

DAFTAR PUSTAKA

- Annisa dkk, (2021) "Pembentukan Portofolio Optimal Menggunakan Single Index Model Sebagai Pertimbangan Investasi" Jurnal Seminar Nasional Gabungan Bidang Sosial - Polinema 2021
- Arly dan Hasnawati,(2021). "*Capital Asset Pricing Model (Capm) Dan Accumulated / Distribution Line* Untuk Penentuan Kelompok Saham-Saham Efisien", Jurnal Pajak dan Keuangan Negara Vol. II, No.2, (2021), Hal.71-86
- Berlian dkk, (2016)," Aplikasi Single Index Model Dalam Pembentukan Portofolio Optimal Saham Lq45 Dan Jakarta Islamic Index" *Management Analysis Journal* 4 (1)
- Darmadji, T dan H. M. Fakhruddin. 2012. Pasar Modal di Indonesia, Edisi 3, Salemba Empat. Jakarta.
- Fahmi, Irham. 2012. "Analisis Kinerja Keuangan" , Bandung: Alfabeta
- Horngren, T. Charles, dkk. 2006. Akuntansi Biaya Jilid 1 Alih bahasa oleh P.A Lestari. Jakarta: Erlangga
- Irni Yunita. (2023)," Evaluasi Kinerja Investasi Saham Syariah menggunakan *Indeks Sharpe, Treynor dan Jensen* Periode 2021-2022" Jurnal Ilmiah Ekonomi Islam, 9(01), 2023, 435-442
- Jumria dkk, (2023). "Pengaruh *Earning Per Share Dan Debt To Equity Ratio* Terhadap Harga Saham Pada PT. Impack Pratama Industri, Tbk" Volume 8 Issue 1 (2023) Pages 229 - 234 Jurnal Mirai Management ISSN : 2598-8301 (Online)
- Jogiyanto Hartono. 2014. Teori dan Praktik Portofolio dengan Excel. Jakarta : Salemba Empat
- Jogiyanto Hartono, *M.B.A ., CA* (2017) "*Teori Portofolio dan analisis investasi*. Edisi kesebelas. BPFE-Yogyakarta

- Luthfi Adi, (2019), "Analisis Pembentukan Portofolio Saham Optimal Menggunakan Metode Single Index Model (Studi Empiris pada Saham Indeks LQ 45 di Bursa Efek Indonesia)" Jurnal Ilmu Manajemen, Volume 16, Nomor 1, 2019
- Nurlela dkk, (2023) "Penggunaan Model Indeks Tunggal Dalam Pembentukan Portofolio Optimal Saham LQ-45 di Bursa Efek Indonesia" Jurnal Pelita Manajemen Vol 02 No 01 Mei 2023 ISSN 2962-147X
- Sitompul, W. J. (2020). Analisis Komparasi Pembentukan Portofolio Saham Optimal dengan Menggunakan Model Markowitz dan Model Indeks Tunggal dalam Keputusan Berinvestasi pada Saham Lq-45 di Bursa Efek Indonesia
- Suad Husnan dan Enny Pudjiastuti. 2012. Dasar – Dasar Manajemen Keuangan. Edisi Keenam Cetakan Pertama. Yogyakarta : UPP STIM YPKN.
- Suad Husnan, DR, MBA, (2019). Dasar-Dasar Teori Portofolio & Analisis Sekuritas.
- Suroto, 2015. Pengaruh Keputusan Investasi, Keputusan Pendanaan dan Kebijakan Dividen Terhadap Nilai Perusahaan. (Studi Empiris Pada Perusahaan LQ-45 Yang Terdaftar Di Bursa Efek Indonesia Periode Februari 2010-Januari 2015). Jurnal Ilmiah UNTAG. Vol. 4, No. 3, 2015.
- Moh. Nazir. 2014. Metode Penelitian. Bogor: Ghalia Indonesia
- Tandelilin, Edardus, MBA, CWM, CSA (2017). pasar modal manajemen portofolio dan investasi.*
- Rawati, M.pd.I dan Arafah, S.Pd. Manajemen Keuangan (Dalam Pendidikan Sekolah), Pustaka Taman Ilmu. Ekananda, Mahyus. (2019). *Manajemen Investasi*. Jakarta: Erlangga
- Zalmi Zubir. 2013. Manajemen Portofolio : Penerapannya Dalam Investasi Saham. Jakarta : Salemba Empat

