



LAMPIRAN-LAMPIRAN

Lampiran 1a Daftar Saham-Saham IDX INFOBANK 15 yang Terdaftar di Bursa Efek Indonesia Periode Januari 2022- Desember 2024.

No	Kode Saham	Nama Saham
1	BBCA	Bank Central Asia Tbk.
2	BBNI	Bank Negara Indonesia (Persero) Tbk.
3	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
4	BBTN	Bank Tabungan Negara (Persero) Tbk.
5	BDMN	Bank Danamon Indonesia Tbk.
6	BJBR	Bank Pembangunan Daerah Jawa Barat dan Banten Tbk.
7	BMRI	Bank Mandiri (Persero) Tbk.
8	BRIS	Bank Syariah Indonesia Tbk.
9	BTPS	Bank BTPN Syariah Tbk.
10	PNBN	Bank Pan Indonesia Tbk
11	BNGA	Bank CIMB Niaga Tbk.
12	MCOR	Bank China Construction Bank Indonesia Tbk.
13	MEGA	Bank Mega Tbk.
14	NISP	Bank OCBC NISP Tbk.
15	SDRA	Bank Woori Saudara Indonesia 1906 Tbk.
16	ARTO	Bank Jago Tbk.
17	AGRO	Bank Raya Indonesia Tbk.
18	BBHI	Allo Bank Indonesia Tbk.
19	BNBA	Bank Bumi Arta Tbk.
20	BJTM	Bank Pembangunan Daerah Jawa Timur Tbk
21	BANK	Bank Aladin Syariah Tbk.

Lampiran 1b Perusahaan yang Masuk dalam Kriteria Sampel Penelitian

No	Kode Saham	Nama Saham
1	BBCA	Bank Central Asia Tbk.
2	BBNI	Bank Negara Indonesia (Persero) Tbk.
3	BBRI	Bank Rakyat Indonesia (Persero) Tbk.
4	BBTN	Bank Tabungan Negara (Persero) Tbk.
5	BDMN	Bank Danamon Indonesia Tbk.
6	BJBR	Bank Pembangunan Daerah Jawa Barat dan Banten Tbk.
7	BMRI	Bank Mandiri (Persero) Tbk.
8	BRIS	Bank Syariah Indonesia Tbk.
9	BTPS	Bank BTPN Syariah Tbk.
10	PNBN	Bank Pan Indonesia Tbk



Lampiran 2a Daftar Harga Penutupan Masing-Masing Saham

No	Bulan	Close Price (IDR)									
		BBCA	BBNI	BBRI	BBTN	BDMN	BJBR	BMRI	BRIS	BTPS	PNBN
1	Januari 2022	7,625	3,663	4,070	1,501	2,400	1,316	3,738	1,507	3,480	745
2	Februari 2022	8,050	4,000	4,550	1,577	2,380	1,391	3,850	1,624	3,590	800
3	Maret 2022	7,975	4,125	4,660	1,524	2,440	1,525	3,950	1,565	3,300	760
4	April 2022	8,125	4,613	4,870	1,639	2,450	1,475	4,475	1,541	3,450	1,010
5	Mei 2022	7,750	4,588	4,630	1,510	2,560	1,460	4,250	1,404	3,050	1,205
6	Juni 2022	7,250	3,925	4,150	1,293	2,350	1,375	3,963	1,307	2,820	1,690
7	Juli 2022	7,350	3,925	4,360	1,306	2,510	1,340	4,138	1,595	2,810	1,790
8	Agustus 2022	8,200	4,263	4,340	1,337	2,640	1,390	4,425	1,482	2,960	1,995
9	September 2022	8,550	4,488	4,490	1,319	2,540	1,355	4,713	1,434	2,730	2,130
10	Oktober 2022	8,800	4,700	4,650	1,373	3,400	1,375	5,275	1,365	2,950	2,400
11	November 2022	9,300	4,950	4,980	1,364	3,020	1,360	5,263	1,302	3,200	1,900
12	Desember 2022	8,550	4,613	4,940	1,350	2,730	1,345	4,963	1,290	2,790	1,540
13	Januari 2023	8,475	4,575	4,580	1,360	2,650	1,365	4,975	1,335	2,560	1,580
14	Februari 2023	8,750	4,388	4,670	1,325	2,860	1,320	5,000	1,520	2,340	1,445
15	Maret 2023	8,750	4,675	4,730	1,225	2,870	1,360	5,163	1,680	2,190	1,430
16	April 2023	9,050	4,713	5,100	1,245	2,820	1,255	5,175	1,730	2,140	1,105
17	Mei 2023	9,050	4,525	5,575	1,280	2,760	1,215	5,050	1,730	1,900	1,085
18	Juni 2023	9,150	4,575	5,425	1,320	2,930	1,180	5,200	1,690	2,070	1,085
19	Juli 2023	9,125	4,438	5,650	1,315	3,060	1,190	5,725	1,655	2,130	1,280
20	Agustus 2023	9,175	4,588	5,550	1,255	2,930	1,185	6,025	1,710	2,160	1,305
21	September 2023	8,825	5,163	5,225	1,220	2,860	1,170	6,025	1,625	1,905	1,250
22	Oktober 2023	8,750	4,790	4,960	1,225	2,740	1,135	5,675	1,500	1,575	1,135
23	November 2023	8,975	5,275	5,275	1,295	2,850	1,120	5,850	1,655	1,655	1,120
24	Desember 2023	9,400	5,375	5,725	1,250	2,780	1,150	6,050	1,740	1,690	1,210
25	Januari 2024	9,550	5,750	5,700	1,305	2,830	1,165	6,650	2,330	1,590	1,100
26	Februari 2024	9,875	6,000	6,125	1,430	2,910	1,205	7,000	2,470	1,375	1,120
27	Maret 2024	10,075	5,900	6,050	1,555	2,980	1,210	7,250	2,710	1,355	1,150
28	April 2024	9,800	5,250	4,940	1,320	2,740	1,015	6,900	2,640	1,215	1,115
29	Mei 2024	9,250	4,400	4,340	1,225	2,570	1,010	5,900	2,200	1,165	1,180
30	Juni 2024	9,925	4,660	4,600	1,265	2,580	970	6,150	2,620	1,145	1,145
31	Juli 2024	10,275	4,970	4,670	1,315	2,590	990	6,400	2,600	1,140	1,215
32	Agustus 2024	10,325	5,350	5,150	1,410	2,610	995	7,125	2,650	1,265	1,400
33	September 2024	10,325	5,350	4,950	1,450	2,600	965	6,925	3,010	1,215	1,625
34	Oktober 2024	10,250	5,250	4,800	1,405	2,570	980	6,700	3,030	1,065	1,900
35	November 2024	10,000	4,980	4,250	1,285	2,520	940	6,150	2,900	910	1,780
36	Desember 2024	9,675	4,350	4,080	1,140	2,540	910	5,700	2,730	925	1,860

Lampiran 2b Daftar Harga Saham Saat Stock Split

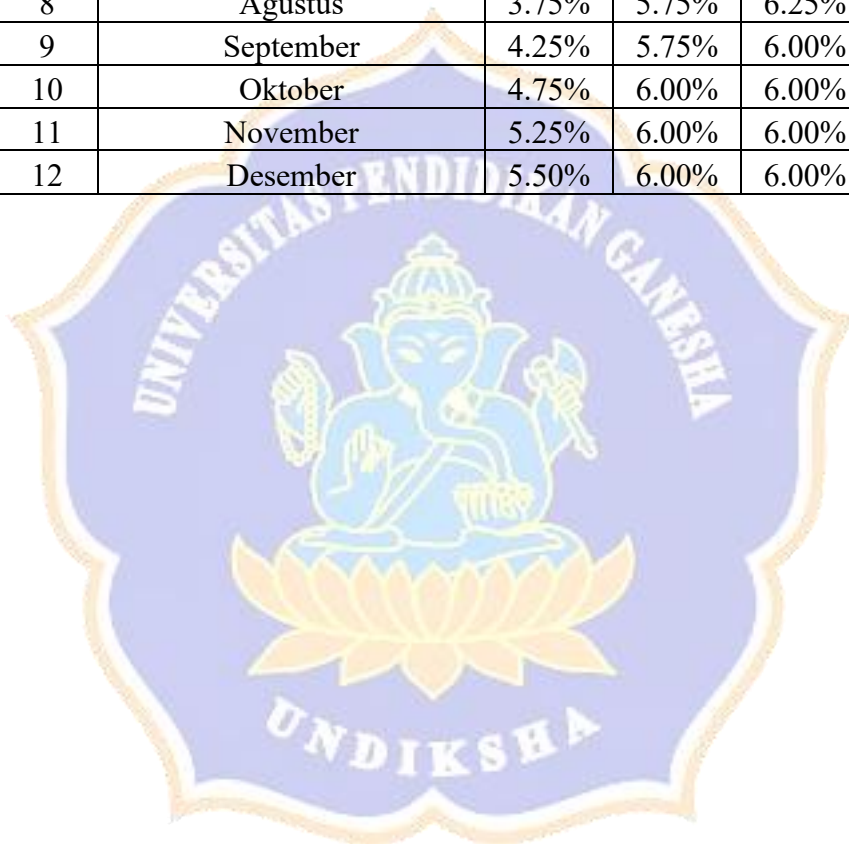
No	Bulan	Close Price (IDR)	
		BBNI	BMRI
1	Januari 2022	7,325	7,475
2	Februari 2022	8,000	7,700
3	Maret 2022	8,250	7,900
4	April 2022	9,225	8,950
5	Mei 2022	9,175	8,500
6	Juni 2022	7,850	7,925
7	Juli 2022	7,850	8,275
8	Agustus 2022	8,525	8,850
9	September 2022	8,975	9,425
10	Oktober 2022	9,400	10,550
11	November 2022	9,900	10,525
12	Desember 2022	9,225	9,925
13	Januari 2023	9,150	9,950
14	Februari 2023	8,775	10,000
15	Maret 2023	9,350	10,325
16	April 2023	9,425	5,175
17	Mei 2023	9,050	5,050
18	Juni 2023	9,150	5,200
19	Juli 2023	8,875	5,725
20	Agustus 2023	9,175	6,025
21	September 2023	10,325	6,025
22	Oktober 2023	4,790	5,675
23	November 2023	5,275	5,850
24	Desember 2023	5,375	6,050
25	Januari 2024	5,750	6,650
26	Februari 2024	6,000	7,000
27	Maret 2024	5,900	7,250
28	April 2024	5,250	6,900
29	Mei 2024	4,400	5,900
30	Juni 2024	4,660	6,150
31	Juli 2024	4,970	6,400
32	Agustus 2024	5,350	7,125
33	September 2024	5,350	6,925
34	Oktober 2024	5,250	6,700
35	November 2024	4,980	6,150
36	Desember 2024	4,350	5,700

Lampiran 3 Daftar Penutupan Indeks Harga Saham Gabungan (IHSG)

No	Bulan	Daftar Penutupan IHSG (IDR)
1	Januari 2022	6,631.15
2	Februari 2022	6,888.17
3	Maret 2022	7,071.44
4	April 2022	7,228.91
5	Mei 2022	7,148.97
6	Juni 2022	6,911.58
7	Juli 2022	6,951.12
8	Agustus 2022	7,178.59
9	September 2022	7,040.80
10	Oktober 2022	7,098.89
11	November 2022	7,081.31
12	Desember 2022	6,850.62
13	Januari 2023	6,839.34
14	Februari 2023	6,843.24
15	Maret 2023	6,805.28
16	April 2023	6,915.72
17	Mei 2023	6,633.26
18	Juni 2023	6,661.88
19	Juli 2023	6,931.36
20	Agustus 2023	6,953.26
21	September 2023	6,939.89
22	Oktober 2023	6,752.21
23	November 2023	7,080.74
24	Desember 2023	7,272.80
25	Januari 2024	7,207.94
26	Februari 2024	7,316.11
27	Maret 2024	7,288.81
28	April 2024	7,234.20
29	Mei 2024	6,970.74
30	Juni 2024	7,063.58
31	Juli 2024	7,255.76
32	Agustus 2024	7,670.73
33	September 2024	7,527.93
34	Oktober 2024	7,574.02
35	November 2024	7,114.27
36	Desember 2024	7,079.90

Lampiran 4a Daftar Suku Bunga Sertifikat Bank Indonesia (SBI)

No	Bulan	Tahun		
		2022	2023	2024
1	Januari	3.50%	5.75%	6.00%
2	Februari	3.50%	5.75%	6.00%
3	Maret	3.50%	5.75%	6.00%
4	April	3.50%	5.75%	6.25%
5	Mei	3.50%	5.75%	6.25%
6	Juni	3.50%	5.75%	6.25%
7	Juli	3.50%	5.75%	6.25%
8	Agustus	3.75%	5.75%	6.25%
9	September	4.25%	5.75%	6.00%
10	Oktober	4.75%	6.00%	6.00%
11	November	5.25%	6.00%	6.00%
12	Desember	5.50%	6.00%	6.00%



Lampiran 4b Daftar Suku Bunga Sertifikat Bank Indonesia (SBI) Bulanan

No	Bulan	Tahun		
		2022	2023	2024
1	Januari	3.50%	5.75%	6.00%
2	Februari	3.50%	5.75%	6.00%
3	Maret	3.50%	5.75%	6.00%
4	April	3.50%	5.75%	6.25%
5	Mei	3.50%	5.75%	6.25%
6	Juni	3.50%	5.75%	6.25%
7	Juli	3.50%	5.75%	6.25%
8	Agustus	3.75%	5.75%	6.25%
9	September	4.25%	5.75%	6.00%
10	Oktober	4.75%	6.00%	6.00%
11	November	5.25%	6.00%	6.00%
12	Desember	5.50%	6.00%	6.00%
13	Total 1 Tahun	48.00%	69.75%	73.25%
14	Rata-Rata 1 Tahun	0.040000	0.058125	0.061042
15	Total 3 Tahun	191.00%		
16	Rata-Rata 3 Tahun	5.30%		
17	Rata-Rata per Bulan $E(R_f) = \frac{\sum R_f}{n}$	0.44%		

Lampiran 5 Cara Perhitungan *Realized Return*, *Expected Return*, *Variance*, dan Standar Deviasi Masing-Masing Saham

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BBCA	Januari 2022	7,625	-	-	-
	Februari 2022	8,050	0.055738	0.048136	0.002317
	Maret 2022	7,975	-0.009317	-0.016918	0.000286
	April 2022	8,125	0.018809	0.011207	0.000126
	Mei 2022	7,750	-0.046154	-0.053755	0.002890
	Juni 2022	7,250	-0.064516	-0.072118	0.005201
	Juli 2022	7,350	0.013793	0.006192	0.000038
	Agustus 2022	8,200	0.115646	0.108045	0.011674
	September 2022	8,550	0.042683	0.035081	0.001231
	Oktober 2022	8,800	0.029240	0.021638	0.000468
	November 2022	9,300	0.056818	0.049217	0.002422
	Desember 2022	8,550	-0.080645	-0.088247	0.007787
	Januari 2023	8,475	-0.008772	-0.016373	0.000268
	Februari 2023	8,750	0.032448	0.024847	0.000617
	Maret 2023	8,750	0.000000	-0.007601	0.000058
	April 2023	9,050	0.034286	0.026684	0.000712
	Mei 2023	9,050	0.000000	-0.007601	0.000058
	Juni 2023	9,150	0.011050	0.003448	0.000012
	Juli 2023	9,125	-0.002732	-0.010334	0.000107
	Agustus 2023	9,175	0.005479	-0.002122	0.000005
	September 2023	8,825	-0.038147	-0.045749	0.002093
	Oktober 2023	8,750	-0.008499	-0.016100	0.000259
	November 2023	8,975	0.025714	0.018113	0.000328
	Desember 2023	9,400	0.047354	0.039752	0.001580
	Januari 2024	9,550	0.015957	0.008356	0.000070
	Februari 2024	9,875	0.034031	0.026430	0.000699
	Maret 2024	10,075	0.020253	0.012652	0.000160
	April 2024	9,800	-0.027295	-0.034897	0.001218
	Mei 2024	9,250	-0.056122	-0.063724	0.004061
	Juni 2024	9,925	0.072973	0.065372	0.004273
	Juli 2024	10,275	0.035264	0.027663	0.000765
	Agustus 2024	10,325	0.004866	-0.002735	0.000007
	September 2024	10,325	0.000000	-0.007601	0.000058
	Oktober 2024	10,250	-0.007264	-0.014865	0.000221
	November 2024	10,000	-0.024390	-0.031992	0.001023
	Desember 2024	9,675	-0.032500	-0.040101	0.001608
Jumlah			0.266050		0.054700
$E(R_i) = \frac{\sum R_i}{n}$			0.007601		
$\sigma_i^2 = \frac{\sum_{i=1}^N (R_i - E(R_i))^2}{n - 1}$					0.001563
$\sigma_i = \sqrt{\sigma_i^2}$					0.039533

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BBNI	Januari 2022	3,663	-	-	-
	Februari 2022	4,000	0.092150	0.084559	0.007150
	Maret 2022	4,125	0.031250	0.023659	0.000560
	April 2022	4,613	0.118182	0.110591	0.012230
	Mei 2022	4,588	-0.005420	-0.013011	0.000169
	Juni 2022	3,925	-0.144414	-0.152005	0.023105
	Juli 2022	3,925	0.000000	-0.007591	0.000058
	Agustus 2022	4,263	0.085987	0.078396	0.006146
	September 2022	4,488	0.052786	0.045195	0.002043
	Oktober 2022	4,700	0.047354	0.039763	0.001581
	November 2022	4,950	0.053191	0.045601	0.002079
	Desember 2022	4,613	-0.068182	-0.075773	0.005741
	Januari 2023	4,575	-0.008130	-0.015721	0.000247
	Februari 2023	4,388	-0.040984	-0.048574	0.002359
	Maret 2023	4,675	0.065527	0.057936	0.003357
	April 2023	4,713	0.008021	0.000431	0.000000
	Mei 2023	4,525	-0.039788	-0.047379	0.002245
	Juni 2023	4,575	0.011050	0.003459	0.000012
	Juli 2023	4,438	-0.030055	-0.037645	0.001417
	Agustus 2023	4,588	0.033803	0.026212	0.000687
	September 2023	5,163	0.125341	0.117750	0.013865
	Oktober 2023	4,790	-0.072155	-0.079746	0.006359
	November 2023	5,275	0.101253	0.093662	0.008773
	Desember 2023	5,375	0.018957	0.011367	0.000129
	Januari 2024	5,750	0.069767	0.062177	0.003866
	Februari 2024	6,000	0.043478	0.035887	0.001288
	Maret 2024	5,900	-0.016667	-0.024257	0.000588
	April 2024	5,250	-0.110169	-0.117760	0.013867
	Mei 2024	4,400	-0.161905	-0.169496	0.028729
	Juni 2024	4,660	0.059091	0.051500	0.002652
	Juli 2024	4,970	0.066524	0.058933	0.003473
	Agustus 2024	5,350	0.076459	0.068868	0.004743
	September 2024	5,350	0.000000	-0.007591	0.000058
	Oktober 2024	5,250	-0.018692	-0.026282	0.000691
	November 2024	4,980	-0.051429	-0.059019	0.003483
	Desember 2024	4,350	-0.126506	-0.134097	0.017982
Jumlah			0.265677		0.181734
$E(R_i) = \frac{\sum R_i}{n}$			0.007591		
$\sigma_i^2 = \frac{\sum_{t=1}^N (R_i - E(R_i))^2}{n - 1}$					0.005192
$\sigma_i = \sqrt{\sigma_i^2}$					0.072058

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BBRI	Januari 2022	4,070	-	-	-
	Februari 2022	4,550	0.117936	0.115423	0.013322
	Maret 2022	4,660	0.024176	0.021662	0.000469
	April 2022	4,870	0.045064	0.042551	0.001811
	Mei 2022	4,630	-0.049281	-0.051795	0.002683
	Juni 2022	4,150	-0.103672	-0.106185	0.011275
	Juli 2022	4,360	0.050602	0.048089	0.002313
	Agustus 2022	4,340	-0.004587	-0.007101	0.000050
	September 2022	4,490	0.034562	0.032049	0.001027
	Oktober 2022	4,650	0.035635	0.033121	0.001097
	November 2022	4,980	0.070968	0.068454	0.004686
	Desember 2022	4,940	-0.008032	-0.010546	0.000111
	Januari 2023	4,580	-0.072874	-0.075388	0.005683
	Februari 2023	4,670	0.019651	0.017137	0.000294
	Maret 2023	4,730	0.012848	0.010334	0.000107
	April 2023	5,100	0.078224	0.075711	0.005732
	Mei 2023	5,575	0.093137	0.090624	0.008213
	Juni 2023	5,425	-0.026906	-0.029419	0.000866
	Juli 2023	5,650	0.041475	0.038961	0.001518
	Agustus 2023	5,550	-0.017699	-0.020213	0.000409
	September 2023	5,225	-0.058559	-0.061072	0.003730
	Oktober 2023	4,960	-0.050718	-0.053231	0.002834
	November 2023	5,275	0.063508	0.060994	0.003720
	Desember 2023	5,725	0.085308	0.082794	0.006855
	Januari 2024	5,700	-0.004367	-0.006880	0.000047
	Februari 2024	6,125	0.074561	0.072048	0.005191
	Maret 2024	6,050	-0.012245	-0.014758	0.000218
	April 2024	4,940	-0.183471	-0.185985	0.034590
	Mei 2024	4,340	-0.121457	-0.123971	0.015369
	Juni 2024	4,600	0.059908	0.057394	0.003294
	Juli 2024	4,670	0.015217	0.012704	0.000161
	Agustus 2024	5,150	0.102784	0.100270	0.010054
	September 2024	4,950	-0.038835	-0.041349	0.001710
	Oktober 2024	4,800	-0.030303	-0.032817	0.001077
	November 2024	4,250	-0.114583	-0.117097	0.013712
	Desember 2024	4,080	-0.040000	-0.042514	0.001807
Jumlah			0.087975		0.166034
$E(R_i) = \frac{\sum R_i}{n}$			0.002514		
$\sigma_i^2 = \frac{\sum_{i=1}^n (R_i - E(R_i))^2}{n - 1}$					0.004744
$\sigma_i = \sqrt{\sigma_i^2}$					0.068875

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BBTN	Januari 2022	1,501	-	-	-
	Februari 2022	1,577	0.050300	0.056214	0.003160
	Maret 2022	1,524	-0.033806	-0.027892	0.000778
	April 2022	1,639	0.075800	0.081715	0.006677
	Mei 2022	1,510	-0.078586	-0.072671	0.005281
	Juni 2022	1,293	-0.144118	-0.138203	0.019100
	Juli 2022	1,306	0.010305	0.016219	0.000263
	Agustus 2022	1,337	0.023814	0.029729	0.000884
	September 2022	1,319	-0.013290	-0.007376	0.000054
	Oktober 2022	1,373	0.040401	0.046315	0.002145
	November 2022	1,364	-0.006470	-0.000555	0.000000
	Desember 2022	1,350	-0.010046	-0.004132	0.000017
	Januari 2023	1,360	0.007407	0.013322	0.000177
	Februari 2023	1,325	-0.025735	-0.019821	0.000393
	Maret 2023	1,225	-0.075472	-0.069557	0.004838
	April 2023	1,245	0.016327	0.022241	0.000495
	Mei 2023	1,280	0.028112	0.034027	0.001158
	Juni 2023	1,320	0.031250	0.037165	0.001381
	Juli 2023	1,315	-0.003788	0.002127	0.000005
	Agustus 2023	1,255	-0.045627	-0.039713	0.001577
	September 2023	1,220	-0.027888	-0.021974	0.000483
	Oktober 2023	1,225	0.004098	0.010013	0.000100
	November 2023	1,295	0.057143	0.063057	0.003976
	Desember 2023	1,250	-0.034749	-0.028834	0.000831
	Januari 2024	1,305	0.044000	0.049915	0.002491
	Februari 2024	1,430	0.095785	0.101700	0.010343
	Maret 2024	1,555	0.087413	0.093327	0.008710
	April 2024	1,320	-0.151125	-0.145211	0.021086
	Mei 2024	1,225	-0.071970	-0.066055	0.004363
	Juni 2024	1,265	0.032653	0.038568	0.001487
	Juli 2024	1,315	0.039526	0.045440	0.002065
	Agustus 2024	1,410	0.072243	0.078158	0.006109
	September 2024	1,450	0.028369	0.034283	0.001175
	Oktober 2024	1,405	-0.031034	-0.025120	0.000631
	November 2024	1,285	-0.085409	-0.079495	0.006319
	Desember 2024	1,140	-0.112840	-0.106926	0.011433
Jumlah			-0.207010		0.129989
$E(R_i) = \frac{\sum R_i}{n}$			-0.005915		
$\sigma_i^2 = \frac{\sum_{i=1}^n (R_i - E(R_i))^2}{n - 1}$					0.003714
$\sigma_i = \sqrt{\sigma_i^2}$					0.060942

