

LAMPIRAN 1. Analisis Awal Uji Kualitas Data Delapan Sampel Harga Saham Harian Periode 17 Juli 2007 – 9 Januari 2008

Statistik Deskriptif Tidak Menunjukkan Distribusi Normal

	ANTM	BUMI	INCO	INTP	KLBF	PTBA	TLKM	UNVR
Mean	3317.992	4093.504	76032.28	7088.189	1320.551	8555.512	10897.44	6824.606
Median	3125	4300	73500	7025	1340	8550	10850	6800
Maximum	5050	6400	110700	8800	1490	12500	12650	7600
Minimum	1875	2150	41800	5500	1190	4700	9850	5700
Std. Dev.	916.5647	1359.641	19925.68	802.5989	70.29481	2546.679	673.6674	329.622
Skewness	0.267488	0.173303	0.079243	0.115592	-0.07158	0.167647	0.652723	0.031164
Kurtosis	1.54486	1.592709	1.49343	1.705262	2.203812	1.427312	2.925546	3.762887
Jarque-Bera	12.71923	11.11571	12.14369	9.153478	3.462909	13.68303	9.047324	3.100293
Probability	0.00173	0.003857	0.002307	0.010288	0.177027	0.001068	0.010849	0.212217
Sum	421385	519875	9656100	900200	167710	1086550	1383975	866725
Sum Sq. Dev.	1.06E+08	2.33E+08	5.00E+10	81164783	622611.4	8.17E+08	57182293	13689980
Observations	127	127	127	127	127	127	127	127

Uji Kolmogorov-Smirnov Menunjukkan Hanya TLKM dan UNVR yang Berdistribusi Normal (0.099 dan $0.139 > 0.05$)

One-Sample Kolmogorov-Smirnov Test

	ANTM	BUMI	INCO	INTP	KLBF	PTBA	TLKM	UNVR	
N	127	127	127	127	127	127	127	127	
Normal Parameters ^{a,b}	Mean	3317.9921	4093.5039	76032.28	7088.1890	1320.5512	8555.5118	10897.44	6824.6063
	Std. Deviation	916.56472	1359.641	19925.68	802.59887	70.29481	2546.679	673.66737	329.62196
Most Extreme Differences	Absolute	.177	.138	.203	.166	.176	.194	.109	.102
	Positive	.177	.138	.142	.166	.110	.194	.109	.102
	Negative	-.156	-.110	-.203	-.131	-.176	-.131	-.076	-.070
Kolmogorov-Smirnov Z		1.996	1.559	2.292	1.872	1.982	2.185	1.226	1.155
Asymp. Sig. (2-tailed)		.001	.015	.000	.002	.001	.000	.099	.139

a. Test distribution is Normal.

b. Calculated from data.

Run Test Menunjukkan Hanya UNVR yang Berdistribusi Normal (19 termasuk di antara 10-19)

Runs Test

	ANTM	BUMI	INCO	INTP	KLBF	PTBA	TLKM	UNVR
Test Value ^a	3317.9921	4093.5039	76032.28	7088.1890	1320.5512	8555.5118	10897.44	6824.6063
Cases < Test Value	73	61	66	65	51	64	66	68
Cases >= Test Value	54	66	61	62	76	63	61	59
Total Cases	127	127	127	127	127	127	127	127
Number of Runs	4	2	4	6	6	4	20	19
Z	-10.770	-11.136	-10.779	-10.423	-10.391	-10.780	-7.924	-8.091
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000

a. Mean

Uji Otokorelasi Delapan Sampel Menunjukkan Masih Ada Otokorelasi (Q-Stat > 43.7729 dan Prob < 0.05)

ANTM	AC	PAC	Q-Stat	Prob
1	0.97	0.97	122.45	0
2	0.939	-0.046	238.03	0
3	0.91	0.024	347.44	0
4	0.878	-0.059	450.23	0
5	0.847	-0.007	546.64	0
6	0.826	0.143	638.94	0
7	0.802	-0.056	726.76	0
8	0.779	0.012	810.29	0
9	0.756	-0.022	889.73	0
10	0.728	-0.106	964	0
11	0.698	-0.02	1032.8	0
12	0.668	-0.034	1096.4	0
13	0.634	-0.072	1154.3	0
14	0.596	-0.091	1205.8	0
15	0.555	-0.108	1250.9	0
16	0.514	-0.038	1289.9	0
17	0.476	0.033	1323.5	0
18	0.442	0.038	1352.9	0
19	0.408	-0.052	1378.2	0
20	0.372	-0.063	1399.4	0
21	0.336	-0.035	1416.8	0
22	0.292	-0.162	1430.1	0
23	0.257	0.198	1440.5	0
24	0.233	0.151	1449.2	0
25	0.208	-0.001	1456.1	0
26	0.19	0.101	1462	0
27	0.173	-0.082	1466.9	0
28	0.161	0.195	1471.2	0
29	0.151	0.054	1475	0
30	0.138	-0.054	1478.2	0
31	0.122	-0.032	1480.8	0
32	0.106	-0.088	1482.7	0
33	0.098	0.179	1484.4	0
34	0.094	0.098	1485.9	0
35	0.089	-0.036	1487.3	0
36	0.084	-0.091	1488.6	0

BUMI	AC	PAC	Q-Stat	Prob
1	0.955	0.955	118.6	0
2	0.91	-0.027	227.07	0
3	0.87	0.043	327.13	0
4	0.831	-0.019	419.12	0
5	0.792	-0.015	503.36	0
6	0.757	0.021	580.9	0
7	0.723	-0.008	652.17	0
8	0.689	-0.007	717.53	0
9	0.658	0.01	777.63	0
10	0.625	-0.044	832.26	0
11	0.59	-0.028	881.44	0
12	0.559	0.015	925.94	0
13	0.527	-0.035	965.78	0
14	0.495	-0.005	1001.3	0
15	0.467	0.016	1033.2	0
16	0.44	-0.004	1061.8	0
17	0.423	0.095	1088.4	0
18	0.411	0.049	1113.8	0
19	0.399	0.001	1137.9	0
20	0.379	-0.09	1159.9	0
21	0.355	-0.055	1179.4	0
22	0.322	-0.133	1195.6	0
23	0.289	-0.02	1208.7	0
24	0.261	0.03	1219.5	0
25	0.237	0.021	1228.6	0
26	0.216	0.021	1236.1	0
27	0.197	0.01	1242.5	0
28	0.183	0.028	1248	0
29	0.166	-0.025	1252.6	0
30	0.147	-0.05	1256.3	0
31	0.127	-0.009	1259	0
32	0.11	0.016	1261.1	0
33	0.092	-0.005	1262.6	0
34	0.08	0.051	1263.7	0
35	0.067	-0.006	1264.5	0
36	0.054	-0.043	1265.1	0