<https://www.idx.co.id/en/news/press-release/2080>

https://www.ksei.co.id/files/Statistik_Publik_Desember_2023_v3.pdf

<https://www.bi.go.id/id/statistik/indikator/BI-Rate.aspx>

<https://finance.yahoo.com/>

LAMPIRAN

CLOSING PRICE ESGQ 45																									
Date	AUTO	AALI	BJBR	BSDE	BTPS	CTRA	DSNG	GOOD	HEAL	IMPC	JPFA	JSMR	MIKA	MPMX	POWR	PRDA	PTPP	SILO	SMBR	SMSM	SSMS	TINS	WIKA	IHSG	BI-7 DAY
31-Jan-21	1,050	11,250	1,581	1,160	4,100	1,155	560	297	812	135	1,535	4,170	2,970	525	715	3,300	1,615	669	950	1,305	1,000	2,220	1800	6,241.80	3.75 %
28-Feb-21	1,160	10,025	1,451	1,120	3,480	1,095	575	337	900	132.27	1,920	4,040	2,630	565	680	4,000	1,370	608	820	1,340	955	1,615	1740	5,985.52	3.50 %
31-Mar-21	1,170	9,325	1,386	1,175	3,270	1,140	635	333	906	150	2,110	4,150	2,620	750	705	3,820	1,220	1041	815	1,315	930	1,730	1535	5,995.62	3.50 %
30-Apr-21	1,150	8,825	1,381	1,120	2,900	1,075	530	336	938	164.55	1,990	3,950	2,580	830	680	4,150	1,115	1044	695	1,190	875	1,600	1440	5,947.46	3.50 %
31-May-21	1,085	7,600	1,207	965	2,880	930	500	369	1,120	161.82	1,730	3,520	2,800	705	645	4,340	915	1044	615	1,335	830	1,490	1250	5,985.49	3.50 %
30-Jun-21	1,060	7,950	1,222	935	2,370	865	540	368	1,170	180.91	1,560	3,940	2,590	705	625	7,375	840	1041	585	1,355	835	1,665	990	6,070.04	3.50 %
31-Jul-21	1,030	8,450	1,232	960	2,800	875	530	374	1,160	191.82	1,810	3,960	2,330	725	605	7,300	905	1025	640	1,420	835	1,525	920	6,150.30	3.50 %
31-Aug-21	1,020	9,775	1,356	1,000	3,470	935	540	420	1,170	189.09	1,975	3,880	2,300	760	605	7,100	1,090	1225	660	1,400	915	1,510	940	6,286.94	3.50 %
30-Sep-21	1,130	10,725	1,421	1,110	3,810	1,075	580	505	1,175	203.64	1,725	4,200	2,280	750	635	6,125	1,205	1075	760	1,590	1,140	1,590	1210	6,591.35	3.50 %
31-Oct-21	1,250	9,975	1,356	1,085	3,570	1,050	530	486	990	213.64	1,600	4,070	2,380	840	620	8,800	1,130	1213	680	1,310	1,175	1,580	1245	6,533.93	3.50 %
30-Nov-21	1,155	9,500	1,331	1,010	3,580	970	500	525	1,070	231.82	1,720	3,890	2,260	1,145	615	9,200	990	1072	620	1,360	965	1,455	1160	6,581.48	3.50 %
31-Dec-21	1,030	9,900	1,316	905	3,480	875	600	500	1,095	246.36	1,665	3,290	2,520	995	625	8,825	930	1034	550	1,320	1,005	1,380	1105	6,631.15	3.50 %
31-Jan-22	1,055	11,350	1,391	915	3,590	925	625	505	1,065	249.09	1,570	3,380	2,220	970	625	8,050	955	975	550	1,310	1,120	1,590	1035	6,888.17	3.50 %
28-Feb-22	1,125	12,550	1,525	1,020	3,300	1,040	640	575	1,175	281.82	1,650	3,850	2,170	1,125	645	8,000	995	1003	540	1,420	1,065	1,820	1010	7,071.44	3.50 %
31-Mar-22	1,145	12,500	1,475	965	3,450	1,065	605	550	1,400	343.64	1,450	4,030	2,530	1,085	690	6,900	935	1040	510	1,560	1,065	1,855	995	7,228.91	3.50 %
30-Apr-22	1,170	12,000	1,460	945	3,050	985	555	545	1,375	342.73	1,425	4,000	2,610	1,085	715	6,125	935	1130	540	1,440	1,320	1,900	950	7,148.97	3.50 %
31-May-22	1,140	9,800	1,375	910	2,820	860	494	515	1,505	330.91	1,540	3,540	2,750	1,085	680	6,500	945	1000	510	1,330	1,210	1,450	965	6,911.58	3.50 %
30-Jun-22	1,165	9,650	1,340	920	2,810	925	530	535	1,435	361.82	1,445	3,560	2,490	985	680	6,500	910	1005	478	1,300	1,505	1,460	970	6,951.12	3.50 %
31-Jul-22	1,240	9,150	1,390	920	2,960	950	505	540	1,490	353.64	1,585	3,440	2,660	1,020	675	5,825	1,010	1040	496	1,255	1,405	1,495	935	7,178.59	3.50 %
31-Aug-22	1,245	8,250	1,355	905	2,730	950	484	530	1,625	344.55	1,515	3,240	2,900	980	695	5,050	885	1030	474	1,300	1,295	1,335	1070	7,040.80	3.75 %
30-Sep-22	1,320	8,500	1,375	930	2,950	940	555	520	1,490	310.91	1,385	3,410	2,760	1,025	680	5,300	880	1095	428	1,500	1,390	1,355	925	7,098.89	4.25 %
31-Oct-22	1,520	8,325	1,360	915	3,200	1,010	610	535	1,525	335.45	1,330	3,110	2,840	1,150	675	6,275	890	1270	418	1,535	1,515	1,225	910	7,081.31	4.75 %
30-Nov-22	1,460	8,025	1,345	920	2,790	940	600	525	1,550	320	1,295	2,980	3,190	1,120	660	5,600	715	1260	386	1,535	1,470	1,170	930	6,850.62	5.25 %
31-Dec-22	1,360	8,225	1,365	935	2,560	975	680	490	1,555	327.27	1,350	3,160	2,990	1,180	660	5,400	695	1220	408	1,580	1,585	1,250	800	6,839.34	5.50 %
31-Jan-23	1,730	8,300	1,320	990	2,340	990	665	478	1,490	313.64	1,345	3,250	2,990	1,250	680	5,850	640	1310	394	1,550	1,625	1,190	690	6,843.24	5.75 %
28-Feb-23	1,690	8,100	1,360	980	2,190	995	710	490	1,355	311.82	1,125	3,220	2,930	1,225	660	5,875	580	1515	360	1,545	1,690	1,030	630	6,805.28	5.75 %
31-Mar-23	1,830	7,725	1,255	1,065	2,140	995	620	466	1,415	338.18	1,040	3,290	2,890	1,320	685	5,875	650	1730	358	1,555	1,710	1,015	515	6,915.72	5.75 %
30-Apr-23	2,070	7,050	1,215	1,050	1,900	1,070	570	464	1,315	331.82	1,195	3,330	2,710	1,155	665	5,700	510	1650	346	1,745	1,525	930	605	6,633.26	5.75 %
31-May-23	2,480	7,475	1,180	1,095	2,070	1,060	535	464	1,350	388	1,340	3,800	2,690	1,065	710	5,700	605	1875	352	1,750	1,210	885	366	6,661.88	5.75 %
30-Jun-23	2,930	7,575	1,190	1,185	2,130	1,115	585	470	1,495	336	1,335	3,870	2,910	1,035	735	6,600	605	1950	382	2,000	1,195	940	505	6,931.36	5.75 %
31-Jul-23	3,200	7,600	1,185	1,135	2,160	1,140	595	428	1,400	322	1,290	4,300	2,830	1,040	760	6,300	580	1970	358	2,040	1,230	910	438	6,953.26	5.75 %
31-Aug-23	3,180	7,500	1,170	1,020	1,905	1,020	610	434	1,310	320	1,285	4,290	2,700	1,030	750	6,400	755	2040	350	2,120	1,185	790	394	6,939.89	5.75 %
30-Sep-23	2,760	7,050	1,135	1,005	1,575	1,110	570	420	1,525	362	1,225	4,260	2,740	1,000	710	6,425	565	2400	312	2,170	1,145	690	458	6,752.21	5.75 %
31-Oct-23	2,750	7,600	1,120	1,060	1,655	1,130	560	418	1,470	360	1,175	4,650	2,800	1,030	725	5,500	555	2740	310	2,000	1,015	620	384	7,080.74	6.00 %
30-Nov-23	2,360	7,025	1,150	1,080	1,690	1,170	555	430	1,490	388	1,180	4,870	2,850	1,050	710	5,400	428	2180	278	1,995	1,045	645	378	7,272.80	6.00 %
31-Dec-23	2,240	6,900	1,165	1,035	1,590	1,250	510	440	1,305	392	1,060	5,000	2,690	1,010	705	5,050	412	2220	238	2,020	1,190	575	384	7,207.94	6.00 %