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BDMN	Januari 2022	2,400	-	-	-
	Februari 2022	2,380	-0.008333	-0.012359	0.000153
	Maret 2022	2,440	0.025210	0.021184	0.000449
	April 2022	2,450	0.004098	0.000072	0.000000
	Mei 2022	2,560	0.044898	0.040872	0.001671
	Juni 2022	2,350	-0.082031	-0.086057	0.007406
	Juli 2022	2,510	0.068085	0.064059	0.004104
	Agustus 2022	2,640	0.051793	0.047767	0.002282
	September 2022	2,540	-0.037879	-0.041905	0.001756
	Oktober 2022	3,400	0.338583	0.334557	0.111928
	November 2022	3,020	-0.111765	-0.115791	0.013408
	Desember 2022	2,730	-0.096026	-0.100053	0.010011
	Januari 2023	2,650	-0.029304	-0.033330	0.001111
	Februari 2023	2,860	0.079245	0.075219	0.005658
	Maret 2023	2,870	0.003497	-0.000530	0.000000
	April 2023	2,820	-0.017422	-0.021448	0.000460
	Mei 2023	2,760	-0.021277	-0.025303	0.000640
	Juni 2023	2,930	0.061594	0.057568	0.003314
	Juli 2023	3,060	0.044369	0.040342	0.001628
	Agustus 2023	2,930	-0.042484	-0.046510	0.002163
	September 2023	2,860	-0.023891	-0.027917	0.000779
	Oktober 2023	2,740	-0.041958	-0.045984	0.002115
	November 2023	2,850	0.040146	0.036120	0.001305
	Desember 2023	2,780	-0.024561	-0.028588	0.000817
	Januari 2024	2,830	0.017986	0.013959	0.000195
	Februari 2024	2,910	0.028269	0.024242	0.000588
	Maret 2024	2,980	0.024055	0.020029	0.000401
	April 2024	2,740	-0.080537	-0.084563	0.007151
	Mei 2024	2,570	-0.062044	-0.066070	0.004365
	Juni 2024	2,580	0.003891	-0.000135	0.000000
	Juli 2024	2,590	0.003876	-0.000150	0.000000
	Agustus 2024	2,610	0.007722	0.003696	0.000014
	September 2024	2,600	-0.003831	-0.007858	0.000062
	Oktober 2024	2,570	-0.011538	-0.015565	0.000242
	November 2024	2,520	-0.019455	-0.023481	0.000551
	Desember 2024	2,540	0.007937	0.003910	0.000015
Jumlah			0.140916		0.186739
$E(R_i) = \frac{\sum R_i}{n}$			0.004026		
$\sigma_i^2 = \frac{\sum_{i=1}^n (R_i - E(R_i))^2}{n - 1}$					0.005335
$\sigma_i = \sqrt{\sigma_i^2}$					0.073044

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BJBR	Januari 2022	1,316	-	-	-
	Februari 2022	1,391	0.056815	0.066384	0.004407
	Maret 2022	1,525	0.096207	0.105776	0.011189
	April 2022	1,475	-0.032787	-0.023219	0.000539
	Mei 2022	1,460	-0.010169	-0.000601	0.000000
	Juni 2022	1,375	-0.058219	-0.048651	0.002367
	Juli 2022	1,340	-0.025455	-0.015886	0.000252
	Agustus 2022	1,390	0.037313	0.046882	0.002198
	September 2022	1,355	-0.025180	-0.015612	0.000244
	Oktober 2022	1,375	0.014760	0.024328	0.000592
	November 2022	1,360	-0.010909	-0.001341	0.000002
	Desember 2022	1,345	-0.011029	-0.001461	0.000002
	Januari 2023	1,365	0.014870	0.024438	0.000597
	Februari 2023	1,320	-0.032967	-0.023399	0.000548
	Maret 2023	1,360	0.030303	0.039871	0.001590
	April 2023	1,255	-0.077206	-0.067638	0.004575
	Mei 2023	1,215	-0.031873	-0.022304	0.000497
	Juni 2023	1,180	-0.028807	-0.019238	0.000370
	Juli 2023	1,190	0.008475	0.018043	0.000326
	Agustus 2023	1,185	-0.004202	0.005367	0.000029
	September 2023	1,170	-0.012658	-0.003090	0.000010
	Oktober 2023	1,135	-0.029915	-0.020346	0.000414
	November 2023	1,120	-0.013216	-0.003648	0.000013
	Desember 2023	1,150	0.026786	0.036354	0.001322
	Januari 2024	1,165	0.013043	0.022612	0.000511
	Februari 2024	1,205	0.034335	0.043903	0.001927
	Maret 2024	1,210	0.004149	0.013718	0.000188
	April 2024	1,015	-0.161157	-0.151589	0.022979
	Mei 2024	1,010	-0.004926	0.004642	0.000022
	Juni 2024	970	-0.039604	-0.030036	0.000902
	Juli 2024	990	0.020619	0.030187	0.000911
	Agustus 2024	995	0.005051	0.014619	0.000214
	September 2024	965	-0.030151	-0.020582	0.000424
	Oktober 2024	980	0.015544	0.025112	0.000631
	November 2024	940	-0.040816	-0.031248	0.000976
	Desember 2024	910	-0.031915	-0.022347	0.000499
Jumlah			-0.334890		0.062266
$E(R_i) = \frac{\sum R_i}{n}$			-0.009568		
$\sigma_i^2 = \frac{\sum_{t=1}^N (R_i - E(R_i))^2}{n - 1}$					0.001779
$\sigma_i = \sqrt{\sigma_i^2}$					0.042179

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BMRI	Januari 2022	3,738	-	-	-
	Februari 2022	3,850	0.030100	0.016021	0.000257
	Maret 2022	3,950	0.025974	0.011895	0.000141
	April 2022	4,475	0.132911	0.118832	0.014121
	Mei 2022	4,250	-0.050279	-0.064359	0.004142
	Juni 2022	3,963	-0.067647	-0.081726	0.006679
	Juli 2022	4,138	0.044164	0.030085	0.000905
	Agustus 2022	4,425	0.069486	0.055407	0.003070
	September 2022	4,713	0.064972	0.050892	0.002590
	Oktober 2022	5,275	0.119363	0.105284	0.011085
	November 2022	5,263	-0.002370	-0.016449	0.000271
	Desember 2022	4,963	-0.057007	-0.071086	0.005053
	Januari 2023	4,975	0.002519	-0.011560	0.000134
	Februari 2023	5,000	0.005025	-0.009054	0.000082
	Maret 2023	5,163	0.032500	0.018421	0.000339
	April 2023	5,175	0.002421	-0.011658	0.000136
	Mei 2023	5,050	-0.024155	-0.038234	0.001462
	Juni 2023	5,200	0.029703	0.015624	0.000244
	Juli 2023	5,725	0.100962	0.086882	0.007549
	Agustus 2023	6,025	0.052402	0.038322	0.001469
	September 2023	6,025	0.000000	-0.014079	0.000198
	Oktober 2023	5,675	-0.058091	-0.072171	0.005209
	November 2023	5,850	0.030837	0.016758	0.000281
	Desember 2023	6,050	0.034188	0.020109	0.000404
	Januari 2024	6,650	0.099174	0.085094	0.007241
	Februari 2024	7,000	0.052632	0.038552	0.001486
	Maret 2024	7,250	0.035714	0.021635	0.000468
	April 2024	6,900	-0.048276	-0.062355	0.003888
	Mei 2024	5,900	-0.144928	-0.159007	0.025283
	Juni 2024	6,150	0.042373	0.028294	0.000801
	Juli 2024	6,400	0.040650	0.026571	0.000706
	Agustus 2024	7,125	0.113281	0.099202	0.009841
	September 2024	6,925	-0.028070	-0.042150	0.001777
	Oktober 2024	6,700	-0.032491	-0.046570	0.002169
	November 2024	6,150	-0.082090	-0.096169	0.009248
	Desember 2024	5,700	-0.073171	-0.087250	0.007613
Jumlah			0.492778		0.136341
$E(R_i) = \frac{\sum R_i}{n}$			0.014079		
$\sigma_i^2 = \frac{\sum_{t=1}^N (R_i - E(R_i))^2}{n - 1}$					0.003895
$\sigma_i = \sqrt{\sigma_i^2}$					0.062414

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BRIS	Januari 2022	1,507	-	-	-
	Februari 2022	1,624	0.077672	0.056104	0.003148
	Maret 2022	1,565	-0.036037	-0.057605	0.003318
	April 2022	1,541	-0.015575	-0.037143	0.001380
	Mei 2022	1,404	-0.088612	-0.110180	0.012140
	Juni 2022	1,307	-0.069444	-0.091012	0.008283
	Juli 2022	1,595	0.220153	0.198585	0.039436
	Agustus 2022	1,482	-0.070336	-0.091904	0.008446
	September 2022	1,434	-0.032898	-0.054466	0.002967
	Oktober 2022	1,365	-0.047618	-0.069186	0.004787
	November 2022	1,302	-0.046425	-0.067993	0.004623
	Desember 2022	1,290	-0.009247	-0.030815	0.000950
	Januari 2023	1,335	0.034884	0.013315	0.000177
	Februari 2023	1,520	0.138577	0.117008	0.013691
	Maret 2023	1,680	0.105263	0.083695	0.007005
	April 2023	1,730	0.029762	0.008194	0.000067
	Mei 2023	1,730	0.000000	-0.021568	0.000465
	Juni 2023	1,690	-0.023121	-0.044690	0.001997
	Juli 2023	1,655	-0.020710	-0.042278	0.001787
	Agustus 2023	1,710	0.033233	0.011664	0.000136
	September 2023	1,625	-0.049708	-0.071276	0.005080
	Oktober 2023	1,500	-0.076923	-0.098491	0.009701
	November 2023	1,655	0.103333	0.081765	0.006686
	Desember 2023	1,740	0.051360	0.029791	0.000888
	Januari 2024	2,330	0.339080	0.317512	0.100814
	Februari 2024	2,470	0.060086	0.038517	0.001484
	Maret 2024	2,710	0.097166	0.075598	0.005715
	April 2024	2,640	-0.025830	-0.047399	0.002247
	Mei 2024	2,200	-0.166667	-0.188235	0.035432
	Juni 2024	2,620	0.190909	0.169341	0.028676
	Juli 2024	2,600	-0.007634	-0.029202	0.000853
	Agustus 2024	2,650	0.019231	-0.002338	0.000005
	September 2024	3,010	0.135849	0.114281	0.013060
	Oktober 2024	3,030	0.006645	-0.014924	0.000223
	November 2024	2,900	-0.042904	-0.064473	0.004157
	Desember 2024	2,730	-0.058621	-0.080189	0.006430
Jumlah			0.754893		0.336253
$E(R_i) = \frac{\sum R_i}{n}$			0.021568		
$\sigma_i^2 = \frac{\sum_{i=1}^n (R_i - E(R_i))^2}{n - 1}$					0.009607
$\sigma_i = \sqrt{\sigma_i^2}$					0.098016

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
BTPS	Januari 2022	3,480	-	-	-
	Februari 2022	3,590	0.031609	0.065818	0.004332
	Maret 2022	3,300	-0.080780	-0.046571	0.002169
	April 2022	3,450	0.045455	0.079664	0.006346
	Mei 2022	3,050	-0.115942	-0.081733	0.006680
	Juni 2022	2,820	-0.075410	-0.041201	0.001697
	Juli 2022	2,810	-0.003546	0.030663	0.000940
	Agustus 2022	2,960	0.053381	0.087590	0.007672
	September 2022	2,730	-0.077703	-0.043494	0.001892
	Oktober 2022	2,950	0.080586	0.114795	0.013178
	November 2022	3,200	0.084746	0.118955	0.014150
	Desember 2022	2,790	-0.128125	-0.093916	0.008820
	Januari 2023	2,560	-0.082437	-0.048228	0.002326
	Februari 2023	2,340	-0.085938	-0.051728	0.002676
	Maret 2023	2,190	-0.064103	-0.029893	0.000894
	April 2023	2,140	-0.022831	0.011378	0.000129
	Mei 2023	1,900	-0.112150	-0.077940	0.006075
	Juni 2023	2,070	0.089474	0.123683	0.015297
	Juli 2023	2,130	0.028986	0.063195	0.003994
	Agustus 2023	2,160	0.014085	0.048294	0.002332
	September 2023	1,905	-0.118056	-0.083846	0.007030
	Oktober 2023	1,575	-0.173228	-0.139019	0.019326
	November 2023	1,655	0.050794	0.085003	0.007225
	Desember 2023	1,690	0.021148	0.055357	0.003064
	Januari 2024	1,590	-0.059172	-0.024962	0.000623
	Februari 2024	1,375	-0.135220	-0.101011	0.010203
	Maret 2024	1,355	-0.014545	0.019664	0.000387
	April 2024	1,215	-0.103321	-0.069112	0.004776
	Mei 2024	1,165	-0.041152	-0.006943	0.000048
	Juni 2024	1,145	-0.017167	0.017042	0.000290
	Juli 2024	1,140	-0.004367	0.029842	0.000891
	Agustus 2024	1,265	0.109649	0.143858	0.020695
	September 2024	1,215	-0.039526	-0.005317	0.000028
	Oktober 2024	1,065	-0.123457	-0.089248	0.007965
	November 2024	910	-0.145540	-0.111331	0.012395
	Desember 2024	925	0.016484	0.050693	0.002570
Jumlah			-1.197320		0.199118
$E(R_i) = \frac{\sum R_i}{n}$			-0.034209		
$\sigma_i^2 = \frac{\sum_{i=1}^n (R_i - E(R_i))^2}{n - 1}$					0.005689
$\sigma_i = \sqrt{\sigma_i^2}$					0.075426

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_i - E(R_i))$	$(R_i - E(R_i))^2$
PNBN	Januari 2022	745	-	-	-
	Februari 2022	800	0.073826	0.039166	0.001534
	Maret 2022	760	-0.050000	-0.084659	0.007167
	April 2022	1,010	0.328947	0.294288	0.086606
	Mei 2022	1,205	0.193069	0.158410	0.025094
	Juni 2022	1,690	0.402490	0.367831	0.135299
	Juli 2022	1,790	0.059172	0.024513	0.000601
	Agustus 2022	1,995	0.114525	0.079866	0.006379
	September 2022	2,130	0.067669	0.033010	0.001090
	Oktober 2022	2,400	0.126761	0.092101	0.008483
	November 2022	1,900	-0.208333	-0.242992	0.059045
	Desember 2022	1,540	-0.189474	-0.224133	0.050236
	Januari 2023	1,580	0.025974	-0.008685	0.000075
	Februari 2023	1,445	-0.085443	-0.120102	0.014425
	Maret 2023	1,430	-0.010381	-0.045040	0.002029
	April 2023	1,105	-0.227273	-0.261932	0.068608
	Mei 2023	1,085	-0.018100	-0.052759	0.002783
	Juni 2023	1,085	0.000000	-0.034659	0.001201
	Juli 2023	1,280	0.179724	0.145064	0.021044
	Agustus 2023	1,305	0.019531	-0.015128	0.000229
	September 2023	1,250	-0.042146	-0.076805	0.005899
	Oktober 2023	1,135	-0.092000	-0.126659	0.016043
	November 2023	1,120	-0.013216	-0.047875	0.002292
	Desember 2023	1,210	0.080357	0.045698	0.002088
	Januari 2024	1,100	-0.090909	-0.125568	0.015767
	Februari 2024	1,120	0.018182	-0.016477	0.000272
	Maret 2024	1,150	0.026786	-0.007873	0.000062
	April 2024	1,115	-0.030435	-0.065094	0.004237
	Mei 2024	1,180	0.058296	0.023637	0.000559
	Juni 2024	1,145	-0.029661	-0.064320	0.004137
	Juli 2024	1,215	0.061135	0.026476	0.000701
	Agustus 2024	1,400	0.152263	0.117604	0.013831
	September 2024	1,625	0.160714	0.126055	0.015890
	Oktober 2024	1,900	0.169231	0.134572	0.018110
	November 2024	1,780	-0.063158	-0.097817	0.009568
	Desember 2024	1,860	0.044944	0.010285	0.000106
Jumlah			1.213068		0.601487
$E(R_i) = \frac{\sum R_i}{n}$			0.034659		
$\sigma_i^2 = \frac{\sum_{i=1}^n (R_i - E(R_i))^2}{n - 1}$					0.017185
$\sigma_i = \sqrt{\sigma_i^2}$					0.131093

Lampiran 6 Hasil Perhitungan *Expected Return*, *Variance*, dan Standar Deviasi Masing-Masing Saham

No	Kode Emiten	$E(R_i)$	Variance	Standar Deviasi
1	BBCA	0.007601	0.001563	0.039533
2	BBNI	0.007591	0.005192	0.072058
3	BBRI	0.002514	0.004744	0.068875
4	BBTN	-0.005915	0.003714	0.060942
5	BDMN	0.004026	0.005335	0.073044
6	BJBR	-0.009568	0.001779	0.042179
7	BMRI	0.014079	0.003895	0.062414
8	BRIS	0.021568	0.009607	0.098016
9	BTPS	-0.034209	0.005689	0.075426
10	PNBN	0.034659	0.017185	0.131093



**Lampiran 7 Saham yang Masuk Dalam Kandidat Portofolio Efisien
Diurutkan Berdasarkan *Expected Return* Terbesar**

No	Kode Emiten	$E(R_i)$
1	PNBN	0.034659
2	BRIS	0.021568
3	BMRI	0.014079
4	BBCA	0.007601
5	BBNI	0.007591
6	BDMN	0.004026
7	BBRI	0.002514



Lampiran 8 Hasil Perhitungan *Realized Return* IHSG, *Expected Return* IHSG, *Variance* IHSG, dan Standar Deviasi IHSG

Periode	Daftar Penutupan IHSG (IDR)	$R_M = \frac{(P_t - P_{t-1})}{P_{t-1}}$	$(R_M - E(R_M))$	$(R_M - E(R_M))^2$
Januari 2022	6,631.15	-	-	-
Februari 2022	6,888.17	0.038759	0.036546	0.001336
Maret 2022	7,071.44	0.026606	0.024393	0.000595
April 2022	7,228.91	0.022268	0.020055	0.000402
Mei 2022	7,148.97	-0.011058	-0.013271	0.000176
Juni 2022	6,911.58	-0.033206	-0.035419	0.001255
Juli 2022	6,951.12	0.005721	0.003508	0.000012
Agustus 2022	7,178.59	0.032724	0.030511	0.000931
September 2022	7,040.80	-0.019195	-0.021408	0.000458
Oktober 2022	7,098.89	0.008250	0.006037	0.000036
November 2022	7,081.31	-0.002476	-0.004689	0.000022
Desember 2022	6,850.62	-0.032577	-0.034790	0.001210
Januari 2023	6,839.34	-0.001647	-0.003860	0.000015
Februari 2023	6,843.24	0.000570	-0.001643	0.000003
Maret 2023	6,805.28	-0.005547	-0.007760	0.000060
April 2023	6,915.72	0.016229	0.014016	0.000196
Mei 2023	6,633.26	-0.040843	-0.043056	0.001854
Juni 2023	6,661.88	0.004315	0.002102	0.000004
Juli 2023	6,931.36	0.040451	0.038238	0.001462
Agustus 2023	6,953.26	0.003160	0.000947	0.000001
September 2023	6,939.89	-0.001923	-0.004136	0.000017
Oktober 2023	6,752.21	-0.027044	-0.029257	0.000856
November 2023	7,080.74	0.048655	0.046442	0.002157
Desember 2023	7,272.80	0.027124	0.024911	0.000621
Januari 2024	7,207.94	-0.008918	-0.011131	0.000124
Februari 2024	7,316.11	0.015007	0.012794	0.000164
Maret 2024	7,288.81	-0.003731	-0.005945	0.000035
April 2024	7,234.20	-0.007492	-0.009705	0.000094
Mei 2024	6,970.74	-0.036419	-0.038632	0.001492
Juni 2024	7,063.58	0.013319	0.011106	0.000123
Juli 2024	7,255.76	0.027207	0.024994	0.000625
Agustus 2024	7,670.73	0.057192	0.054979	0.003023
September 2024	7,527.93	-0.018616	-0.020829	0.000434
Oktober 2024	7,574.02	0.006123	0.003910	0.000015
November 2024	7,114.27	-0.060701	-0.062914	0.003958
Desember 2024	7,079.90	-0.004831	-0.007044	0.000050
Jumlah		0.077455		0.023817
$E(R_M) = \frac{\sum R_M}{n}$		0.002213		
$\sigma_M^2 = \frac{\sum_{t=1}^N (R_M - E(R_M))^2}{n - 1}$				0.000680
$\sigma_M = \sqrt{\sigma_M^2}$				0.026086

Lampiran 9 Cara Perhitungan Kovarian Saham dengan Pasar

Kode Emiten	Periode	Harga Saham	R_i	$(R_i - E(R_i))$	R_M	$(R_M - E(R_M))$	$\sigma_{iM} = (R_i - E(R_i)) \cdot (R_M - E(R_M))$
BBCA	Januari 2022	7,625	-	-	-	-	-
	Februari 2022	8,050	0.055738	0.048136	0.038759	0.036546	0.001759
	Maret 2022	7,975	-0.009317	-0.016918	0.026606	0.024393	-0.000413
	April 2022	8,125	0.018809	0.011207	0.022268	0.020055	0.000225
	Mei 2022	7,750	-0.046154	-0.053755	-0.011058	-0.013271	0.000713
	Juni 2022	7,250	-0.064516	-0.072118	-0.033206	-0.035419	0.002554
	Juli 2022	7,350	0.013793	0.006192	0.005721	0.003508	0.000022
	Agustus 2022	8,200	0.115646	0.108045	0.032724	0.030511	0.003297
	September 2022	8,550	0.042683	0.035081	-0.019195	-0.021408	-0.000751
	Oktober 2022	8,800	0.029240	0.021638	0.008250	0.006037	0.000131
	November 2022	9,300	0.056818	0.049217	-0.002476	-0.004689	-0.000231
	Desember 2022	8,550	-0.080645	-0.088247	-0.032577	-0.034790	0.003070
	Januari 2023	8,475	-0.008772	-0.016373	-0.001647	-0.003860	0.000063
	Februari 2023	8,750	0.032448	0.024847	0.000570	-0.001643	-0.000041
	Maret 2023	8,750	0.000000	-0.007601	-0.005547	-0.007760	0.000059
	April 2023	9,050	0.034286	0.026684	0.016229	0.014016	0.000374
	Mei 2023	9,050	0.000000	-0.007601	-0.040843	-0.043056	0.000327
	Juni 2023	9,150	0.011050	0.003448	0.004315	0.002102	0.000007
	Juli 2023	9,125	-0.002732	-0.010334	0.040451	0.038238	-0.000395
	Agustus 2023	9,175	0.005479	-0.002122	0.003160	0.000947	-0.000002
	September 2023	8,825	-0.038147	-0.045749	-0.001923	-0.004136	0.000189
	Oktober 2023	8,750	-0.008499	-0.016100	-0.027044	-0.029257	0.000471
	November 2023	8,975	0.025714	0.018113	0.048655	0.046442	0.000841
	Desember 2023	9,400	0.047354	0.039752	0.027124	0.024911	0.000990
Januari 2024	9,550	0.015957	0.008356	-0.008918	-0.011131	-0.000093	
Februari 2024	9,875	0.034031	0.026430	0.015007	0.012794	0.000338	
Maret 2024	10,075	0.020253	0.012652	-0.003731	-0.005945	-0.000075	
April 2024	9,800	-0.027295	-0.034897	-0.007492	-0.009705	0.000339	
Mei 2024	9,250	-0.056122	-0.063724	-0.036419	-0.038632	0.002462	
Juni 2024	9,925	0.072973	0.065372	0.013319	0.011106	0.000726	
Juli 2024	10,275	0.035264	0.027663	0.027207	0.024994	0.000691	
Agustus 2024	10,325	0.004866	-0.002735	0.057192	0.054979	-0.000150	
September 2024	10,325	0.000000	-0.007601	-0.018616	-0.020829	0.000158	
Oktober 2024	10,250	-0.007264	-0.014865	0.006123	0.003910	-0.000058	
November 2024	10,000	-0.024390	-0.031992	-0.060701	-0.062914	0.002013	
Desember 2024	9,675	-0.032500	-0.040101	-0.004831	-0.007044	0.000282	
					$\Sigma \sigma_{iM}$	0.019894	
					σ_{iM}	0.000505	

Lampiran 9 Cara Perhitungan Kovarian Saham dengan Pasar

Kode Emiten	Periode	Harga Saham	R_i	$(R_i - E(R_i))$	R_M	$(R_M - E(R_M))$	$\sigma_{iM} = (R_i - E(R_i)) \cdot (R_M - E(R_M))$
BBNI	Januari 2022	3,663	-	-	-	-	-
	Februari 2022	4,000	0.092150	0.084559	0.038759	0.036546	0.003090
	Maret 2022	4,125	0.031250	0.023659	0.026606	0.024393	0.000577
	April 2022	4,613	0.118182	0.110591	0.022268	0.020055	0.002218
	Mei 2022	4,588	-0.005420	-0.013011	-0.011058	-0.013271	0.000173
	Juni 2022	3,925	-0.144414	-0.152005	-0.033206	-0.035419	0.005384
	Juli 2022	3,925	0.000000	-0.007591	0.005721	0.003508	-0.000027
	Agustus 2022	4,263	0.085987	0.078396	0.032724	0.030511	0.002392
	September 2022	4,488	0.052786	0.045195	-0.019195	-0.021408	-0.000968
	Oktober 2022	4,700	0.047354	0.039763	0.008250	0.006037	0.000240
	November 2022	4,950	0.053191	0.045601	-0.002476	-0.004689	-0.000214
	Desember 2022	4,613	-0.068182	-0.075773	-0.032577	-0.034790	0.002636
	Januari 2023	4,575	-0.008130	-0.015721	-0.001647	-0.003860	0.000061
	Februari 2023	4,388	-0.040984	-0.048574	0.000570	-0.001643	0.000080
	Maret 2023	4,675	0.065527	0.057936	-0.005547	-0.007760	-0.000450
	April 2023	4,713	0.008021	0.000431	0.016229	0.014016	0.000006
	Mei 2023	4,525	-0.039788	-0.047379	-0.040843	-0.043056	0.002040
	Juni 2023	4,575	0.011050	0.003459	0.004315	0.002102	0.000007
	Juli 2023	4,438	-0.030055	-0.037645	0.040451	0.038238	-0.001439
	Agustus 2023	4,588	0.033803	0.026212	0.003160	0.000947	0.000025
	September 2023	5,163	0.125341	0.117750	-0.001923	-0.004136	-0.000487
	Oktober 2023	4,790	-0.072155	-0.079746	-0.027044	-0.029257	0.002333
	November 2023	5,275	0.101253	0.093662	0.048655	0.046442	0.004350
	Desember 2023	5,375	0.018957	0.011367	0.027124	0.024911	0.000283
	Januari 2024	5,750	0.069767	0.062177	-0.008918	-0.011131	-0.000692
	Februari 2024	6,000	0.043478	0.035887	0.015007	0.012794	0.000459
	Maret 2024	5,900	-0.016667	-0.024257	-0.003731	-0.005945	0.000144
	April 2024	5,250	-0.110169	-0.117760	-0.007492	-0.009705	0.001143
	Mei 2024	4,400	-0.161905	-0.169496	-0.036419	-0.038632	0.006548
	Juni 2024	4,660	0.059091	0.051500	0.013319	0.011106	0.000572
	Juli 2024	4,970	0.066524	0.058933	0.027207	0.024994	0.001473
	Agustus 2024	5,350	0.076459	0.068868	0.057192	0.054979	0.003786
	September 2024	5,350	0.000000	-0.007591	-0.018616	-0.020829	0.000158
	Oktober 2024	5,250	-0.018692	-0.026282	0.006123	0.003910	-0.000103
	November 2024	4,980	-0.051429	-0.059019	-0.060701	-0.062914	0.003713
	Desember 2024	4,350	-0.126506	-0.134097	-0.004831	-0.007044	0.000945
							$\Sigma \sigma_{iM}$
							σ_{iM}