INCO	AC	PAC	Q-Stat	Prob
1	0.972	0.972	122.77	0
2	0.942	-0.033	239.16	0
3	0.915	0.019	349.75	0
4	0.886	-0.046	454.26	0
5	0.857	0	552.98	0
6	0.832	0.041	646.76	0
7	0.805	-0.052	735.22	0
8	0.776	-0.039	818.15	0
9	0.75	0.025	896.2	0
10	0.722	-0.039	969.21	0
11	0.694	-0.015	1037.3	0
12	0.667	-0.005	1100.7	0
13	0.639	-0.044	1159.3	0
14	0.61	-0.017	1213.3	0
15	0.584	0.022	1263.1	0
16	0.558	-0.01	1309	0
17	0.527	-0.101	1350.4	0
18	0.498	0.008	1387.7	0
19	0.461	-0.173	1419.9	0
20	0.423	-0.02	1447.3	0
21	0.386	-0.023	1470.4	0
22	0.344	-0.132	1488.8	0
23	0.301	-0.031	1503.1	0
24	0.259	-0.047	1513.8	0
25	0.218	-0.011	1521.5	0
26	0.189	0.196	1527.3	0
27	0.167	0.091	1531.8	0
28	0.152	0.146	1535.7	0
29	0.135	-0.045	1538.7	0
30	0.114	-0.096	1540.9	0
31	0.094	0.024	1542.4	0
32	0.073	-0.044	1543.3	0
33	0.052	-0.038	1543.8	0
34	0.039	0.121	1544.1	0
35	0.028	0.027	1544.2	0
36	0.015	-0.016	1544.3	0

INTP	AC	PAC	Q-Stat	Prob
1	0.931	0.931	112.81	0
2	0.878	0.077	213.81	0
3	0.827	0.006	304.22	0
4	0.771	-0.067	383.32	0
5	0.721	0.015	453.16	0
6	0.689	0.112	517.46	0
7	0.665	0.073	577.81	0
8	0.645	0.033	635.01	0
9	0.625	-0.001	689.32	0
10	0.607	0.001	740.85	0
11	0.596	0.074	790.96	0
12	0.577	-0.03	838.33	0
13	0.547	-0.085	881.33	0
14	0.519	-0.022	920.37	0
15	0.487	-0.031	955.09	0
16	0.446	-0.079	984.4	0
17	0.404	-0.05	1008.8	0
18	0.365	-0.04	1028.8	0
19	0.327	-0.03	1045	0
20	0.296	0.018	1058.5	0
21	0.273	0.025	1070	0
22	0.264	0.077	1080.9	0
23	0.247	-0.059	1090.5	0
24	0.216	-0.131	1097.9	0
25	0.176	-0.119	1102.8	0
26	0.135	-0.038	1105.8	0
27	0.102	0.085	1107.5	0
28	0.076	0.063	1108.5	0
29	0.059	0.033	1109.1	0
30	0.037	-0.08	1109.3	0
31	0.019	-0.008	1109.3	0
32	-0.001	-0.022	1109.3	0
33	-0.022	-0.01	1109.4	0
34	-0.037	0.021	1109.7	0
35	-0.041	0.091	1110	0
36	-0.047	0.021	1110.4	0

KLBF	AC	PAC	Q-Stat	Prob
1	0.926	0.926	111.5	0
2	0.834	-0.165	202.68	0
3	0.763	0.116	279.65	0
4	0.684	-0.145	341.89	0
5	0.588	-0.117	388.36	0
6	0.515	0.109	424.28	0
7	0.458	0.004	452.97	0
8	0.385	-0.134	473.39	0
9	0.314	0.01	487.07	0
10	0.266	0.048	496.99	0
11	0.226	-0.005	504.18	0
12	0.176	-0.044	508.61	0
13	0.138	0.02	511.34	0
14	0.105	-0.069	512.94	0
15	0.062	-0.055	513.49	0
16	0.02	0.01	513.55	0
17	-0.006	0.019	513.55	0
18	-0.008	0.137	513.56	0
19	-0.014	-0.038	513.59	0
20	-0.016	0.019	513.63	0
21	-0.006	0.026	513.64	0
22	0.014	0.075	513.67	0
23	0.02	-0.082	513.73	0
24	0.018	-0.048	513.78	0
25	0.018	-0.031	513.84	0
26	0.017	0.003	513.88	0
27	0.025	0.141	513.98	0
28	0.03	-0.06	514.13	0
29	0.031	-0.04	514.29	0
30	0.033	0.042	514.48	0
31	0.046	0.064	514.85	0
32	0.059	-0.012	515.44	0
33	0.059	-0.066	516.05	0
34	0.061	0.012	516.71	0
35	0.061	-0.034	517.38	0
36	0.059	0.049	518.01	0

PTBA	AC	PAC	Q-Stat	Prob
1	0.968	0.968	121.86	0
2	0.935	-0.039	236.37	0
3	0.903	0.012	344.14	0
4	0.869	-0.052	444.84	0
5	0.835	-0.031	538.44	0
6	0.805	0.062	626.28	0
7	0.775	-0.029	708.36	0
8	0.746	0.001	784.99	0
9	0.717	-0.012	856.47	0
10	0.688	-0.028	922.81	0
11	0.658	-0.025	984	0
12	0.629	-0.004	1040.4	0
13	0.599	-0.042	1091.9	0
14	0.568	-0.019	1138.6	0
15	0.536	-0.034	1180.7	0
16	0.507	0.021	1218.7	0
17	0.482	0.044	1253.3	0
18	0.461	0.04	1285.2	0
19	0.436	-0.072	1314.1	0
20	0.405	-0.119	1339.2	0
21	0.373	-0.052	1360.7	0
22	0.333	-0.136	1378	0
23	0.294	0.016	1391.6	0
24	0.261	0.054	1402.5	0
25	0.234	0.06	1411.3	0
26	0.213	0.1	1418.6	0
27	0.195	-0.005	1424.9	0
28	0.18	0.045	1430.2	0
29	0.164	-0.055	1434.7	0
30	0.14	-0.156	1438.1	0
31	0.121	0.067	1440.5	0
32	0.103	0.015	1442.4	0
33	0.088	0.07	1443.7	0
34	0.076	0.059	1444.8	0
35	0.064	-0.04	1445.5	0
36	0.054	0.003	1446	0