CLOSING PRICE LQ45

Date	ACES	ADRO	AMRT	ARTO	BRIS	BRPT	ESSA	GGRM	HRUM	INDY	ITMG	MAPI	MDKA	MEDC	PTBA	SCMA	SIDO	SRTG	TBIG	TOWR	TPIA	IHSG	BI-7 DAY
31-Jan-21	1,525	1,180	1,020	8,293	2,867	1,095	212	36,500	1,280	1,480	12,200	805	2,761	695	2,710	396	789	1125	2,170	1,265	2,438	6,242	3.75 %
28-Feb-21	1,525	1,175	900	9,725	2,233	956	350	36,175	976	1,425	11,425	740	2,098	570	2,620	340	779	1030	2,070	1,100	2,781	5,986	3.50 %
31-Mar-21	1,480	1,245	950	10,150	2,224	996	384	36,100	1,030	1,420	11,875	800	2,556	670	2,370	315	789	1185	2,790	1,140	2,519	5,996	3.50 %
30-Apr-21	1,495	1,190	905	12,150	1,858	896	354	33,150	1,025	1,285	12,925	700	2,634	690	2,210	337	769	1090	2,590	1,175	1,981	5,947	3.50 %
31-May-21	1,250	1,205	1,250	13,625	2,243	851	364	44,200	1,015	1,300	14,200	625	2,868	640	2,000	362	705	1765	3,210	1,240	2,456	5,985	3.50 %
30-Jun-21	1,320	1,335	1,350	17,950	2,565	966	442	32,800	1,150	1,370	16,950	620	2,888	488	2,230	460	799	1845	3,210	1,465	2,350	6,070	3.50 %
31-Jul-21	1,390	1,260	1,350	15,175	2,165	1,061	328	33,075	970	1,340	16,000	740	2,751	476	2,110	406	789	1605	3,130	1,340	1,963	6,150	3.50 %
31-Aug-21	1,270	1,760	1,380	15,100	1,990	961	304	32,550	1,860	1,900	20,800	780	2,459	550	2,760	402	770	1895	2,960	1,325	1,800	6,287	3.50 %
30-Sep-21	1,410	1,680	1,195	15,500	2,058	931	334	33,500	1,525	1,780	21,600	880	3,083	570	2,680	420	845	2090	2,940	1,160	1,900	6,591	3.50 %
31-Oct-21	1,305	1,700	1,180	15,825	1,907	916	350	31,400	1,840	1,635	21,550	740	3,571	478	2,600	342	915	2140	3,020	1,160	1,769	6,534	3.50 %
30-Nov-21	1,280	2,250	1,215	16,000	1,736	851	530	30,600	2,065	1,545	20,400	710	3,795	466	2,710	326	865	2800	2,950	1,125	1,831	6,581	3.50 %
31-Dec-21	1,235	2,240	1,165	16,400	1,507	886	595	30,625	2,125	2,090	21,650	780	3,551	555	2,850	292	930	2750	2,880	1,025	2,206	6,631	3.50 %
31-Jan-22	1,070	2,450	1,090	16,175	1,624	886	670	31,400	2,455	2,230	26,675	785	3,776	600	3,140	258	975	2630	2,940	1,035	2,256	6,888	3.50 %
28-Feb-22	1,025	2,690	1,520	14,650	1,565	901	1,215	31,600	2,140	2,230	28,550	880	4,419	555	3,290	292	1020	2730	2,870	1,070	2,525	7,071	3.50 %
31-Mar-22	1,045	3,340	1,710	11,650	1,541	846	1,240	30,700	2,305	2,690	28,400	900	5,300	550	3,820	254	940	3640	3,010	1,010	2,513	7,229	3.50 %
30-Apr-22	960	3,270	1,820	9,375	1,404	832	1,175	31,500	2,375	2,890	35,000	900	5,450	585	4,530	224	1020	3190	2,950	1,000	2,556	7,149	3.50 %
31-May-22	770	2,860	2,040	9,150	1,307	752	835	31,175	1,545	2,330	30,675	980	3,990	635	3,820	220	1000	2610	2,940	1,100	2,250	6,912	3.50 %
30-Jun-22	710	3,250	1,875	10,575	1,595	896	1,035	27,850	1,845	2,670	39,600	890	4,060	610	4,300	220	905	2550	3,070	1,175	2,375	6,951	3.50 %
31-Jul-22	720	3,540	2,180	8,425	1,482	817	1,115	23,725	1,700	2,870	39,300	1,010	4,280	860	4,250	226	710	2640	2,820	1,240	2,440	7,179	3.50 %
31-Aug-22	610	3,960	2,390	6,600	1,434	792	995	22,925	1,780	3,000	41,425	1,060	3,940	915	4,170	206	710	2650	2,830	1,235	2,400	7,041	3.75 %
30-Sep-22	565	3,980	2,820	5,100	1,365	822	1,065	24,100	1,610	3,260	45,050	1,205	3,770	1,155	3,910	234	740	2460	2,460	1,155	2,440	7,099	4.25 %
31-Oct-22	500	3,870	3,090	4,590	1,302	787	1,065	19,950	1,755	2,900	41,750	1,450	4,150	1,065	3,800	250	785	2650	2,320	1,130	2,390	7,081	4.75 %
30-Nov-22	496	3,850	2,650	3,720	1,290	755	915	18,000	1,620	2,730	39,025	1,445	4,120	1,015	3,690	206	755	2530	2,300	1,100	2,570	6,851	5.25 %
31-Dec-22	490	2,960	2,830	3,210	1,335	825	990	23,000	1,730	2,410	36,200	1,300	4,720	1,395	3,400	226	755	2430	2,100	1,120	2,310	6,839	5.50 %
31-Jan-23	505	2,990	2,900	2,510	1,520	935	1,070	25,000	1,630	2,300	37,200	1,510	4,540	1,150	3,860	216	880	2360	2,090	1,050	2,310	6,843	5.75 %
28-Feb-23	478	2,900	2,880	2,420	1,680	825	945	26,000	1,460	2,410	39,400	1,510	4,190	1,010	3,990	188	870	1985	2,160	925	2,340	6,805	5.75 %
31-Mar-23	450	3,130	2,900	2,070	1,730	835	700	28,450	1,510	2,600	33,300	1,370	3,940	1,010	4,140	165	790	1895	2,060	1,025	2,360	6,916	5.75 %
30-Apr-23	630	2,040	2,640	2,380	1,730	760	488	27,000	1,410	1,715	22,125	1,775	3,000	905	3,060	138	725	1550	2,130	990	2,140	6,633	5.75 %
31-May-23	675	2,230	2,580	3,180	1,690	745	580	27,625	1,420	1,910	24,125	1,690	3,060	890	2,680	162	730	1670	2,010	1,055	2,100	6,662	5.75 %
30-Jun-23	720	2,410	2,700	2,910	1,655	775	590	27,925	1,660	1,975	27,200	1,980	3,510	1,130	2,770	156	640	1610	1,930	1,015	2,120	6,931	5.75 %
31-Jul-23	730	2,670	2,900	2,330	1,710	1,070	605	24,050	1,560	2,000	28,925	1,935	3,380	1,070	2,860	148	620	1665	2,100	1,030	2,180	6,953	5.75 %
31-Aug-23	750	2,850	2,960	2,020	1,625	1,300	795	24,600	1,885	2,200	28,975	1,820	2,880	1,610	2,800	158	590	1760	2,020	960	2,530	6,940	5.75 %
30-Sep-23	800	2,560	2,890	1,575	1,500	1,125	600	23,275	1,615	1,815	26,525	1,735	2,230	1,275	2,480	151	510	1430	2,070	890	2,980	6,752	5.75 %
31-Oct-23	755	2,620	2,870	3,200	1,655	1,045	555	21,125	1,385	1,475	24,550	1,745	2,530	1,155	2,420	157	500	1635	2,050	1,000	2,950	7,081	6.00 %
30-Nov-23	720	2,380	2,930	2,900	1,740	1,330	530	20,325	1,335	1,435	25,650	1,790	2,700	1,155	2,440	170	525	1640	2,090	990	5,250	7,273	6.00 %
31-Dec-23	850	2,400	2,650	3,210	2,330	1,060	492	19,700	1,175	1,380	27,050	1,955	2,700	1,220	2,610	154	510	1510	1,950	890	5,400	7,208	6.00 %