Lampiran 9 Cara Perhitungan Kovarian Saham dengan Pasar

Kode Emiten	Periode	Harga Saham	R_i	$(R_i - E(R_i))$	R_M	$(R_M - E(R_M))$	$\sigma_{iM} = (R_i - E(R_i)) \cdot (R_M - E(R_M))$
BBRI	Januari 2022	4,070	-	-	-	-	-
	Februari 2022	4,550	0.117936	0.115423	0.038759	0.036546	0.004218
	Maret 2022	4,660	0.024176	0.021662	0.026606	0.024393	0.000528
	April 2022	4,870	0.045064	0.042551	0.022268	0.020055	0.000853
	Mei 2022	4,630	-0.049281	-0.051795	-0.011058	-0.013271	0.000687
	Juni 2022	4,150	-0.103672	-0.106185	-0.033206	-0.035419	0.003761
	Juli 2022	4,360	0.050602	0.048089	0.005721	0.003508	0.00169
	Agustus 2022	4,340	-0.004587	-0.007101	0.032724	0.030511	-0.000217
	September 2022	4,490	0.034562	0.032049	-0.019195	-0.021408	-0.000686
	Oktober 2022	4,650	0.035635	0.033121	0.008250	0.006037	0.000200
	November 2022	4,980	0.070968	0.068454	-0.002476	-0.004689	-0.000321
	Desember 2022	4,940	-0.008032	-0.010546	-0.032577	-0.034790	0.000367
	Januari 2023	4,580	-0.072874	-0.075388	-0.001647	-0.003860	0.000291
	Februari 2023	4,670	0.019651	0.017137	0.000570	-0.001643	-0.000028
	Maret 2023	4,730	0.012848	0.010334	-0.005547	-0.007760	-0.000080
	April 2023	5,100	0.078224	0.075711	0.016229	0.014016	0.001061
	Mei 2023	5,575	0.093137	0.090624	-0.040843	-0.043056	-0.003902
	Juni 2023	5,425	-0.026906	-0.029419	0.004315	0.002102	-0.000062
	Juli 2023	5,650	0.041475	0.038961	0.040451	0.038238	0.001490
	Agustus 2023	5,550	-0.017699	-0.020213	0.003160	0.000947	-0.000019
	September 2023	5,225	-0.058559	-0.061072	-0.001923	-0.004136	0.000253
	Oktober 2023	4,960	-0.050718	-0.053231	-0.027044	-0.029257	0.001557
	November 2023	5,275	0.063508	0.060994	0.048655	0.046442	0.002833
	Desember 2023	5,725	0.085308	0.082794	0.027124	0.024911	0.002063
	Januari 2024	5,700	-0.004367	-0.006880	-0.008918	-0.011131	0.000077
	Februari 2024	6,125	0.074561	0.072048	0.015007	0.012794	0.000922
	Maret 2024	6,050	-0.012245	-0.014758	-0.003731	-0.005945	0.000088
	April 2024	4,940	-0.183471	-0.185985	-0.007492	-0.009705	0.001805
	Mei 2024	4,340	-0.121457	-0.123971	-0.036419	-0.038632	0.004789
	Juni 2024	4,600	0.059908	0.057394	0.013319	0.011106	0.000637
	Juli 2024	4,670	0.015217	0.012704	0.027207	0.024994	0.000318
	Agustus 2024	5,150	0.102784	0.100270	0.057192	0.054979	0.005513
	September 2024	4,950	-0.038835	-0.041349	-0.018616	-0.020829	0.000861
	Oktober 2024	4,800	-0.030303	-0.032817	0.006123	0.003910	-0.000128
	November 2024	4,250	-0.114583	-0.117097	-0.060701	-0.062914	0.007367
	Desember 2024	4,080	-0.040000	-0.042514	-0.004831	-0.007044	0.000299
							$\Sigma \sigma_{iM}$
							σ_{iM}

Lampiran 9 Cara Perhitungan Kovarian Saham dengan Pasar

Kode Emiten	Periode	Harga Saham	R_i	$(R_i - E(R_i))$	R_M	$(R_M - E(R_M))$	$\sigma_{iM} = (R_i - E(R_i)) \cdot (R_M - E(R_M))$
BDMN	Januari 2022	2,400	-	-	-	-	-
	Februari 2022	2,380	-0.008333	-0.012359	0.038759	0.036546	-0.000452
	Maret 2022	2,440	0.025210	0.021184	0.026606	0.024393	0.000517
	April 2022	2,450	0.004098	0.000072	0.022268	0.020055	0.000001
	Mei 2022	2,560	0.044898	0.040872	-0.011058	-0.013271	-0.000542
	Juni 2022	2,350	-0.082031	-0.086057	-0.033206	-0.035419	0.003048
	Juli 2022	2,510	0.068085	0.064059	0.005721	0.003508	0.000225
	Agustus 2022	2,640	0.051793	0.047767	0.032724	0.030511	0.001457
	September 2022	2,540	-0.037879	-0.041905	-0.019195	-0.021408	0.000897
	Oktober 2022	3,400	0.338583	0.334557	0.008250	0.006037	0.002020
	November 2022	3,020	-0.111765	-0.115791	-0.002476	-0.004689	0.000543
	Desember 2022	2,730	-0.096026	-0.100053	-0.032577	-0.034790	0.003481
	Januari 2023	2,650	-0.029304	-0.033330	-0.001647	-0.003860	0.000129
	Februari 2023	2,860	0.079245	0.075219	0.000570	-0.001643	-0.000124
	Maret 2023	2,870	0.003497	-0.000530	-0.005547	-0.007760	0.000004
	April 2023	2,820	-0.017422	-0.021448	0.016229	0.014016	-0.000301
	Mei 2023	2,760	-0.021277	-0.025303	-0.040843	-0.043056	0.001089
	Juni 2023	2,930	0.061594	0.057568	0.004315	0.002102	0.000121
	Juli 2023	3,060	0.044369	0.040342	0.040451	0.038238	0.001543
	Agustus 2023	2,930	-0.042484	-0.046510	0.003160	0.000947	-0.000044
	September 2023	2,860	-0.023891	-0.027917	-0.001923	-0.004136	0.000115
	Oktober 2023	2,740	-0.041958	-0.045984	-0.027044	-0.029257	0.001345
	November 2023	2,850	0.040146	0.036120	0.048655	0.046442	0.001677
	Desember 2023	2,780	-0.024561	-0.028588	0.027124	0.024911	-0.000712
	Januari 2024	2,830	0.017986	0.013959	-0.008918	-0.011131	-0.000155
	Februari 2024	2,910	0.028269	0.024242	0.015007	0.012794	0.000310
	Maret 2024	2,980	0.024055	0.020029	-0.003731	-0.005945	-0.000119
	April 2024	2,740	-0.080537	-0.084563	-0.007492	-0.009705	0.000821
	Mei 2024	2,570	-0.062044	-0.066070	-0.036419	-0.038632	0.002552
	Juni 2024	2,580	0.003891	-0.000135	0.013319	0.011106	-0.000002
	Juli 2024	2,590	0.003876	-0.000150	0.027207	0.024994	-0.000004
	Agustus 2024	2,610	0.007722	0.003696	0.057192	0.054979	0.000203
	September 2024	2,600	-0.003831	-0.007858	-0.018616	-0.020829	0.000164
	Oktober 2024	2,570	-0.011538	-0.015565	0.006123	0.003910	-0.000061
	November 2024	2,520	-0.019455	-0.023481	-0.060701	-0.062914	0.001477
	Desember 2024	2,540	0.007937	0.003910	-0.004831	-0.007044	-0.000028
							$\Sigma \sigma_{iM}$
							σ_{iM}

Lampiran 9 Cara Perhitungan Kovarian Saham dengan Pasar

Kode Emiten	Periode	Harga Saham	R_i	$(R_i - E(R_i))$	R_M	$(R_M - E(R_M))$	$\sigma_{iM} = (R_i - E(R_i)) \cdot (R_M - E(R_M))$
BMRI	Januari 2022	3,738	-	-	-	-	-
	Februari 2022	3,850	0.030100	0.016021	0.038759	0.036546	0.000586
	Maret 2022	3,950	0.025974	0.011895	0.026606	0.024393	0.000290
	April 2022	4,475	0.132911	0.118832	0.022268	0.020055	0.002383
	Mei 2022	4,250	-0.050279	-0.064359	-0.011058	-0.013271	0.000854
	Juni 2022	3,963	-0.067647	-0.081726	-0.033206	-0.035419	0.002895
	Juli 2022	4,138	0.044164	0.030085	0.005721	0.003508	0.001106
	Agustus 2022	4,425	0.069486	0.055407	0.032724	0.030511	0.001691
	September 2022	4,713	0.064972	0.050892	-0.019195	-0.021408	-0.001089
	Oktober 2022	5,275	0.119363	0.105284	0.008250	0.006037	0.000636
	November 2022	5,263	-0.002370	-0.016449	-0.002476	-0.004689	0.000077
	Desember 2022	4,963	-0.057007	-0.071086	-0.032577	-0.034790	0.002473
	Januari 2023	4,975	0.002519	-0.011560	-0.001647	-0.003860	0.000045
	Februari 2023	5,000	0.005025	-0.009054	0.000570	-0.001643	0.000015
	Maret 2023	5,163	0.032500	0.018421	-0.005547	-0.007760	-0.000143
	April 2023	5,175	0.002421	-0.011658	0.016229	0.014016	-0.000163
	Mei 2023	5,050	-0.024155	-0.038234	-0.040843	-0.043056	0.001646
	Juni 2023	5,200	0.029703	0.015624	0.004315	0.002102	0.000033
	Juli 2023	5,725	0.100962	0.086882	0.040451	0.038238	0.003322
	Agustus 2023	6,025	0.052402	0.038322	0.003160	0.000947	0.000036
	September 2023	6,025	0.000000	-0.014079	-0.001923	-0.004136	0.000058
	Oktober 2023	5,675	-0.058091	-0.072171	-0.027044	-0.029257	0.002111
	November 2023	5,850	0.030837	0.016758	0.048655	0.046442	0.000778
	Desember 2023	6,050	0.034188	0.020109	0.027124	0.024911	0.000501
	Januari 2024	6,650	0.099174	0.085094	-0.008918	-0.011131	-0.000947
	Februari 2024	7,000	0.052632	0.038552	0.015007	0.012794	0.000493
	Maret 2024	7,250	0.035714	0.021635	-0.003731	-0.005945	-0.000129
	April 2024	6,900	-0.048276	-0.062355	-0.007492	-0.009705	0.000605
	Mei 2024	5,900	-0.144928	-0.159007	-0.036419	-0.038632	0.006143
	Juni 2024	6,150	0.042373	0.028294	0.013319	0.011106	0.000314
	Juli 2024	6,400	0.040650	0.026571	0.027207	0.024994	0.000664
	Agustus 2024	7,125	0.113281	0.099202	0.057192	0.054979	0.005454
	September 2024	6,925	-0.028070	-0.042150	-0.018616	-0.020829	0.000878
	Oktober 2024	6,700	-0.032491	-0.046570	0.006123	0.003910	-0.000182
	November 2024	6,150	-0.082090	-0.096169	-0.060701	-0.062914	0.006050
	Desember 2024	5,700	-0.073171	-0.087250	-0.004831	-0.007044	0.000615
							$\Sigma \sigma_{iM}$
							σ_{iM}

Lampiran 9 Cara Perhitungan Kovarian Saham dengan Pasar

Kode Emiten	Periode	Harga Saham	R_i	$(R_i - E(R_i))$	R_M	$(R_M - E(R_M))$	$\sigma_{iM} = (R_i - E(R_i)) \cdot (R_M - E(R_M))$
BRIS	Januari 2022	1,507	-	-	-	-	-
	Februari 2022	1,624	0.077672	0.056104	0.038759	0.036546	0.002050
	Maret 2022	1,565	-0.036037	-0.057605	0.026606	0.024393	-0.001405
	April 2022	1,541	-0.015575	-0.037143	0.022268	0.020055	-0.000745
	Mei 2022	1,404	-0.088612	-0.110180	-0.011058	-0.013271	0.001462
	Juni 2022	1,307	-0.069444	-0.091012	-0.033206	-0.035419	0.003224
	Juli 2022	1,595	0.220153	0.198585	0.005721	0.003508	0.000697
	Agustus 2022	1,482	-0.070336	-0.091904	0.032724	0.030511	-0.002804
	September 2022	1,434	-0.032898	-0.054466	-0.019195	-0.021408	0.001166
	Oktober 2022	1,365	-0.047618	-0.069186	0.008250	0.006037	-0.000418
	November 2022	1,302	-0.046425	-0.067993	-0.002476	-0.004689	0.000319
	Desember 2022	1,290	-0.009247	-0.030815	-0.032577	-0.034790	0.001072
	Januari 2023	1,335	0.034884	0.013315	-0.001647	-0.003860	-0.000051
	Februari 2023	1,520	0.138577	0.117008	0.000570	-0.001643	-0.000192
	Maret 2023	1,680	0.105263	0.083695	-0.005547	-0.007760	-0.000649
	April 2023	1,730	0.029762	0.008194	0.016229	0.014016	0.000115
	Mei 2023	1,730	0.000000	-0.021568	-0.040843	-0.043056	0.000929
	Juni 2023	1,690	-0.023121	-0.044690	0.004315	0.002102	-0.000094
	Juli 2023	1,655	-0.020710	-0.042278	0.040451	0.038238	-0.001617
	Agustus 2023	1,710	0.033233	0.011664	0.003160	0.000947	0.000011
	September 2023	1,625	-0.049708	-0.071276	-0.001923	-0.004136	0.000295
	Oktober 2023	1,500	-0.076923	-0.098491	-0.027044	-0.029257	0.002882
	November 2023	1,655	0.103333	0.081765	0.048655	0.046442	0.003797
	Desember 2023	1,740	0.051360	0.029791	0.027124	0.024911	0.000742
	Januari 2024	2,330	0.339080	0.317512	-0.008918	-0.011131	-0.003534
	Februari 2024	2,470	0.060086	0.038517	0.015007	0.012794	0.000493
	Maret 2024	2,710	0.097166	0.075598	-0.003731	-0.005945	-0.000449
	April 2024	2,640	-0.025830	-0.047399	-0.007492	-0.009705	0.000460
	Mei 2024	2,200	-0.166667	-0.188235	-0.036419	-0.038632	0.007272
	Juni 2024	2,620	0.190909	0.169341	0.013319	0.011106	0.001881
	Juli 2024	2,600	-0.007634	-0.029202	0.027207	0.024994	-0.000730
	Agustus 2024	2,650	0.019231	-0.002338	0.057192	0.054979	-0.000129
	September 2024	3,010	0.135849	0.114281	-0.018616	-0.020829	-0.002380
	Oktober 2024	3,030	0.006645	-0.014924	0.006123	0.003910	-0.000058
	November 2024	2,900	-0.042904	-0.064473	-0.060701	-0.062914	0.004056
	Desember 2024	2,730	-0.058621	-0.080189	-0.004831	-0.007044	0.000565
							$\Sigma \sigma_{iM}$
							σ_{iM}

0.018230
0.000521

Lampiran 9 Cara Perhitungan Kovarian Saham dengan Pasar

Kode Emiten	Periode	Harga Saham	R_i	$(R_i - E(R_i))$	R_M	$(R_M - E(R_M))$	$\sigma_{iM} = (R_i - E(R_i)) \cdot (R_M - E(R_M))$
PNBN	Januari 2022	745	-	-	-	-	-
	Februari 2022	800	0.073826	0.039166	0.038759	0.036546	0.001431
	Maret 2022	760	-0.050000	-0.084659	0.026606	0.024393	-0.002065
	April 2022	1.010	0.328947	0.294288	0.022268	0.020055	0.005902
	Mei 2022	1.205	0.193069	0.158410	-0.011058	-0.013271	-0.002102
	Juni 2022	1.690	0.402490	0.367831	-0.033206	-0.035419	-0.013028
	Juli 2022	1.790	0.059172	0.024513	0.005721	0.003508	0.000086
	Agustus 2022	1.995	0.114525	0.079866	0.032724	0.030511	0.002437
	September 2022	2.130	0.067669	0.033010	-0.019195	-0.021408	-0.000707
	Oktober 2022	2.400	0.126761	0.092101	0.008250	0.006037	0.000556
	November 2022	1.900	-0.208333	-0.242992	-0.002476	-0.004689	0.001140
	Desember 2022	1.540	-0.189474	-0.224133	-0.032577	-0.034790	0.007798
	Januari 2023	1.580	0.025974	-0.008685	-0.001647	-0.003860	0.000034
	Februari 2023	1.445	-0.085443	-0.120102	0.000570	-0.001643	0.000197
	Maret 2023	1.430	-0.010381	-0.045040	-0.005547	-0.007760	0.000350
	April 2023	1.105	-0.227273	-0.261932	0.016229	0.014016	-0.003671
	Mei 2023	1.085	-0.018100	-0.052759	-0.040843	-0.043056	0.002272
	Juni 2023	1.085	0.000000	-0.034659	0.004315	0.002102	-0.000073
	Juli 2023	1.280	0.179724	0.145064	0.040451	0.038238	0.005547
	Agustus 2023	1.305	0.019531	-0.015128	0.003160	0.000947	-0.000014
	September 2023	1.250	-0.042146	-0.076805	-0.001923	-0.004136	0.000318
	Oktober 2023	1.135	-0.092000	-0.126659	-0.027044	-0.029257	0.003706
	November 2023	1.120	-0.013216	-0.047875	0.048655	0.046442	-0.002223
	Desember 2023	1.210	0.080357	0.045698	0.027124	0.024911	0.001138
	Januari 2024	1.100	-0.090909	-0.125568	-0.008918	-0.011131	0.001398
	Februari 2024	1.120	0.018182	-0.016477	0.015007	0.012794	-0.000211
	Maret 2024	1.150	0.026786	-0.007873	-0.003731	-0.005945	0.000047
	April 2024	1.115	-0.030435	-0.065094	-0.007492	-0.009705	0.000632
	Mei 2024	1.180	0.058296	0.023637	-0.036419	-0.038632	-0.000913
	Juni 2024	1.145	-0.029661	-0.064320	0.013319	0.011106	-0.000714
	Juli 2024	1.215	0.061135	0.026476	0.027207	0.024994	0.000662
	Agustus 2024	1.400	0.152263	0.117604	0.057192	0.054979	0.006466
	September 2024	1.625	0.160714	0.126055	-0.018616	-0.020829	-0.002626
	Oktober 2024	1.900	0.169231	0.134572	0.006123	0.003910	0.000526
	November 2024	1.780	-0.063158	-0.097817	-0.060701	-0.062914	0.006154
	Desember 2024	1.860	0.044944	0.010285	-0.004831	-0.007044	-0.000072
							$\Sigma \sigma_{iM}$
							σ_{iM}

0.020374

0.000582

Lampiran 10 Hasil Perhitungan Kovarian Saham dengan Pasar

No	Kode Emiten	σ_{iM}
1	BBCA	0.000568
2	BBNI	0.001156
3	BBRI	0.001073
4	BDMN	0.000606
5	BMRI	0.001117
6	BRIS	0.000521
7	PNBN	0.000582



Lampiran 11 Hasil Perhitungan *Beta* dan *Alpha* Saham Individual

No	Kode Emiten	σ_{iM}	σ_M^2	$\beta_i = \frac{\sigma_{iM}}{\sigma_M^2}$	$E(R_i)$	$E(R_M)$	$\alpha_i = E(R_i) - \beta_i E(R_M)$
1	BBCA	0.000568	0.000680	0.835264	0.007601	0.002213	0.005753
2	BBNI	0.001156	0.000680	1.698658	0.007591	0.002213	0.003832
3	BBRI	0.001073	0.000680	1.577168	0.002514	0.002213	-0.000977
4	BDMN	0.000606	0.000680	0.890040	0.004026	0.002213	0.002056
5	BMRI	0.001117	0.000680	1.641604	0.014079	0.002213	0.010446
6	BRIS	0.000521	0.000680	0.765418	0.021568	0.002213	0.019874
7	PNBN	0.000582	0.000680	0.855418	0.034659	0.002213	0.032766



Lampiran 12 Hasil Perhitungan *Variance Residual Error*

No	Kode Emiten	σ_i^2	β_i^2	σ_M^2	$\sigma_{e_i}^2 = \sigma_i^2 - \beta_i^2 \cdot \sigma_M^2$
1	BBCA	0.001563	0.697666	0.000680	0.001088
2	BBNI	0.005192	2.885437	0.000680	0.003229
3	BBRI	0.004744	2.487460	0.000680	0.003051
4	BDMN	0.005335	0.792171	0.000680	0.004796
5	BMRI	0.003895	2.694865	0.000680	0.002062
6	BRIS	0.009607	0.585865	0.000680	0.009209
7	PNBN	0.017185	0.731740	0.000680	0.016687



Lampiran 13 Hasil Perhitungan *Excess Return to Beta* Masing-Masing Saham

No	Kode Emiten	$E(R_i)$	R_f	β_i	$ERB_i = \frac{E(R_i) - R_f}{\beta_i}$
1	BBCA	0.007601	0.004421	0.835264	0.003807
2	BBNI	0.007591	0.004421	1.698658	0.001866
3	BBRI	0.002514	0.004421	1.577168	-0.001210
4	BDMN	0.004026	0.004421	0.890040	-0.000444
5	BMRI	0.014079	0.004421	1.641604	0.005883
6	BRIS	0.021568	0.004421	0.765418	0.022402
7	PNBN	0.034659	0.004421	0.855418	0.035349



Lampiran 14 Urutan Saham Dengan Nilai ERB Terbesar Sampai Terkecil

No	Kode Emiten	$E(R_i)$	R_f	β_i	$ERB_i = \frac{E(R_i) - R_f}{\beta_i}$
1	PNBN	0.034659	0.004421	0.855418	0.035349
2	BRIS	0.021568	0.004421	0.765418	0.022402
3	BMRI	0.014079	0.004421	1.641604	0.005883
4	BBCA	0.007601	0.004421	0.835264	0.003807
5	BBNI	0.007591	0.004421	1.698658	0.001866
6	BDMN	0.004026	0.004421	0.890040	-0.000444
7	BBRI	0.002514	0.004421	1.577168	-0.001210



Lampiran 15 Hasil Perhitungan dari A_i , B_i dan *Cut Off Rate* dari Masing-Masing Saham

Kode Emiten	A_i	Kum A_i	B_i	Kum B_i	σ_M^2	$C_i = \frac{\sigma_M^2 \sum_{i=1}^n A_i}{1 + \sigma_M^2 \sum_{i=1}^n \beta_i}$
BBCA	3.59197401	3.59197401	641.17031724	641.17031724	0.000680	0.00170179
BBNI	0.02492948	3.61690349	893.62898695	1,534.79930420	0.000680	0.00120390
BBRI	-1.46160176	2.15530174	815.25462571	2,350.05392991	0.000680	0.00056428
BDMN	0.01897964	2.17428138	165.16142411	2,515.21535402	0.000680	0.00054565
BMRI	3.30872705	5.48300843	1,307.15631130	3,822.37166532	0.000680	0.00103611
BRIS	1.97471220	7.45772063	63.62186988	3,885.99353520	0.000680	0.00139253
PNBN	1.85031880	9.30803943	43.84984163	3,929.84337683	0.000680	0.00172391



Lampiran 16 Perbandingan antara ERB dengan *Cut Off Rate*

No	Kode Emiten	ERB		C_i	Keterangan
1	PNBN	0.035349	>	0.00172391	Masuk Portofolio
2	BRIS	0.022402	>	0.00139253	Masuk Portofolio
3	BMRI	0.005883	>	0.00103611	Masuk Portofolio
4	BBCA	0.003807	>	0.00170179	Masuk Portofolio
5	BBNI	0.001866	>	0.00120390	Masuk Portofolio
6	BDMN	-0.000444	<	0.00054565	Tidak Masuk Portofolio
7	BBRI	-0.001210	<	0.00056428	Tidak Masuk Portofolio
$C^* =$				0.00120390	<i>Cut Off Point</i>