TLKM	AC	PAC	Q-Stat	Prob
1	0.916	0.916	109.14	0
2	0.844	0.026	202.4	0
3	0.779	0.014	282.52	0
4	0.697	-0.136	347.22	0
5	0.613	-0.072	397.68	0
6	0.545	0.037	437.9	0
7	0.489	0.05	470.51	0
8	0.424	-0.068	495.3	0
9	0.354	-0.102	512.7	0
10	0.307	0.07	525.88	0
11	0.263	0.013	535.68	0
12	0.225	0.035	542.91	0
13	0.211	0.099	549.29	0
14	0.188	-0.083	554.41	0
15	0.158	-0.065	558.07	0
16	0.128	-0.043	560.5	0
17	0.093	-0.058	561.78	0
18	0.061	0.009	562.33	0
19	0.032	0.014	562.49	0
20	-0.001	-0.081	562.49	0
21	-0.032	-0.03	562.65	0
22	-0.047	0.102	562.99	0
23	-0.072	-0.068	563.8	0
24	-0.087	0.049	564.99	0
25	-0.119	-0.162	567.28	0
26	-0.136	0.021	570.29	0
27	-0.156	-0.038	574.27	0
28	-0.182	-0.029	579.73	0
29	-0.198	-0.009	586.29	0
30	-0.217	-0.051	594.23	0
31	-0.211	0.17	601.82	0
32	-0.192	0.073	608.19	0
33	-0.185	-0.031	614.13	0
34	-0.163	0.036	618.83	0
35	-0.137	-0.004	622.17	0
36	-0.116	0.009	624.61	0

UNVR	AC	PAC	Q-Stat	Prob
1	0.891	0.891	103.25	0
2	0.771	-0.114	181.1	0
3	0.686	0.109	243.21	0
4	0.587	-0.14	289.11	0
5	0.484	-0.044	320.61	0
6	0.415	0.077	343.94	0
7	0.338	-0.114	359.49	0
8	0.254	-0.034	368.36	0
9	0.194	0.022	373.59	0
10	0.125	-0.117	375.79	0
11	0.037	-0.105	375.98	0
12	-0.026	0.025	376.08	0
13	-0.063	0.029	376.65	0
14	-0.104	-0.029	378.23	0
15	-0.153	-0.094	381.64	0
16	-0.196	-0.066	387.29	0
17	-0.23	0.006	395.2	0
18	-0.244	0.057	404.14	0
19	-0.226	0.098	411.88	0
20	-0.198	0.037	417.9	0
21	-0.179	-0.03	422.87	0
22	-0.15	0.023	426.38	0
23	-0.133	-0.095	429.18	0
24	-0.132	-0.027	431.95	0
25	-0.126	0.008	434.52	0
26	-0.136	-0.127	437.52	0
27	-0.144	0.013	440.9	0
28	-0.141	-0.038	444.17	0
29	-0.159	-0.149	448.41	0
30	-0.17	0.095	453.26	0
31	-0.146	0.104	456.89	0
32	-0.134	-0.068	459.97	0
33	-0.146	-0.076	463.67	0
34	-0.149	-0.051	467.58	0
35	-0.143	0.033	471.22	0
36	-0.163	-0.073	475.99	0

LAMPIRAN 2.**Uji Otokorelasi Lima Sampel dengan *Correlogram****Correlogram* BUMI

	AC	PAC	Q-Stat	Prob
1	0.186	0.186	9.8419	0.002
2	-0.141	-0.182	15.501	0.000
3	0.225	0.311	30.042	0.000
4	0.204	0.057	41.966	0.000
5	-0.032	-0.000	42.252	0.000
6	-0.028	-0.036	42.485	0.000
7	0.116	0.060	46.360	0.000
8	0.041	-0.020	46.845	0.000
9	0.009	0.066	46.871	0.000
10	0.037	-0.012	47.268	0.000
11	0.094	0.087	49.862	0.000
12	0.087	0.043	52.092	0.000
13	0.151	0.170	58.858	0.000
14	0.088	-0.010	61.149	0.000
15	-0.084	-0.112	63.246	0.000
16	0.010	-0.020	63.278	0.000
17	0.083	-0.005	65.339	0.000
18	0.127	0.180	70.226	0.000
19	0.018	-0.005	70.327	0.000
20	-0.085	-0.103	72.542	0.000
21	-0.066	-0.152	73.884	0.000
22	-0.063	-0.113	75.104	0.000
23	-0.028	0.022	75.349	0.000
24	-0.015	0.035	75.415	0.000
25	0.103	0.157	78.738	0.000
26	0.020	-0.044	78.861	0.000
27	-0.052	-0.029	79.712	0.000
28	-0.004	-0.043	79.718	0.000
29	0.034	0.000	80.080	0.000
30	0.150	0.186	87.197	0.000
31	0.002	-0.061	87.199	0.000
32	-0.084	-0.040	89.444	0.000
33	-0.017	-0.022	89.538	0.000
34	0.070	0.108	91.106	0.000
35	0.020	0.077	91.229	0.000
36	0.010	0.015	91.260	0.000

Correlogram INTP

	AC	PAC	Q-Stat	Prob
1	-0.153	-0.153	6.6417	0.010
2	-0.056	-0.081	7.5268	0.023
3	0.096	0.077	10.175	0.017
4	-0.114	-0.094	13.916	0.008
5	0.020	-0.001	14.030	0.015
6	0.004	-0.013	14.036	0.029
7	-0.026	-0.010	14.225	0.047
8	-0.011	-0.030	14.262	0.075
9	0.039	0.035	14.716	0.099
10	-0.134	-0.130	19.960	0.030
11	0.021	-0.014	20.087	0.044
12	0.048	0.024	20.761	0.054
13	-0.107	-0.074	24.167	0.030
14	0.042	-0.009	24.697	0.038
15	0.022	0.015	24.840	0.052
16	-0.081	-0.061	26.784	0.044
17	0.019	-0.024	26.888	0.060
18	0.050	0.041	27.649	0.068
19	0.068	0.104	29.035	0.065
20	-0.041	-0.045	29.543	0.078
21	0.009	-0.001	29.567	0.101
22	-0.077	-0.078	31.371	0.089
23	0.029	0.006	31.622	0.108
24	0.009	-0.005	31.647	0.136
25	-0.036	-0.005	32.046	0.157
26	0.047	-0.001	32.721	0.170
27	0.004	0.017	32.725	0.206
28	0.013	0.035	32.775	0.244
29	-0.037	-0.029	33.204	0.270
30	-0.054	-0.079	34.117	0.276
31	0.071	0.064	35.719	0.256
32	0.038	0.055	36.172	0.280
33	-0.026	-0.013	36.392	0.314
34	0.015	0.006	36.462	0.355
35	-0.049	-0.049	37.244	0.366
36	0.020	0.016	37.368	0.406