ACTUAL RETURN ESGQ 45																							IHSG	Rf
AUTO	AALI	BJBR	BSDE	BTPS	CTRA	DSNG	GOOD	HEAL	IMPC	JPFA	JSMR	MIKA	MPMX	POWR	PRDA	PTPP	SILO	SMBR	SMSM	SSMS	TINS	WIKA		
0.105	-0.109	-0.082	-0.034	-0.151	-0.052	0.027	0.135	0.108	-0.020	0.251	-0.031	-0.114	0.076	-0.049	0.212	-0.152	-0.092	-0.137	0.027	-0.045	-0.273	-0.033	-0.273	0.003
0.009	-0.070	-0.045	0.049	-0.060	0.041	0.104	-0.012	0.007	0.134	0.099	0.027	-0.004	0.327	0.037	-0.045	-0.109	0.713	-0.006	-0.019	-0.026	0.071	-0.118	0.071	0.003
-0.017	-0.054	-0.004	-0.047	-0.113	-0.057	-0.165	0.009	0.035	0.097	-0.057	-0.048	-0.015	0.107	-0.035	0.086	-0.086	0.003	-0.147	-0.095	-0.059	-0.075	-0.062	-0.075	0.003
-0.057	-0.139	-0.126	-0.138	-0.007	-0.135	-0.057	0.098	0.194	-0.017	-0.131	-0.109	0.085	-0.151	-0.051	0.046	-0.179	0.000	-0.115	0.122	-0.051	-0.069	-0.132	-0.069	0.003
-0.023	0.046	0.012	-0.031	-0.177	-0.070	0.080	-0.003	0.045	0.118	-0.098	0.119	-0.075	0.000	-0.031	0.699	-0.082	-0.003	-0.049	0.015	0.006	0.117	-0.208	0.117	0.003
-0.028	0.063	0.008	0.027	0.181	0.012	-0.019	0.016	-0.009	0.060	0.160	0.005	-0.100	0.028	-0.032	-0.010	0.077	-0.015	0.094	0.048	0.000	-0.084	-0.071	-0.084	0.003
-0.010	0.157	0.101	0.042	0.239	0.069	0.019	0.123	0.009	-0.014	0.091	-0.020	-0.013	0.048	0.000	-0.027	0.204	0.195	0.031	-0.014	0.096	-0.010	0.022	-0.010	0.003
0.108	0.097	0.048	0.110	0.098	0.150	0.074	0.202	0.004	0.077	-0.127	0.082	-0.009	-0.013	0.050	-0.137	0.106	-0.122	0.152	0.136	0.246	0.053	0.287	0.053	0.003
0.106	-0.070	-0.046	-0.023	-0.063	-0.023	-0.086	-0.038	-0.157	0.049	-0.072	-0.031	0.044	0.120	-0.024	0.437	-0.062	0.128	-0.105	-0.176	0.031	-0.006	0.029	-0.006	0.003
-0.076	-0.048	-0.018	-0.069	0.003	-0.076	-0.057	0.080	0.081	0.085	0.075	-0.044	-0.050	0.363	-0.008	0.045	-0.124	-0.116	-0.088	0.038	-0.179	-0.079	-0.068	-0.079	0.003
-0.108	0.042	-0.011	-0.104	-0.028	-0.098	0.200	-0.048	0.023	0.063	-0.032	-0.154	0.115	-0.131	0.016	-0.041	-0.061	-0.035	-0.113	-0.029	0.041	-0.052	-0.047	-0.052	0.003
0.024	0.146	0.057	0.011	0.032	0.057	0.042	0.010	-0.027	0.011	-0.057	0.027	-0.119	-0.025	0.000	-0.088	0.027	-0.057	0.000	-0.008	0.114	0.152	-0.063	0.152	0.003
0.066	0.106	0.096	0.115	-0.081	0.124	0.024	0.139	0.103	0.131	0.051	0.139	-0.023	0.160	0.032	-0.006	0.042	0.029	-0.018	0.084	-0.049	0.145	-0.024	0.145	0.003
0.018	-0.004	-0.033	-0.054	0.045	0.024	-0.055	-0.043	0.191	0.219	-0.121	0.047	0.166	-0.036	0.070	-0.138	-0.060	0.037	-0.056	0.099	0.000	0.019	-0.015	0.019	0.003
0.022	-0.040	-0.010	-0.021	-0.116	-0.075	-0.083	-0.009	-0.018	-0.003	-0.017	-0.007	0.032	0.000	0.036	-0.112	0.000	0.087	0.059	-0.077	0.239	0.024	-0.045	0.024	0.003
-0.026	-0.183	-0.058	-0.037	-0.075	-0.127	-0.110	-0.055	0.095	-0.034	0.081	-0.115	0.054	0.000	-0.049	0.061	0.011	-0.115	-0.056	-0.076	-0.083	-0.237	0.016	-0.237	0.003
0.022	-0.015	-0.025	0.011	-0.004	0.076	0.073	0.039	-0.047	0.093	-0.062	0.006	-0.095	-0.092	0.000	0.000	-0.037	0.005	-0.063	-0.023	0.244	0.007	0.005	0.007	0.003
0.064	-0.052	0.037	0.000	0.053	0.027	-0.047	0.009	0.038	-0.023	0.097	-0.034	0.068	0.036	-0.007	-0.104	0.110	0.035	0.038	-0.035	-0.066	0.024	-0.036	0.024	0.003
0.004	-0.098	-0.025	-0.016	-0.078	0.000	-0.042	-0.019	0.091	-0.026	-0.044	-0.058	0.090	-0.039	0.030	-0.133	-0.124	-0.010	-0.044	0.036	-0.078	-0.107	0.144	-0.107	0.003
0.060	0.030	0.015	0.028	0.081	-0.011	0.147	-0.019	-0.083	-0.098	-0.086	0.052	-0.048	0.046	-0.022	0.050	-0.006	0.063	-0.097	0.154	0.073	0.015	-0.136	0.015	0.004
0.152	-0.021	-0.011	-0.016	0.085	0.074	0.099	0.029	0.023	0.079	-0.040	-0.088	0.029	0.122	-0.007	0.184	0.011	0.160	-0.023	0.023	0.090	-0.096	-0.016	-0.096	0.004
-0.039	-0.036	-0.011	0.005	-0.128	-0.069	-0.016	-0.019	0.016	-0.046	-0.026	-0.042	0.123	-0.026	-0.022	-0.108	-0.197	-0.008	-0.077	0.000	-0.030	-0.045	0.022	-0.045	0.004
-0.068	0.025	0.015	0.016	-0.082	0.037	0.133	-0.067	0.003	0.023	0.042	0.060	-0.063	0.054	0.000	-0.036	-0.028	-0.032	0.057	0.029	0.078	0.068	-0.140	0.068	0.005
0.272	0.009	-0.033	0.059	-0.086	0.015	-0.022	-0.024	-0.042	-0.042	-0.004	0.028	0.000	0.059	0.030	0.083	-0.079	0.074	-0.034	-0.019	0.025	-0.048	-0.138	-0.048	0.005
-0.023	-0.024	0.030	-0.010	-0.064	0.005	0.068	0.025	-0.091	-0.006	-0.164	-0.009	-0.020	-0.020	-0.029	0.004	-0.094	0.156	-0.086	-0.003	0.040	-0.134	-0.087	-0.134	0.005
0.083	-0.046	-0.077	0.087	-0.023	0.000	-0.127	-0.049	0.044	0.085	-0.076	0.022	-0.014	0.078	0.038	0.000	0.121	0.142	-0.006	0.006	0.012	-0.015	-0.183	-0.015	0.005
0.131	-0.087	-0.032	-0.014	-0.112	0.075	-0.081	-0.004	-0.071	-0.019	0.149	0.012	-0.062	-0.125	-0.029	-0.030	-0.215	-0.046	-0.034	0.122	-0.108	-0.084	0.175	-0.084	0.005
0.198	0.060	-0.029	0.043	0.089	-0.009	-0.061	0.000	0.027	0.169	0.121	0.141	-0.007	-0.078	0.068	0.000	0.186	0.136	0.017	0.003	-0.207	-0.048	-0.395	-0.048	0.005
0.181	0.013	0.008	0.082	0.029	0.052	0.093	0.013	0.107	-0.134	-0.004	0.018	0.082	-0.028	0.035	0.158	0.000	0.040	0.085	0.143	-0.012	0.062	0.380	0.062	0.005
0.092	0.003	-0.004	-0.042	0.014	0.022	0.017	-0.089	-0.064	-0.042	-0.034	0.111	-0.027	0.005	0.034	-0.045	-0.041	0.010	-0.063	0.020	0.029	-0.032	-0.133	-0.032	0.005
-0.006	-0.013	-0.013	-0.101	-0.118	-0.105	0.025	0.014	-0.064	-0.006	-0.004	-0.002	-0.046	-0.010	-0.013	0.016	0.302	0.036	-0.022	0.039	-0.037	-0.132	-0.100	-0.132	0.005
-0.132	-0.060	-0.030	-0.015	-0.173	0.088	-0.066	-0.032	0.164	0.131	-0.047	-0.007	0.015	-0.029	-0.053	0.004	-0.252	0.176	-0.109	0.024	-0.034	-0.127	0.162	-0.127	0.005
-0.004	0.078	-0.013	0.055	0.051	0.018	-0.018	-0.005	-0.036	-0.006	-0.041	0.092	0.022	0.030	0.021	-0.144	-0.018	0.142	-0.006	-0.078	-0.114	-0.101	-0.162	-0.101	0.005
-0.142	-0.076	0.027	0.019	0.021	0.035	-0.009	0.029	0.014	0.078	0.004	0.047	0.018	0.019	-0.021	-0.018	-0.229	-0.204	-0.103	-0.003	0.030	0.040	-0.016	0.040	0.005
-0.051	-0.018	0.013	-0.042	-0.059	0.068	-0.081	0.023	-0.124	0.010	-0.102	0.027	-0.056	-0.038	-0.007	-0.065	-0.037	0.018	-0.144	0.013	0.139	-0.109	0.016	-0.109	0.005

