0023	0.0129	0.0001	0.0002	0.0215	0.0551	0.0058	0.0015	0.0008	0.0017	0.0300
Aug-23	0.0001	0.0014	0.0000	0.0006	0.0025	0.0017	0.0112	0.0023	0.0078	0.0011	0.0000	0.0007	0.0005	0.0042
Sep-23	0.0004	0.0054	0.0086	0.0000	0.0001	0.0001	0.0001	0.0071	0.2206	0.0026	0.0001	0.0007	0.0120	0.0059
Oct-23	0.0056	0.0000	0.0333	0.0032	0.0097	0.0029	0.0002	0.0051	0.0591	0.0001	0.0090	0.0143	0.0161	0.0144
Nov-23	0.0113	0.0016	0.0380	0.0001	0.0078	0.0023	0.0074	0.0004	0.0167	0.0003	0.0142	0.0009	0.0037	0.0190
Dec-23	0.0089	0.0000	0.0012	0.0012	0.0010	0.0000	0.0018	0.0000	0.0012	0.0002	0.0000	0.0000	0.5311	0.0006
Jan-24	0.0108	0.0003	0.0021	0.0000	0.0017	0.0119	0.0005	0.0045	0.0005	0.0038	0.0005	0.0041	0.0005	0.0000
Feb-24	0.0008	0.0011	0.0005	0.0306	0.0021	0.0060	0.0063	0.0018	0.0015	0.0021	0.0052	0.0006	0.0411	0.0002
Mar-24	0.0000	0.0020	0.0084	0.0016	0.0000	0.0007	0.0003	0.0059	0.0032	0.0032	0.0576	0.0240	0.0488	0.0003
Apr-24	0.0052	0.0007	0.0023	0.0011	0.0048	0.0021	0.0011	0.0254	0.0083	0.0028	0.0054	0.0002	0.0623	0.0003
May-24	0.0128	0.0044	0.0001	0.0083	0.0006	0.0357	0.0145	0.0477	0.0000	0.0001	0.0045	0.0337	0.0257	0.0145
Jun-24	0.0022	0.0008	0.0151	0.0009	0.0032	0.0011	0.0013	0.0187	0.0061	0.0016	0.0011	0.0005	0.0021	0.0002
Jul-24	0.0026	0.0000	0.0083	0.0004	0.0075	0.0205	0.0119	0.0017	0.0021	0.0000	0.0010	0.0078	0.0000	0.0271
Aug-24	0.0017	0.0125	0.0018	0.0070	0.0005	0.0012	0.0017	0.0000	0.0071	0.0001	0.0020	0.0002	0.0003	0.0015
Sep-24	0.0041	0.0005	0.0268	0.0014	0.0017	0.0110	0.0070	0.0232	0.0007	0.0009	0.0057	0.0151	0.0405	0.0000
Oct-24	0.0001	0.0051	0.0096	0.0110	0.0045	0.0693	0.0005	0.0162	0.0005	0.0227	0.0069	0.0020	0.0003	0.0000
Nov-24	0.0020	0.0002	0.0108	0.0034	0.0024	0.0053	0.0077	0.0008	0.0337	0.0028	0.0013	0.0087	0.0659	0.0012
Dec-24	0.0029	0.0002	0.0032	0.0002	0.0001	0.0161	0.0010	0.0168	0.0007	0.0004	0.0015	0.0002	0.0008	0.0001

Data Kovarian (σ_{ij})