Correlogram KLBF

	AC	PAC	Q-Stat	Prob
1	0.022	0.022	0.1343	0.714
2	-0.051	-0.051	0.8691	0.648
3	0.105	0.108	4.0456	0.257
4	0.011	0.003	4.0795	0.395
5	0.080	0.092	5.9395	0.312
6	0.083	0.069	7.9429	0.242
7	-0.034	-0.030	8.2784	0.309
8	0.026	0.019	8.4757	0.388
9	0.027	0.004	8.6833	0.467
10	-0.030	-0.030	8.9390	0.538
11	0.047	0.035	9.6003	0.567
12	-0.058	-0.070	10.602	0.563
13	0.025	0.042	10.790	0.628
14	0.121	0.100	15.155	0.368
15	0.009	0.024	15.179	0.439
16	-0.145	-0.145	21.468	0.161
17	0.102	0.096	24.621	0.104
18	-0.062	-0.088	25.772	0.105
19	-0.031	-0.014	26.058	0.129
20	0.003	-0.040	26.059	0.164
21	-0.145	-0.111	32.451	0.053
22	-0.009	0.001	32.478	0.070
23	0.081	0.073	34.477	0.059
24	-0.061	-0.025	35.635	0.060
25	-0.023	-0.005	35.793	0.075
26	-0.035	-0.031	36.172	0.089
27	0.031	0.076	36.466	0.105
28	0.018	-0.048	36.570	0.129
29	-0.012	0.028	36.617	0.156
30	-0.033	-0.024	36.955	0.178
31	0.064	0.066	38.243	0.174
32	-0.019	-0.039	38.353	0.204
33	0.047	0.096	39.077	0.216
34	0.002	-0.049	39.078	0.252
35	-0.035	0.035	39.467	0.277
36	-0.039	-0.085	39.950	0.299

Correlogram PTBA

	AC	PAC	Q-Stat	Prob
1	0.022	0.022	0.1354	0.713
2	-0.056	-0.056	1.0244	0.599
3	0.173	0.176	9.5456	0.023
4	0.209	0.203	22.089	0.000
5	-0.078	-0.069	23.841	0.000
6	-0.024	-0.033	24.001	0.001
7	-0.132	-0.226	29.080	0.000
8	0.048	0.035	29.761	0.000
9	0.041	0.077	30.248	0.000
10	-0.091	-0.017	32.683	0.000
11	-0.054	0.009	33.548	0.000
12	0.053	-0.025	34.386	0.001
13	0.019	0.013	34.497	0.001
14	-0.061	-0.048	35.622	0.001
15	-0.123	-0.126	40.123	0.000
16	-0.128	-0.159	45.033	0.000
17	0.026	0.008	45.237	0.000
18	-0.072	-0.011	46.787	0.000
19	-0.101	0.026	49.893	0.000
20	-0.059	-0.031	50.962	0.000
21	-0.071	-0.146	52.500	0.000
22	0.053	0.054	53.372	0.000
23	-0.030	-0.046	53.654	0.000
24	0.014	0.108	53.712	0.000
25	0.026	0.013	53.927	0.001
26	0.175	0.137	63.524	0.000
27	0.021	0.032	63.657	0.000
28	0.028	-0.009	63.900	0.000
29	0.034	-0.010	64.274	0.000
30	0.117	0.003	68.577	0.000
31	0.072	0.086	70.217	0.000
32	-0.031	-0.034	70.533	0.000
33	0.031	0.086	70.843	0.000
34	0.073	-0.015	72.555	0.000
35	0.013	-0.022	72.612	0.000
36	0.042	0.048	73.188	0.000

Correlogram UNVR

	AC	PAC	Q-Stat	Prob
1	-0.272	-0.272	21.033	0.000
2	0.005	-0.074	21.041	0.000
3	-0.045	-0.069	21.615	0.000
4	0.007	-0.027	21.627	0.000
5	0.081	0.078	23.497	0.000
6	-0.068	-0.028	24.846	0.000
7	0.028	0.009	25.081	0.001
8	-0.136	-0.134	30.435	0.000
9	0.081	0.002	32.355	0.000
10	-0.071	-0.072	33.849	0.000
11	0.055	0.018	34.724	0.000
12	0.011	0.031	34.762	0.001
13	-0.056	-0.030	35.694	0.001
14	0.104	0.077	38.937	0.000
15	-0.084	-0.031	41.068	0.000
16	0.019	-0.039	41.173	0.001
17	-0.014	-0.011	41.234	0.001
18	-0.073	-0.107	42.831	0.001
19	-0.008	-0.066	42.853	0.001
20	0.023	0.008	43.008	0.002
21	-0.027	-0.040	43.223	0.003
22	-0.098	-0.105	46.155	0.002
23	0.044	-0.033	46.744	0.002
24	-0.002	-0.009	46.745	0.004
25	0.023	-0.011	46.904	0.005
26	0.103	0.107	50.233	0.003
27	-0.079	-0.006	52.174	0.003
28	-0.027	-0.074	52.405	0.003
29	0.058	0.039	53.460	0.004
30	0.003	-0.001	53.462	0.005
31	0.108	0.112	57.186	0.003
32	-0.103	-0.020	60.579	0.002
33	0.043	0.038	61.162	0.002
34	0.008	0.039	61.180	0.003
35	-0.027	-0.042	61.420	0.004
36	-0.027	-0.056	61.650	0.005

LAMPIRAN 3.**Estimasi Model BUMI dengan ARIMA dan GARCH (1,1)**

Estimasi BUMI ARIMA (1,1,1) dengan Model

$$Y_t = 5.144039 - 0.48331 Y_{t-1} + 0.790508 e_{a1} + e_{a1}$$

$$SE = (18.86518) \quad (0.105772) \quad (0.074161)$$

$$t = (0.272674) \quad (-4.56933) \quad (10.6593)$$

Dependent Variable: D(BUMI)				
Method: Least Squares				
Date: 07/31/09 Time: 14:18				
Sample (adjusted): 1/19/2004 5/25/2009				
Included observations: 280 after adjustments				
Convergence achieved after 10 iterations				
Backcast: 12/29/2003				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.144039	18.86518	0.272674	0.7853
AR(1)	-0.48331	0.105772	-4.56933	0
MA(1)	0.790508	0.074161	10.6593	0
R-squared	0.109097	Mean dependent var		5.491036
Adjusted R-squared	0.102665	S.D. dependent var		276.1928
S.E. of regression	261.6313	Akaike info criterion		13.98241
Sum squared resid	18960911	Schwarz criterion		14.02135
Log likelihood	-1954.54	F-statistic		16.96029
Durbin-Watson stat	2.046109	Prob(F-statistic)		0
Inverted AR Roots	-0.48			
Inverted MA Roots	-0.79			