Lampiran 17 Hasil Perhitungan W_i dan Z_i

No	Kode Emiten	β_i	$\sigma_{e_i}^2$	$\frac{\beta_i}{\sigma_{e_i}^2}$	ERB	C*	Z_i	W_i
1	PNBN	0.855418	0.016687	51.26128906	0.035349	0.00120390	1.75029889	0.18261
2	BRIS	0.765418	0.009209	83.12042426	0.022402	0.00120390	1.76201403	0.18383
3	BMRI	1.641604	0.002062	796.26750386	0.005883	0.00120390	3.72606894	0.38874
4	BBCA	0.835264	0.001088	767.62567264	0.003807	0.00120390	1.99846752	0.2085
5	BBNI	1.698658	0.003229	526.07955160	0.001866	0.00120390	0.34824860	0.03633
Jumlah							9.58509797	1



Lampiran 18 Hasil Perhitungan *Beta*, *Alpha* dan *Expected Return* Portofolio Saham Optimal

No	Kode Emiten	α_i	β_i	W_i	$W_i \cdot \alpha_i$	$W_i \cdot \beta_i$
1	PNBN	0.032766	0.855418	0.18261	0.00598328	0.15620473
2	BRIS	0.019874	0.765418	0.18383	0.0036535	0.14070563
3	BMRI	0.010446	1.641604	0.38874	0.00406092	0.63815013
4	BBCA	0.005753	0.835264	0.2085	0.00119948	0.17415039
5	BBNI	0.003832	1.698658	0.03633	0.00013921	0.06171612
$\alpha_p =$					0.01503639	
$\beta_p =$						1.17092700
$E(R_M) =$		0.002213				
$E(R_p) = \alpha_p + \beta_p \cdot E(R_M)$		0.01762767				



Lampiran 19 Hasil Perhitungan Risiko Portofolio

No	Kode Emiten	W _i	σe_i^2	W _i . σe_i^2	β_p^2	σ_M^2
1	PNBN	0.18260626	0.016687	0.00304723	1.37107005	0.000680
2	BRIS	0.183828484	0.009209	0.00169279		
3	BMRI	0.388735614	0.002062	0.00080143		
4	BBCA	0.208497349	0.001088	0.00022687		
5	BBNI	0.036332294	0.003229	0.00011731		
Jumlah				0.00588563		
$\sigma_p^2 = \beta_p^2 \sigma_M^2 + \left(\sum_{i=1}^n W_i \cdot \sigma e_i \right)^2$						0.006818625
$\sigma_p =$						0.082574965



Lampiran 20 Perhitungan *Return Saham Individu*

Kode Emiten	Periode	Harga Saham	$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}}$	Kode Emiten	Periode	Harga Saham	$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}}$
BBCA	Januari 2022	7,625	-	BBNI	Januari 2022	3,663	-
	Februari 2022	8,050	0.055738		Februari 2022	4,000	0.092150
	Maret 2022	7,975	-0.009317		Maret 2022	4,125	0.031250
	April 2022	8,125	0.018809		April 2022	4,613	0.118182
	Mei 2022	7,750	-0.046154		Mei 2022	4,588	-0.005420
	Juni 2022	7,250	-0.064516		Juni 2022	3,925	-0.144414
	Juli 2022	7,350	0.013793		Juli 2022	3,925	0.000000
	Agustus 2022	8,200	0.115646		Agustus 2022	4,263	0.085987
	September 2022	8,550	0.042683		September 2022	4,488	0.052786
	Oktober 2022	8,800	0.029240		Oktober 2022	4,700	0.047354
	November 2022	9,300	0.056818		November 2022	4,950	0.053191
	Desember 2022	8,550	-0.080645		Desember 2022	4,613	-0.068182
	Januari 2023	8,475	-0.008772		Januari 2023	4,575	-0.008130
	Februari 2023	8,750	0.032448		Februari 2023	4,388	-0.040984
	Maret 2023	8,750	0.000000		Maret 2023	4,675	0.065527
	April 2023	9,050	0.034286		April 2023	4,713	0.008021
	Mei 2023	9,050	0.000000		Mei 2023	4,525	-0.039788
	Juni 2023	9,150	0.011050		Juni 2023	4,575	0.011050
	Juli 2023	9,125	-0.002732		Juli 2023	4,438	-0.030055
	Agustus 2023	9,175	0.005479		Agustus 2023	4,588	0.033803
	September 2023	8,825	-0.038147		September 2023	5,163	0.125341
	Oktober 2023	8,750	-0.008499		Oktober 2023	4,790	-0.072155
	November 2023	8,975	0.025714		November 2023	5,275	0.101253
	Desember 2023	9,400	0.047354		Desember 2023	5,375	0.018957
	Januari 2024	9,550	0.015957		Januari 2024	5,750	0.069767
	Februari 2024	9,875	0.034031		Februari 2024	6,000	0.043478
	Maret 2024	10,075	0.020253		Maret 2024	5,900	-0.016667
	April 2024	9,800	-0.027295		April 2024	5,250	-0.110169
	Mei 2024	9,250	-0.056122		Mei 2024	4,400	-0.161905
	Juni 2024	9,925	0.072973		Juni 2024	4,660	0.059091
	Juli 2024	10,275	0.035264		Juli 2024	4,970	0.066524
	Agustus 2024	10,325	0.004866		Agustus 2024	5,350	0.076459
	September 2024	10,325	0.000000		September 2024	5,350	0.000000
	Oktober 2024	10,250	-0.007264		Oktober 2024	5,250	-0.018692
	November 2024	10,000	-0.024390		November 2024	4,980	-0.051429
	Desember 2024	9,675	-0.032500		Desember 2024	4,350	-0.126506
Jumlah			0.266050	Jumlah			0.265677
Rata-Rata			0.007601428	Rata-Rata			0.007590763

Lampiran 20 Perhitungan *Return Saham Individu*

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$
BBRI	Januari 2022	4,070	-	BBTN	Januari 2022	1,501	-
	Februari 2022	4,550	0.117936		Februari 2022	1,577	0.050300
	Maret 2022	4,660	0.024176		Maret 2022	1,524	-0.033806
	April 2022	4,870	0.045064		April 2022	1,639	0.075800
	Mei 2022	4,630	-0.049281		Mei 2022	1,510	-0.078586
	Juni 2022	4,150	-0.103672		Juni 2022	1,293	-0.144118
	Juli 2022	4,360	0.050602		Juli 2022	1,306	0.010305
	Agustus 2022	4,340	-0.004587		Agustus 2022	1,337	0.023814
	September 2022	4,490	0.034562		September 2022	1,319	-0.013290
	Oktober 2022	4,650	0.035635		Oktober 2022	1,373	0.040401
	November 2022	4,980	0.070968		November 2022	1,364	-0.006470
	Desember 2022	4,940	-0.008032		Desember 2022	1,350	-0.010046
	Januari 2023	4,580	-0.072874		Januari 2023	1,360	0.007407
	Februari 2023	4,670	0.019651		Februari 2023	1,325	-0.025735
	Maret 2023	4,730	0.012848		Maret 2023	1,225	-0.075472
	April 2023	5,100	0.078224		April 2023	1,245	0.016327
	Mei 2023	5,575	0.093137		Mei 2023	1,280	0.028112
	Juni 2023	5,425	-0.026906		Juni 2023	1,320	0.031250
	Juli 2023	5,650	0.041475		Juli 2023	1,315	-0.003788
	Agustus 2023	5,550	-0.017699		Agustus 2023	1,255	-0.045627
	September 2023	5,225	-0.058559		September 2023	1,220	-0.027888
	Oktober 2023	4,960	-0.050718		Oktober 2023	1,225	0.004098
	November 2023	5,275	0.063508		November 2023	1,295	0.057143
	Desember 2023	5,725	0.085308		Desember 2023	1,250	-0.034749
	Januari 2024	5,700	-0.004367		Januari 2024	1,305	0.044000
	Februari 2024	6,125	0.074561		Februari 2024	1,430	0.095785
	Maret 2024	6,050	-0.012245		Maret 2024	1,555	0.087413
	April 2024	4,940	-0.183471		April 2024	1,320	-0.151125
	Mei 2024	4,340	-0.121457		Mei 2024	1,225	-0.071970
	Juni 2024	4,600	0.059908		Juni 2024	1,265	0.032653
	Juli 2024	4,670	0.015217		Juli 2024	1,315	0.039526
	Agustus 2024	5,150	0.102784		Agustus 2024	1,410	0.072243
	September 2024	4,950	-0.038835		September 2024	1,450	0.028369
	Oktober 2024	4,800	-0.030303		Oktober 2024	1,405	-0.031034
	November 2024	4,250	-0.114583		November 2024	1,285	-0.085409
	Desember 2024	4,080	-0.040000		Desember 2024	1,140	-0.112840
Jumlah			0.087975	Jumlah			-0.207010
Rata-Rata			0.00251357	Rata-Rata			-0.005914558

Lampiran 20 Perhitungan *Return Saham Individu*

Kode Emiten	Periode	Harga Saham	$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}}$	Kode Emiten	Periode	Harga Saham	$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}}$
BDMN	Januari 2022	2,400	-	BJBR	Januari 2022	1,316	-
	Februari 2022	2,380	-0.008333		Februari 2022	1,391	0.056815
	Maret 2022	2,440	0.025210		Maret 2022	1,525	0.096207
	April 2022	2,450	0.004098		April 2022	1,475	-0.032787
	Mei 2022	2,560	0.044898		Mei 2022	1,460	-0.010169
	Juni 2022	2,350	-0.082031		Juni 2022	1,375	-0.058219
	Juli 2022	2,510	0.068085		Juli 2022	1,340	-0.025455
	Agustus 2022	2,640	0.051793		Agustus 2022	1,390	0.037313
	September 2022	2,540	-0.037879		September 2022	1,355	-0.025180
	Oktober 2022	3,400	0.338583		Oktober 2022	1,375	0.014760
	November 2022	3,020	-0.111765		November 2022	1,360	-0.010909
	Desember 2022	2,730	-0.096026		Desember 2022	1,345	-0.011029
	Januari 2023	2,650	-0.029304		Januari 2023	1,365	0.014870
	Februari 2023	2,860	0.079245		Februari 2023	1,320	-0.032967
	Maret 2023	2,870	0.003497		Maret 2023	1,360	0.030303
	April 2023	2,820	-0.017422		April 2023	1,255	-0.077206
	Mei 2023	2,760	-0.021277		Mei 2023	1,215	-0.031873
	Juni 2023	2,930	0.061594		Juni 2023	1,180	-0.028807
	Juli 2023	3,060	0.044369		Juli 2023	1,190	0.008475
	Agustus 2023	2,930	-0.042484		Agustus 2023	1,185	-0.004202
	September 2023	2,860	-0.023891		September 2023	1,170	-0.012658
	Oktober 2023	2,740	-0.041958		Oktober 2023	1,135	-0.029915
	November 2023	2,850	0.040146		November 2023	1,120	-0.013216
	Desember 2023	2,780	-0.024561		Desember 2023	1,150	0.026786
	Januari 2024	2,830	0.017986		Januari 2024	1,165	0.013043
	Februari 2024	2,910	0.028269		Februari 2024	1,205	0.034335
	Maret 2024	2,980	0.024055		Maret 2024	1,210	0.004149
	April 2024	2,740	-0.080537		April 2024	1,015	-0.161157
	Mei 2024	2,570	-0.062044		Mei 2024	1,010	-0.004926
	Juni 2024	2,580	0.003891		Juni 2024	970	-0.039604
	Juli 2024	2,590	0.003876		Juli 2024	990	0.020619
	Agustus 2024	2,610	0.007722		Agustus 2024	995	0.005051
	September 2024	2,600	-0.003831		September 2024	965	-0.030151
	Oktober 2024	2,570	-0.011538		Oktober 2024	980	0.015544
	November 2024	2,520	-0.019455		November 2024	940	-0.040816
	Desember 2024	2,540	0.007937		Desember 2024	910	-0.031915
Jumlah			0.140916	Jumlah			-0.334890
Rata-Rata			0.004026164	Rata-Rata			-0.009568272

Lampiran 20 Perhitungan *Return Saham Individu*

Kode Emiten	Periode	Harga Saham	$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}}$	Kode Emiten	Periode	Harga Saham	$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}}$
BMRI	Januari 2022	3,738	-	BRIS	Januari 2022	1,507	-
	Februari 2022	3,850	0.030100		Februari 2022	1,624	0.077672
	Maret 2022	3,950	0.025974		Maret 2022	1,565	-0.036037
	April 2022	4,475	0.132911		April 2022	1,541	-0.015575
	Mei 2022	4,250	-0.050279		Mei 2022	1,404	-0.088612
	Juni 2022	3,963	-0.067647		Juni 2022	1,307	-0.069444
	Juli 2022	4,138	0.044164		Juli 2022	1,595	0.220153
	Agustus 2022	4,425	0.069486		Agustus 2022	1,482	-0.070336
	September 2022	4,713	0.064972		September 2022	1,434	-0.032898
	Oktober 2022	5,275	0.119363		Oktober 2022	1,365	-0.047618
	November 2022	5,263	-0.002370		November 2022	1,302	-0.046425
	Desember 2022	4,963	-0.057007		Desember 2022	1,290	-0.009247
	Januari 2023	4,975	0.002519		Januari 2023	1,335	0.034884
	Februari 2023	5,000	0.005025		Februari 2023	1,520	0.138577
	Maret 2023	5,163	0.032500		Maret 2023	1,680	0.105263
	April 2023	5,175	0.002421		April 2023	1,730	0.029762
	Mei 2023	5,050	-0.024155		Mei 2023	1,730	0.000000
	Juni 2023	5,200	0.029703		Juni 2023	1,690	-0.023121
	Juli 2023	5,725	0.100962		Juli 2023	1,655	-0.020710
	Agustus 2023	6,025	0.052402		Agustus 2023	1,710	0.033233
	September 2023	6,025	0.000000		September 2023	1,625	-0.049708
	Oktober 2023	5,675	-0.058091		Oktober 2023	1,500	-0.076923
	November 2023	5,850	0.030837		November 2023	1,655	0.103333
	Desember 2023	6,050	0.034188		Desember 2023	1,740	0.051360
	Januari 2024	6,650	0.099174		Januari 2024	2,330	0.339080
	Februari 2024	7,000	0.052632		Februari 2024	2,470	0.060086
	Maret 2024	7,250	0.035714		Maret 2024	2,710	0.097166
	April 2024	6,900	-0.048276		April 2024	2,640	-0.025830
	Mei 2024	5,900	-0.144928		Mei 2024	2,200	-0.166667
	Juni 2024	6,150	0.042373		Juni 2024	2,620	0.190909
	Juli 2024	6,400	0.040650		Juli 2024	2,600	-0.007634
	Agustus 2024	7,125	0.113281		Agustus 2024	2,650	0.019231
	September 2024	6,925	-0.028070		September 2024	3,010	0.135849
	Oktober 2024	6,700	-0.032491		Oktober 2024	3,030	0.006645
	November 2024	6,150	-0.082090		November 2024	2,900	-0.042904
	Desember 2024	5,700	-0.073171		Desember 2024	2,730	-0.058621
Jumlah			0.492778	Jumlah			0.754893
Rata-Rata			0.014079372	Rata-Rata			0.021568362

Lampiran 20 Perhitungan *Return Saham Individu*

Kode Emiten	Periode	Harga Saham	$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}}$	Kode Emiten	Periode	Harga Saham	$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}}$
BTPS	Januari 2022	3,480	-	PNBN	Januari 2022	745	-
	Februari 2022	3,590	0.031609		Februari 2022	800	0.073826
	Maret 2022	3,300	-0.080780		Maret 2022	760	-0.050000
	April 2022	3,450	0.045455		April 2022	1,010	0.328947
	Mei 2022	3,050	-0.115942		Mei 2022	1,205	0.193069
	Juni 2022	2,820	-0.075410		Juni 2022	1,690	0.402490
	Juli 2022	2,810	-0.003546		Juli 2022	1,790	0.059172
	Agustus 2022	2,960	0.053381		Agustus 2022	1,995	0.114525
	September 2022	2,730	-0.077703		September 2022	2,130	0.067669
	Oktober 2022	2,950	0.080586		Oktober 2022	2,400	0.126761
	November 2022	3,200	0.084746		November 2022	1,900	-0.208333
	Desember 2022	2,790	-0.128125		Desember 2022	1,540	-0.189474
	Januari 2023	2,560	-0.082437		Januari 2023	1,580	0.025974
	Februari 2023	2,340	-0.085938		Februari 2023	1,445	-0.085443
	Maret 2023	2,190	-0.064103		Maret 2023	1,430	-0.010381
	April 2023	2,140	-0.022831		April 2023	1,105	-0.227273
	Mei 2023	1,900	-0.112150		Mei 2023	1,085	-0.018100
	Juni 2023	2,070	0.089474		Juni 2023	1,085	0.000000
	Juli 2023	2,130	0.028986		Juli 2023	1,280	0.179724
	Agustus 2023	2,160	0.014085		Agustus 2023	1,305	0.019531
	September 2023	1,905	-0.118056		September 2023	1,250	-0.042146
	Oktober 2023	1,575	-0.173228		Oktober 2023	1,135	-0.092000
	November 2023	1,655	0.050794		November 2023	1,120	-0.013216
	Desember 2023	1,690	0.021148		Desember 2023	1,210	0.080357
	Januari 2024	1,590	-0.059172		Januari 2024	1,100	-0.090909
	Februari 2024	1,375	-0.135220		Februari 2024	1,120	0.018182
	Maret 2024	1,355	-0.014545		Maret 2024	1,150	0.026786
	April 2024	1,215	-0.103321		April 2024	1,115	-0.030435
	Mei 2024	1,165	-0.041152		Mei 2024	1,180	0.058296
	Juni 2024	1,145	-0.017167		Juni 2024	1,145	-0.029661
	Juli 2024	1,140	-0.004367		Juli 2024	1,215	0.061135
	Agustus 2024	1,265	0.109649		Agustus 2024	1,400	0.152263
	September 2024	1,215	-0.039526		September 2024	1,625	0.160714
	Oktober 2024	1,065	-0.123457		Oktober 2024	1,900	0.169231
	November 2024	910	-0.145540		November 2024	1,780	-0.063158
	Desember 2024	925	0.016484		Desember 2024	1,860	0.044944
Jumlah			-1.197320	Jumlah			1.213068
Rata-Rata			-0.034209146	Rata-Rata			0.034659089

Lampiran 21 Hasil Perhitungan *Return* Saham Individual Masing-Masing Saham

No	Kode Emiten	R_i
1	BBCA	0.00760143
2	BBNI	0.00759076
3	BBRI	0.00251357
4	BBTN	-0.00591456
5	BDMN	0.00402616
6	BJBR	-0.00956827
7	BMRI	0.01407937
8	BRIS	0.02156836
9	BTPS	-0.03420915
10	PNBN	0.03465909
Ri Tertinggi (PNBN)		0.03465909
Ri Terendah (BTPS)		-0.03420915



Lampiran 22 Perhitungan *Return* Pasar

Periode	Daftar Penutupan IHSG (IDR)	$R_M = \frac{(P_t - P_{t-1})}{P_{t-1}}$
Januari 2022	6,631.15	-
Februari 2022	6,888.17	0.038759
Maret 2022	7,071.44	0.026606
April 2022	7,228.91	0.022268
Mei 2022	7,148.97	-0.011058
Juni 2022	6,911.58	-0.033206
Juli 2022	6,951.12	0.005721
Agustus 2022	7,178.59	0.032724
September 2022	7,040.80	-0.019195
Oktober 2022	7,098.89	0.008250
November 2022	7,081.31	-0.002476
Desember 2022	6,850.62	-0.032577
Januari 2023	6,839.34	-0.001647
Februari 2023	6,843.24	0.000570
Maret 2023	6,805.28	-0.005547
April 2023	6,915.72	0.016229
Mei 2023	6,633.26	-0.040843
Juni 2023	6,661.88	0.004315
Juli 2023	6,931.36	0.040451
Agustus 2023	6,953.26	0.003160
September 2023	6,939.89	-0.001923
Oktober 2023	6,752.21	-0.027044
November 2023	7,080.74	0.048655
Desember 2023	7,272.80	0.027124
Januari 2024	7,207.94	-0.008918
Februari 2024	7,316.11	0.015007
Maret 2024	7,288.81	-0.003731
April 2024	7,234.20	-0.007492
Mei 2024	6,970.74	-0.036419
Juni 2024	7,063.58	0.013319
Juli 2024	7,255.76	0.027207
Agustus 2024	7,670.73	0.057192
September 2024	7,527.93	-0.018616
Oktober 2024	7,574.02	0.006123
November 2024	7,114.27	-0.060701
Desember 2024	7,079.90	-0.004831

Jumlah	0.077455
Rata-Rata	0.002213012
Rm Tertinggi	0.057192
Rm Terendah	-0.060701



Lampiran 23 Hasil Perhitungan *Beta Saham Individu*

No	Kode Emiten	σ_{iM}	σ_M^2	$\beta_i = \frac{\sigma_{iM}}{\sigma_M^2}$
1	BBCA	0.000568	0.000680	0.835264
2	BBNI	0.001156	0.000680	1.698658
3	BBRI	0.001073	0.000680	1.577168
4	BBTN	0.000768	0.000680	1.128306
5	BDMN	0.000606	0.000680	0.890040
6	BJBR	0.000435	0.000680	0.639283
7	BMRI	0.001117	0.000680	1.641604
8	BRIS	0.000521	0.000680	0.765418
9	BTPS	0.001259	0.000680	1.850223
10	PNBN	0.000582	0.000680	0.855418



Lampiran 24 Hasil Perhitungan *Expected Return*

No	Kode Emiten	R_f	β_i	$E(R_M)$	$ER_i = R_f + \beta_i((ER_M - R_f))$
1	BBCA	0.004421	0.835264	0.002213	0.00257680
2	BBNI	0.004421	1.698658	0.002213	0.00067018
3	BBRI	0.004421	1.577168	0.002213	0.00093846
4	BBTN	0.004421	1.128306	0.002213	0.00192968
5	BDMN	0.004421	0.890040	0.002213	0.00245583
6	BJBR	0.004421	0.639283	0.002213	0.00300958
7	BMRI	0.004421	1.641604	0.002213	0.00079617
8	BRIS	0.004421	0.765418	0.002213	0.00273104
9	BTPS	0.004421	1.850223	0.002213	0.00033548
10	PNBN	0.004421	0.855418	0.002213	0.00253229



Lampiran 25 Perbandingan antara ER_i dan β_i

No	Kode Emiten	β_i	ER_i
1	BJBR	0.639283	0.00300958
2	BRIS	0.765418	0.00273104
3	BBCA	0.835264	0.00257680
4	PNBN	0.855418	0.00253229
5	BDMN	0.890040	0.00245583
6	BBTN	1.128306	0.00192968
7	BBRI	1.577168	0.00093846
8	BMRI	1.641604	0.00079617
9	BBNI	1.698658	0.00067018
10	BTPS	1.850223	0.00033548



Lampiran 26 Saham Efisien dan Tidak Efisien serta Keputusan Investasi

No	Kode Emiten	ER_i	R_i	Evaluasi Saham	Keputusan
1	BJBR	0.00300958	-0.00956827	Tidak Efisien	Menjual
2	BRIS	0.00273104	0.02156836	Efisien	Membeli
3	BBCA	0.00257680	0.00760143	Efisien	Membeli
4	PNBN	0.00253229	0.03465909	Efisien	Membeli
5	BDMN	0.00245583	0.00402616	Efisien	Membeli
6	BBTN	0.00192968	-0.00591456	Tidak Efisien	Menjual
7	BBRI	0.00093846	0.00251357	Efisien	Membeli
8	BMRI	0.00079617	0.01407937	Efisien	Membeli
9	BBNI	0.00067018	0.00759076	Efisien	Membeli
10	BTPS	0.00033548	-0.03420915	Tidak Efisien	Menjual