KOVARIAN (σ_{ij})														
	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
ADRO	0.0179	0.0062	0.0043	0.0013	0.0033	0.0023	0.0037	0.0045	0.0031	0.0028	0.0095	0.0000	0.0017	0.0117
AKRA	0.0062	0.0088	0.0031	0.0003	0.0026	0.0015	0.0027	0.0016	0.0009	0.0016	0.0051	-0.0013	0.0010	0.0078
AMRT	0.0043	0.0031	0.0100	0.0009	0.0017	0.0006	0.0020	0.0010	0.0019	0.0023	-0.0014	0.0011	0.0004	0.0104
BBCA	0.0013	0.0003	0.0009	0.0016	0.0019	0.0017	0.0016	-0.0001	0.0005	0.0014	0.0020	0.0006	0.0005	0.0009
BBNI	0.0033	0.0026	0.0017	0.0019	0.0054	0.0030	0.0035	0.0002	0.0007	0.0020	0.0048	0.0018	0.0009	0.0040
BBRI	0.0023	0.0015	0.0006	0.0017	0.0030	0.0047	0.0027	0.0002	0.0025	0.0031	0.0019	0.0005	0.0002	0.0000
BMRI	0.0037	0.0027	0.0020	0.0016	0.0035	0.0027	0.0040	0.0007	0.0015	0.0022	0.0037	0.0017	0.0014	0.0032
BRPT	0.0045	0.0016	0.0010	-0.0001	0.0002	0.0002	0.0007	0.0146	0.0012	0.0002	0.0043	0.0016	0.0005	0.0082
BSDE	0.0031	0.0009	0.0019	0.0005	0.0007	0.0025	0.0015	0.0012	0.0051	0.0029	0.0004	0.0011	0.0004	0.0029
CTRA	0.0028	0.0016	0.0023	0.0014	0.0020	0.0031	0.0022	0.0002	0.0029	0.0051	0.0022	0.0011	0.0007	0.0036
DOID	0.0095	0.0051	-0.0014	0.0020	0.0048	0.0019	0.0037	0.0043	0.0004	0.0022	0.0315	0.0029	0.0047	0.0127
DSNG	0.0000	-0.0013	0.0011	0.0006	0.0018	0.0005	0.0017	0.0016	0.0011	0.0011	0.0029	0.0116	0.0003	0.0087
ELSA	0.0017	0.0010	0.0004	0.0005	0.0009	0.0002	0.0014	0.0005	0.0004	0.0007	0.0047	0.0003	0.0054	0.0005
ESSA	0.0117	0.0078	0.0104	0.0009	0.0040	0.0000	0.0032	0.0082	0.0029	0.0036	0.0127	0.0087	0.0005	0.0405
ICBP	-0.0010	-0.0007	-0.0001	0.0001	0.0012	0.0010	0.0010	-0.0025	0.0001	0.0000	-0.0010	-0.0005	0.0011	-0.0064
INDF	-0.0013	-0.0010	-0.0002	-0.0004	-0.0004	0.0008	0.0002	-0.0013	0.0008	0.0000	-0.0023	0.0001	0.0002	-0.0035
INDY	0.0113	0.0051	0.0017	0.0011	0.0036	0.0004	0.0033	0.0041	-0.0006	-0.0008	0.0091	0.0032	0.0016	0.0105
ISAT	0.0013	0.0011	0.0004	0.0003	0.0001	0.0010	0.0015	-0.0014	-0.0009	0.0006	0.0026	-0.0040	0.0002	-0.0045
ITMG	0.0064	0.0053	0.0004	0.0005	0.0022	0.0005	0.0022	0.0041	0.0005	0.0003	0.0076	0.0025	0.0020	0.0099
JPFA	-0.0011	-0.0046	0.0004	-0.0004	-0.0026	-0.0012	-0.0022	0.0007	0.0012	-0.0001	-0.0027	0.0013	-0.0002	0.0026
JSMR	0.0024	0.0026	0.0021	0.0007	0.0018	0.0017	0.0019	0.0022	0.0020	0.0028	0.0038	-0.0004	0.0015	0.0054
MAPI	-0.0026	-0.0004	0.0032	0.0017	0.0022	0.0033	0.0025	-0.0036	0.0004	0.0024	-0.0028	-0.0007	0.0006	-0.0022
MEDC	0.0029	0.0006	0.0038	0.0007	0.0031	-0.0012	0.0027	0.0035	-0.0013	-0.0018	0.0037	0.0035	0.0046	0.0077
MIKA	0.0025	0.0000	0.0011	0.0001	0.0000	-0.0004	0.0006	-0.0011	-0.0004	-0.0008	-0.0009	-0.0014	-0.0007	-0.0019
PGAS	0.0031	0.0007	0.0007	0.0002	-0.0004	-0.0004	0.0003	0.0018	-0.0002	-0.0003	0.0038	0.0020	0.0020	0.0044
PTBA	0.0080	0.0044	0.0020	0.0009	0.0028	0.0014	0.0025	0.0024	0.0003	0.0015	0.0065	0.0018	0.0007	0.0075
TPIA	0.0036	0.0011	-0.0003	0.0003	-0.0007	-0.0002	-0.0001	0.0094	0.0008	0.0007	0.0027	0.0016	-0.0008	0.0075
UNTR	0.0070	0.0037	0.0019	0.0012	0.0026	0.0010	0.0030	0.0030	0.0010	0.0012	0.0086	0.0022	0.0023	0.0086