Residual Tes BUMI ARIMA (1,1,1) = Ada Otokorelasi

	AC	PAC	Q-Stat	Prob
1	-0.021	-0.021	0.1266	
2	-0.040	-0.041	0.5878	
3	0.134	0.133	5.7301	0.017
4	0.201	0.209	17.305	0.000
5	-0.057	-0.037	18.251	0.000
6	-0.018	-0.027	18.344	0.001
7	0.103	0.046	21.409	0.001
8	0.018	-0.007	21.501	0.001
9	0.018	0.050	21.590	0.003
10	0.016	0.006	21.668	0.006
11	0.084	0.057	23.749	0.005
12	0.059	0.064	24.777	0.006
13	0.115	0.120	28.685	0.003
14	0.089	0.086	31.036	0.002
15	-0.100	-0.139	34.012	0.001
16	0.037	-0.023	34.411	0.002
17	0.045	-0.020	35.019	0.002
18	0.113	0.132	38.851	0.001
19	0.017	0.090	38.940	0.002
20	-0.083	-0.126	41.043	0.002
21	-0.026	-0.110	41.251	0.002
22	-0.077	-0.164	43.082	0.002
23	0.012	0.019	43.127	0.003
24	-0.045	0.018	43.751	0.004
25	0.106	0.131	47.263	0.002
26	0.011	0.040	47.298	0.003
27	-0.058	-0.090	48.351	0.003
28	0.023	0.009	48.518	0.005
29	-0.016	-0.070	48.594	0.007
30	0.161	0.178	56.731	0.001
31	-0.033	0.012	57.068	0.001
32	-0.039	-0.066	57.542	0.002
33	-0.049	-0.035	58.313	0.002
34	0.096	0.093	61.286	0.001
35	-0.017	0.072	61.374	0.002
36	0.022	0.050	61.531	0.003

Sampel	Q-stat	Probabilitas	Otokorelasi
BUMI	> 43.7729	< 0.05	Signifikan

Squared Residual BUMI ARIMA (1,1,1) = Ada Otokorelasi

	AC	PAC	Q-Stat	Prob
1	0.351	0.351	34.825	
2	0.262	0.158	54.308	
3	0.410	0.325	102.33	0.000
4	0.323	0.121	132.10	0.000
5	0.284	0.100	155.22	0.000
6	0.222	-0.028	169.42	0.000
7	0.226	0.026	184.16	0.000
8	0.296	0.120	209.66	0.000
9	0.182	-0.024	219.34	0.000
10	0.205	0.057	231.60	0.000
11	0.239	0.040	248.36	0.000
12	0.199	0.029	260.06	0.000
13	0.216	0.049	273.80	0.000
14	0.132	-0.070	279.01	0.000
15	0.164	0.017	286.97	0.000
16	0.204	0.034	299.39	0.000
17	0.129	-0.002	304.42	0.000
18	0.244	0.155	322.35	0.000
19	0.201	0.017	334.57	0.000
20	0.254	0.149	354.10	0.000
21	0.298	0.089	381.17	0.000
22	0.241	0.055	398.99	0.000
23	0.292	0.075	425.26	0.000
24	0.146	-0.180	431.83	0.000
25	0.346	0.258	468.79	0.000
26	0.442	0.205	529.39	0.000
27	0.165	-0.085	537.91	0.000
28	0.141	-0.166	544.18	0.000
29	0.261	-0.064	565.68	0.000
30	0.089	-0.195	568.21	0.000
31	0.148	0.007	575.16	0.000
32	0.159	0.074	583.18	0.000
33	0.088	-0.087	585.63	0.000
34	0.107	-0.073	589.31	0.000
35	0.057	-0.019	590.34	0.000
36	0.052	-0.095	591.21	0.000

Sampel	Q-stat	Probabilitas	Otokorelasi
BUMI	> 43.7729	< 0.05	Signifikan

Estimasi BUMI GARCH (1,1) dengan Model

$$Y_t = 8.785736 + 0.87101 Y_{t-1} - 0.81386 e_{a1} + e_{it}$$

$$SE = (5.366133) (0.177635) (0.214463)$$

$$z = (1.637257) (4.903375) (-3.79489)$$

$$s_t^2 = 93.09618 + 0.25017 e_{a1}^2 + 0.782649 s_{t-1}^2$$

$$SE = (59.18339) (0.040295) (0.022796)$$

$$z = (1.573012) (6.208502) (34.333)$$

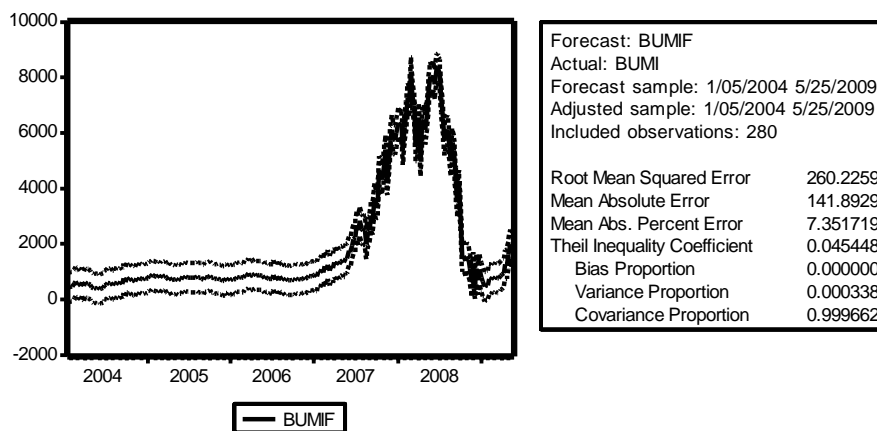
Dependent Variable: D(BUMI)				
Method: ML - ARCH (Marquardt) - Normal distribution				
Date: 07/31/09 Time: 15:02				
Sample (adjusted): 1/19/2004 5/25/2009				
Included observations: 280 after adjustments				
Convergence achieved after 41 iterations				
MA backcast: 12/29/2003, Variance backcast: ON				
GARCH = C(4) + C(5)*RESID(-1)^2 + C(6)*GARCH(-1)				
	Coefficient	Std. Error	z-Statistic	Prob.
C	8.785736	5.366133	1.637257	0.1016
AR(1)	0.87101	0.177635	4.903375	0
MA(1)	-0.81386	0.214463	-3.79489	0.0001
	Variance Equation			
C	93.09618	59.18339	1.573012	0.1157
RESID(-1)^2	0.25017	0.040295	6.208502	0
GARCH(-1)	0.782649	0.022796	34.333	0
R-squared	0.029845	Mean dependent var		5.491036
Adjusted R-squared	0.012141	S.D. dependent var		276.1928
S.E. of regression	274.511	Akaike info criterion		12.06394
Sum squared resid	20647626	Schwarz criterion		12.14183
Log likelihood	-1682.95	F-statistic		1.685806
Durbin-Watson stat	1.7748	Prob(F-statistic)		0.13811
Inverted AR Roots	0.87			
Inverted MA Roots	0.81			