Lampiran 27a Perhitungan ER_i SIM Bulanan

Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$	Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$
BBCA	Januari 2022	0.005753	0.835264	-	-	BBNI	Januari 2022	0.003832	1.698658	-	-
	Februari 2022	0.005753	0.835264	0.038759	0.038127		Februari 2022	0.003832	1.698658	0.038759	0.069671
	Maret 2022	0.005753	0.835264	0.026606	0.027976		Maret 2022	0.003832	1.698658	0.026606	0.049027
	April 2022	0.005753	0.835264	0.022268	0.024353		April 2022	0.003832	1.698658	0.022268	0.041658
	Mei 2022	0.005753	0.835264	-0.011058	-0.003484		Mei 2022	0.003832	1.698658	-0.011058	-0.014953
	Juni 2022	0.005753	0.835264	-0.033206	-0.021983		Juni 2022	0.003832	1.698658	-0.033206	-0.052574
	Juli 2022	0.005753	0.835264	0.005721	0.010531		Juli 2022	0.003832	1.698658	0.005721	0.013549
	Agustus 2022	0.005753	0.835264	0.032724	0.033086		Agustus 2022	0.003832	1.698658	0.032724	0.059419
	September 2022	0.005753	0.835264	-0.019195	-0.010280		September 2022	0.003832	1.698658	-0.019195	-0.028773
	Oktober 2022	0.005753	0.835264	0.008250	0.012644		Oktober 2022	0.003832	1.698658	0.008250	0.017846
	November 2022	0.005753	0.835264	-0.002476	0.003684		November 2022	0.003832	1.698658	-0.002476	-0.000375
	Desember 2022	0.005753	0.835264	-0.032577	-0.021458		Desember 2022	0.003832	1.698658	-0.032577	-0.051506
	Januari 2023	0.005753	0.835264	-0.001647	0.004378		Januari 2023	0.003832	1.698658	-0.001647	0.001035
	Februari 2023	0.005753	0.835264	0.000570	0.006229		Februari 2023	0.003832	1.698658	0.000570	0.004800
	Maret 2023	0.005753	0.835264	-0.005547	0.001120		Maret 2023	0.003832	1.698658	-0.005547	-0.005591
	April 2023	0.005753	0.835264	0.016229	0.019308		April 2023	0.003832	1.698658	0.016229	0.031398
	Mei 2023	0.005753	0.835264	-0.040843	-0.028362		Mei 2023	0.003832	1.698658	-0.040843	-0.065547
	Juni 2023	0.005753	0.835264	0.004315	0.009357		Juni 2023	0.003832	1.698658	0.004315	0.011161
	Juli 2023	0.005753	0.835264	0.040451	0.039540		Juli 2023	0.003832	1.698658	0.040451	0.072544
	Agustus 2023	0.005753	0.835264	0.003160	0.008392		Agustus 2023	0.003832	1.698658	0.003160	0.009199
	September 2023	0.005753	0.835264	-0.001923	0.004147		September 2023	0.003832	1.698658	-0.001923	0.000565
	Oktober 2023	0.005753	0.835264	-0.027044	-0.016836		Oktober 2023	0.003832	1.698658	-0.027044	-0.042106
	November 2023	0.005753	0.835264	0.048655	0.046393		November 2023	0.003832	1.698658	0.048655	0.086480
	Desember 2023	0.005753	0.835264	0.027124	0.028409		Desember 2023	0.003832	1.698658	0.027124	0.049906
	Januari 2024	0.005753	0.835264	-0.008918	-0.001696		Januari 2024	0.003832	1.698658	-0.008918	-0.011317
	Februari 2024	0.005753	0.835264	0.015007	0.018288		Februari 2024	0.003832	1.698658	0.015007	0.029323
	Maret 2024	0.005753	0.835264	-0.003731	0.002636		Maret 2024	0.003832	1.698658	-0.003731	-0.002507
	April 2024	0.005753	0.835264	-0.007492	-0.000505		April 2024	0.003832	1.698658	-0.007492	-0.008895
	Mei 2024	0.005753	0.835264	-0.036419	-0.024666		Mei 2024	0.003832	1.698658	-0.036419	-0.058031
	Juni 2024	0.005753	0.835264	0.013319	0.016877		Juni 2024	0.003832	1.698658	0.013319	0.026455
	Juli 2024	0.005753	0.835264	0.027207	0.028478		Juli 2024	0.003832	1.698658	0.027207	0.050047
	Agustus 2024	0.005753	0.835264	0.057192	0.053523		Agustus 2024	0.003832	1.698658	0.057192	0.100981
	September 2024	0.005753	0.835264	-0.018616	-0.009796		September 2024	0.003832	1.698658	-0.018616	-0.027791
	Oktober 2024	0.005753	0.835264	0.006123	0.010867		Oktober 2024	0.003832	1.698658	0.006123	0.014232
	November 2024	0.005753	0.835264	-0.060701	-0.044948		November 2024	0.003832	1.698658	-0.060701	-0.099278
	Desember 2024	0.005753	0.835264	-0.004831	0.001718		Desember 2024	0.003832	1.698658	-0.004831	-0.004375



Lampiran 27a Perhitungan ER_i SIM Bulanan

Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$	Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$
BBRI	Januari 2022	-0.000977	1.577168	-	-	BBTN	Januari 2022	-0.008412	1.128306	-	-
	Februari 2022	-0.000977	1.577168	0.038759	0.060154		Februari 2022	-0.008412	1.128306	0.038759	0.035321
	Maret 2022	-0.000977	1.577168	0.026606	0.040986		Maret 2022	-0.008412	1.128306	0.026606	0.021609
	April 2022	-0.000977	1.577168	0.022268	0.034144		April 2022	-0.008412	1.128306	0.022268	0.016714
	Mei 2022	-0.000977	1.577168	-0.011058	-0.018418		Mei 2022	-0.008412	1.128306	-0.011058	-0.020889
	Juni 2022	-0.000977	1.577168	-0.033206	-0.053348		Juni 2022	-0.008412	1.128306	-0.033206	-0.045878
	Juli 2022	-0.000977	1.577168	0.005721	0.008046		Juli 2022	-0.008412	1.128306	0.005721	-0.001957
	Agustus 2022	-0.000977	1.577168	0.032724	0.050635		Agustus 2022	-0.008412	1.128306	0.032724	0.028511
	September 2022	-0.000977	1.577168	-0.019195	-0.031250		September 2022	-0.008412	1.128306	-0.019195	-0.030069
	Oktober 2022	-0.000977	1.577168	0.008250	0.012036		Oktober 2022	-0.008412	1.128306	0.008250	0.000898
	November 2022	-0.000977	1.577168	-0.002476	-0.004882		November 2022	-0.008412	1.128306	-0.002476	-0.011206
	Desember 2022	-0.000977	1.577168	-0.032577	-0.052357		Desember 2022	-0.008412	1.128306	-0.032577	-0.045169
	Januari 2023	-0.000977	1.577168	-0.001647	-0.003574		Januari 2023	-0.008412	1.128306	-0.001647	-0.010269
	Februari 2023	-0.000977	1.577168	0.000570	-0.000077		Februari 2023	-0.008412	1.128306	0.000570	-0.007768
	Maret 2023	-0.000977	1.577168	-0.005547	-0.009725		Maret 2023	-0.008412	1.128306	-0.005547	-0.014670
	April 2023	-0.000977	1.577168	0.016229	0.024618		April 2023	-0.008412	1.128306	0.016229	0.009899
	Mei 2023	-0.000977	1.577168	-0.040843	-0.065393		Mei 2023	-0.008412	1.128306	-0.040843	-0.054495
	Juni 2023	-0.000977	1.577168	0.004315	0.005828		Juni 2023	-0.008412	1.128306	0.004315	-0.003543
	Juli 2023	-0.000977	1.577168	0.040451	0.062821		Juli 2023	-0.008412	1.128306	0.040451	0.037230
	Agustus 2023	-0.000977	1.577168	0.003160	0.004006		Agustus 2023	-0.008412	1.128306	0.003160	-0.004847
	September 2023	-0.000977	1.577168	-0.001923	-0.004009		September 2023	-0.008412	1.128306	-0.001923	-0.010581
	Oktober 2023	-0.000977	1.577168	-0.027044	-0.043629		Oktober 2023	-0.008412	1.128306	-0.027044	-0.038925
	November 2023	-0.000977	1.577168	0.048655	0.075761		November 2023	-0.008412	1.128306	0.048655	0.046486
	Desember 2023	-0.000977	1.577168	0.027124	0.041803		Desember 2023	-0.008412	1.128306	0.027124	0.022193
	Januari 2024	-0.000977	1.577168	-0.008918	-0.015042		Januari 2024	-0.008412	1.128306	-0.008918	-0.018474
	Februari 2024	-0.000977	1.577168	0.015007	0.022692		Februari 2024	-0.008412	1.128306	0.015007	0.008521
	Maret 2024	-0.000977	1.577168	-0.003731	-0.006862		Maret 2024	-0.008412	1.128306	-0.003731	-0.012622
	April 2024	-0.000977	1.577168	-0.007492	-0.012793		April 2024	-0.008412	1.128306	-0.007492	-0.016865
	Mei 2024	-0.000977	1.577168	-0.036419	-0.058415		Mei 2024	-0.008412	1.128306	-0.036419	-0.049503
	Juni 2024	-0.000977	1.577168	0.013319	0.020029		Juni 2024	-0.008412	1.128306	0.013319	0.006616
	Juli 2024	-0.000977	1.577168	0.027207	0.041934		Juli 2024	-0.008412	1.128306	0.027207	0.022286
	Agustus 2024	-0.000977	1.577168	0.057192	0.089224		Agustus 2024	-0.008412	1.128306	0.057192	0.056118
	September 2024	-0.000977	1.577168	-0.018616	-0.030338		September 2024	-0.008412	1.128306	-0.018616	-0.029416
	Oktober 2024	-0.000977	1.577168	0.006123	0.008680		Oktober 2024	-0.008412	1.128306	0.006123	-0.001503
	November 2024	-0.000977	1.577168	-0.060701	-0.096712		November 2024	-0.008412	1.128306	-0.060701	-0.076901
	Desember 2024	-0.000977	1.577168	-0.004831	-0.008596		Desember 2024	-0.008412	1.128306	-0.004831	-0.013863



Lampiran 27a Perhitungan ER_i SIM Bulanan

Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$	Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$
BDMN	Januari 2022	0.002056	0.890040	-	-	BJBR	Januari 2022	-0.010983	0.639283	-	-
	Februari 2022	0.002056	0.890040	0.038759	0.036554		Februari 2022	-0.010983	0.639283	0.038759	0.013795
	Maret 2022	0.002056	0.890040	0.026606	0.025737		Maret 2022	-0.010983	0.639283	0.026606	0.006026
	April 2022	0.002056	0.890040	0.022268	0.021876		April 2022	-0.010983	0.639283	0.022268	0.003253
	Mei 2022	0.002056	0.890040	-0.011058	-0.007786		Mei 2022	-0.010983	0.639283	-0.011058	-0.018052
	Juni 2022	0.002056	0.890040	-0.033206	-0.027498		Juni 2022	-0.010983	0.639283	-0.033206	-0.032211
	Juli 2022	0.002056	0.890040	0.005721	0.007148		Juli 2022	-0.010983	0.639283	0.005721	-0.007326
	Agustus 2022	0.002056	0.890040	0.032724	0.031182		Agustus 2022	-0.010983	0.639283	0.032724	0.009937
	September 2022	0.002056	0.890040	-0.019195	-0.015027		September 2022	-0.010983	0.639283	-0.019195	-0.023254
	Oktober 2022	0.002056	0.890040	0.008250	0.009400		Oktober 2022	-0.010983	0.639283	0.008250	-0.005709
	November 2022	0.002056	0.890040	-0.002476	-0.000148		November 2022	-0.010983	0.639283	-0.002476	-0.012566
	Desember 2022	0.002056	0.890040	-0.032577	-0.026939		Desember 2022	-0.010983	0.639283	-0.032577	-0.031809
	Januari 2023	0.002056	0.890040	-0.001647	0.000591		Januari 2023	-0.010983	0.639283	-0.001647	-0.012036
	Februari 2023	0.002056	0.890040	0.000570	0.002564		Februari 2023	-0.010983	0.639283	0.000570	-0.010618
	Maret 2023	0.002056	0.890040	-0.005547	-0.002881		Maret 2023	-0.010983	0.639283	-0.005547	-0.014529
	April 2023	0.002056	0.890040	0.016229	0.016501		April 2023	-0.010983	0.639283	0.016229	-0.000608
	Mei 2023	0.002056	0.890040	-0.040843	-0.034296		Mei 2023	-0.010983	0.639283	-0.040843	-0.037093
	Juni 2023	0.002056	0.890040	0.004315	0.005897		Juni 2023	-0.010983	0.639283	0.004315	-0.008225
	Juli 2023	0.002056	0.890040	0.040451	0.038060		Juli 2023	-0.010983	0.639283	0.040451	0.014877
	Agustus 2023	0.002056	0.890040	0.003160	0.004869		Agustus 2023	-0.010983	0.639283	0.003160	-0.008963
	September 2023	0.002056	0.890040	-0.001923	0.000345		September 2023	-0.010983	0.639283	-0.001923	-0.012212
	Oktober 2023	0.002056	0.890040	-0.027044	-0.022013		Oktober 2023	-0.010983	0.639283	-0.027044	-0.028272
	November 2023	0.002056	0.890040	0.048655	0.045362		November 2023	-0.010983	0.639283	0.048655	0.020121
	Desember 2023	0.002056	0.890040	0.027124	0.026198		Desember 2023	-0.010983	0.639283	0.027124	0.006357
	Januari 2024	0.002056	0.890040	-0.008918	-0.005881		Januari 2024	-0.010983	0.639283	-0.008918	-0.016684
	Februari 2024	0.002056	0.890040	0.015007	0.015413		Februari 2024	-0.010983	0.639283	0.015007	-0.001389
	Maret 2024	0.002056	0.890040	-0.003731	-0.001265		Maret 2024	-0.010983	0.639283	-0.003731	-0.013368
	April 2024	0.002056	0.890040	-0.007492	-0.004612		April 2024	-0.010983	0.639283	-0.007492	-0.015773
	Mei 2024	0.002056	0.890040	-0.036419	-0.030358		Mei 2024	-0.010983	0.639283	-0.036419	-0.034265
	Juni 2024	0.002056	0.890040	0.013319	0.013911		Juni 2024	-0.010983	0.639283	0.013319	-0.002469
	Juli 2024	0.002056	0.890040	0.027207	0.026272		Juli 2024	-0.010983	0.639283	0.027207	0.006410
	Agustus 2024	0.002056	0.890040	0.057192	0.052959		Agustus 2024	-0.010983	0.639283	0.057192	0.025579
	September 2024	0.002056	0.890040	-0.018616	-0.014513		September 2024	-0.010983	0.639283	-0.018616	-0.022884
	Oktober 2024	0.002056	0.890040	0.006123	0.007506		Oktober 2024	-0.010983	0.639283	0.006123	-0.007069
	November 2024	0.002056	0.890040	-0.060701	-0.051970		November 2024	-0.010983	0.639283	-0.060701	-0.049788
	Desember 2024	0.002056	0.890040	-0.004831	-0.002243		Desember 2024	-0.010983	0.639283	-0.004831	-0.014071



Lampiran 27a Perhitungan ER_i SIM Bulanan

Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$	Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$
BMRI	Januari 2022	0.010446	1.641604	-	-	BRIS	Januari 2022	0.019874	0.765418	-	-
	Februari 2022	0.010446	1.641604	0.038759	0.074074		Februari 2022	0.019874	0.765418	0.038759	0.049542
	Maret 2022	0.010446	1.641604	0.026606	0.054124		Maret 2022	0.019874	0.765418	0.026606	0.040240
	April 2022	0.010446	1.641604	0.022268	0.047002		April 2022	0.019874	0.765418	0.022268	0.036919
	Mei 2022	0.010446	1.641604	-0.011058	-0.007707		Mei 2022	0.019874	0.765418	-0.011058	0.011410
	Juni 2022	0.010446	1.641604	-0.033206	-0.044065		Juni 2022	0.019874	0.765418	-0.033206	-0.005542
	Juli 2022	0.010446	1.641604	0.005721	0.019838		Juli 2022	0.019874	0.765418	0.005721	0.024253
	Agustus 2022	0.010446	1.641604	0.032724	0.064167		Agustus 2022	0.019874	0.765418	0.032724	0.044922
	September 2022	0.010446	1.641604	-0.019195	-0.021063		September 2022	0.019874	0.765418	-0.019195	0.005183
	Oktober 2022	0.010446	1.641604	0.008250	0.023991		Oktober 2022	0.019874	0.765418	0.008250	0.026190
	November 2022	0.010446	1.641604	-0.002476	0.006381		November 2022	0.019874	0.765418	-0.002476	0.017979
	Desember 2022	0.010446	1.641604	-0.032577	-0.043033		Desember 2022	0.019874	0.765418	-0.032577	-0.005061
	Januari 2023	0.010446	1.641604	-0.001647	0.007743		Januari 2023	0.019874	0.765418	-0.001647	0.018614
	Februari 2023	0.010446	1.641604	0.000570	0.011383		Februari 2023	0.019874	0.765418	0.000570	0.020311
	Maret 2023	0.010446	1.641604	-0.005547	0.001340		Maret 2023	0.019874	0.765418	-0.005547	0.015629
	April 2023	0.010446	1.641604	0.016229	0.037087		April 2023	0.019874	0.765418	0.016229	0.032296
	Mei 2023	0.010446	1.641604	-0.040843	-0.056602		Mei 2023	0.019874	0.765418	-0.040843	-0.011388
	Juni 2023	0.010446	1.641604	0.004315	0.017529		Juni 2023	0.019874	0.765418	0.004315	0.023177
	Juli 2023	0.010446	1.641604	0.040451	0.076851		Juli 2023	0.019874	0.765418	0.040451	0.050836
	Agustus 2023	0.010446	1.641604	0.003160	0.015633		Agustus 2023	0.019874	0.765418	0.003160	0.022293
	September 2023	0.010446	1.641604	-0.001923	0.007290		September 2023	0.019874	0.765418	-0.001923	0.018403
	Oktober 2023	0.010446	1.641604	-0.027044	-0.033949		Oktober 2023	0.019874	0.765418	-0.027044	-0.000825
	November 2023	0.010446	1.641604	0.048655	0.090319		November 2023	0.019874	0.765418	0.048655	0.057116
	Desember 2023	0.010446	1.641604	0.027124	0.054974		Desember 2023	0.019874	0.765418	0.027124	0.040636
	Januari 2024	0.010446	1.641604	-0.008918	-0.004194		Januari 2024	0.019874	0.765418	-0.008918	0.013048
	Februari 2024	0.010446	1.641604	0.015007	0.035082		Februari 2024	0.019874	0.765418	0.015007	0.031361
	Maret 2024	0.010446	1.641604	-0.003731	0.004321		Maret 2024	0.019874	0.765418	-0.003731	0.017018
	April 2024	0.010446	1.641604	-0.007492	-0.001853		April 2024	0.019874	0.765418	-0.007492	0.014140
	Mei 2024	0.010446	1.641604	-0.036419	-0.049339		Mei 2024	0.019874	0.765418	-0.036419	-0.008001
	Juni 2024	0.010446	1.641604	0.013319	0.032310		Juni 2024	0.019874	0.765418	0.013319	0.030069
	Juli 2024	0.010446	1.641604	0.027207	0.055110		Juli 2024	0.019874	0.765418	0.027207	0.040699
	Agustus 2024	0.010446	1.641604	0.057192	0.104333		Agustus 2024	0.019874	0.765418	0.057192	0.063650
	September 2024	0.010446	1.641604	-0.018616	-0.020114		September 2024	0.019874	0.765418	-0.018616	0.005625
	Oktober 2024	0.010446	1.641604	0.006123	0.020497		Oktober 2024	0.019874	0.765418	0.006123	0.024561
	November 2024	0.010446	1.641604	-0.060701	-0.089200		November 2024	0.019874	0.765418	-0.060701	-0.026587
	Desember 2024	0.010446	1.641604	-0.004831	0.002516		Desember 2024	0.019874	0.765418	-0.004831	0.016177



Lampiran 27a Perhitungan ER_i SIM Bulanan

Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$	Kode Emiten	Periode	α_i	β_i	R_{Mt}	$ER_{it} = \alpha_i + \beta_i \cdot R_{Mt}$
BTPS	Januari 2022	-0.038304	1.850223	-	-	PNBN	Januari 2022	0.032766	0.855418	-	-
	Februari 2022	-0.038304	1.850223	0.038759	0.033410		Februari 2022	0.032766	0.855418	0.038759	0.065922
	Maret 2022	-0.038304	1.850223	0.026606	0.010924		Maret 2022	0.032766	0.855418	0.026606	0.055526
	April 2022	-0.038304	1.850223	0.022268	0.002898		April 2022	0.032766	0.855418	0.022268	0.051815
	Mei 2022	-0.038304	1.850223	-0.011058	-0.058764		Mei 2022	0.032766	0.855418	-0.011058	0.023307
	Juni 2022	-0.038304	1.850223	-0.033206	-0.099743		Juni 2022	0.032766	0.855418	-0.033206	0.004361
	Juli 2022	-0.038304	1.850223	0.005721	-0.027719		Juli 2022	0.032766	0.855418	0.005721	0.037660
	Agustus 2022	-0.038304	1.850223	0.032724	0.022243		Agustus 2022	0.032766	0.855418	0.032724	0.060759
	September 2022	-0.038304	1.850223	-0.019195	-0.073818		September 2022	0.032766	0.855418	-0.019195	0.016347
	Oktober 2022	-0.038304	1.850223	0.008250	-0.023038		Oktober 2022	0.032766	0.855418	0.008250	0.039824
	November 2022	-0.038304	1.850223	-0.002476	-0.042886		November 2022	0.032766	0.855418	-0.002476	0.030648
	Desember 2022	-0.038304	1.850223	-0.032577	-0.098579		Desember 2022	0.032766	0.855418	-0.032577	0.004899
	Januari 2023	-0.038304	1.850223	-0.001647	-0.041350		Januari 2023	0.032766	0.855418	-0.001647	0.031358
	Februari 2023	-0.038304	1.850223	0.000570	-0.037249		Februari 2023	0.032766	0.855418	0.000570	0.033254
	Maret 2023	-0.038304	1.850223	-0.005547	-0.048567		Maret 2023	0.032766	0.855418	-0.005547	0.028021
	April 2023	-0.038304	1.850223	0.016229	-0.008277		April 2023	0.032766	0.855418	0.016229	0.046648
	Mei 2023	-0.038304	1.850223	-0.040843	-0.113873		Mei 2023	0.032766	0.855418	-0.040843	-0.002172
	Juni 2023	-0.038304	1.850223	0.004315	-0.030321		Juni 2023	0.032766	0.855418	0.004315	0.036457
	Juli 2023	-0.038304	1.850223	0.040451	0.036540		Juli 2023	0.032766	0.855418	0.040451	0.067369
	Agustus 2023	-0.038304	1.850223	0.003160	-0.032458		Agustus 2023	0.032766	0.855418	0.003160	0.035469
	September 2023	-0.038304	1.850223	-0.001923	-0.041861		September 2023	0.032766	0.855418	-0.001923	0.031121
	Oktober 2023	-0.038304	1.850223	-0.027044	-0.088340		Oktober 2023	0.032766	0.855418	-0.027044	0.009632
	November 2023	-0.038304	1.850223	0.048655	0.051719		November 2023	0.032766	0.855418	0.048655	0.074387
	Desember 2023	-0.038304	1.850223	0.027124	0.011882		Desember 2023	0.032766	0.855418	0.027124	0.055969
	Januari 2024	-0.038304	1.850223	-0.008918	-0.054804		Januari 2024	0.032766	0.855418	-0.008918	0.025137
	Februari 2024	-0.038304	1.850223	0.015007	-0.010537		Februari 2024	0.032766	0.855418	0.015007	0.045603
	Maret 2024	-0.038304	1.850223	-0.003731	-0.045208		Maret 2024	0.032766	0.855418	-0.003731	0.029574
	April 2024	-0.038304	1.850223	-0.007492	-0.052166		April 2024	0.032766	0.855418	-0.007492	0.026357
	Mei 2024	-0.038304	1.850223	-0.036419	-0.105686		Mei 2024	0.032766	0.855418	-0.036419	0.001613
	Juni 2024	-0.038304	1.850223	0.013319	-0.013661		Juni 2024	0.032766	0.855418	0.013319	0.044159
	Juli 2024	-0.038304	1.850223	0.027207	0.012036		Juli 2024	0.032766	0.855418	0.027207	0.056040
	Agustus 2024	-0.038304	1.850223	0.057192	0.067514		Agustus 2024	0.032766	0.855418	0.057192	0.081689
	September 2024	-0.038304	1.850223	-0.018616	-0.072748		September 2024	0.032766	0.855418	-0.018616	0.016841
	Oktober 2024	-0.038304	1.850223	0.006123	-0.026976		Oktober 2024	0.032766	0.855418	0.006123	0.038003
	November 2024	-0.038304	1.850223	-0.060701	-0.150614		November 2024	0.032766	0.855418	-0.060701	-0.019159
	Desember 2024	-0.038304	1.850223	-0.004831	-0.047242		Desember 2024	0.032766	0.855418	-0.004831	0.028633