ACTUAL RETURN LQ45																					IHSG	Rf
ACES	ADRO	AMRT	ARTO	BRIS	BRPT	ESSA	GGRM	HRUM	INDY	ITMG	MAPI	MDKA	MEDC	PTBA	SCMA	SIDO	SRTG	TBIG	TOWR	TPIA		
0.00	0.00	-0.12	0.17	-0.22	-0.13	0.65	-0.01	-0.24	-0.04	-0.06	-0.08	-0.24	-0.18	-0.03	-0.14	-0.01	-0.08	-0.05	-0.13	0.14	-0.04	0.00
-0.03	0.06	0.06	0.04	0.00	0.04	0.10	0.00	0.06	0.00	0.04	0.08	0.22	0.18	-0.10	-0.07	0.01	0.15	0.35	0.04	-0.09	0.00	0.00
0.01	-0.04	-0.05	0.20	-0.16	-0.10	-0.08	-0.08	0.00	-0.10	0.09	-0.13	0.03	0.03	-0.07	0.07	-0.03	-0.08	-0.07	0.03	-0.21	-0.01	0.00
-0.16	0.01	0.38	0.12	0.21	-0.05	0.03	0.33	-0.01	0.01	0.10	-0.11	0.09	-0.07	-0.10	0.07	-0.08	0.62	0.24	0.06	0.24	0.01	0.00
0.06	0.11	0.08	0.32	0.14	0.13	0.21	-0.26	0.13	0.05	0.19	-0.01	0.01	-0.24	0.12	0.27	0.13	0.05	0.00	0.18	-0.04	0.01	0.00
0.05	-0.06	0.00	-0.15	-0.16	0.10	-0.26	0.01	-0.16	-0.02	-0.06	0.19	-0.05	-0.02	-0.05	-0.12	-0.01	-0.13	-0.02	-0.09	-0.16	0.01	0.00
-0.09	0.40	0.02	0.00	-0.08	-0.09	-0.07	-0.02	0.92	0.42	0.30	0.05	-0.11	0.16	0.31	-0.01	-0.02	0.18	-0.05	-0.01	-0.08	0.02	0.00
0.11	-0.05	-0.13	0.03	0.03	-0.03	0.10	0.03	-0.18	-0.06	0.04	0.13	0.25	0.04	-0.03	0.04	0.10	0.10	-0.01	-0.12	0.06	0.05	0.00
-0.07	0.01	-0.01	0.02	-0.07	-0.02	0.05	-0.06	0.21	-0.08	0.00	-0.16	0.16	-0.16	-0.03	-0.19	0.08	0.02	0.03	0.00	-0.07	-0.01	0.00
-0.02	0.32	0.03	0.01	-0.09	-0.07	0.51	-0.03	0.12	-0.06	-0.05	-0.04	0.06	-0.03	0.04	-0.05	-0.05	0.31	-0.02	-0.03	0.04	0.01	0.00
-0.04	0.00	-0.04	0.03	-0.13	0.04	0.12	0.00	0.03	0.35	0.06	0.10	-0.06	0.19	0.05	-0.10	0.08	-0.02	-0.02	-0.09	0.20	0.01	0.00
-0.13	0.09	-0.06	-0.01	0.08	0.00	0.13	0.03	0.16	0.07	0.23	0.01	0.06	0.08	0.10	-0.12	0.05	-0.04	0.02	0.01	0.02	0.04	0.00
-0.04	0.10	0.39	-0.09	-0.04	0.02	0.81	0.01	-0.13	0.00	0.07	0.12	0.17	-0.08	0.05	0.13	0.05	0.04	-0.02	0.03	0.12	0.03	0.00
0.02	0.24	0.13	-0.20	-0.02	-0.06	0.02	-0.03	0.08	0.21	-0.01	0.02	0.20	-0.01	0.16	-0.13	-0.08	0.33	0.05	-0.06	0.00	0.02	0.00
-0.08	-0.02	0.06	-0.20	-0.09	-0.02	-0.05	0.03	0.03	0.07	0.23	0.00	0.03	0.06	0.19	-0.12	0.09	-0.12	-0.02	-0.01	0.02	-0.01	0.00
-0.20	-0.13	0.12	-0.02	-0.07	-0.10	-0.29	-0.01	-0.35	-0.19	-0.12	0.09	-0.27	0.09	-0.16	-0.02	-0.02	-0.18	0.00	0.10	-0.12	-0.03	0.00
-0.08	0.14	-0.08	0.16	0.22	0.19	0.24	-0.11	0.19	0.15	0.29	-0.09	0.02	-0.04	0.13	0.00	-0.10	-0.02	0.04	0.07	0.06	0.01	0.00
0.01	0.09	0.16	-0.20	-0.07	-0.09	0.08	-0.15	-0.08	0.07	-0.01	0.13	0.05	0.41	-0.01	0.03	-0.22	0.04	-0.08	0.06	0.03	0.03	0.00
-0.15	0.12	0.10	-0.22	-0.03	-0.03	-0.11	-0.03	0.05	0.05	0.05	0.05	-0.08	0.06	-0.02	-0.09	0.00	0.00	0.00	0.00	-0.02	-0.02	0.00
-0.07	0.01	0.18	-0.23	-0.05	0.04	0.07	0.05	-0.10	0.09	0.09	0.14	-0.04	0.26	-0.06	0.14	0.04	-0.07	-0.13	-0.06	0.02	0.01	0.00
-0.12	-0.03	0.10	-0.10	-0.05	-0.04	0.00	-0.17	0.09	-0.11	-0.07	0.20	0.10	-0.08	-0.03	0.07	0.06	0.08	-0.06	-0.02	-0.02	0.00	0.00
-0.01	-0.01	-0.14	-0.19	-0.01	-0.04	-0.14	-0.10	-0.08	-0.06	-0.07	0.00	-0.01	-0.05	-0.03	-0.18	-0.04	-0.05	-0.01	-0.03	0.08	-0.03	0.00
-0.01	-0.23	0.07	-0.14	0.03	0.09	0.08	0.28	0.07	-0.12	-0.07	-0.10	0.15	0.37	-0.08	0.10	0.00	-0.04	-0.09	0.02	-0.10	0.00	0.00
0.03	0.01	0.02	-0.22	0.14	0.13	0.08	0.09	-0.06	-0.05	0.03	0.16	-0.04	-0.18	0.14	-0.04	0.17	-0.03	0.00	-0.06	0.00	0.00	0.00
-0.05	-0.03	-0.01	-0.04	0.11	-0.12	-0.12	0.04	-0.10	0.05	0.06	0.00	-0.08	-0.12	0.03	-0.13	-0.01	-0.16	0.03	-0.12	0.01	-0.01	0.00
-0.06	0.08	0.01	-0.14	0.03	0.01	-0.26	0.09	0.03	0.08	-0.15	-0.09	-0.06	0.00	0.04	-0.12	-0.09	-0.05	-0.05	0.11	0.01	0.02	0.00
0.40	-0.35	-0.09	0.15	0.00	-0.09	-0.30	-0.05	-0.07	-0.34	-0.34	0.30	-0.24	-0.10	-0.26	-0.16	-0.08	-0.18	0.03	-0.03	-0.09	-0.04	0.00
0.07	0.09	-0.02	0.34	-0.02	-0.02	0.19	0.02	0.01	0.11	0.09	-0.05	0.02	-0.02	-0.12	0.17	0.01	0.08	-0.06	0.07	-0.02	0.00	0.00
0.07	0.08	0.05	-0.08	-0.02	0.04	0.02	0.01	0.17	0.03	0.13	0.17	0.15	0.27	0.03	-0.04	-0.12	-0.04	-0.04	-0.04	0.01	0.04	0.00
0.01	0.11	0.07	-0.20	0.03	0.38	0.03	-0.14	-0.06	0.01	0.06	-0.02	-0.04	-0.05	0.03	-0.05	-0.03	0.03	0.09	0.01	0.03	0.00	0.00
0.03	0.07	0.02	-0.13	-0.05	0.21	0.31	0.02	0.21	0.10	0.00	-0.06	-0.15	0.50	-0.02	0.07	-0.05	0.06	-0.04	-0.07	0.16	0.00	0.00
0.07	-0.10	-0.02	-0.22	-0.08	-0.13	-0.25	-0.05	-0.14	-0.18	-0.08	-0.05	-0.23	-0.21	-0.11	-0.04	-0.14	-0.19	0.02	-0.07	0.18	-0.03	0.00
-0.06	0.02	-0.01	1.03	0.10	-0.07	-0.08	-0.09	-0.14	-0.19	-0.07	0.01	0.13	-0.09	-0.02	0.04	-0.02	0.14	-0.01	0.12	-0.01	0.05	0.01
-0.05	-0.09	0.02	-0.09	0.05	0.27	-0.05	-0.04	-0.04	-0.03	0.04	0.03	0.07	0.00	0.01	0.08	0.05	0.00	0.02	-0.01	0.78	0.03	0.01
0.18	0.01	-0.10	0.11	0.34	-0.20	-0.07	-0.03	-0.12	-0.04	0.05	0.09	0.00	0.06	0.07	-0.09	-0.03	-0.08	-0.07	-0.10	0.03	-0.01	0.01