Residual Tes BUMI GARCH (1,1) = Tidak Ada Otokorelasi

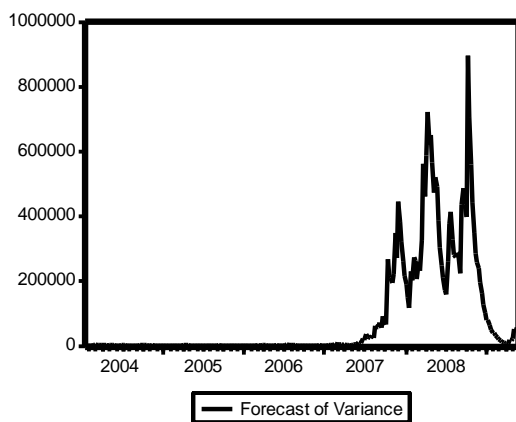
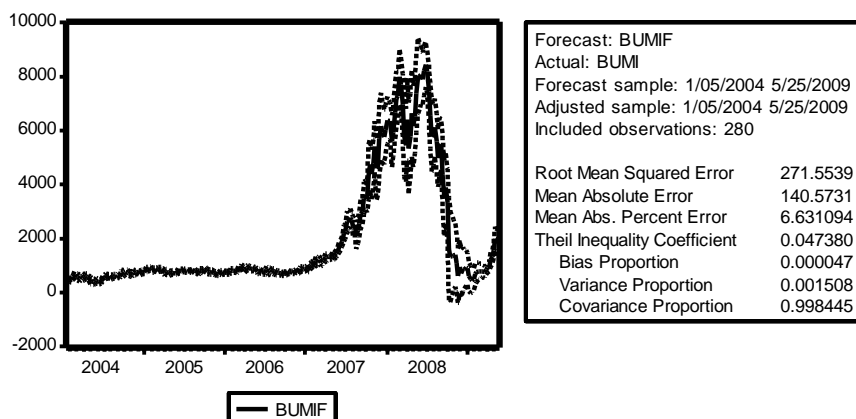
	AC	PAC	Q-Stat	Prob
1	-0.010	-0.010	0.0293	
2	0.019	0.019	0.1296	
3	0.049	0.049	0.8090	0.368
4	0.066	0.067	2.0563	0.358
5	-0.004	-0.005	2.0618	0.560
6	-0.061	-0.067	3.1514	0.533
7	0.095	0.088	5.7659	0.330
8	-0.022	-0.022	5.9051	0.434
9	-0.008	-0.005	5.9238	0.549
10	-0.002	-0.002	5.9249	0.656
11	-0.016	-0.027	5.9993	0.740
12	0.004	0.004	6.0030	0.815
13	0.126	0.142	10.692	0.469
14	0.123	0.121	15.203	0.231
15	-0.091	-0.093	17.653	0.171
16	0.052	0.032	18.461	0.187
17	0.038	0.014	18.898	0.218
18	0.118	0.122	23.108	0.111
19	0.013	0.043	23.160	0.144
20	-0.009	-0.036	23.183	0.184
21	0.029	-0.021	23.431	0.219
22	0.010	0.026	23.462	0.267
23	-0.002	0.001	23.463	0.320
24	0.024	0.049	23.647	0.366
25	0.015	-0.002	23.713	0.420
26	0.039	0.006	24.190	0.451
27	-0.028	-0.053	24.427	0.495
28	-0.021	-0.011	24.566	0.544
29	-0.004	0.011	24.570	0.599
30	0.114	0.106	28.656	0.430
31	0.001	-0.030	28.656	0.483
32	0.026	-0.012	28.867	0.525
33	-0.035	-0.040	29.261	0.556
34	0.073	0.074	30.953	0.519
35	0.047	0.052	31.650	0.534
36	-0.038	-0.045	32.124	0.560

Sampel	Q-stat	Probabilitas	Otokorelasi
BUMI	< 43.7729	> 0.05	Tidak Signifikan

Forecasting Plot BUMI ARIMA (1,1,1)



Forecasting Plot BUMI GARCH (1,1)



LAMPIRAN 4.**Estimasi Model INTP dengan ARIMA dan GARCH (1,1)**

Estimasi INTP MA (1) dengan Model

$$Y_t = 15.28072 - 0.16202 e_{a1} + e_a$$

$$SE = (16.36144) (0.059234)$$

$$t = (0.933947) (-2.73524)$$

Dependent Variable: D(INTP)				
Method: Least Squares				
Date: 08/03/09 Time: 02:24				
Sample (adjusted): 1/12/2004 5/25/2009				
Included observations: 281 after adjustments				
Convergence achieved after 5 iterations				
Backcast: 12/29/2003				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.28072	16.36144	0.933947	0.3511
MA(1)	-0.16202	0.059234	-2.73524	0.0066
R-squared	0.024459	Mean dependent var		15.59648
Adjusted R-squared	0.020962	S.D. dependent var		330.5332
S.E. of regression	327.0505	Akaike info criterion		14.4252
Sum squared resid	29842415	Schwarz criterion		14.45109
Log likelihood	-2024.74	F-statistic		6.995073
Durbin-Watson stat	1.988046	Prob(F-statistic)		0.008637
Inverted MA Roots	0.16			

Residual Tes INTP MA (1) = Tidak Ada Otokorelasi

	AC	PAC	Q-Stat	Prob
1	-0.004	-0.004	0.0052	
2	-0.040	-0.040	0.4690	0.493
3	0.076	0.076	2.1236	0.346
4	-0.097	-0.099	4.8383	0.184
5	0.004	0.010	4.8424	0.304
6	0.000	-0.014	4.8424	0.435
7	-0.027	-0.012	5.0573	0.536
8	-0.014	-0.026	5.1172	0.646
9	0.016	0.018	5.1953	0.737
10	-0.130	-0.133	10.124	0.341
11	0.006	0.009	10.135	0.429
12	0.033	0.015	10.465	0.489
13	-0.097	-0.077	13.268	0.350
14	0.029	0.005	13.520	0.409
15	0.015	0.007	13.588	0.481
16	-0.075	-0.063	15.285	0.431
17	0.016	-0.004	15.367	0.498
18	0.064	0.059	16.612	0.481
19	0.073	0.088	18.222	0.441
20	-0.030	-0.060	18.489	0.490
21	-0.008	-0.008	18.508	0.554
22	-0.076	-0.075	20.270	0.504
23	0.015	0.013	20.338	0.562
24	0.005	-0.007	20.346	0.621
25	-0.028	-0.003	20.586	0.663
26	0.046	0.007	21.243	0.679
27	0.013	0.022	21.299	0.726
28	0.008	0.026	21.322	0.771
29	-0.044	-0.045	21.920	0.785
30	-0.051	-0.063	22.742	0.788
31	0.084	0.097	24.969	0.727
32	0.036	0.031	25.385	0.750
33	-0.019	-0.021	25.498	0.785
34	0.004	-0.004	25.503	0.821
35	-0.046	-0.042	26.185	0.829
36	0.016	0.022	26.267	0.856