Lampiran 27b Perhitungan ER_i CAPM Bulanan

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{ft}	β_i	R_{M}	$ER_{it} = R_{ft} + \beta_i(R_{Mt} - R_{ft})$	Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{ft}	β_i	R_{M}	$ER_{it} = R_{ft} + \beta_i(R_{Mt} - R_{ft})$
BBCA	Januari 2022	7.625	-	0.29%	0.835264	-	-	BBRI	Januari 2022	1.316	-	0.29%	0.639283	-	-
	Februari 2022	8.050	0.055738	0.29%	0.835264	0.038759	0.032855		Februari 2022	1.391	0.056815	0.29%	0.639283	0.038759	0.025830
	Maret 2022	7.975	-0.009317	0.29%	0.835264	0.026606	0.022704		Maret 2022	1.525	0.096207	0.29%	0.639283	0.026606	0.018061
	April 2022	8.125	0.018809	0.29%	0.835264	0.022268	0.019081		April 2022	1.475	-0.032787	0.29%	0.639283	0.022268	0.015288
	Mei 2022	7.750	-0.046154	0.29%	0.835264	-0.011058	-0.008756		Mei 2022	1.460	-0.010169	0.29%	0.639283	-0.011058	-0.006017
	Juni 2022	7.250	-0.064516	0.29%	0.835264	-0.033206	-0.027255		Juni 2022	1.375	-0.058219	0.29%	0.639283	-0.033206	-0.020176
	Juli 2022	7.350	0.013793	0.29%	0.835264	0.005721	0.005259		Juli 2022	1.340	-0.025455	0.29%	0.639283	0.005721	0.004709
	Agustus 2022	8.200	0.115646	0.31%	0.835264	0.032724	0.027848		Agustus 2022	1.390	0.037313	0.31%	0.639283	0.032724	0.022047
	September 2022	8.550	0.042683	0.35%	0.835264	0.019195	-0.015449		September 2022	1.355	-0.025180	0.35%	0.639283	0.019195	-0.010993
	Oktober 2022	8.800	0.029240	0.40%	0.835264	0.008250	0.007543		Oktober 2022	1.375	0.014760	0.40%	0.639283	0.008250	0.006702
	November 2022	9.300	0.056819	0.44%	0.835264	0.002476	-0.001348		November 2022	1.360	-0.010909	0.44%	0.639283	0.002476	-0.000005
	Desember 2022	8.550	-0.080645	0.46%	0.835264	-0.032577	-0.026456		Desember 2022	1.345	-0.011029	0.46%	0.639283	-0.032577	-0.019173
	Januari 2023	8.475	-0.008772	0.48%	0.835264	-0.001647	-0.000586		Januari 2023	1.365	0.014870	0.48%	0.639283	-0.001647	0.000676
	Februari 2023	8.750	0.032448	0.48%	0.835264	0.009570	0.001266		Februari 2023	1.320	-0.032967	0.48%	0.639283	0.009570	0.002093
	Maret 2023	8.750	0.000000	0.48%	0.835264	-0.005347	-0.003844		Maret 2023	1.360	0.030303	0.48%	0.639283	-0.005347	-0.001818
	April 2023	9.050	0.034286	0.48%	0.835264	0.016229	0.014345		April 2023	1.255	-0.077206	0.48%	0.639283	0.016229	0.012103
	Mei 2023	9.050	0.000000	0.48%	0.835264	-0.040843	-0.033325		Mei 2023	1.215	-0.031873	0.48%	0.639283	-0.040843	-0.024382
	Juni 2023	9.150	0.011050	0.48%	0.835264	0.004315	0.004393		Juni 2023	1.180	-0.028807	0.48%	0.639283	0.004315	0.004487
	Juli 2023	9.125	-0.002732	0.48%	0.835264	0.004051	0.034577		Juli 2023	1.190	0.008475	0.48%	0.639283	0.004051	0.027588
	Agustus 2023	9.175	0.005479	0.48%	0.835264	0.003160	0.003428		Agustus 2023	1.185	-0.004202	0.48%	0.639283	0.003160	0.003748
	September 2023	8.825	-0.038147	0.48%	0.835264	-0.001923	-0.000871		September 2023	1.170	-0.012658	0.48%	0.639283	-0.001923	0.000499
	Oktober 2023	8.750	-0.008499	0.50%	0.835264	-0.027044	-0.021765		Oktober 2023	1.135	-0.029915	0.50%	0.639283	-0.027044	-0.015485
	November 2023	8.975	0.025714	0.50%	0.835264	0.048655	0.041464		November 2023	1.120	-0.013216	0.50%	0.639283	0.048655	0.032908
	Desember 2023	9.400	0.047354	0.50%	0.835264	0.027124	0.023480		Desember 2023	1.150	0.026786	0.50%	0.639283	0.027124	0.019144
	Januari 2024	9.550	0.015957	0.50%	0.835264	-0.008918	-0.006625		Januari 2024	1.165	0.031843	0.50%	0.639283	-0.008918	-0.003808
	Februari 2024	9.875	0.034031	0.50%	0.835264	0.015007	0.013359		Februari 2024	1.205	0.034335	0.50%	0.639283	0.015007	0.011397
	Maret 2024	10.075	0.020253	0.50%	0.835264	-0.003731	-0.002293		Maret 2024	1.210	0.004149	0.50%	0.639283	-0.003731	-0.000582
	April 2024	9.800	-0.027295	0.52%	0.835264	-0.007492	-0.005400		April 2024	1.015	-0.161157	0.52%	0.639283	-0.007492	-0.002911
	Mei 2024	9.250	-0.056132	0.52%	0.835264	-0.036419	-0.029561		Mei 2024	1.010	-0.040926	0.52%	0.639283	-0.036419	-0.021405
	Juni 2024	9.925	0.072973	0.52%	0.835264	0.013319	0.011982		Juni 2024	970	-0.039604	0.52%	0.639283	0.013319	0.010393
	Juli 2024	10.275	0.035264	0.52%	0.835264	0.027207	0.023583		Juli 2024	990	0.020619	0.52%	0.639283	0.027207	0.019272
	Agustus 2024	10.325	0.004866	0.52%	0.835264	0.057192	0.048628		Agustus 2024	995	0.005051	0.52%	0.639283	0.057192	0.038440
	September 2024	10.325	0.000000	0.50%	0.835264	-0.018616	-0.014726		September 2024	965	-0.030151	0.50%	0.639283	-0.018616	-0.010097
	Oktober 2024	10.260	-0.007264	0.50%	0.835264	-0.006123	-0.005928		Oktober 2024	980	0.015544	0.50%	0.639283	-0.006123	0.005710
	November 2024	10.000	-0.024390	0.50%	0.835264	-0.060701	-0.049878		November 2024	940	-0.040816	0.50%	0.639283	-0.060701	-0.037001
	Desember 2024	9.675	-0.032500	0.50%	0.835264	-0.040831	-0.032312		Desember 2024	910	-0.031915	0.50%	0.639283	-0.040831	-0.001285

Kode Emiten	Periode	Harga Saham	$R_{it} = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{ft}	β_i	R_{M}	$ER_{it} = R_{ft} + \beta_i(R_{Mt} - R_{ft})$	Kode Emiten	Periode	Harga Saham	$R_{it} = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{ft}	β_i	R_{M}	$ER_{it} = R_{ft} + \beta_i(R_{Mt} - R_{ft})$
BBCA	Januari 2022	3.663		0.29%	1.698658			BBRI	Januari 2022	3.738		0.29%	1.641604		
	Februari 2022	4.000	0.092150	0.29%	1.698658	0.038759	0.063801		Februari 2022	3.850	0.030100	0.29%	1.641604	0.038759	0.061756
	Maret 2022	4.125	0.031250	0.29%	1.698658	0.026606	0.043158		Maret 2022	3.950	0.025974	0.29%	1.641604	0.026606	0.041806
	April 2022	4.613	0.118182	0.29%	1.698658	0.022268	0.035780		April 2022	4.475	0.132911	0.29%	1.641604	0.022268	0.034685
	Mei 2022	4.588	-0.005420	0.29%	1.698658	-0.011058	-0.020822		Mei 2022	4.750	-0.050279	0.29%	1.641604	-0.011058	-0.020025
	Juni 2022	3.925	-0.144414	0.29%	1.698658	-0.033206	-0.058444		Juni 2022	3.963	-0.067647	0.29%	1.641604	-0.033206	-0.056383
	Juli 2022	3.925	0.000000	0.29%	1.698658	0.005721	0.007680		Juli 2022	4.138	0.044164	0.29%	1.641604	0.005721	0.007520
	Agustus 2022	4.263	0.085987	0.31%	1.698658	0.032724	0.053404		Agustus 2022	4.425	0.069486	0.31%	1.641604	0.032724	0.051715
	September 2022	4.488	0.053766	0.35%	1.698658	0.019195	-0.015079		September 2022	4.713	0.064972	0.35%	1.641604	0.019195	0.037382
	Oktober 2022	4.700	0.047354	0.40%	1.698658	0.008250	0.011249		Oktober 2022	5.275	0.119363	0.40%	1.641604	0.008250	0.011004
	November 2022	4.950	0.053191	0.44%	1.698658	0.002476	-0.007263		November 2022	5.263	-0.002370	0.44%	1.641604	0.002476	-0.006872
	Desember 2022	4.613	-0.068182	0.46%	1.698658	-0.032577	-0.058540		Desember 2022	4.963	-0.057007	0.46%	1.641604	-0.032577	-0.056420
	Januari 2023	4.575	-0.008130	0.48%	1.698658	-0.001647	-0.006145		Januari 2023	4.975	0.025519	0.48%	1.641604	-0.001647	-0.005777
	Februari 2023	4.388	-0.040954	0.48%	1.698658	0.009570	-0.002379		Februari 2023	5.000	0.050525	0.48%	1.641604	0.009570	0.002138
	Maret 2023	4.675	0.065527	0.48%	1.698658	0.005347	-0.012770		Maret 2023	5.163	0.032500	0.48%	1.641604	0.005347	0.012180
	April 2023	4.713	0.008021	0.48%	1.698658	0.016229	0.024219		April 2023	5.175	0.002421	0.48%	1.641604	0.016229	0.023567
	Mei 2023	4.525	-0.039788	0.48%	1.698658	-0.040843	-0.072726		Mei 2023	5.050	-0.024155	0.48%	1.641604	-0.040843	-0.070123
	Juni 2023	4.575	0.011050	0.48%	1.698658	0.004315	0.013981		Juni 2023	5.200	0.029769	0.48%	1.641604	0.004315	0.040009
	Juli 2023	4.438	-0.030355	0.48%	1.698658	0.004051	0.065365		Juli 2023	5.225	0.100962	0.48%	1.641604	0.004051	0.063330
	Agustus 2023	4.588	0.033803	0.48%	1.698658	0.003160	0.002019		Agustus 2023	6.025	0.052402	0.48%	1.641604	0.003160	0.002112
	September 2023	5.163	0.125341	0.48%	1.698658	0.001923	-0.006614		September 2023	6.025	0.000000	0.48%	1.641604	0.001923	0.006621
	Oktober 2023	4.790	-0.072155	0.50%	1.698658	-0.027044	-0.049431		Oktober 2023	5.675	-0.058091	0.50%	1.641604	-0.027044	-0.047603
	November 2023	5.275	0.101253	0.50%	1.698658	0.048655	0.079155		November 2023	5.850	0.030857	0.50%	1.641604	0.048655	0.077665
	Desember 2023	5.375	0.018957	0.50%	1.698658	0.027124	0.045582		Desember 2023	6.050	0.034188	0.50%	1.641604	0.027124	0.041319
	Januari 2024	5.750	0.069767	0.50%	1.698658	-0.008918	-0.018642		Januari 2024	6.650	0.099174	0.50%	1.641604	-0.008918	-0.017848
	Februari 2024	6.000	0.043478	0.50%	1.698658	0.015007	0.021999		Februari 2024	7.000	0.052632	0.50%	1.641604	0.015007	0.021428
	Maret 2024	5.900	-0.016667	0.50%	1.698658	-0.003731	-0.009832		Maret 2024	7.250	0.035714	0.50%	1.641604	-0.003731	-0.009334
	April 2024	5.250	-0.111069	0.52%	1.698658	-0.070492	-0.015636		April 2024	6.900	-0.048276	0.52%	1.641604	-0.070492	-0.015641
Mei 2024	4.460	-0.161905	0.52%	1.698658	-0.065802	-0.021902	Mei 2024	6.700	-0.144921	0.52%	1.641604	-0.065802	-0.021912		
Juni 2024	4.660	0.059901	0.52%	1.698658	0.031319	0.048855	Juni 2024	6.500	0.042373	0.52%	1.641604	0.031319	0.018522		
Juli 2024	4.970	0.066524	0.52%	1.698658	0.027207	0.021977	Juli 2024	6.400	0.040650	0.52%	1.641604	0.027207	0.020781		
Agustus 2024	5.350	0.076659	0.52%	1.698658	0.057192	0.093510	Agustus 2024	7.125	0.113281	0.52%	1.641604	0.057192	0.090545		
September 2024	5.550	0.000000	0.50%	1.698658	-0.018616	-0.035111	September 2024	6.925	-0.028070	0.50%	1.641604	-0.018616	-0.035748		
Oktober 2024	5.250	-0.018602	0.50%	1.698658	-0.009073	-0.016007	Oktober 2024	6.700	-0.032461	0.50%	1.641604	-0.009073	-0.016043		
November 2024	4.980	-0.051429	0.50%	1.698658	-0.040401	-0.106603	November 2024	6.150	-0.082090	0.50%	1.641604	-0.040401	-0.102855		
Desember 2024	4.450	-0.125066	0.50%	1.698658	-0.006871	-0.011700	Desember 2024	5.700	-0.073711	0.50%	1.641604	-0.006871	-0.011139		

Lampiran 27b Perhitungan ER_i CAPM Bulanan

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{It}	β_i	R_{Mt}	$ER_{It} = R_{It} + \beta_i((R_{Mt} - R_{It}))$	Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{It}	β_i	R_{Mt}	$ER_{It} = R_{It} + \beta_i((R_{Mt} - R_{It}))$
IBRI	Januari 2022	4.070	-	0.29%	1.577168	-	-	BRIS	Januari 2022	1.507	-	0.29%	0.765418	-	-
	Februari 2022	4.550	0.117936	0.29%	1.577168	0.038759	0.059447		Februari 2022	1.624	0.077672	0.29%	0.765418	0.038759	0.030351
	Maret 2022	4.660	0.024176	0.29%	1.577168	0.026606	0.040280		Maret 2022	1.565	-0.036037	0.29%	0.765418	0.026606	0.021049
	April 2022	4.870	0.045064	0.29%	1.577168	0.022268	0.033438		April 2022	1.541	-0.015575	0.29%	0.765418	0.022268	0.017729
	Mei 2022	4.630	-0.049281	0.29%	1.577168	-0.011058	-0.019124		Mei 2022	1.404	-0.088612	0.29%	0.765418	-0.011058	-0.007780
	Jun 2022	4.150	-0.103672	0.29%	1.577168	-0.033206	-0.054055		Jun 2022	1.307	-0.069444	0.29%	0.765418	-0.033206	-0.024732
	Juli 2022	4.360	0.050602	0.29%	1.577168	0.005721	0.007339		Juli 2022	1.595	0.220153	0.29%	0.765418	0.005721	0.005063
	Agustus 2022	4.340	-0.004587	0.31%	1.577168	0.032724	0.049808		Agustus 2022	1.482	-0.070336	0.31%	0.765418	0.032724	0.025781
	September 2022	4.490	0.034562	0.35%	1.577168	-0.019195	-0.032317		September 2022	1.434	-0.032898	0.35%	0.765418	-0.019195	-0.013861
	Oktober 2022	4.650	0.035635	0.40%	1.577168	0.008250	0.010728		Oktober 2022	1.365	-0.047618	0.40%	0.765418	0.008250	0.007244
	November 2022	4.980	0.070960	0.44%	1.577168	-0.002476	-0.006431		November 2022	1.302	-0.046425	0.44%	0.765418	-0.002476	-0.000869
	Desember 2022	4.940	-0.008032	0.46%	1.577168	-0.032577	-0.054025		Desember 2022	1.290	-0.009247	0.46%	0.765418	-0.032577	-0.023869
	Januari 2023	4.580	-0.072874	0.48%	1.577168	-0.001647	-0.005361		Januari 2023	1.335	0.034884	0.48%	0.765418	-0.001647	-0.000136
	Februari 2023	4.670	0.019651	0.48%	1.577168	0.000570	-0.001866		Februari 2023	1.520	0.138577	0.48%	0.765418	0.000570	0.001561
	Maret 2023	4.730	0.012848	0.48%	1.577168	-0.005547	-0.011514		Maret 2023	1.680	0.105263	0.48%	0.765418	-0.005547	-0.003122
	April 2023	5.100	0.078224	0.48%	1.577168	0.016229	0.022830		April 2023	1.730	0.029762	0.48%	0.765418	0.016229	0.013546
	Mei 2023	5.575	0.093137	0.48%	1.577168	-0.040843	-0.067182		Mei 2023	1.730	0.000000	0.48%	0.765418	-0.040843	-0.030138
	Jun 2023	5.425	-0.026906	0.48%	1.577168	0.004315	0.004039		Jun 2023	1.690	-0.023121	0.48%	0.765418	0.004315	0.004427
	Juli 2023	5.650	0.041475	0.48%	1.577168	0.040451	0.061033		Juli 2023	1.655	-0.020710	0.48%	0.765418	0.040451	0.032086
	Agustus 2023	5.550	-0.017699	0.48%	1.577168	0.003160	0.002218		Agustus 2023	1.710	0.033233	0.48%	0.765418	0.003160	0.003542
	September 2023	5.225	-0.053559	0.48%	1.577168	-0.001923	-0.005796		September 2023	1.625	-0.049708	0.48%	0.765418	-0.001923	-0.003048
	Oktober 2023	4.960	-0.050718	0.50%	1.577168	-0.027044	-0.045538		Oktober 2023	1.500	-0.076923	0.50%	0.765418	-0.027044	-0.019527
	November 2023	5.275	0.063508	0.50%	1.577168	0.048655	0.073852		November 2023	1.655	0.103333	0.50%	0.765418	0.048655	0.038414
	Desember 2023	5.725	0.085308	0.50%	1.577168	0.027124	0.039894		Desember 2023	1.740	0.051360	0.50%	0.765418	0.027124	0.021934
	Januari 2024	5.700	-0.004367	0.50%	1.577168	-0.009918	-0.016951		Januari 2024	2.330	0.339080	0.50%	0.765418	-0.009918	-0.005542
	Februari 2024	6.125	0.074561	0.50%	1.577168	0.015907	0.020783		Februari 2024	2.470	0.060066	0.50%	0.765418	0.015907	0.012660
	Maret 2024	6.050	-0.012245	0.50%	1.577168	-0.003731	-0.008771		Maret 2024	2.710	0.097166	0.50%	0.765418	-0.003731	-0.001683
	April 2024	4.940	-0.183471	0.52%	1.577168	-0.007492	-0.014823		April 2024	2.640	-0.025830	0.52%	0.765418	-0.007492	-0.004513
	Mei 2024	4.340	-0.121457	0.52%	1.577168	-0.036419	-0.064444		Mei 2024	2.200	-0.166667	0.52%	0.765418	-0.036419	-0.026654
	Jun 2024	4.600	0.059908	0.52%	1.577168	0.013319	0.017989		Jun 2024	2.620	0.190909	0.52%	0.765418	0.013319	0.011416
	Juli 2024	4.670	0.015217	0.52%	1.577168	0.027207	0.039904		Juli 2024	2.600	-0.007634	0.52%	0.765418	0.027207	0.022047
	Agustus 2024	5.150	0.102784	0.52%	1.577168	0.057192	0.087195		Agustus 2024	2.650	0.019231	0.52%	0.765418	0.057192	0.044997
	September 2024	4.950	-0.038835	0.50%	1.577168	-0.018616	-0.032247		September 2024	3.010	0.135849	0.50%	0.765418	-0.018616	-0.013076
	Oktober 2024	4.800	-0.030303	0.50%	1.577168	0.006123	0.006670		Oktober 2024	3.030	0.006645	0.50%	0.765418	0.006123	0.005859
	November 2024	4.250	-0.114583	0.50%	1.577168	-0.009862	-0.020061		November 2024	2.900	-0.042904	0.50%	0.765418	-0.009862	-0.004528
	Desember 2024	4.080	-0.040000	0.50%	1.577168	-0.004831	-0.010505		Desember 2024	2.730	-0.058621	0.50%	0.765418	-0.004831	-0.002525

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{It}	β_i	R_{Mt}	$ER_{It} = R_{It} + \beta_i((R_{Mt} - R_{It}))$	Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{It}	β_i	R_{Mt}	$ER_{It} = R_{It} + \beta_i((R_{Mt} - R_{It}))$
BBTN	Januari 2022	1.501		0.29%	1.128306			BTSP	Januari 2022	3.480		0.29%	1.850223		
	Februari 2022	1.577	0.050300	0.29%	1.128306	0.038759	0.043358		Februari 2022	3.590	0.031609	0.29%	1.850223	0.038759	0.069234
	Maret 2022	1.524	-0.033806	0.29%	1.128306	0.026606	0.029646		Maret 2022	3.300	-0.080780	0.29%	1.850223	0.026606	0.046748
	April 2022	1.639	0.075800	0.29%	1.128306	0.022268	0.024751		April 2022	3.450	0.045455	0.29%	1.850223	0.022268	0.038722
	Mei 2022	1.510	-0.078586	0.29%	1.128306	-0.011058	-0.012851		Mei 2022	3.050	-0.115042	0.29%	1.850223	-0.011058	-0.022940
	Jun 2022	1.293	-0.144118	0.29%	1.128306	-0.033206	-0.037841		Jun 2022	2.820	-0.075410	0.29%	1.850223	-0.033206	-0.063919
	Juli 2022	1.306	0.010305	0.29%	1.128306	0.005721	0.006081		Juli 2022	2.810	-0.003546	0.29%	1.850223	0.005721	0.008105
	Agustus 2022	1.337	0.023814	0.31%	1.128306	0.032724	0.036522		Agustus 2022	2.960	0.053381	0.31%	1.850223	0.032724	0.057890
	September 2022	1.319	-0.013290	0.35%	1.128306	-0.019195	-0.022112		September 2022	2.730	-0.077703	0.35%	1.850223	-0.019195	-0.038525
	Oktober 2022	1.373	0.040401	0.40%	1.128306	0.008250	0.008801		Oktober 2022	2.950	0.080536	0.40%	1.850223	0.008250	0.011900
	November 2022	1.364	-0.006470	0.44%	1.128306	-0.002476	-0.003356		November 2022	3.200	0.084746	0.44%	1.850223	-0.002476	-0.008302
	Desember 2022	1.350	-0.010046	0.46%	1.128306	-0.032577	-0.037345		Desember 2022	2.790	-0.128125	0.46%	1.850223	-0.032577	-0.064172
	Januari 2023	1.360	0.007407	0.48%	1.128306	-0.001647	-0.002473		Januari 2023	2.560	-0.082437	0.48%	1.850223	-0.001647	-0.007120
	Februari 2023	1.325	-0.025735	0.48%	1.128306	0.000570	-0.000629		Februari 2023	2.340	-0.085998	0.48%	1.850223	0.000570	-0.004019
	Maret 2023	1.225	-0.075472	0.48%	1.128306	-0.005547	-0.008874		Maret 2023	2.190	-0.064103	0.48%	1.850223	-0.005547	-0.014337
	April 2023	1.245	0.016327	0.48%	1.128306	0.016229	0.017696		April 2023	2.140	-0.022831	0.48%	1.850223	0.016229	0.025952
	Mei 2023	1.280	0.028142	0.48%	1.128306	-0.040843	-0.046698		Mei 2023	1.900	-0.112150	0.48%	1.850223	-0.040843	-0.079643
	Jun 2023	1.320	0.031250	0.48%	1.128306	0.004315	0.004253		Jun 2023	2.070	0.089474	0.48%	1.850223	0.004315	0.003909
	Juli 2023	1.315	-0.003788	0.48%	1.128306	0.040451	0.045026		Juli 2023	2.120	0.028988	0.48%	1.850223	0.040451	0.070709
	Agustus 2023	1.285	-0.045627	0.48%	1.128306	0.003160	0.002950		Agustus 2023	2.160	0.014085	0.48%	1.850223	0.003160	0.001772
	September 2023	1.220	-0.027888	0.48%	1.128306	-0.001923	-0.002784		September 2023	1.905	-0.118056	0.48%	1.850223	-0.001923	-0.007632
	Oktober 2023	1.225	0.004098	0.50%	1.128306	-0.027044	-0.031155		Oktober 2023	1.575	-0.173228	0.50%	1.850223	-0.027044	-0.054288
	November 2023	1.295	0.057143	0.50%	1.128306	0.048655	0.054256		November 2023	1.655	0.050794	0.50%	1.850223	0.048655	0.085772
	Desember 2023	1.290	-0.034749	0.50%	1.128306	0.027124	0.029963		Desember 2023	1.690	0.021148	0.50%	1.850223	0.027124	0.044935
	Januari 2024	1.305	0.044000	0.50%	1.128306	-0.009918	-0.010704		Januari 2024	1.590	-0.059172	0.50%	1.850223	-0.009918	-0.020752
	Februari 2024	1.430	0.095785	0.50%	1.128306	0.015907	0.016291		Februari 2024	1.375	-0.135220	0.50%	1.850223	0.015907	0.032515
	Maret 2024	1.555	0.087413	0.50%	1.128306	-0.003731	-0.004852		Maret 2024	1.355	-0.014545	0.50%	1.850223	-0.003731	-0.011155
April 2024	1.320	-0.151125	0.52%	1.128306	-0.009120	-0.009120	April 2024	1.215	-0.103229	0.52%	1.850223	-0.009120	-0.018120		
Mei 2024	1.265	-0.071770	0.52%	1.128306	-0.036419	-0.041760	Mei 2024	1.065	-0.041552	0.52%	1.850223	-0.036419	-0.071781		
Jun 2024	1.265	0.032655	0.52%	1.128306	0.031319	0.031459	Jun 2024	1.145	-0.071767	0.52%	1.850223	0.031319	0.020214		
Juli 2024	1.315	0.039526	0.52%	1.128306	0.027207	0.030360	Juli 2024	1.100	-0.004367	0.52%	1.850223	0.027207	0.045911		
Agustus 2024	1.410	0.072243	0.52%	1.128306	0.057192	0.063862	Agustus 2024	1.265	0.109609	0.52%	1.850223	0.057192	0.101389		
September 2024	1.450	0.028209	0.50%	1.128306	0.011646	0.011646	September 2024	1.215	-0.039526	0.50%	1.850223	0.011646	0.038095		
Oktober 2024	1.445	-0.010304	0.50%	1.128306	0.006123	0.006267	Oktober 2024	1.065	-0.123455	0.50%	1.850223	0.006123	-0.071023		
November 2024	1.285	-0.085409	0.50%	1.128306	-0.060701	-0.069131	November 2024	1.010	-0.145540	0.50%	1.850223	-0.060701	-0.115651		
Desember 2024	1.140	-0.112840	0.50%	1.128306	-0.040831	-0.060693	Desember 2024	925	-0.016484	0.50%	1.850223	-0.040831	-0.031904		