KOVARIAN (σ_{ij})														
	ICBP	INDF	INDY	ISAT	ITMG	JPFA	JSMR	MAPI	MEDC	MIKA	PGAS	PTBA	TPIA	UNTR
ADRO	-0.0010	-0.0013	0.0113	0.0013	0.0064	-0.0011	0.0024	-0.0026	0.0029	0.0025	0.0031	0.0080	0.0036	0.0070
AKRA	-0.0007	-0.0010	0.0051	0.0011	0.0053	-0.0046	0.0026	-0.0004	0.0006	0.0000	0.0007	0.0044	0.0011	0.0037
AMRT	-0.0001	-0.0002	0.0017	0.0004	0.0004	0.0004	0.0021	0.0032	0.0038	0.0011	0.0007	0.0020	-0.0003	0.0019
BBCA	0.0001	-0.0004	0.0011	0.0003	0.0005	-0.0004	0.0007	0.0017	0.0007	0.0001	0.0002	0.0009	0.0003	0.0012
BBNI	0.0012	-0.0004	0.0036	0.0001	0.0022	-0.0026	0.0018	0.0022	0.0031	0.0000	-0.0004	0.0028	-0.0007	0.0026
BBRI	0.0010	0.0008	0.0004	0.0010	0.0005	-0.0012	0.0017	0.0033	-0.0012	-0.0004	-0.0004	0.0014	-0.0002	0.0010
BMRI	0.0010	0.0002	0.0033	0.0015	0.0022	-0.0022	0.0019	0.0025	0.0027	0.0006	0.0003	0.0025	-0.0001	0.0030
BRPT	-0.0025	-0.0013	0.0041	-0.0014	0.0041	0.0007	0.0022	-0.0036	0.0035	-0.0011	0.0018	0.0024	0.0094	0.0030
BSDE	0.0001	0.0008	-0.0006	-0.0009	0.0005	0.0012	0.0020	0.0004	-0.0013	-0.0004	-0.0002	0.0003	0.0008	0.0010
CTRA	0.0000	0.0000	-0.0008	0.0006	0.0003	-0.0001	0.0028	0.0024	-0.0018	-0.0008	-0.0003	0.0015	0.0007	0.0012
DOID	-0.0010	-0.0023	0.0091	0.0026	0.0076	-0.0027	0.0038	-0.0028	0.0037	-0.0009	0.0038	0.0065	0.0027	0.0086
DSNG	-0.0005	0.0001	0.0032	-0.0040	0.0025	0.0013	-0.0004	-0.0007	0.0035	-0.0014	0.0020	0.0018	0.0016	0.0022
ELSA	0.0011	0.0002	0.0016	0.0002	0.0020	-0.0002	0.0015	0.0006	0.0046	-0.0007	0.0020	0.0007	-0.0008	0.0023
ESSA	-0.0064	-0.0035	0.0105	-0.0045	0.0099	0.0026	0.0054	-0.0022	0.0077	-0.0019	0.0044	0.0075	0.0075	0.0086
ICBP	0.0046	0.0017	-0.0013	0.0008	-0.0018	-0.0013	-0.0001	0.0030	0.0005	0.0004	0.0001	0.0002	-0.0051	-0.0012
INDF	0.0017	0.0023	-0.0011	0.0008	-0.0017	0.0006	-0.0001	0.0011	-0.0016	0.0000	-0.0003	-0.0010	-0.0020	-0.0008
INDY	-0.0013	-0.0011	0.0167	-0.0014	0.0087	-0.0033	-0.0006	-0.0025	0.0069	0.0023	0.0038	0.0081	0.0034	0.0079
ISAT	0.0008	0.0008	-0.0014	0.0110	-0.0044	0.0002	0.0013	0.0026	-0.0003	0.0018	-0.0029	-0.0010	-0.0048	0.0010
ITMG	-0.0018	-0.0017	0.0087	-0.0044	0.0128	-0.0028	0.0012	-0.0023	0.0022	-0.0009	0.0034	0.0067	0.0023	0.0068
JPFA	-0.0013	0.0006	-0.0033	0.0002	-0.0028	0.0090	0.0005	-0.0018	0.0017	-0.0016	0.0012	-0.0041	0.0006	-0.0015
JSMR	-0.0001	-0.0001	-0.0006	0.0013	0.0012	0.0005	0.0050	-0.0004	-0.0008	-0.0013	-0.0001	0.0011	0.0003	0.0015
MAPI	0.0030	0.0011	-0.0025	0.0026	-0.0023	-0.0018	-0.0004	0.0119	-0.0003	0.0016	-0.0013	-0.0004	-0.0048	-0.0005
MEDC	0.0005	-0.0016	0.0069	-0.0003	0.0022	0.0017	-0.0008	-0.0003	0.0255	0.0003	0.0031	0.0000	0.0006	0.0033
MIKA	0.0004	0.0000	0.0023	0.0018	-0.0009	-0.0016	-0.0013	0.0016	0.0003	0.0045	-0.0001	0.0013	0.0018	0.0005
PGAS	0.0001	-0.0003	0.0038	-0.0029	0.0034	0.0012	-0.0001	-0.0013	0.0031	-0.0001	0.0077	0.0038	0.0045	0.0025
PTBA	0.0002	-0.0010	0.0081	-0.0010	0.0067	-0.0041	0.0011	-0.0004	0.0000	0.0013	0.0038	0.0099	0.0021	0.0065
TPIA	-0.0051	-0.0020	0.0034	-0.0048	0.0023	0.0006	0.0003	-0.0048	0.0006	0.0018	0.0045	0.0021	0.0281	0.0016
UNTR	-0.0012	-0.0008	0.0079	0.0010	0.0068	-0.0015	0.0015	-0.0005	0.0033	0.0005	0.0025	0.0065	0.0016	0.0085