Sampel	Q-stat	Probabilitas	Otokorelasi
INTP	< 43.7729	> 0.05	Tidak Signifikan

Squared Residual INTP MA (1) = Ada Otokorelasi

	AC	PAC	Q-Stat	Prob
1	0.165	0.165	7.7116	
2	0.049	0.022	8.3936	0.004
3	-0.004	-0.016	8.3982	0.015
4	0.028	0.031	8.6176	0.035
5	0.037	0.030	9.0193	0.061
6	-0.029	-0.043	9.2604	0.099
7	0.041	0.052	9.7424	0.136
8	0.215	0.210	23.151	0.002
9	0.059	-0.015	24.169	0.002
10	0.044	0.023	24.734	0.003
11	0.051	0.054	25.509	0.004
12	0.015	-0.018	25.577	0.007
13	0.047	0.033	26.243	0.010
14	-0.027	-0.023	26.466	0.015
15	0.004	-0.006	26.472	0.023
16	0.028	-0.015	26.706	0.031
17	0.056	0.050	27.655	0.035
18	0.045	0.014	28.266	0.042
19	0.040	0.013	28.760	0.051
20	0.036	0.026	29.165	0.063
21	0.055	0.028	30.102	0.068
22	0.144	0.147	36.478	0.019
23	0.060	0.019	37.598	0.020
24	0.010	-0.018	37.631	0.028
25	-0.021	-0.036	37.773	0.037
26	0.029	0.021	38.028	0.046
27	0.049	0.027	38.780	0.051
28	0.026	0.003	38.994	0.063
29	0.067	0.047	40.407	0.061
30	0.061	-0.024	41.576	0.061
31	0.254	0.247	62.172	0.000
32	0.034	-0.050	62.542	0.001
33	0.008	-0.006	62.562	0.001
34	0.033	0.041	62.920	0.001
35	0.018	-0.024	63.021	0.002
36	0.003	-0.010	63.023	0.003

Sampel	Q-stat	Probabilitas	Otokorelasi
INTP	> 43.7729	< 0.05	Signifikan

Estimasi INTP GARCH (1,1) dengan Model

$$Y_t = 19.22576 - 0.078 e_{a1} + e_{it}$$

$$SE = (8.858447) (0.055457)$$

$$z = (2.170331) (-1.40653)$$

$$s_t^2 = -446.486 - 0.00887 e_{a1}^2 + 1.027655 s_{t-1}^2$$

$$SE = (203.1437) (0.010413) \quad (0.014461)$$

$$z = (-2.19788) (-0.85206) \quad (71.06425)$$

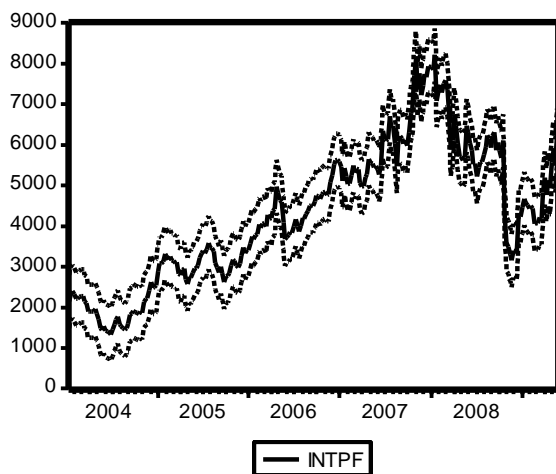
Dependent Variable: D(INTP)				
Method: ML - ARCH (Marquardt) - Normal distribution				
Date: 08/03/09 Time: 02:52				
Sample (adjusted): 1/12/2004 5/25/2009				
Included observations: 281 after adjustments				
Convergence achieved after 34 iterations				
MA backcast: 12/29/2003, Variance backcast: ON				
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)				
	Coefficient	Std. Error	z-Statistic	Prob.
C	19.22576	8.858447	2.170331	0.03
MA(1)	-0.078	0.055457	-1.40653	0.1596
	Variance Equation			
C	-446.486	203.1437	-2.19788	0.028
RESID(-1)^2	-0.00887	0.010413	-0.85206	0.3942
GARCH(-1)	1.027655	0.014461	71.06425	0
R-squared	0.017607	Mean dependent var		15.59648
Adjusted R-squared	0.00337	S.D. dependent var		330.5332
S.E. of regression	329.9759	Akaike info criterion		13.97618
Sum squared resid	30052008	Schwarz criterion		14.04092
Log likelihood	-1958.65	F-statistic		1.23667
Durbin-Watson stat	2.149885	Prob(F-statistic)		0.295544
Inverted MA Roots	0.08			

Residual Tes INTP GARCH (1,1) = Tidak Ada Otokorelasi

	AC	PAC	Q-Stat	Prob
1	-0.011	-0.011	0.0373	
2	-0.057	-0.057	0.9663	0.326
3	0.061	0.059	2.0160	0.365
4	-0.080	-0.082	3.8314	0.280
5	0.018	0.024	3.9261	0.416
6	-0.023	-0.037	4.0853	0.537
7	0.016	0.029	4.1618	0.655
8	0.047	0.035	4.8037	0.684
9	-0.008	0.002	4.8227	0.776
10	-0.089	-0.094	7.1479	0.622
11	0.034	0.035	7.4982	0.678
12	0.005	-0.001	7.5070	0.757
13	-0.123	-0.111	11.978	0.447
14	0.027	0.011	12.191	0.512
15	0.011	0.004	12.227	0.588
16	-0.130	-0.128	17.337	0.299
17	0.009	-0.004	17.364	0.362
18	0.042	0.043	17.886	0.396
19	0.067	0.073	19.252	0.376
20	-0.035	-0.057	19.624	0.417
21	0.007	0.035	19.638	0.481
22	-0.051	-0.074	20.451	0.493
23	-0.023	-0.023	20.620	0.544
24	0.005	0.009	20.629	0.604
25	0.001	0.014	20.629	0.661
26	0.030	-0.028	20.907	0.698
27	-0.004	0.007	20.913	0.746
28	0.002	0.012	20.914	0.790
29	-0.020	-0.044	21.036	0.824
30	-0.087	-0.093	23.451	0.756
31	0.010	0.030	23.481	0.795
32	0.030	0.008	23.761	0.820
33	-0.036	-0.049	24.176	0.838
34	-0.000	0.006	24.176	0.868
35	-0.038	-0.034	24.653	0.880
36	0.034	0.015	25.033	0.894