Lampiran 27b Perhitungan ER_i CAPM Bulanan

Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{It}	β_i	R_{M}	$ER_{It} = R_{It} + \beta_i((R_{M} - R_{It}))$	Kode Emiten	Periode	Harga Saham	$R_i = \frac{(P_t - P_{t-1})}{P_{t-1}}$	R_{It}	β_i	R_{M}	$ER_{It} = R_{It} + \beta_i((R_{M} - R_{It}))$
BDMN	Januari 2022	2.400	-	0.29%	0.890040	-	-	PSNB	Januari 2022	745	-	0.29%	0.855418	-	-
	Februari 2022	2.380	-0.008333	0.29%	0.890040	0.038759	0.034818		Februari 2022	800	0.073826	0.29%	0.855418	0.038759	0.033577
	Maret 2022	2.440	0.025210	0.29%	0.890040	0.026606	0.024002		Maret 2022	760	-0.050000	0.29%	0.855418	0.026606	0.023181
	April 2022	2.450	0.004098	0.29%	0.890040	0.022268	0.020141		April 2022	1.010	0.328947	0.29%	0.855418	0.022268	0.019471
	Mei 2022	2.560	0.044898	0.29%	0.890040	-0.011058	-0.009522		Mei 2022	1.205	0.193069	0.29%	0.855418	-0.011058	-0.009038
	Juni 2022	2.350	-0.082031	0.29%	0.890040	-0.033206	-0.029234		Juni 2022	1.690	0.402490	0.29%	0.855418	-0.033206	-0.027983
	Juli 2022	2.510	0.068085	0.29%	0.890040	0.005721	0.005412		Juli 2022	1.790	0.059172	0.29%	0.855418	0.005721	0.005315
	Agustus 2022	2.640	0.051793	0.31%	0.890040	0.032724	0.029469		Agustus 2022	1.995	0.114525	0.31%	0.855418	0.032724	0.028445
	September 2022	2.540	-0.037879	0.35%	0.890040	-0.019195	-0.016695		September 2022	2.130	0.067669	0.35%	0.855418	-0.019195	-0.015907
	Oktober 2022	3.400	0.335853	0.40%	0.890040	0.008250	0.007779		Oktober 2022	2.400	0.126761	0.40%	0.855418	0.008250	0.007630
	November 2022	3.020	-0.111765	0.44%	0.890040	-0.002476	-0.001723		November 2022	1.900	-0.208333	0.44%	0.855418	-0.002476	-0.001486
	Desember 2022	2.730	-0.096026	0.46%	0.890040	-0.032577	-0.028491		Desember 2022	1.540	-0.189474	0.46%	0.855418	-0.032577	-0.027205
	Januari 2023	2.650	-0.029304	0.48%	0.890040	-0.001647	-0.000939		Januari 2023	1.580	0.025974	0.48%	0.855418	-0.001647	-0.000716
	Februari 2023	2.860	0.079245	0.48%	0.890040	0.000570	0.001034		Februari 2023	1.445	-0.085443	0.48%	0.855418	0.000570	0.001181
	Maret 2023	2.870	0.003497	0.48%	0.890040	-0.005547	-0.004410		Maret 2023	1.430	-0.010381	0.48%	0.855418	-0.005547	-0.004052
	April 2023	2.820	-0.017422	0.48%	0.890040	0.016229	0.014971		April 2023	1.105	-0.227273	0.48%	0.855418	0.016229	0.014575
	Mei 2023	2.760	-0.021277	0.48%	0.890040	-0.040843	-0.035825		Mei 2023	1.085	-0.018100	0.48%	0.855418	-0.040843	-0.034245
	Juni 2023	2.930	0.061594	0.48%	0.890040	0.004315	0.004367		Juni 2023	1.085	0.000000	0.48%	0.855418	0.004315	0.004384
	Juli 2023	3.060	0.044369	0.48%	0.890040	0.040451	0.036530		Juli 2023	1.280	0.179724	0.48%	0.855418	0.040451	0.035295
	Agustus 2023	2.930	-0.042484	0.48%	0.890040	0.003160	0.003339		Agustus 2023	1.305	0.019531	0.48%	0.855418	0.003160	0.003396
	September 2023	2.860	-0.023801	0.48%	0.890040	-0.010123	-0.001185		September 2023	1.250	-0.042144	0.48%	0.855418	-0.010123	-0.000952
	Oktober 2023	2.740	-0.041958	0.50%	0.890040	-0.027044	-0.023520		Oktober 2023	1.135	-0.092000	0.50%	0.855418	-0.027044	-0.022411
	November 2023	2.850	0.040146	0.50%	0.890040	0.048655	0.043855		November 2023	1.120	-0.013216	0.50%	0.855418	0.048655	0.042443
	Desember 2023	2.780	-0.024561	0.50%	0.890040	0.027124	0.024692		Desember 2023	1.210	0.080357	0.50%	0.855418	0.027124	0.023926
	Januari 2024	2.830	0.017986	0.50%	0.890040	-0.008918	-0.007388		Januari 2024	1.100	-0.090909	0.50%	0.855418	-0.008918	-0.006906
	Februari 2024	2.910	0.028269	0.50%	0.890040	0.015007	0.013907		Februari 2024	1.120	0.018182	0.50%	0.855418	0.015007	0.013560
	Maret 2024	2.980	0.024055	0.50%	0.890040	-0.003731	-0.002771		Maret 2024	1.150	0.026786	0.50%	0.855418	-0.003731	-0.002469
	April 2024	2.740	-0.080537	0.52%	0.890040	-0.007492	-0.006096		April 2024	1.115	-0.030435	0.52%	0.855418	-0.007492	-0.006566
	Mei 2024	2.570	-0.062044	0.52%	0.890040	-0.036419	-0.031841		Mei 2024	1.180	0.058296	0.52%	0.855418	-0.036419	-0.030400
BDMN	Juni 2024	2.580	0.003891	0.52%	0.890040	0.013319	0.012427	PSNB	Juni 2024	1.145	-0.029661	0.52%	0.855418	0.013319	0.012146
	Juli 2024	2.590	0.003876	0.52%	0.890040	0.027207	0.024788		Juli 2024	1.215	0.061135	0.52%	0.855418	0.027207	0.024027
	Agustus 2024	2.610	0.007722	0.52%	0.890040	0.057192	0.051474		Agustus 2024	1.400	0.152263	0.52%	0.855418	0.057192	0.049676
	September 2024	2.600	-0.003831	0.50%	0.890040	-0.018616	-0.016019		September 2024	1.625	0.160714	0.50%	0.855418	-0.018616	-0.015202
	Oktober 2024	2.570	-0.011538	0.50%	0.890040	0.006123	0.005999		Oktober 2024	1.900	0.169231	0.50%	0.855418	0.006123	0.005960
	November 2024	2.520	-0.019455	0.50%	0.890040	-0.060701	-0.055476		November 2024	1.780	-0.063158	0.50%	0.855418	-0.060701	-0.051202
	Desember 2024	2.540	0.007957	0.50%	0.890040	-0.004831	-0.003750		Desember 2024	1.860	0.044944	0.50%	0.855418	-0.004831	-0.003410



Lampiran 27c MADsim

Periode	BBCA				BBNI				BBRI				
	R _t	ER _t	et	[et]	R _t	ER _t	et	[et]	R _t	ER _t	et	[et]	
Februari 2022	0.055738	0.038127	0.017610	0.017610	0.092150	0.069671	0.022479	0.022479	0.117936	0.060154	0.057783	0.057783	
Maret 2022	-0.009317	0.027976	-0.037293	0.037293	0.031250	0.049027	-0.017777	0.017777	0.024176	0.040986	-0.016810	0.016810	
April 2022	0.018809	0.024353	-0.005544	0.005544	0.118182	0.041658	0.076524	0.076524	0.045064	0.034144	0.010920	0.010920	
Mei 2022	-0.046154	-0.003484	-0.042670	0.042670	-0.005420	-0.014953	0.009533	0.009533	-0.049281	-0.018418	-0.030864	0.030864	
Junni 2022	-0.064516	-0.021983	-0.042533	0.042533	-0.144414	-0.052574	-0.091840	0.091840	-0.103672	-0.053348	-0.050323	0.050323	
Juli 2022	0.013793	0.010531	0.003262	0.003262	0.000000	0.013549	-0.013549	0.013549	0.050602	0.008046	0.042556	0.042556	
Agustus 2022	0.115646	0.033086	0.082560	0.082560	0.085987	0.059419	0.026568	0.026568	-0.004587	0.050635	-0.055222	0.055222	
September 2022	0.042683	-0.010280	0.052962	0.052962	0.052786	-0.028773	0.081559	0.081559	0.034562	-0.031250	0.065812	0.065812	
Oktober 2022	0.029240	0.012644	0.016595	0.016595	0.047354	0.017846	0.029507	0.029507	0.035635	0.012036	0.023599	0.023599	
November 2022	0.056818	0.003684	0.053134	0.053134	0.053191	-0.000375	0.053567	0.053567	0.070968	-0.004882	0.075850	0.075850	
Desember 2022	-0.080645	-0.021458	-0.059187	0.059187	-0.068182	-0.051506	-0.016676	0.016676	-0.008032	-0.052357	0.044324	0.044324	
Januari 2023	-0.008772	0.004378	-0.013150	0.013150	-0.008130	0.001035	-0.009165	0.009165	-0.072874	-0.003574	-0.069301	0.069301	
Februari 2023	0.032448	0.006229	0.026219	0.026219	-0.040984	0.004800	-0.045784	0.045784	0.019651	-0.000077	0.019728	0.019728	
Maret 2023	0.000000	0.001120	-0.001120	0.001120	0.065527	-0.005591	0.071118	0.071118	0.012848	-0.009725	0.022573	0.022573	
April 2023	0.034286	0.019308	0.014978	0.014978	0.008021	0.031398	-0.023377	0.023377	0.078224	0.024618	0.053606	0.053606	
Mei 2023	0.000000	-0.028362	0.028362	0.028362	-0.039788	-0.065547	0.025759	0.025759	0.093137	-0.065393	0.158531	0.158531	
Juni 2023	0.011050	0.009357	0.001693	0.001693	0.011050	0.011161	-0.000111	0.000111	-0.026906	0.005828	-0.032734	0.032734	
Juli 2023	-0.002732	0.039540	-0.042273	0.042273	-0.030055	0.072544	-0.102599	0.102599	0.041475	0.062821	-0.021347	0.021347	
Agustus 2023	0.005479	0.008392	-0.002913	0.002913	0.033803	0.009199	0.024604	0.024604	-0.017699	0.004006	-0.021706	0.021706	
September 2023	-0.038147	0.004147	-0.042294	0.042294	0.125341	0.000565	0.124775	0.124775	-0.058559	-0.004009	-0.054549	0.054549	
Oktober 2023	-0.008499	-0.016836	0.008337	0.008337	-0.072155	-0.042106	-0.030049	0.030049	-0.050718	-0.043629	-0.007089	0.007089	
November 2023	0.025714	0.046393	-0.020679	0.020679	0.101253	0.086480	0.014773	0.014773	0.063508	0.075761	-0.012253	0.012253	
Desember 2023	0.047354	0.028409	0.018945	0.018945	0.018957	0.049906	-0.030949	0.030949	0.085308	0.041803	0.043505	0.043505	
Januari 2024	0.015957	-0.001696	0.017653	0.017653	0.069767	-0.011317	0.081085	0.081085	-0.004367	-0.015042	0.010675	0.010675	
Februari 2024	0.034031	0.018288	0.015744	0.015744	0.043478	0.029323	0.014155	0.014155	0.074561	0.022692	0.051869	0.051869	
Maret 2024	0.020253	0.002636	0.017617	0.017617	-0.016667	-0.002507	-0.014160	0.014160	-0.012245	-0.006862	-0.005383	0.005383	
April 2024	-0.027295	-0.000505	-0.026790	0.026790	-0.110169	-0.008895	-0.101274	0.101274	-0.183471	-0.012793	-0.170678	0.170678	
Mei 2024	-0.056122	-0.024666	-0.031456	0.031456	-0.161905	-0.058031	-0.103874	0.103874	-0.121457	-0.058415	-0.063042	0.063042	
Juni 2024	0.072973	0.016877	0.056096	0.056096	0.059091	0.026455	0.032636	0.032636	0.059908	0.020029	0.039879	0.039879	
Juli 2024	0.035264	0.028478	0.006786	0.006786	0.066524	0.050047	0.016476	0.016476	0.015217	0.041934	-0.026716	0.026716	
Agustus 2024	0.004866	0.053523	-0.048657	0.048657	0.076459	0.100981	-0.024522	0.024522	0.102784	0.089224	0.013559	0.013559	
September 2024	0.000000	-0.009796	0.009796	0.009796	0.000000	-0.027791	0.027791	0.027791	-0.038835	-0.030338	-0.008497	0.008497	
Oktober 2024	-0.007264	0.010867	-0.018131	0.018131	-0.018692	0.014232	-0.032923	0.032923	-0.030303	0.008680	-0.038983	0.038983	
November 2024	-0.024390	-0.044948	0.020558	0.020558	-0.051429	-0.099278	0.047850	0.047850	-0.114583	-0.096712	-0.017871	0.017871	
Desember 2024	-0.032500	0.001718	-0.034218	0.034218	-0.126506	-0.004375	-0.122131	0.122131	-0.040000	-0.008596	-0.031404	0.031404	
Jumlah				0.937815	Jumlah				1.561518	Jumlah			1.469542
MAD				0.02679471	MAD				0.04461481	MAD			0.0419869



Lampiran 27c MAD_{SIM}

Periode	BBTN				BDMN				BJBR			
	R _i	ER _i	et	[et]	R _i	ER _i	et	[et]	R _i	ER _i	et	[et]
Februari 2022	0.050300	0.035321	0.014979	0.014979	-0.008333	0.036554	-0.044887	0.044887	0.056815	0.013795	0.043020	0.043020
Maret 2022	-0.033806	0.021609	-0.055415	0.055415	0.025210	0.025737	-0.000527	0.000527	0.096207	0.006026	0.090181	0.090181
April 2022	0.075800	0.016714	0.059086	0.059086	0.004098	0.021876	-0.017778	0.017778	-0.032787	0.003253	-0.036040	0.036040
Mei 2022	-0.078586	-0.020889	-0.057697	0.057697	0.044898	-0.007786	0.052684	0.052684	-0.010169	-0.018052	0.007883	0.007883
Juni 2022	-0.144118	-0.045878	-0.098240	0.098240	-0.082031	-0.027498	-0.054533	0.054533	-0.058219	-0.032211	-0.026008	0.026008
Juli 2022	0.010305	-0.001957	0.012261	0.012261	0.068085	0.007148	0.060937	0.060937	-0.025455	-0.007326	-0.018129	0.018129
Agustus 2022	0.023814	0.028511	-0.004697	0.004697	0.051793	0.031182	0.020610	0.020610	0.037313	0.009937	0.027376	0.027376
September 2022	-0.013290	-0.030069	0.016778	0.016778	-0.037879	-0.015027	-0.022851	0.022851	-0.025180	-0.023254	-0.001926	0.001926
Oktober 2022	0.040401	0.000898	0.039503	0.039503	0.338583	0.009400	0.329183	0.329183	0.014760	-0.005709	0.020469	0.020469
November 2022	-0.006470	-0.011206	0.004736	0.004736	-0.111765	-0.000148	-0.111617	0.111617	-0.010909	-0.012566	0.001657	0.001657
Desember 2022	-0.010046	-0.045169	0.035122	0.035122	-0.096026	-0.026939	-0.069088	0.069088	-0.011029	-0.031809	0.020780	0.020780
Januari 2023	0.007407	-0.010269	0.017677	0.017677	-0.029304	0.000591	-0.029895	0.029895	0.014870	-0.012036	0.026906	0.026906
Februari 2023	-0.025735	-0.007768	-0.017967	0.017967	0.079245	0.002564	0.076681	0.076681	-0.032967	-0.010618	-0.022349	0.022349
Maret 2023	-0.075472	-0.014670	-0.060801	0.060801	0.003497	-0.002881	0.006377	0.006377	0.030303	-0.014529	0.044832	0.044832
April 2023	0.016327	0.009899	0.006427	0.006427	-0.017422	0.016501	-0.033922	0.033922	-0.077206	-0.000608	-0.076598	0.076598
Mei 2023	0.028112	-0.054495	0.082608	0.082608	-0.021277	-0.034296	0.013019	0.013019	-0.031873	-0.037093	0.005221	0.005221
Juni 2023	0.031250	-0.003543	0.034793	0.034793	0.061594	0.005897	0.055698	0.055698	-0.028807	-0.008225	-0.020582	0.020582
Juli 2023	-0.003788	0.037230	-0.041018	0.041018	0.043469	0.038060	0.006309	0.006309	0.008475	0.014877	-0.006402	0.006402
Agustus 2023	-0.045627	-0.004847	-0.040781	0.040781	-0.042484	0.004869	-0.047352	0.047352	-0.004202	-0.008963	0.004761	0.004761
September 2023	-0.027888	-0.010581	-0.017307	0.017307	-0.023891	0.000345	-0.024236	0.024236	-0.012658	-0.012212	-0.000446	0.000446
Oktober 2023	0.004098	-0.038925	0.043023	0.043023	-0.041958	-0.022013	-0.019945	0.019945	-0.029915	-0.028272	-0.001643	0.001643
November 2023	0.057143	0.046486	0.010656	0.010656	0.040146	0.045362	-0.005216	0.005216	-0.013216	0.020121	-0.033337	0.033337
Desember 2023	-0.034749	0.022193	-0.056942	0.056942	-0.024561	0.026198	-0.050760	0.050760	0.026786	0.006357	0.020429	0.020429
Januari 2024	0.044000	-0.018474	0.062474	0.062474	0.017986	-0.005881	0.023867	0.023867	0.013043	-0.016684	0.029728	0.029728
Februari 2024	0.095785	0.008521	0.087264	0.087264	0.028269	0.015413	0.012855	0.012855	0.034335	-0.001389	0.035724	0.035724
Maret 2024	0.087413	-0.012622	0.100034	0.100034	0.024055	-0.001265	0.025320	0.025320	0.004149	-0.013368	0.017518	0.017518
April 2024	-0.151125	-0.016865	-0.134260	0.134260	-0.080537	-0.004612	-0.075925	0.075925	-0.161157	-0.015773	-0.145384	0.145384
Mei 2024	-0.071970	-0.049503	-0.022467	0.022467	-0.062044	-0.030358	-0.031686	0.031686	-0.004926	-0.034265	0.029339	0.029339
Juni 2024	0.032653	0.006616	0.026037	0.026037	0.003891	0.013911	-0.010019	0.010019	-0.039604	-0.002469	-0.037135	0.037135
Juli 2024	0.039526	0.022286	0.017239	0.017239	0.003876	0.026272	-0.022396	0.022396	0.020619	0.006410	0.014208	0.014208
Agustus 2024	0.072243	0.056118	0.016125	0.016125	0.007722	0.052959	-0.045237	0.045237	0.005051	0.025579	-0.020528	0.020528
September 2024	0.028369	-0.029416	0.057785	0.057785	-0.003831	-0.014513	0.010681	0.010681	-0.030151	-0.022884	-0.007267	0.007267
Oktober 2024	-0.031034	-0.001503	-0.029531	0.029531	-0.011538	0.007506	-0.019044	0.019044	0.015544	-0.007069	0.022613	0.022613
November 2024	-0.085409	-0.076901	-0.008509	0.008509	-0.019455	-0.051970	0.032515	0.032515	-0.040816	-0.049788	0.008972	0.008972
Desember 2024	-0.112840	-0.013863	-0.098978	0.098978	0.007937	-0.002243	0.010180	0.010180	-0.031915	-0.014071	-0.017843	0.017843
	Jumlah		1.489220		Jumlah		1.473830		Jumlah		0.94323342	
	MAD		0.04254916		MAD		0.04210944		MAD		0.02694953	

Lampiran 27c MAD_{SIM}

Periode	BMRI				BRIS				BTPS			
	R _i	ER _i	et	[et]	R _i	ER _i	et	[et]	R _i	ER _i	et	[et]
Februari 2022	0.030100	0.074074	-0.043974	0.043974	0.077672	0.049542	0.028130	0.028130	0.031609	0.033410	-0.001801	0.001801
Maret 2022	0.025974	0.054124	-0.028150	0.028150	-0.036037	0.040240	-0.076276	0.076276	-0.080780	0.010924	-0.091704	0.091704
April 2022	0.132911	0.047002	0.085909	0.085909	-0.015575	0.036919	-0.052494	0.052494	0.045455	0.002898	0.042557	0.042557
Mei 2022	-0.050279	-0.007707	-0.042572	0.042572	-0.088612	0.011410	-0.100022	0.100022	-0.115942	-0.058764	-0.057178	0.057178
Juni 2022	-0.067647	-0.044065	-0.023582	0.023582	-0.069444	-0.005542	-0.063902	0.063902	-0.075410	-0.099743	0.024333	0.024333
Juli 2022	0.044164	0.019838	0.024326	0.024326	0.220153	0.024253	0.195900	0.195900	-0.003546	-0.027719	0.024173	0.024173
Agustus 2022	0.069486	0.064167	0.005320	0.005320	-0.070336	0.044922	-0.115258	0.115258	0.053381	0.022243	0.031137	0.031137
September 2022	0.064972	-0.021063	0.086035	0.086035	-0.032898	0.005183	-0.038080	0.038080	-0.077703	-0.073818	-0.003885	0.003885
Oktober 2022	0.119363	0.023991	0.095373	0.095373	-0.047618	0.026190	-0.073808	0.073808	0.080586	-0.023038	0.103625	0.103625
November 2022	-0.002370	0.006381	-0.008751	0.008751	-0.046425	0.017979	-0.064404	0.064404	0.084746	-0.042886	0.127631	0.127631
Desember 2022	-0.057007	-0.043033	-0.013975	0.013975	-0.009247	-0.005061	-0.004186	0.004186	-0.128125	-0.098579	-0.029546	0.029546
Januari 2023	0.002519	0.007743	-0.005225	0.005225	0.034884	0.018614	0.016270	0.016270	-0.082437	-0.041350	-0.041087	0.041087
Februari 2023	0.005025	0.011383	-0.006357	0.006357	0.138577	0.020311	0.118266	0.118266	-0.085938	-0.037249	-0.048689	0.048689
Maret 2023	0.032500	0.001340	0.031160	0.031160	0.105263	0.015629	0.089635	0.089635	-0.064103	-0.048567	-0.015536	0.015536
April 2023	0.002421	0.037087	-0.034666	0.034666	0.029762	0.032296	-0.002534	0.002534	-0.022831	-0.008277	-0.014554	0.014554
Mei 2023	-0.024155	-0.056602	0.032447	0.032447	0.000000	-0.011388	0.011388	0.011388	-0.112150	-0.113873	0.001723	0.001723
Juni 2023	0.029703	0.017529	0.012174	0.012174	-0.023121	0.023177	-0.046298	0.046298	0.089474	-0.030321	0.119794	0.119794
Juli 2023	0.100962	0.076851	0.024110	0.024110	-0.020710	0.050836	-0.071546	0.071546	0.028986	0.036540	-0.007554	0.007554
Agustus 2023	0.052402	0.015633	0.036769	0.036769	0.033233	0.022293	0.010940	0.010940	0.014085	-0.032458	0.046542	0.046542
September 2023	0.000000	0.007290	-0.007290	0.007290	-0.049708	0.018403	-0.068110	0.068110	-0.118056	-0.041861	-0.076194	0.076194
Oktober 2023	-0.058091	-0.033949	-0.024143	0.024143	-0.076923	-0.000825	-0.076098	0.076098	-0.173228	-0.088340	-0.084888	0.084888
November 2023	0.030837	0.090319	-0.059482	0.059482	0.103333	0.057116	0.046217	0.046217	0.050794	0.051719	-0.000926	0.000926
Desember 2023	0.034188	0.054974	-0.020786	0.020786	0.051360	0.040636	0.010724	0.010724	0.021148	0.011882	0.009266	0.009266
Januari 2024	0.099174	-0.004194	0.103367	0.103367	0.339080	0.013048	0.326032	0.326032	-0.059172	-0.054804	-0.004367	0.004367
Februari 2024	0.052632	0.035082	0.017549	0.017549	0.060086	0.031361	0.028725	0.028725	-0.135220	-0.010537	-0.124683	0.124683
Maret 2024	0.035714	0.004321	0.031393	0.031393	0.097166	0.017018	0.080148	0.080148	-0.014545	-0.045208	0.030662	0.030662
April 2024	-0.048276	-0.001853	-0.046423	0.046423	-0.025830	0.014140	-0.039970	0.039970	-0.103321	-0.052166	-0.051155	0.051155
Mei 2024	-0.144928	-0.049339	-0.095589	0.095589	-0.166667	-0.008001	-0.158666	0.158666	-0.041152	-0.105686	0.064534	0.064534
Juni 2024	0.042373	0.032310	0.010063	0.010063	0.190909	0.030069	0.160840	0.160840	-0.017167	-0.013661	-0.003506	0.003506
Juli 2024	0.040650	0.055110	-0.014459	0.014459	-0.007634	0.040699	-0.048333	0.048333	-0.004367	0.012036	-0.016402	0.016402
Agustus 2024	0.113281	0.104333	0.008948	0.008948	0.019231	0.063650	-0.044419	0.044419	0.109649	0.067514	0.042135	0.042135
September 2024	-0.028070	-0.020114	-0.007956	0.007956	0.135849	0.005625	0.130224	0.130224	-0.039526	-0.072748	0.033222	0.033222
Oktober 2024	-0.032491	0.020497	-0.052988	0.052988	0.006645	0.024561	-0.017916	0.017916	-0.123457	-0.026976	-0.096481	0.096481
November 2024	-0.082090	-0.089200	0.007111	0.007111	-0.042904	-0.026587	-0.016317	0.016317	-0.145540	-0.150614	0.005074	0.005074
Desember 2024	-0.073171	0.002516	-0.075686	0.075686	-0.058621	0.016177	-0.074797	0.074797	0.016484	-0.047242	0.063726	0.063726
Jumlah	1.224109				2.5068732				1.54027013			
MAD	0.03497453				0.07162495				0.044400772			