Koefesien Korelasi

KORELASI														
	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA	DOID	DSNG	ELSA	ESSA
ADRO	1.0000	0.4924	0.3226	0.2364	0.3346	0.2501	0.4430	0.2760	0.3266	0.2923	0.3989	0.0001	0.1700	0.4327
AKRA	0.4924	1.0000	0.3272	0.0829	0.3775	0.2368	0.4575	0.1436	0.1326	0.2387	0.3088	-0.1287	0.1395	0.4151
AMRT	0.3226	0.3272	1.0000	0.2251	0.2332	0.0915	0.3233	0.0863	0.2647	0.3155	-0.0810	0.1022	0.0596	0.5159
BBCA	0.2364	0.0829	0.2251	1.0000	0.6352	0.6008	0.6209	-0.0213	0.1658	0.5056	0.2748	0.1331	0.1654	0.1064
BBNI	0.3346	0.3775	0.2332	0.6352	1.0000	0.5933	0.7651	0.0277	0.1278	0.3824	0.3711	0.2274	0.1673	0.2723
BBRI	0.2501	0.2368	0.0915	0.6008	0.5933	1.0000	0.6177	0.0218	0.5005	0.6202	0.1547	0.0662	0.0346	-0.0010
BMRI	0.4430	0.4575	0.3233	0.6209	0.7651	0.6177	1.0000	0.0885	0.3277	0.4932	0.3307	0.2435	0.3114	0.2520
BRPT	0.2760	0.1436	0.0863	-0.0213	0.0277	0.0218	0.0885	1.0000	0.1407	0.0283	0.2006	0.1262	0.0612	0.3363
BSDE	0.3266	0.1326	0.2647	0.1658	0.1278	0.5005	0.3277	0.1407	1.0000	0.5562	0.0285	0.1399	0.0853	0.2023
CTRA	0.2923	0.2387	0.3155	0.5056	0.3824	0.6202	0.4932	0.0283	0.5562	1.0000	0.1704	0.1436	0.1323	0.2523
DOID	0.3989	0.3088	-0.0810	0.2748	0.3711	0.1547	0.3307	0.2006	0.0285	0.1704	1.0000	0.1529	0.3580	0.3544
DSNG	0.0001	-0.1287	0.1022	0.1331	0.2274	0.0662	0.2435	0.1262	0.1399	0.1436	0.1529	1.0000	0.0344	0.3999
ELSA	0.1700	0.1395	0.0596	0.1654	0.1673	0.0346	0.3114	0.0612	0.0853	0.1323	0.3580	0.0344	1.0000	0.0334
ESSA	0.4327	0.4151	0.5159	0.1064	0.2723	-0.0010	0.2520	0.3363	0.2023	0.2523	0.3544	0.3999	0.0334	1.0000
ICBP	-0.1077	-0.1090	-0.0076	0.0452	0.2363	0.2107	0.2315	-0.3111	0.0188	-0.0084	-0.0871	-0.0641	0.2229	-0.4696
INDF	-0.2001	-0.2284	-0.0377	-0.1864	-0.1080	0.2332	0.0586	-0.2329	0.2422	-0.0099	-0.2750	0.0288	0.0618	-0.3650
INDY	0.6535	0.4204	0.1338	0.2052	0.3781	0.0436	0.3993	0.2613	-0.0686	-0.0917	0.3983	0.2292	0.1670	0.4051
ISAT	0.0923	0.1113	0.0425	0.0613	0.0176	0.1391	0.2272	-0.1124	-0.1158	0.0756	0.1393	-0.3576	0.0279	-0.2117
ITMG	0.4213	0.4996	0.0352	0.1051	0.2601	0.0671	0.3041	0.3002	0.0587	0.0390	0.3781	0.2067	0.2392	0.4335
JPFA	-0.0903	-0.5141	0.0418	-0.1138	-0.3761	-0.1756	-0.3705	0.0568	0.1716	-0.0159	-0.1625	0.1228	-0.0342	0.1353
JSMR	0.2532	0.3860	0.2908	0.2297	0.3483	0.3516	0.4163	0.2540	0.3973	0.5562	0.3053	-0.0587	0.2840	0.3791
MAPI	-0.1784	-0.0405	0.2883	0.3832	0.2739	0.4434	0.3568	-0.2710	0.0525	0.3070	-0.1425	-0.0563	0.0805	-0.0979
MEDC	0.1345	0.0416	0.2356	0.1122	0.2686	-0.1105	0.2655	0.1796	-0.1167	-0.1597	0.1322	0.2028	0.3953	0.2379
MIKA	0.2787	0.0078	0.1570	0.0241	0.0084	-0.0788	0.1536	-0.1299	-0.0832	-0.1710	-0.0792	-0.1978	-0.1390	-0.1383
PGAS	0.2626	0.0834	0.0782	0.0680	-0.0613	-0.0676	0.0521	0.1705	-0.0387	-0.0496	0.2429	0.2119	0.3100	0.2469
PTBA	0.5995	0.4732	0.1977	0.2350	0.3813	0.2014	0.3916	0.1984	0.0478	0.2114	0.3686	0.1641	0.0976	0.3726
TPIA	0.1615	0.0674	-0.0196	0.0513	-0.0593	-0.0170	-0.0105	0.4638	0.0699	0.0547	0.0905	0.0872	-0.0685	0.2222
UNTR	0.5623	0.4264	0.2107	0.3122	0.3899	0.1592	0.5135	0.2728	0.1465	0.1783	0.5269	0.2223	0.3406	0.4610