EXCESS RETURN ESGQ 45																						
AUTO	AALI	BJBR	BSDE	BTPS	CTRA	DSNG	GOOD	HEAL	IMPC	JPFA	JSMR	MIKA	MPMX	POWR	PRDA	PTPP	SILO	SMBR	SMSM	SSMS	TINS	WIKA
0.101845	-0.11181	-0.08493	-0.0374	-0.15414	-0.05486	0.023869	0.131763	0.105458	-0.02314	0.247898	-0.03409	-0.11739	0.073274	-0.05187	0.209205	-0.15462	-0.09451	-0.13976	0.023903	-0.04792	-0.27544	-0.03625
0.005704	-0.07274	-0.04759	0.04619	-0.06326	0.038179	0.101431	-0.01479	0.00375	0.131127	0.096042	0.024311	-0.00672	0.324517	0.033848	-0.04792	-0.11241	0.710055	-0.00901	-0.02157	-0.02909	0.068291	-0.12073
-0.02001	-0.05654	-0.00652	-0.04973	-0.11607	-0.05993	-0.16827	0.006092	0.032403	0.094083	-0.05979	-0.05111	-0.01818	0.10375	-0.03838	0.083471	-0.08898	8.15E-05	-0.15016	-0.09797	-0.06206	-0.07806	-0.06481
-0.05944	-0.14173	-0.12927	-0.14131	-0.00981	-0.1378	-0.05952	0.095298	0.191113	-0.01951	-0.13357	-0.11178	0.082355	-0.15352	-0.05439	0.042866	-0.18229	-0.00292	-0.11802	0.118932	-0.05435	-0.07167	-0.13486
-0.02596	0.043136	0.009481	-0.034	-0.18	-0.07281	0.077083	-0.00563	0.041726	0.115054	-0.10118	0.116402	-0.07792	-0.00292	-0.03392	0.696392	-0.08488	-0.00591	-0.0517	0.012065	0.003107	0.114533	-0.21092
-0.03122	0.059976	0.005245	0.023821	0.178518	0.008644	-0.02144	0.013388	-0.01146	0.05739	0.15734	0.002159	-0.1033	0.025452	-0.03492	-0.01309	0.074464	-0.01794	0.0911	0.045054	-0.00292	-0.087	-0.07362
-0.01263	0.153888	0.098301	0.03875	0.236369	0.065655	0.015951	0.120078	0.005704	-0.01715	0.088244	-0.02312	-0.01579	0.045359	-0.00292	-0.03031	0.201503	0.192205	0.028333	-0.017	0.092892	-0.01275	0.018822
0.104926	0.09427	0.044877	0.107083	0.095066	0.146816	0.071157	0.199464	0.001357	0.074031	-0.1295	0.079558	-0.01161	-0.01607	0.04667	-0.14024	0.102588	-0.12537	0.148598	0.132798	0.242985	0.050063	0.284317
0.103278	-0.07285	-0.04853	-0.02544	-0.06591	-0.02617	-0.08912	-0.04054	-0.16036	0.04619	-0.07538	-0.03387	0.040943	0.117083	-0.02654	0.433818	-0.06516	0.12499	-0.10818	-0.17902	0.027785	-0.00921	0.026009
-0.07892	-0.05054	-0.0213	-0.07204	-0.00012	-0.07911	-0.05952	0.07733	0.077891	0.08218	-0.072083	-0.04714	-0.05334	0.360179	-0.01098	0.042538	-0.12681	-0.11889	-0.09115	0.035251	-0.18164	-0.08203	-0.07109
-0.11114	0.039189	-0.01415	-0.10688	-0.03085	-0.10085	0.197083	-0.05054	0.020448	0.059804	-0.03489	-0.15716	0.112128	-0.13392	0.013343	-0.04368	-0.06352	-0.0379	-0.11582	-0.03233	0.038534	-0.05446	-0.05033
0.021355	0.143548	0.053899	0.008133	0.028693	0.054226	0.03875	0.007083	-0.03031	0.008165	-0.05997	0.024439	-0.12196	-0.02804	-0.00292	-0.09074	0.023965	-0.06032	-0.00292	-0.01049	0.111511	0.149257	-0.06627
0.063434	0.10281	0.093291	0.111837	-0.0837	0.121408	0.021083	0.135697	0.10037	0.128482	0.048039	0.136137	-0.02544	0.156877	0.029083	-0.00913	0.038968	0.025935	-0.0211	0.081053	-0.05202	0.141737	-0.02707
0.014861	-0.0069	-0.0357	-0.05684	0.042538	0.021122	-0.0576	-0.04639	0.188573	0.216443	-0.12413	0.043837	0.162982	-0.03847	0.066851	-0.14042	-0.06322	0.033838	-0.05847	0.095675	-0.00292	0.016314	-0.01777
0.018917	-0.04292	-0.01309	-0.02364	-0.11886	-0.07803	-0.08556	-0.01201	-0.02077	-0.00556	-0.02016	-0.01036	0.028704	-0.00292	-0.03315	-0.11524	-0.00292	0.083622	0.055907	-0.07984	0.23652	0.021342	-0.04814
-0.02856	-0.18625	-0.06114	-0.03995	-0.07833	-0.12982	-0.11283	-0.05796	0.091629	-0.0374	0.077785	-0.11792	0.050723	-0.00292	-0.05187	0.058308	0.007779	-0.11796	-0.05847	-0.07931	-0.08625	-0.23976	0.012873
0.019013	-0.01822	-0.02837	0.008072	-0.00646	0.072665	0.069958	0.035918	-0.04943	0.090492	-0.0646	0.002733	-0.09746	-0.09508	-0.00292	-0.00292	-0.03995	0.002083	-0.06566	-0.02547	0.240885	0.00398	0.002265
0.061461	-0.05473	0.034397	-0.00292	0.050464	0.02411	-0.05009	0.006429	0.035411	-0.02552	0.093969	-0.03662	0.065356	0.032616	-0.01027	-0.10676	0.106973	0.031909	0.03474	-0.03753	-0.06936	0.021056	-0.039
0.001116	-0.10128	-0.0281	-0.01922	-0.08062	-0.00292	-0.0445	-0.02144	0.087687	-0.02862	-0.04708	-0.06106	0.087309	-0.04213	0.026713	-0.13596	-0.12668	-0.01253	-0.04727	0.03294	-0.08121	-0.10994	0.141468
0.057324	0.027386	0.011843	0.024708	0.077669	-0.01344	0.143778	-0.02178	-0.08599	-0.10055	-0.08873	0.049552	-0.05119	0.043002	-0.0245	0.046588	-0.00857	0.06019	-0.09996	0.150929	0.070442	0.012065	-0.13843
0.148598	-0.0235	-0.01383	-0.01905	0.081829	0.071551	0.096182	0.025929	0.020573	0.076013	-0.04263	-0.09089	0.026069	0.119035	-0.01027	0.181046	0.008447	0.156901	-0.02628	0.020417	0.087011	-0.09886	-0.01913
-0.04239	-0.03895	-0.01395	0.002548	-0.13104	-0.07222	-0.01931	-0.02161	0.013477	-0.04897	-0.02923	-0.04472	0.120323	-0.029	-0.02514	-0.11049	-0.19955	-0.01079	-0.07947	-0.00292	-0.03262	-0.04781	0.019061
-0.07141	0.022005	0.011953	0.013388	-0.08535	0.034317	0.130417	-0.06958	0.000309	0.019802	0.039554	0.057486	-0.06561	0.050655	-0.00292	-0.03863	-0.03089	-0.03466	0.054078	0.026399	0.075315	0.065459	-0.1427
0.269142	0.006202	-0.03588	0.055907	-0.08885	0.012468	-0.02498	-0.02741	-0.04472	-0.04456	-0.00662	0.025564	-0.00292	0.056405	0.027386	0.080417	-0.08205	0.070854	-0.03723	-0.0219	0.02232	-0.05092	-0.14042
-0.02604	-0.02701	0.027386	-0.01302	-0.06702	0.002134	0.064753	0.022188	-0.09352	-0.00872	-0.16649	-0.01215	-0.02298	-0.02292	-0.03233	0.001357	-0.09667	0.153572	-0.08921	-0.00614	0.037083	-0.13737	-0.08987
0.079924	-0.04921	-0.08012	0.083818	-0.02575	-0.00292	-0.12968	-0.0519	0.041364	0.081619	-0.07847	0.018822	-0.01657	0.074634	0.034962	-0.00292	0.117773	0.138998	-0.00847	0.003556	0.008918	-0.01748	-0.18546
0.128231	-0.0903	-0.03479	-0.017	-0.11507	0.07246	-0.08356	-0.00721	-0.07359	-0.02172	0.146122	0.009241	-0.0652	-0.12792	-0.03211	-0.0327	-0.2183	-0.04916	-0.03644	0.11927	-0.1111	-0.08666	0.171841
0.195151	0.057367	-0.03172	0.03994	0.086557	-0.01226	-0.06432	-0.00292	0.023699	0.166392	0.118422	0.138224	-0.0103	-0.08084	0.064753	-0.00292	0.183358	0.133447	0.014424	-5.1E-05	-0.20947	-0.0513	-0.39796
0.178535	0.010461	0.005558	0.079275	0.026069	0.04897	0.090541	0.010014	0.104491	-0.13694	-0.00665	0.015504	0.078868	-0.03109	0.032295	0.154978	-0.00292	0.037083	0.082311	0.13994	-0.01531	0.05923	0.376865
0.089234	0.000384	-0.00712	-0.04511	0.011168	0.019505	0.014177	-0.09228	-0.06646	-0.04458	-0.03662	0.108194	-0.03041	0.001914	0.031097	-0.04837	-0.04424	0.00734	-0.06574	0.017083	0.026372	-0.03483	-0.13559
-0.00917	-0.01607	-0.01557	-0.10424	-0.12097	-0.10818	0.022293	0.011102	-0.0672	-0.00913	-0.00679	-0.00524	-0.04885	-0.01253	-0.01607	0.012956	0.298807	0.032616	-0.02526	0.036299	-0.0395	-0.13478	-0.10337
-0.13499	-0.06292	-0.03283	-0.01762	-0.17615	0.085319	-0.06849	-0.03517	0.161205	0.128333	-0.04961	-0.00991	0.011898	-0.03204	-0.05625	0.00099	-0.25457	0.173554	-0.11149	0.020668	-0.03667	-0.1295	0.15952
-0.00654	0.075098	-0.01613	0.05181	0.047877	0.015101	-0.02046	-0.00768	-0.03898	-0.00844	-0.04373	0.088633	0.018981	0.027083	0.01821	-0.14689	-0.02062	0.13875	-0.00933	-0.08126	-0.11645	-0.10437	-0.16449
-0.14473	-0.07857	0.023869	0.015951	0.018231	0.032482	-0.01185	0.025791	0.010689	0.074861	0.001339	0.044395	0.01494	0.016501	-0.02361	-0.0211	-0.23175	-0.2073	-0.10614	-0.00542	0.02664	0.037406	-0.01854
-0.05376	-0.02071	0.010127	-0.04458	-0.06209	0.065459	-0.084	0.020339	-0.12708	0.007393	-0.10461	0.023777	-0.05906	-0.04101	-0.00996	-0.06773	-0.0403	0.015432	-0.1468	0.009615	0.135839	-0.11144	0.012956