Lampiran 27c MAD_{SIM}

Periode	PNBN			
	R _i	ER _i	et	[et]
Februari 2022	0.073826	0.065922	0.007904	0.007904
Maret 2022	-0.050000	0.055526	-0.105526	0.105526
April 2022	0.328947	0.051815	0.277132	0.277132
Mei 2022	0.193069	0.023307	0.169763	0.169763
Juni 2022	0.402490	0.004361	0.398129	0.398129
Juli 2022	0.059172	0.037660	0.021512	0.021512
Agustus 2022	0.114525	0.060759	0.053766	0.053766
September 2022	0.067669	0.016347	0.051323	0.051323
Oktober 2022	0.126761	0.039824	0.086937	0.086937
November 2022	-0.208333	0.030648	-0.238981	0.238981
Desember 2022	-0.189474	0.004899	-0.194373	0.194373
Januari 2023	0.025974	0.031358	-0.005384	0.005384
Februari 2023	-0.085443	0.033254	-0.118697	0.118697
Maret 2023	-0.010381	0.028021	-0.038402	0.038402
April 2023	-0.227273	0.046648	-0.273921	0.273921
Mei 2023	-0.018100	-0.002172	-0.015928	0.015928
Juni 2023	0.000000	0.036457	-0.036457	0.036457
Juli 2023	0.179724	0.067369	0.112355	0.112355
Agustus 2023	0.019531	0.035469	-0.015938	0.015938
September 2023	-0.042146	0.031121	-0.073267	0.073267
Oktober 2023	-0.092000	0.009632	-0.101632	0.101632
November 2023	-0.013216	0.074387	-0.087602	0.087602
Desember 2023	0.080357	0.055969	0.024388	0.024388
Januari 2024	-0.090909	0.025137	-0.116046	0.116046
Februari 2024	0.018182	0.045603	-0.027422	0.027422
Maret 2024	0.026786	0.029574	-0.002788	0.002788
April 2024	-0.030435	0.026357	-0.056792	0.056792
Mei 2024	0.058296	0.001613	0.056683	0.056683
Juni 2024	-0.029661	0.044159	-0.073820	0.073820
Juli 2024	0.061135	0.056040	0.005096	0.005096
Agustus 2024	0.152263	0.081689	0.070574	0.070574
September 2024	0.160714	0.016841	0.143873	0.143873
Oktober 2024	0.169231	0.038003	0.131227	0.131227
November 2024	-0.063158	-0.019159	-0.043999	0.043999
Desember 2024	0.044944	0.028633	0.016310	0.016310
			Jumlah	3.2539459
			MAD	0.09296988



Lampiran 27d MADCAPM

Periode	BBCA				BBNI				BBRI			
	R _t	ER _t	et	[et]	R _t	ER _t	et	[et]	R _t	ER _t	et	[et]
Februari 2022	0.055738	0.032855	0.022883	0.022883	0.092150	0.063801	0.028349	0.028349	0.117936	0.059447	0.058489	0.058489
Maret 2022	-0.009317	0.022704	-0.032021	0.032021	0.031250	0.043158	-0.011908	0.011908	0.024176	0.040280	-0.016104	0.016104
April 2022	0.018809	0.019081	-0.000272	0.000272	0.118182	0.035789	0.082393	0.082393	0.045064	0.033438	0.011627	0.011627
Mei 2022	-0.046154	-0.008756	-0.037398	0.037398	-0.005420	-0.020822	0.015402	0.015402	-0.049281	-0.019124	-0.030157	0.030157
Juni 2022	-0.064516	-0.027255	-0.037261	0.037261	-0.144414	-0.058444	-0.085970	0.085970	-0.103672	-0.054055	-0.049617	0.049617
Juli 2022	0.013793	0.005259	0.008534	0.008534	0.000000	0.007680	-0.007680	0.007680	0.050602	0.007339	0.043263	0.043263
Agustus 2022	0.115646	0.027848	0.087798	0.087798	0.085987	0.053404	0.032583	0.032583	-0.004587	0.049808	-0.054395	0.054395
September 2022	0.042683	-0.015449	0.058132	0.058132	0.052786	-0.035079	0.087865	0.087865	0.034562	-0.032317	0.066879	0.066879
Oktober 2022	0.029240	0.007543	0.021696	0.021696	0.047354	0.011249	0.036105	0.036105	0.035635	0.010728	0.024907	0.024907
November 2022	0.056818	-0.001348	0.058166	0.058166	0.053191	-0.007263	0.060455	0.060455	0.070968	-0.006431	0.077399	0.077399
Desember 2022	-0.080645	-0.026456	-0.054190	0.054190	-0.068182	-0.058540	-0.009642	0.009642	-0.008032	-0.054025	0.045993	0.045993
Januari 2023	-0.008772	-0.000586	-0.008186	0.008186	-0.008130	-0.006145	-0.001985	0.001985	-0.072874	-0.005363	-0.067512	0.067512
Februari 2023	0.032448	0.001266	0.031183	0.031183	-0.040984	-0.038604	-0.038604	0.038604	0.019651	-0.001866	0.021517	0.021517
Maret 2023	0.000000	-0.003844	0.003844	0.003844	0.065527	-0.012770	0.078297	0.078297	0.012848	-0.011514	0.024362	0.024362
April 2023	0.034286	0.014345	0.019941	0.019941	0.008021	0.024219	-0.016198	0.016198	0.078224	0.022830	0.055395	0.055395
Mei 2023	0.000000	-0.033325	0.033325	0.033325	-0.039788	-0.072726	0.032939	0.032939	0.093137	-0.067182	0.160319	0.160319
Juni 2023	0.011050	0.004393	0.006657	0.006657	0.011050	0.003981	0.007068	0.007068	-0.026906	0.004039	-0.030945	0.030945
Juli 2023	-0.002732	0.034577	-0.037309	0.037309	-0.030055	0.063565	-0.095419	0.095419	0.041475	0.061033	-0.019558	0.019558
Agustus 2023	0.005479	0.003428	0.002051	0.002051	0.033803	0.002019	0.031784	0.031784	-0.017699	0.002218	-0.019917	0.019917
September 2023	-0.038147	-0.000817	-0.037330	0.037330	0.125341	-0.006614	0.131955	0.131955	-0.058559	-0.005798	-0.052760	0.052760
Oktober 2023	-0.008499	-0.021765	0.013266	0.013266	-0.072155	-0.049431	-0.022724	0.022724	-0.050718	-0.045538	-0.005179	0.005179
November 2023	0.025714	0.041464	-0.015749	0.015749	0.101253	0.079155	0.022097	0.022097	0.063508	0.073852	-0.010344	0.010344
Desember 2023	0.047354	0.023480	0.023874	0.023874	0.018957	0.042582	-0.023624	0.023624	0.085308	0.039894	0.045414	0.045414
Januari 2024	0.015957	-0.006625	0.022583	0.022583	0.069767	-0.018642	0.088410	0.088410	-0.004367	-0.016951	0.012584	0.012584
Februari 2024	0.034031	0.013359	0.020673	0.020673	0.043478	0.021999	0.021480	0.021480	0.074561	0.020783	0.053779	0.053779
Maret 2024	0.020253	-0.002293	0.022546	0.022546	-0.016667	-0.009832	-0.006835	0.006835	-0.012245	-0.008771	-0.003474	0.003474
April 2024	-0.027295	-0.005400	-0.021895	0.021895	-0.110169	-0.016366	-0.093804	0.093804	-0.183471	-0.014823	-0.168648	0.168648
Mei 2024	-0.056122	-0.029561	-0.026561	0.026561	-0.161905	-0.065502	-0.096403	0.096403	-0.121457	-0.060444	-0.061013	0.061013
Juni 2024	0.072973	0.011982	0.060990	0.060990	0.059091	0.018985	0.040106	0.040106	0.059908	0.017999	0.041908	0.041908
Juli 2024	0.035264	0.023583	0.011681	0.011681	0.066524	0.042577	0.023947	0.023947	0.015217	0.039904	-0.024687	0.024687
Agustus 2024	0.004866	0.048628	-0.043762	0.043762	0.076459	0.093510	-0.017052	0.017052	0.102784	0.087195	0.015589	0.015589
September 2024	0.000000	-0.014726	0.014726	0.014726	0.000000	-0.035116	0.035116	0.035116	-0.038835	-0.032247	-0.006588	0.006588
Oktober 2024	-0.007264	0.005938	-0.013202	0.013202	-0.018692	0.006907	-0.025598	0.025598	-0.030303	0.006770	-0.037073	0.037073
November 2024	-0.024390	-0.049878	0.025487	0.025487	-0.051429	-0.106603	0.055175	0.055175	-0.114583	-0.098621	-0.015962	0.015962
Desember 2024	-0.032500	-0.003212	-0.029288	0.029288	-0.126506	-0.011700	-0.114806	0.114806	-0.040000	-0.010505	-0.029495	0.029495
Jumlah			0.964461				Jumlah	1.579778			Jumlah	1.462852
MAD			0.02755603				MAD	0.04513651			MAD	0.04179578



Lampiran 27d MAD_{CAPM}

Periode	BBTN				BDMN				BJBR			
	R _i	ER _i	et	[et]	R _i	ER _i	et	[et]	R _i	ER _i	et	[et]
Februari 2022	0.050300	0.043358	0.006941	0.006941	-0.008333	0.034818	-0.043152	0.043152	0.056815	0.025830	0.030985	0.030985
Maret 2022	-0.033806	0.029646	-0.063452	0.063452	0.025210	0.024002	0.001209	0.001209	0.096207	0.018061	0.078146	0.078146
April 2022	0.075800	0.024751	0.051049	0.051049	0.004098	0.020141	-0.016042	0.016042	-0.032787	0.015288	-0.048075	0.048075
Mei 2022	-0.078586	-0.012851	-0.065734	0.065734	0.044898	-0.009522	0.054420	0.054420	-0.010169	-0.006017	-0.004152	0.004152
Juni 2022	-0.144118	-0.037841	-0.106277	0.106277	-0.082031	-0.029234	-0.052797	0.052797	-0.058219	-0.020176	-0.038043	0.038043
Juli 2022	0.010305	0.006081	0.004224	0.004224	0.068085	0.005412	0.062673	0.062673	-0.025455	0.004709	-0.030164	0.030164
Agustus 2022	0.023814	0.036522	-0.012708	0.012708	0.051793	0.029469	0.022323	0.022323	0.037313	0.022047	0.015266	0.015266
September 2022	-0.013290	-0.022112	0.008821	0.008821	-0.037879	-0.016695	-0.021184	0.021184	-0.025180	-0.010993	-0.014187	0.014187
Oktober 2022	0.040401	0.008801	0.031600	0.031600	0.338583	0.007779	0.330804	0.330804	0.014760	0.006702	0.008058	0.008058
November 2022	-0.006470	-0.003356	-0.003114	0.003114	-0.111765	-0.001723	-0.110042	0.110042	-0.010909	-0.000005	-0.010904	0.010904
Desember 2022	-0.010046	-0.037345	0.027299	0.027299	-0.096026	-0.028491	-0.067535	0.067535	-0.011029	-0.019173	0.008143	0.008143
Januari 2023	0.007407	-0.002473	0.009880	0.009880	-0.029304	-0.000939	-0.028365	0.028365	0.014870	0.000676	0.014194	0.014194
Februari 2023	-0.025735	0.000029	-0.025764	0.025764	0.079245	0.001034	0.078211	0.078211	-0.032967	0.002093	-0.035060	0.035060
Maret 2023	-0.075472	-0.006874	-0.068598	0.068598	0.003497	-0.004410	0.007907	0.007907	0.030303	-0.001818	0.032121	0.032121
April 2023	0.016327	0.017696	-0.001369	0.001369	-0.017422	0.014971	-0.032393	0.032393	-0.077206	0.012103	-0.089309	0.089309
Mei 2023	0.028112	-0.046698	0.074811	0.074811	-0.021277	-0.035825	0.014549	0.014549	-0.031873	-0.024382	-0.007491	0.007491
Juni 2023	0.031250	0.004253	0.026997	0.026997	0.061594	0.004367	0.057227	0.057227	-0.028807	0.004487	-0.033293	0.033293
Juli 2023	-0.003788	0.045026	-0.048814	0.048814	0.043469	0.036530	0.007839	0.007839	0.008475	0.027588	-0.019114	0.019114
Agustus 2023	-0.045627	0.002950	-0.048578	0.048578	-0.042484	0.003339	-0.045823	0.045823	-0.004202	0.003748	-0.007950	0.007950
September 2023	-0.027888	-0.002784	-0.025104	0.025104	-0.023891	-0.001185	-0.022706	0.022706	-0.012658	0.000499	-0.013157	0.013157
Oktober 2023	0.004098	-0.031155	0.035253	0.035253	-0.041958	-0.023520	-0.018438	0.018438	-0.029915	-0.015485	-0.014430	0.014430
November 2023	0.057143	0.054256	0.002886	0.002886	0.040146	0.038555	-0.003709	0.003709	-0.013216	0.032908	-0.046124	0.046124
Desember 2023	-0.034749	0.029963	-0.064712	0.064712	-0.024561	0.024692	-0.049253	0.049253	0.026786	0.019144	0.007642	0.007642
Januari 2024	0.044000	-0.010704	0.054704	0.054704	0.017986	-0.007388	0.025373	0.025373	0.013043	-0.003898	0.016941	0.016941
Februari 2024	0.095785	0.016291	0.079494	0.079494	0.028269	0.013907	0.014362	0.014362	0.034335	0.011397	0.022937	0.022937
Maret 2024	0.087413	-0.004852	0.092264	0.092264	0.024055	-0.002771	0.026826	0.026826	0.004149	-0.000582	0.004731	0.004731
April 2024	-0.151125	-0.009122	-0.142004	0.142004	-0.080537	-0.006096	-0.074441	0.074441	-0.161157	-0.002911	-0.158246	0.158246
Mei 2024	-0.071970	-0.041760	-0.030210	0.030210	-0.062044	-0.031841	-0.030202	0.030202	-0.004926	-0.021403	0.016477	0.016477
Juni 2024	0.032653	0.014359	0.018294	0.018294	0.003891	0.012427	-0.008536	0.008536	-0.039604	0.010393	-0.049997	0.049997
Juli 2024	0.039526	0.030030	0.009496	0.009496	0.003876	0.024788	-0.020912	0.020912	0.020619	0.019272	0.001347	0.001347
Agustus 2024	0.072243	0.063862	0.008382	0.008382	0.007722	0.051476	-0.043754	0.043754	0.005051	0.038440	-0.033390	0.033390
September 2024	0.028369	-0.021646	0.050015	0.050015	-0.003831	-0.016019	0.012188	0.012188	-0.030151	-0.010097	-0.020053	0.020053
Oktober 2024	-0.031034	0.006267	-0.037301	0.037301	-0.011538	0.005999	-0.017538	0.017538	0.015544	0.005718	0.009826	0.009826
November 2024	-0.085409	-0.069131	-0.016279	0.016279	-0.019455	-0.053476	0.034021	0.034021	-0.040816	-0.037001	-0.003815	0.003815
Desember 2024	-0.112840	-0.006093	-0.106748	0.106748	0.007937	-0.003750	0.011687	0.011687	-0.031915	-0.001285	-0.030630	0.030630
			Jumlah	1.459177			Jumlah	1.468439			Jumlah	0.97439867
			MAD	0.04169078			MAD	0.0419554			MAD	0.0278400

Lampiran 27d MAD_{CAPM}

Periode	BMRI				BRIS				BTPS			
	R _i	ER _i	et	[et]	R _i	ER _i	et	[et]	R _i	ER _i	et	[et]
Februari 2022	0.030100	0.061756	-0.031656	0.031656	0.077672	0.030351	0.047321	0.047321	0.031609	0.069234	-0.037625	0.037625
Maret 2022	0.025974	0.041806	-0.015832	0.015832	-0.036037	0.021049	-0.057086	0.057086	-0.080780	0.046748	-0.127528	0.127528
April 2022	0.132911	0.034685	0.098227	0.098227	-0.015575	0.017729	-0.033303	0.033303	0.045455	0.038722	0.006733	0.006733
Mei 2022	-0.050279	-0.020025	-0.030255	0.030255	-0.088612	-0.007780	-0.080832	0.080832	-0.115942	-0.022940	-0.093002	0.093002
Juni 2022	-0.067647	-0.056383	-0.011264	0.011264	-0.069444	-0.024732	-0.044712	0.044712	-0.075410	-0.063919	-0.011491	0.011491
Juli 2022	0.044164	0.007520	0.036644	0.036644	0.220153	0.005063	0.215090	0.215090	-0.003546	0.008105	-0.011651	0.011651
Agustus 2022	0.069486	0.051715	0.017771	0.017771	-0.070336	0.025781	-0.096117	0.096117	0.053381	0.057890	-0.004509	0.004509
September 2022	0.064972	-0.033782	0.098754	0.098754	-0.032898	-0.013861	-0.019037	0.019037	-0.077703	-0.038525	-0.039177	0.039177
Oktober 2022	0.119363	0.011004	0.108359	0.108359	-0.047618	0.007244	-0.054862	0.054862	0.080586	0.011900	0.068686	0.068686
November 2022	-0.002370	-0.006872	0.004503	0.004503	-0.046425	-0.000869	-0.045556	0.045556	0.084746	-0.008302	0.093047	0.093047
Desember 2022	-0.057007	-0.056420	-0.000587	0.000587	-0.009247	-0.023860	0.014613	0.014613	-0.128125	-0.064172	-0.063953	0.063953
Januari 2023	0.002519	-0.005777	0.008296	0.008296	0.034884	-0.000136	0.035020	0.035020	-0.082437	-0.007120	-0.075317	0.075317
Februari 2023	0.005025	-0.002138	0.007163	0.007163	0.138577	0.001561	0.137016	0.137016	-0.085938	-0.003019	-0.082919	0.082919
Maret 2023	0.032500	-0.012180	0.044680	0.044680	0.105263	-0.003122	0.108385	0.108385	-0.064103	-0.014337	-0.049765	0.049765
April 2023	0.002421	0.023567	-0.021145	0.021145	0.029762	0.013546	0.016216	0.016216	-0.022831	0.025952	-0.048784	0.048784
Mei 2023	-0.024155	-0.070123	0.045968	0.045968	0.000000	-0.030138	0.030138	0.030138	-0.112150	-0.079643	-0.032507	0.032507
Juni 2023	0.029703	0.004009	0.025694	0.025694	-0.023121	0.004427	0.027548	0.027548	0.089474	0.003909	0.085565	0.085565
Juli 2023	0.100962	0.063330	0.037631	0.037631	-0.020710	0.032086	-0.052796	0.052796	0.028986	0.070769	-0.041784	0.041784
Agustus 2023	0.052402	0.002112	0.050289	0.050289	0.033233	0.003542	0.029690	0.029690	0.014085	0.001772	0.012313	0.012313
September 2023	0.000000	-0.006231	0.006231	0.006231	-0.049708	-0.000348	-0.049360	0.049360	-0.118056	-0.007632	-0.110424	0.110424
Oktober 2023	-0.058091	-0.047603	-0.010488	0.010488	-0.076923	-0.019527	-0.057396	0.057396	-0.173228	-0.054288	-0.118940	0.118940
November 2023	0.030837	0.076665	-0.045828	0.045828	0.103333	0.038414	0.064919	0.064919	0.050794	0.085772	-0.034978	0.034978
Desember 2023	0.034188	0.041319	-0.007131	0.007131	0.051360	0.021934	0.029425	0.029425	0.021148	0.045935	-0.024787	0.024787
Januari 2024	0.099174	-0.017848	0.117022	0.117022	0.339080	-0.005653	0.344734	0.344734	-0.059172	-0.020752	-0.038420	0.038420
Februari 2024	0.052632	0.021428	0.031204	0.031204	0.060086	0.012660	0.047426	0.047426	-0.135220	0.023515	-0.158735	0.158735
Maret 2024	0.035714	-0.009334	0.045048	0.045048	0.097166	-0.001683	0.098849	0.098849	-0.014545	-0.011155	-0.003390	0.003390
April 2024	-0.048276	-0.015641	-0.032635	0.032635	-0.025830	-0.004513	-0.021317	0.021317	-0.103321	-0.018291	-0.085030	0.085030
Mei 2024	-0.144928	-0.063127	-0.081801	0.081801	-0.166667	-0.026654	-0.140013	0.140013	-0.041152	-0.071811	0.030659	0.030659
Juni 2024	0.042373	0.018522	0.023851	0.023851	0.190909	0.011416	0.179493	0.179493	-0.017167	0.020214	-0.037381	0.037381
Juli 2024	0.040650	0.041322	-0.000671	0.000671	-0.007634	0.022047	-0.029680	0.029680	-0.004367	0.045911	-0.050278	0.050278
Agustus 2024	0.113281	0.090545	0.022737	0.022737	0.019231	0.044997	-0.025767	0.025767	0.109649	0.101389	0.008260	0.008260
September 2024	-0.028070	-0.033768	0.005698	0.005698	0.135849	-0.013076	0.148925	0.148925	-0.039526	-0.038695	-0.000830	0.000830
Oktober 2024	-0.032491	0.006843	-0.039334	0.039334	0.006645	0.005859	0.000785	0.000785	-0.123457	0.007077	-0.130534	0.130534
November 2024	-0.082090	-0.102855	0.020765	0.020765	-0.042904	-0.045289	0.002384	0.002384	-0.145540	-0.116561	-0.028979	0.028979
Desember 2024	-0.073171	-0.011139	-0.062032	0.062032	-0.058621	-0.002525	-0.056096	0.056096	0.016484	-0.013190	0.029673	0.029673
	Jumlah			1.247196	Jumlah			2.44190755	Jumlah			1.87765372
	MAD			0.03563416	MAD			0.06976879	MAD			0.05364725

Lampiran 27d MAD_{CAPM}

Periode	PNBN			
	R _i	ER _i	et	[et]
Februari 2022	0.073826	0.033577	0.040248	0.040248
Maret 2022	-0.050000	0.023181	-0.073181	0.073181
April 2022	0.328947	0.019471	0.309477	0.309477
Mei 2022	0.193069	-0.009038	0.202107	0.202107
Juni 2022	0.402490	-0.027983	0.430473	0.430473
Juli 2022	0.059172	0.005315	0.053856	0.053856
Agustus 2022	0.114525	0.028445	0.086080	0.086080
September 2022	0.067669	-0.015907	0.083577	0.083577
Oktober 2022	0.126761	0.007630	0.119131	0.119131
November 2022	-0.208333	-0.001486	-0.206847	0.206847
Desember 2022	-0.189474	-0.027205	-0.162269	0.162269
Januari 2023	0.025974	-0.000716	0.026690	0.026690
Februari 2023	-0.085443	0.001181	-0.086624	0.086624
Maret 2023	-0.010381	-0.004052	-0.006328	0.006328
April 2023	-0.227273	0.014575	-0.241848	0.241848
Mei 2023	-0.018100	-0.034245	0.016146	0.016146
Juni 2023	0.000000	0.004384	-0.004384	0.004384
Juli 2023	0.179724	0.035295	0.144428	0.144428
Agustus 2023	0.019531	0.003396	0.016136	0.016136
September 2023	-0.042146	-0.000952	-0.041194	0.041194
Oktober 2023	-0.092000	-0.022411	-0.069589	0.069589
November 2023	-0.013216	0.042343	-0.055559	0.055559
Desember 2023	0.080357	0.023926	0.056432	0.056432
Januari 2024	-0.090909	-0.006906	-0.084003	0.084003
Februari 2024	0.018182	0.013560	0.004622	0.004622
Maret 2024	0.026786	-0.002469	0.029255	0.029255
April 2024	-0.030435	-0.005656	-0.024779	0.024779
Mei 2024	0.058296	-0.030400	0.088696	0.088696
Juni 2024	-0.029661	0.012146	-0.041807	0.041807
Juli 2024	0.061135	0.024027	0.037109	0.037109
Agustus 2024	0.152263	0.049676	0.102587	0.102587
September 2024	0.160714	-0.015202	0.175916	0.175916
Oktober 2024	0.169231	0.005960	0.163271	0.163271
November 2024	-0.063158	-0.051202	-0.011956	0.011956
Desember 2024	0.044944	-0.003410	0.048354	0.048354
			Jumlah	3.34495737
			MAD	0.09557021



RIWAYAT HIDUP



I Made Nararya Dhananjaya lahir di Kupang pada tanggal 30 Juli 2003. Penulis lahir dari pasangan suami istri Bapak I Wayan Parka dan Ibu Ni Wayan Suartini. Penulis berkebangsaan Indonesia dan beragama Hindu. Kini penulis beralamat di Jalan Sulatri GG. XXVI No. 10, Desa Kesiman Petilan, Kecamatan Denpasar Timur, Kota Denpasar, Provinsi Bali. Penulis menyelesaikan pendidikan dasar di SD Saraswati 5 Denpasar dan lulus pada tahun 2015. Kemudian penulis melanjutkan di SMP Negeri 8 Denpasar dan lulus pada tahun 2018. Pada tahun 2021, penulis lulus dari SMA Negeri 3 Denpasar jurusan Ilmu Pengetahuan Alam dan melanjutkan ke Strata 1 Jurusan Manajemen di Universitas Pendidikan Ganesha. Pada semester akhir tahun 2025 penulis telah menyelesaikan Tugas Akhir yang berjudul “Analisis Perbandingan Keakuratan *Single Index Model* (SIM) dan *Capital Asset Pricing Model* (CAPM) dalam Memprediksi *Return* Saham IDX INFOBANK 15 di Bursa Efek Indonesia (Periode 2022-2024)”.