KORELASI														
	ICBP	INDF	INDY	ISAT	ITMG	JPFA	JSMR	MAPI	MEDC	MIKA	PGAS	PTBA	TPIA	UNTR
ADRO	-0.1077	-0.2001	0.6535	0.0923	0.4213	-0.0903	0.2532	-0.1784	0.1345	0.2787	0.2626	0.5995	0.1615	0.5623
AKRA	-0.1090	-0.2284	0.4204	0.1113	0.4996	-0.5141	0.3860	-0.0405	0.0416	0.0078	0.0834	0.4732	0.0674	0.4264
AMRT	-0.0076	-0.0377	0.1338	0.0425	0.0352	0.0418	0.2908	0.2883	0.2356	0.1570	0.0782	0.1977	-0.0196	0.2107
BBCA	0.0452	-0.1864	0.2052	0.0613	0.1051	-0.1138	0.2297	0.3832	0.1122	0.0241	0.0680	0.2350	0.0513	0.3122
BBNI	0.2363	-0.1080	0.3781	0.0176	0.2601	-0.3761	0.3483	0.2739	0.2686	0.0084	-0.0613	0.3813	-0.0593	0.3899
BBRI	0.2107	0.2332	0.0436	0.1391	0.0671	-0.1756	0.3516	0.4434	-0.1105	-0.0788	-0.0676	0.2014	-0.0170	0.1592
BMRI	0.2315	0.0586	0.3993	0.2272	0.3041	-0.3705	0.4163	0.3568	0.2655	0.1536	0.0521	0.3916	-0.0105	0.5135
BRPT	-0.3111	-0.2329	0.2613	-0.1124	0.3002	0.0568	0.2540	-0.2710	0.1796	-0.1299	0.1705	0.1984	0.4638	0.2728
BSDE	0.0188	0.2422	-0.0686	-0.1158	0.0587	0.1716	0.3973	0.0525	-0.1167	-0.0832	-0.0387	0.0478	0.0699	0.1465
CTRA	-0.0084	-0.0099	-0.0917	0.0756	0.0390	-0.0159	0.5562	0.3070	-0.1597	-0.1710	-0.0496	0.2114	0.0547	0.1783
DOID	-0.0871	-0.2750	0.3983	0.1393	0.3781	-0.1625	0.3053	-0.1425	0.1322	-0.0792	0.2429	0.3686	0.0905	0.5269
DSNG	-0.0641	0.0288	0.2292	-0.3576	0.2067	0.1228	-0.0587	-0.0563	0.2028	-0.1978	0.2119	0.1641	0.0872	0.2223
ELSA	0.2229	0.0618	0.1670	0.0279	0.2392	-0.0342	0.2840	0.0805	0.3953	-0.1390	0.3100	0.0976	-0.0685	0.3406
ESSA	-0.4696	-0.3650	0.4051	-0.2117	0.4335	0.1353	0.3791	-0.0979	0.2379	-0.1383	0.2469	0.3726	0.2222	0.4610
ICBP	1.0000	0.5145	-0.1533	0.1138	-0.2288	-0.1952	-0.0290	0.4073	0.0498	0.0841	0.0127	0.0310	-0.4480	-0.1862
INDF	0.5145	1.0000	-0.1819	0.1594	-0.3161	0.1376	-0.0184	0.2034	-0.2045	-0.0105	-0.0669	-0.2059	-0.2562	-0.1925
INDY	-0.1533	-0.1819	1.0000	-0.0999	0.5979	-0.2683	-0.0637	-0.1746	0.3332	0.2625	0.3345	0.6298	0.1563	0.6648
ISAT	0.1138	0.1594	-0.0999	1.0000	-0.3680	0.0205	0.1691	0.2305	-0.0158	0.2570	-0.3209	-0.0977	-0.2735	0.1029
ITMG	-0.2288	-0.3161	0.5979	-0.3680	1.0000	-0.2626	0.1541	-0.1878	0.1225	-0.1208	0.3483	0.5977	0.1223	0.6484
JPFA	-0.1952	0.1376	-0.2683	0.0205	-0.2626	1.0000	0.0685	-0.1690	0.1110	-0.2500	0.1478	-0.4357	0.0369	-0.1682
JSMR	-0.0290	-0.0184	-0.0637	0.1691	0.1541	0.0685	1.0000	-0.0530	-0.0684	-0.2769	-0.0119	0.1616	0.0215	0.2298
MAPI	0.4073	0.2034	-0.1746	0.2305	-0.1878	-0.1690	-0.0530	1.0000	-0.0147	0.2164	-0.1356	-0.0350	-0.2600	-0.0505
MEDC	0.0498	-0.2045	0.3332	-0.0158	0.1225	0.1110	-0.0684	-0.0147	1.0000	0.0238	0.2224	-0.0031	0.0206	0.2226
MIKA	0.0841	-0.0105	0.2625	0.2570	-0.1208	-0.2500	-0.2769	0.2164	0.0238	1.0000	-0.0143	0.1894	0.1605	0.0735
PGAS	0.0127	-0.0669	0.3345	-0.3209	0.3483	0.1478	-0.0119	-0.1356	0.2224	-0.0143	1.0000	0.4348	0.3086	0.3071
PTBA	0.0310	-0.2059	0.6298	-0.0977	0.5977	-0.4357	0.1616	-0.0350	-0.0031	0.1894	0.4348	1.0000	0.1278	0.7030
TPIA	-0.4480	-0.2562	0.1563	-0.2735	0.1223	0.0369	0.0215	-0.2600	0.0206	0.1605	0.3086	0.1278	1.0000	0.1065
UNTR	-0.1862	-0.1925	0.6648	0.1029	0.6484	-0.1682	0.2298	-0.0505	0.2226	0.0735	0.3071	0.7030	0.1065	1.0000