EXCESS RETURN LQ45																				
ACES	ADRO	AMRT	ARTO	BRIS	BRPT	ESSA	GGRM	HRUM	INDY	ITMG	MAPI	MDKA	MEDC	PTBA	SCMA	SIDO	SRTG	TBIG	TOWR	TPIA
-0.003	-0.007	-0.121	0.170	-0.224	-0.130	0.648	-0.012	-0.240	-0.040	-0.066	-0.084	-0.243	-0.183	-0.036	-0.144	-0.016	-0.087	-0.049	-0.133	0.138
-0.032	0.057	0.053	0.041	-0.007	0.039	0.094	-0.005	0.052	-0.006	0.036	0.078	0.216	0.173	-0.098	-0.076	0.010	0.148	0.345	0.033	-0.097
0.007	-0.047	-0.050	0.194	-0.167	-0.103	-0.081	-0.085	-0.008	-0.098	0.086	-0.128	0.028	0.027	-0.070	0.067	-0.028	-0.083	-0.075	0.028	-0.216
-0.167	0.010	0.378	0.118	0.204	-0.053	0.025	0.330	-0.013	0.009	0.096	-0.110	0.086	-0.075	-0.098	0.071	-0.087	0.616	0.236	0.052	0.237
0.053	0.105	0.077	0.315	0.141	0.132	0.211	-0.261	0.130	0.051	0.191	-0.011	0.004	-0.240	0.112	0.268	0.131	0.042	-0.003	0.179	-0.046
0.050	-0.059	-0.003	-0.158	-0.159	0.095	-0.261	0.005	-0.159	-0.025	-0.059	0.191	-0.050	-0.028	-0.057	-0.120	-0.015	-0.133	-0.028	-0.088	-0.168
-0.089	0.394	0.019	-0.008	-0.084	-0.097	-0.076	-0.019	0.915	0.415	0.297	0.051	-0.109	0.153	0.305	-0.013	-0.027	0.178	-0.057	-0.014	-0.086
0.107	-0.048	-0.137	0.024	0.031	-0.034	0.096	0.026	-0.183	-0.066	0.036	0.125	0.251	0.033	-0.032	0.042	0.094	0.100	-0.010	-0.127	0.053
-0.077	0.009	-0.015	0.018	-0.076	-0.019	0.045	-0.066	0.204	-0.084	-0.005	-0.162	0.155	-0.164	-0.033	-0.189	0.080	0.021	0.024	-0.003	-0.072
-0.022	0.321	0.027	0.008	-0.092	-0.074	0.511	-0.028	0.119	-0.058	-0.056	-0.043	0.060	-0.028	0.039	-0.050	-0.058	0.305	-0.026	-0.033	0.032
-0.038	-0.007	-0.044	0.022	-0.135	0.038	0.120	-0.002	0.026	0.350	0.058	0.096	-0.067	0.188	0.049	-0.107	0.072	-0.021	-0.027	-0.092	0.202
-0.137	0.091	-0.067	-0.017	0.075	-0.003	0.123	0.022	0.152	0.064	0.229	0.003	0.060	0.078	0.099	-0.119	0.045	-0.047	0.018	0.007	0.020
-0.045	0.095	0.392	-0.097	-0.039	0.014	0.811	0.003	-0.131	-0.003	0.067	0.118	0.168	-0.078	0.045	0.129	0.043	0.035	-0.027	0.031	0.116
0.017	0.239	0.122	-0.208	-0.018	-0.064	0.018	-0.031	0.074	0.203	-0.008	0.020	0.196	-0.012	0.158	-0.133	-0.081	0.330	0.046	-0.059	-0.008
-0.084	-0.024	0.061	-0.198	-0.092	-0.021	-0.055	0.023	0.027	0.071	0.229	-0.003	0.025	0.061	0.183	-0.121	0.082	-0.127	-0.023	-0.013	0.014
-0.201	-0.128	0.118	-0.027	-0.072	-0.099	-0.292	-0.013	-0.352	-0.197	-0.126	0.086	-0.271	0.083	-0.160	-0.021	-0.023	-0.185	-0.006	0.097	-0.123
-0.081	0.133	-0.084	0.153	0.217	0.189	0.237	-0.110	0.191	0.143	0.288	-0.095	0.015	-0.042	0.123	-0.003	-0.098	-0.026	0.041	0.065	0.053
0.011	0.086	0.160	-0.206	-0.073	-0.092	0.074	-0.151	-0.082	0.072	-0.010	0.132	0.051	0.407	-0.015	0.024	-0.218	0.032	-0.084	0.052	0.024
-0.156	0.116	0.093	-0.220	-0.036	-0.033	-0.111	-0.037	0.044	0.042	0.051	0.047	-0.082	0.061	-0.022	-0.091	-0.003	0.001	0.001	-0.007	-0.019
-0.077	0.002	0.177	-0.230	-0.051	0.035	0.067	0.048	-0.098	0.084	0.085	0.134	-0.046	0.259	-0.065	0.133	0.039	-0.075	-0.134	-0.068	0.014
-0.118	-0.031	0.093	-0.103	-0.049	-0.045	-0.003	-0.175	0.087	-0.113	-0.076	0.200	0.098	-0.081	-0.031	0.065	0.058	0.074	-0.060	-0.025	-0.023
-0.011	-0.008	-0.145	-0.192	-0.012	-0.043	-0.144	-0.101	-0.080	-0.062	-0.068	-0.006	-0.010	-0.050	-0.032	-0.179	-0.041	-0.048	-0.012	-0.029	0.072
-0.015	-0.234	0.065	-0.140	0.032	0.090	0.079	0.275	0.065	-0.120	-0.075	-0.103	0.143	0.371	-0.082	0.094	-0.003	-0.042	-0.090	0.015	-0.104
0.028	0.007	0.022	-0.221	0.136	0.130	0.078	0.084	-0.061	-0.049	0.025	0.159	-0.041	-0.179	0.132	-0.047	0.163	-0.032	-0.008	-0.065	-0.003
-0.056	-0.033	-0.010	-0.039	0.102	-0.121	-0.120	0.037	-0.107	0.045	0.056	-0.003	-0.080	-0.125	0.031	-0.133	-0.014	-0.162	0.031	-0.122	0.010
-0.061	0.076	0.004	-0.148	0.027	0.009	-0.262	0.091	0.031	0.076	-0.158	-0.096	-0.063	-0.003	0.035	-0.125	-0.095	-0.048	-0.049	0.105	0.006
0.397	-0.351	-0.093	0.147	-0.003	-0.093	-0.306	-0.054	-0.069	-0.343	-0.339	0.293	-0.241	-0.107	-0.264	-0.167	-0.085	-0.185	0.031	-0.037	-0.096
0.069	0.090	-0.026	0.333	-0.026	-0.023	0.186	0.020	0.004	0.111	0.087	-0.051	0.017	-0.019	-0.127	0.171	0.004	0.075	-0.059	0.063	-0.022
0.064	0.078	0.044	-0.088	-0.024	0.037	0.014	0.008	0.166	0.031	0.125	0.169	0.144	0.267	0.031	-0.040	-0.126	-0.039	-0.043	-0.041	0.007
0.011	0.105	0.071	-0.202	0.030	0.378	0.023	-0.142	-0.063	0.010	0.061	-0.026	-0.040	-0.056	0.030	-0.054	-0.034	0.031	0.085	0.012	0.025
0.024	0.064	0.018	-0.136	-0.053	0.212	0.311	0.020	0.205	0.097	-0.001	-0.062	-0.151	0.502	-0.024	0.065	-0.051	0.054	-0.041	-0.071	0.158
0.064	-0.105	-0.027	-0.223	-0.080	-0.138	-0.248	-0.057	-0.146	-0.178	-0.087	-0.050	-0.229	-0.211	-0.117	-0.047	-0.139	-0.190	0.022	-0.076	0.175
-0.059	0.021	-0.010	1.029	0.100	-0.074	-0.078	-0.095	-0.145	-0.190	-0.077	0.003	0.132	-0.097	-0.027	0.037	-0.023	0.140	-0.013	0.121	-0.013
-0.049	-0.095	0.018	-0.097	0.048	0.270	-0.048	-0.041	-0.039	-0.030	0.042	0.023	0.064	-0.003	0.005	0.080	0.047	0.000	0.017	-0.013	0.777
0.178	0.005	-0.098	0.104	0.336	-0.206	-0.075	-0.034	-0.123	-0.041	0.052	0.089	-0.003	0.053	0.067	-0.097	-0.031	-0.082	-0.070	-0.104	0.026