Perhitungan Lainnya Metode Markowitz

Emiten	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA
E(RI)	0.0124	0.0128	0.0285	0.0086	0.0097	0.0022	0.0155	0.0088	0.0006	0.0029
Stedv	0.1339	0.0937	0.1001	0.0400	0.0732	0.0689	0.0630	0.1209	0.0716	0.0716
Var(Ri)	0.0179	0.0088	0.0100	0.0016	0.0054	0.0047	0.0040	0.0146	0.0051	0.0051
Bobot	0.0000	0.1010	0.0000	0.2512	0.0000	0.0000	0.0000	0.0330	0.0000	0.0000
β	2.9575	0.7954	1.3972	0.8415	1.7118	1.5735	1.6496	1.2375	1.7466	1.3868

Emiten	DOID	DSNG	ELSA	ESSA	ICBP	INDE	INDY	ISAT	ITMG	JPFA
E(RI)	0.0348	0.0232	0.0150	0.0292	0.0097	0.0066	0.0075	0.0182	0.0139	0.0075
Stedv	0.1775	0.1077	0.0734	0.2013	0.0678	0.0477	0.1293	0.1048	0.1130	0.0951
Var(Ri)	0.0315	0.0116	0.0054	0.0405	0.0046	0.0023	0.0167	0.0110	0.0128	0.0090
Bobot	0.0000	0.0192	0.0078	0.0000	0.0785	0.2020	0.0000	0.0007	0.0354	0.1286
β	2.3207	0.9486	0.7450	3.1271	-0.0532	-0.0431	1.5768	-0.0334	1.3358	-0.1993

Emiten	JSMR	MAPI	MEDC	MIKA	PGAS	PTBA	TPIA	UNTR	JSMR	MAPI
E(RI)	0.0054	0.0248	0.0350	0.0054	0.0076	0.0054	0.0509	0.0095	0.0054	0.0248
Stedv	0.0709	0.1093	0.1598	0.0669	0.0875	0.0995	0.1675	0.0923	0.0709	0.1093
Var(Ri)	0.0050	0.0119	0.0255	0.0045	0.0077	0.0099	0.0281	0.0085	0.0050	0.0119
Bobot	0.0000	0.0000	0.0000	0.1338	0.0000	0.0000	0.0088	0.0000	0.0000	0.0000
β	1.3070	0.2675	1.3095	0.0523	0.2762	1.6064	1.2136	1.8867	1.3070	0.2675

Bp	0.38294
E(Rp)	0.90%
O(Rp)	1.89%

Solver Parameters

Set Objective:

To: ☐ Max ☒ Min ☐ Value Of:

By Changing Variable Cells:

Subject to the Constraints:

\$AD\$180 = 1

☒ Make Unconstrained Variables Non-Negative

Select a Solving Method:

Solving Method
 Select the GRG Nonlinear engine for Solver Problems that are smooth nonlinear. Select the LP Simplex engine for linear Solver Problems, and select the Evolutionary engine for Solver problems that are non-smooth.

Keterangan :

- | | |
|-------------------------------|--|
| 1. Set Object | : Risiko Portofolio |
| 2. To : Min (Minimal) | |
| 3. By Changing Variable Cells | : Bobot sementara boleh dengan apa aja |
| 4. Subject to Constraints | : Bobot harus sama dengan total bobot nya, |
| biasanya 1 atau 100 | |

Data Perhitungan lainya Metode Single Indeks Model

Emiten	ADRO	AKRA	AMRT	BBCA	BBNI	BBRI	BMRI	BRPT	BSDE	CTRA
E(Ri)	0.0124	0.0128	0.0285	0.0086	0.0097	0.0022	0.0155	0.0088	0.0006	0.0029
Rf	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
E(Ri) - Rf	0.0080	0.0084	0.0240	0.0042	0.0053	-0.0022	0.0110	0.0044	-0.0038	-0.0015
Varians	0.0179	0.0088	0.0100	0.0016	0.0054	0.0047	0.0040	0.0146	0.0051	0.0051
α	0.0055	0.0109	0.0252	0.0067	0.0057	-0.0015	0.0116	0.0059	-0.0035	-0.0004
β	2.9575	0.7954	1.3972	0.8415	1.7118	1.5735	1.6496	1.2375	1.7466	1.3868
Unsistematik Risk	0.0239	0.0092	0.0113	0.0021	0.0074	0.0064	0.0058	0.0157	0.0072	0.0064
Ai	0.9890	0.7219	2.9606	1.6990	1.2392	-0.5497	3.1319	0.3468	-0.9270	-0.3322
Bi	366.317	68.638	172.099	339.934	398.368	384.801	467.692	97.797	423.385	299.056
Ci	0.0005	0.0005	0.0018	0.0009	0.0007	-0.0003	0.0016	0.0002	-0.0005	-0.0002
c*	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018
ERB	0.0027	0.0105	0.0172	0.0050	0.0031	-0.0014	0.0067	0.0035	-0.0022	-0.0011
Penilaian	Optimal	Optimal	Optimal	Optimal	Optimal	Tidak	Optimal	Optimal	Tidak	Tidak

Emiten	DOID	DSNG	ELSA	ESSA	ICBP	INDF	INDY	ISAT	ITMG	JPFA
E(Ri)	0.0348	0.0232	0.0150	0.0292	0.0097	0.0066	0.0075	0.0182	0.0139	0.0075
Rf	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
E(Ri) - Rf	0.0303	0.0188	0.0106	0.0247	0.0053	0.0021	0.0031	0.0138	0.0095	0.0031
Varians	0.0315	0.0116	0.0054	0.0405	0.0046	0.0023	0.0167	0.0110	0.0128	0.0090
α	0.0293	0.0210	0.0133	0.0218	0.0098	0.0067	0.0038	0.0183	0.0108	0.0080
β	2.3207	0.9486	0.7450	3.1271	-0.0532	-0.0431	1.5768	-0.0334	1.3358	-0.1993
Unsistematik Risk	0.0352	0.0122	0.0058	0.0472	0.0046	0.0023	0.0184	0.0110	0.0140	0.0091
Ai	2.0026	1.4618	1.3704	1.6398	-0.0610	-0.0407	0.2624	-0.0418	0.9047	-0.0687
Bi	153.145	73.716	96.370	207.239	0.616	0.817	135.025	0.101	127.525	4.380
Ci	0.0012	0.0009	0.0009	0.0010	0.0000	0.0000	0.0002	0.0000	0.0006	0.0000
c*	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018
ERB	0.0131	0.0198	0.0142	0.0079	-0.0990	-0.0498	0.0019	-0.4132	0.0071	-0.0157
Penilaian	Optimal	Optimal	Optimal	Optimal	Tidak	Tidak	Optimal	Tidak	Optimal	Tidak

Emiten	JSMR	MAPI	MEDC	MIKA	PGAS	PTBA	TPIA	UNTR
E(Ri)	0.0054	0.0248	0.0350	0.0054	0.0076	0.0054	0.0509	0.0095
Rf	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044
E(Ri) - Rf	0.0010	0.0204	0.0306	0.0010	0.0032	0.0010	0.0465	0.0051
Varians	0.0050	0.0119	0.0255	0.0045	0.0077	0.0099	0.0281	0.0085
α	0.0024	0.0242	0.0320	0.0053	0.0070	0.0016	0.0481	0.0051
β	1.3070	0.2675	1.3095	0.0523	0.2762	1.6064	1.2136	1.8867
Unsistematik Risk	0.0062	0.0120	0.0267	0.0045	0.0077	0.0117	0.0291	0.0110
Ai	0.2143	0.4553	1.5002	0.0116	0.1140	0.1335	1.9401	0.8737
Bi	275.879	5.967	64.206	0.612	9.884	221.391	50.658	325.031
Ci	0.0001	0.0003	0.0010	0.0000	0.0001	0.0001	0.0013	0.0005
c*	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018
ERB	0.0008	0.0763	0.0234	0.0190	0.0115	0.0006	0.0383	0.0027
Penilaian	Tidak	Optimal	Optimal	Optimal	Optimal	Tidak	Optimal	Optimal