LQ45

Emiten	E(R)	(σ ²)	Ai	Bi
ACES	-0.011	0.011	0.754	31.670
ADRO	0.029	0.018	3.059	278.170
AMRT	0.034	0.014	2.315	80.789
ARTO	-0.005	0.055	-0.280	69.366
BRIS	0.000	0.013	-0.207	83.287
BRPT	0.006	0.015	0.243	102.352
ESSA	0.049	0.058	1.419	56.579
GGRM	-0.012	0.011	-0.137	0.949
HRUM	0.014	0.041	0.564	107.991
INDY	0.008	0.020	0.475	215.020
ITMG	0.031	0.016	3.319	256.067
MAPI	0.031	0.011	1.367	26.855
MDKA	0.008	0.017	0.812	574.457
MEDC	0.030	0.030	1.562	107.892
PTBA	0.004	0.011	0.221	266.582
SCMA	-0.021	0.012	-3.011	212.592
SIDO	-0.009	0.006	-0.353	5.117
SRTG	0.019	0.025	1.526	252.152
TBIG	0.000	0.007	0.063	3.888
TOWR	-0.007	0.005	-1.173	71.640
TPIA	0.033	0.026	1.192	40.901

Emiten	α	β	σ ² _{εi}	ERB	Ci	C*	Keputusan
ITMG	0.055	0.031	0.016	3.319	0.018	0.060	OPTIMAL
ADRO	0.008	0.029	0.018	3.059	0.021	0.060	OPTIMAL
AMRT	-0.096	0.034	0.014	2.315	0.014	0.060	OPTIMAL
MEDC	0.056	0.030	0.030	1.562	0.032	0.060	OPTIMAL
SRTG	-0.079	0.019	0.025	1.526	0.029	0.060	OPTIMAL
ESSA	-0.072	0.049	0.058	1.419	0.060	0.060	OPTIMAL
MAPI	0.092	0.031	0.011	1.367	0.011	0.060	OPTIMAL
TPIA	0.029	0.033	0.026	1.192	0.026	0.060	OPTIMAL
MDKA	0.000	0.008	0.017	0.812	0.025	0.060	OPTIMAL
HRUM	-0.120	0.014	0.041	0.564	0.043	0.060	OPTIMAL
INDY	-0.038	0.008	0.020	0.475	0.023	0.060	OPTIMAL
BRPT	-0.203	0.006	0.015	0.243	0.016	0.060	OPTIMAL
PTBA	0.070	0.004	0.011	0.221	0.013	0.060	OPTIMAL
TBIG	-0.067	0.000	0.007	0.063	0.007	0.060	OPTIMAL
BRIS	0.339	0.000	0.013	-0.207	0.014	0.060	-

Zi	Wi	αp	βp	σ ² _{εp}	Wi dalam %
6.385	0.240	0.013	0.007	0.004	24%
4.963	0.187	0.002	0.005	0.003	19%
5.536	0.208	-0.020	0.007	0.003	21%
1.497	0.056	0.003	0.002	0.002	6%
1.125	0.042	-0.003	0.001	0.001	4%
1.151	0.043	-0.003	0.002	0.003	4%
3.625	0.136	0.013	0.004	0.002	14%
1.454	0.055	0.002	0.002	0.001	5%
0.362	0.014	0.000	0.000	0.000	1%
0.176	0.007	-0.001	0.000	0.000	1%
0.162	0.006	0.000	0.000	0.000	1%
0.073	0.003	-0.001	0.000	0.000	0%
0.064	0.002	0.000	0.000	0.000	0%
0.000	0.000	0.000	0.000	0.000	0%
26.576	1	0.004	0.0309	0.019	100%
		E(Rm)	0.0044		
		E(Rf)	0.0037		
	SIM =	E(Rp)	0.0043		

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Emiten	E(R)	(σ^2)	Ai	Bi
IMPC	0.034	0.008	0.204	0.671
SILO	0.044	0.006	-0.839	26.640
JSMR	0.008	0.002	-1.028	23.985
SMSM	0.015	0.003	-0.316	18.854
MPMX	0.024	0.009	-0.522	4.041
JPFA	-0.006	0.005	0.094	15.870
SSMS	0.010	0.007	-0.084	11.368
AUTO	0.026	0.004	0.066	0.160
CTRA	0.005	0.007	-0.104	0.368
GOOD	0.013	0.006	0.933	5.562
PRDA	0.023	0.009	0.246	6.483
WIKA	-0.033	0.005	0.292	23.459
MIKA	-0.001	0.005	0.015	0.090
DSNG	0.001	0.011	0.251	1.612
HEAL	0.017	0.001	-0.327	19.015
BSDE	-0.002	0.026	0.045	0.135
POWR	0.000	0.015	-0.423	2.429
PTPP	-0.031	0.022	0.372	1.833
BTPS	-0.022	0.005	-2.106	17.082
AALI	-0.011	0.005	0.283	2.764
BJBR	-0.008	0.011	0.230	12.057
TINS	-0.033	0.009	-2.073	57.364
SMBR	-0.036	0.019	0.036	0.019

Emiten	α	β	σ_{ei}^2	ERB	Ci	C*	Keputusan
IMPC	0.010	0.034	0.006	0.933	0.006	0.026	OPTIMAL
SILO	0.018	0.044	0.022	0.372	0.022	0.026	OPTIMAL
JSMR	0.027	0.008	0.005	0.292	0.006	0.026	OPTIMAL
SMSM	0.013	0.015	0.005	0.283	0.005	0.026	OPTIMAL
MPMX	-0.038	0.024	0.011	0.251	0.011	0.026	OPTIMAL
SSMS	0.139	0.010	0.011	0.230	0.012	0.026	OPTIMAL
AUTO	-0.051	0.026	0.008	0.204	0.009	0.026	OPTIMAL
CTRA	0.068	0.005	0.005	0.094	0.006	0.026	OPTIMAL
GOOD	0.023	0.013	0.004	0.066	0.004	0.026	OPTIMAL
PRDA	-0.065	0.023	0.026	0.045	0.026	0.026	OPTIMAL
DSNG	-0.081	0.001	0.007	-0.084	0.008	0.026	-
HEAL	-0.124	0.017	0.007	-0.104	0.007	0.026	-
POWR	-0.007	0.000	0.001	-0.327	0.001	0.026	-

Zi	Wi	α_p	β_p	σ_{ep}^2	Wi dalam %
5.3015	0.6133	0.0063	0.0207	0.0035	61%
0.6956	0.0805	0.0015	0.0035	0.0017	8%
0.4289	0.0496	0.0013	0.0004	0.0002	5%
0.7809	0.0903	0.0011	0.0014	0.0004	9%
0.4834	0.0559	-0.0021	0.0013	0.0006	6%
0.1942	0.0225	0.0031	0.0002	0.0002	2%
0.5447	0.0630	-0.0032	0.0016	0.0005	6%
0.0659	0.0076	0.0005	0.0000	0.0000	1%
0.1331	0.0154	0.0004	0.0002	0.0001	2%
0.0162	0.0019	-0.0001	0.0000	0.0000	0%
8.6445	1	0.0088	0.02939	0.0075	100%
		E(Rm)	-0.0332		
		E(Rf)	0.00372		
	SIM =	E(Rp)	0.00782		