Daftar Emiten Optimal Single Indeks Model

No	Emiten	Nama Perusahaan	Z_i	W_i	α_p	β_p	σ_i^2
1	ADRO	Adaro Energy Indonesia Tbk	0.1109	0.0072	0.0000	0.0212	0.0002
2	AKRA	AKR Corporindo Tbk	0.7518	0.0485	0.0005	0.0386	0.0004
3	AMRT	Sumber Alfaria Trijaya Tbk	1.8966	0.1224	0.0031	0.1710	0.0014
4	BBCA	Bank Central Asia Tbk	1.2899	0.0833	0.0006	0.0701	0.0002
5	BBNI	Bank Negara Indonesia (Persero) Tbk	0.3039	0.0196	0.0001	0.0336	0.0001
6	BMRI	Bank Mandiri (Persero) Tbk	1.3869	0.0895	0.0010	0.1477	0.0005
7	BRPT	Barito Pacific Tbk	0.1376	0.0089	0.0001	0.0110	0.0001
8	DOID	Delta Dunia Makmur Tbk	0.7438	0.0480	0.0014	0.1114	0.0017
9	DSNG	Dharma Satya Nusantara Tbk	1.4008	0.0904	0.0019	0.0858	0.0011
10	ELSA	Elnusa Tbk	1.6060	0.1037	0.0014	0.0772	0.0006
11	ESSA	Surya Esa Perkasa Tbk	0.4048	0.0261	0.0006	0.0817	0.0012
12	INDY	Indika Energy Tbk	0.0119	0.0008	0.0000	0.0012	0.0000
13	ITMG	Indo Tambangraya Megah Tbk	0.5049	0.0326	0.0004	0.0435	0.0005
14	MAPI	Mitra Adiperkasa Tbk	1.6618	0.1073	0.0026	0.0287	0.0013
15	MEDC	Medco Energi Internasional Tbk	1.0571	0.0682	0.0022	0.0893	0.0018
16	MIKA	Mitra Keluarga Karyasehat Tbk	0.2007	0.0130	0.0001	0.0007	0.0001
17	PGAS	Perusahaan Gas Negara Tbk	0.3482	0.0225	0.0002	0.0062	0.0002
18	TPIA	Chandra Asri Petrochemical Tbk	1.5233	0.0983	0.0047	0.1193	0.0029
19	UNTR	United Tractors Tbk	0.1522	0.0098	0.0000	0.0185	0.0001
Total			15.4932	1.0000	0.0208	1.1567	0.0144

Return Portofolio	2.35%
Risiko Portofolio	1.53%

LAMPIRAN

III

Output Hasil Uji SPSS

Uji Normalitas

Tests of Normality

	Kolmogorov-Smirnov ^a				Shapiro-Wilk		
	Metode	Statistic	df	Sig.	Statistic	df	Sig.
Return	Markowitz	.252	12	.035	.701	12	.001
	Single Indeks Model	.230	19	.009	.865	19	.012
Risiko	Markowitz	.158	12	.200*	.863	12	.053
	Single Indeks Model	.179	19	.110	.884	19	.026

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Uji Mann Whitneyy

Ranks

	Metode	N	Mean Rank	Sum of Ranks
Return	Markowitz	12	13.92	167.00
	Single Indeks Model	19	17.32	329.00
	Total	31		
Risiko	Markowitz	12	13.63	163.50
	Single Indeks Model	19	17.50	332.50
	Total	31		

Test Statistics^a

Return		Risiko	
Mann-Whitney U	89.000	85.500	
Wilcoxon W	167.000	163.500	
Z	-1.015	-1.157	
Asymp. Sig. (2-tailed)	.310	.247	
Exact Sig. [2*(1-tailed Sig.)]	.326 ^b	.252 ^b	

a. Grouping Variable: Metode

b. Not corrected for ties.

LAMPIRAN

IV

RIWAYAT HIDUP

DATA PRIBADI

Nama : Sahrul Fauzi
Tempat/Tanggal Lahir : Kuningan, 06 Oktober 2002
Agama : Islam
Status : WNI
Alamat : Desa. Cihideunggirang, Rt 004 Rw 002, Kec.
Cidahu. Kab. Kuningan Jawa Barat
Email : sahrulfauzi737@gmail.com

RIWAYAT PENDIDIKAN

Sekolah Dasar : SD NEGERI 2 CIHIDEUNGGERANG 2010-2016
Sekolah Menengah Pertama : SMP NEGERI 1 CIAWIGEBANG 2016-2019
Sekolah Menengah Atas : SMA NEGERI 1 CIAWIGEBANG 2019-2021
Perguruan Tinggi : UNIVERSITAS KUNINGAN 2021-2025