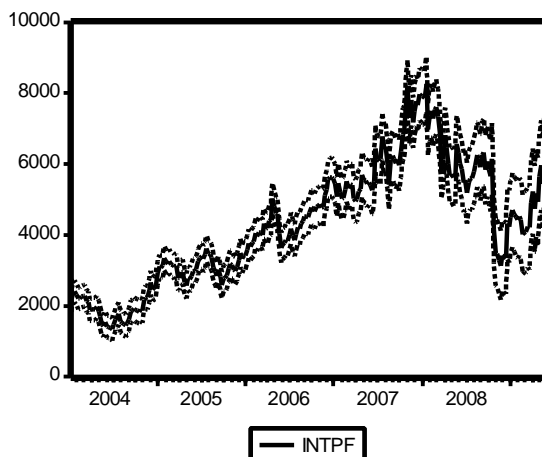
Sampel	Q-stat	Probabilitas	Otokorelasi
INTP	< 43.7729	> 0.05	Tidak Signifikan

Forecasting Plot INTP MA(1)

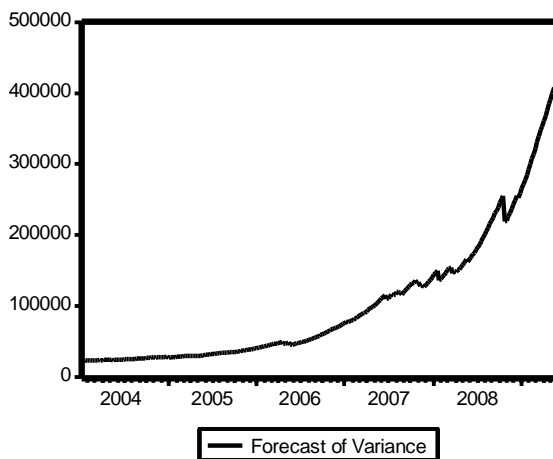


Forecast: INTPF	
Actual: INTP	
Forecast sample: 1/05/2004 5/25/2009	
Adjusted sample: 1/05/2004 5/25/2009	
Included observations: 281	
Root Mean Squared Error	325.8846
Mean Absolute Error	212.7934
Mean Abs. Percent Error	4.980091
Theil Inequality Coefficient	0.035175
Bias Proportion	0.000000
Variance Proportion	0.000239
Covariance Proportion	0.999761

Forecasting Plot INTP GARCH (1,1)



Forecast: INTPF	
Actual: INTP	
Forecast sample: 1/05/2004 5/25/2009	
Adjusted sample: 1/05/2004 5/25/2009	
Included observations: 281	
Root Mean Squared Error	327.0270
Mean Absolute Error	213.3838
Mean Abs. Percent Error	4.953736
Theil Inequality Coefficient	0.035280
Bias Proportion	0.000150
Variance Proportion	0.000061
Covariance Proportion	0.999789



LAMPIRAN 5.**Estimasi Model UNVR dengan ARIMA dan GARCH (1,1)**

Estimasi INTP MA (1) dengan Model

$$Y_t = 17.17174 - 0.30436 e_{a1} + e_a$$

$$SE = (8.473979) (0.057018)$$

$$t = (2.026408) (-5.3379)$$

Dependent Variable: D(UNVR)				
Method: Least Squares				
Date: 08/03/09 Time: 08:19				
Sample (adjusted): 1/12/2004 5/25/2009				
Included observations: 281 after adjustments				
Convergence achieved after 5 iterations				
Backcast: 12/29/2003				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17.17174	8.473979	2.026408	0.0437
MA(1)	-0.30436	0.057018	-5.3379	0
R-squared	0.082148	Mean dependent var		17.28132
Adjusted R-squared	0.078858	S.D. dependent var		212.3929
S.E. of regression	203.8465	Akaike info criterion		13.4797
Sum squared resid	11593398	Schwarz criterion		13.5056
Log likelihood	-1891.9	F-statistic		24.97057
Durbin-Watson stat	1.98702	Prob(F-statistic)		0.000001
Inverted MA Roots	0.3			

Residual Tes UNVR MA (1) = Tidak Ada Otokorelasi

	AC	PAC	Q-Stat	Prob
1	0.006	0.006	0.0094	
2	-0.005	-0.005	0.0165	0.898
3	-0.041	-0.041	0.4988	0.779
4	0.014	0.015	0.5561	0.906
5	0.067	0.067	1.8573	0.762
6	-0.055	-0.058	2.7265	0.742
7	-0.022	-0.020	2.8700	0.825
8	-0.132	-0.128	7.9538	0.337
9	0.028	0.024	8.1877	0.415
10	-0.051	-0.059	8.9579	0.441
11	0.043	0.044	9.5011	0.485
12	0.017	0.020	9.5820	0.568
13	-0.030	-0.020	9.8513	0.629
14	0.078	0.067	11.664	0.555
15	-0.063	-0.063	12.863	0.537
16	-0.011	-0.039	12.903	0.610
17	-0.046	-0.036	13.541	0.633
18	-0.082	-0.100	15.589	0.553
19	-0.029	-0.026	15.849	0.603
20	-0.002	0.008	15.850	0.667
21	-0.056	-0.068	16.821	0.665
22	-0.109	-0.092	20.479	0.491
23	0.023	0.005	20.638	0.543
24	0.021	0.011	20.768	0.595
25	0.057	0.023	21.770	0.593
26	0.104	0.099	25.117	0.456
27	-0.053	-0.050	26.012	0.462
28	-0.023	-0.048	26.174	0.509
29	0.065	0.067	27.512	0.490
30	0.049	0.018	28.279	0.503
31	0.102	0.101	31.559	0.388
32	-0.071	-0.047	33.155	0.362
33	0.023	0.045	33.318	0.403
34	0.004	0.008	33.322	0.452
35	-0.039	-0.069	33.815	0.477
36	-0.029	-0.032	34.087	0.512

Sampel	Q-stat	Probabilitas	Otokorelasi
UNVR	< 43.7729	> 0.05	Tidak Signifikan

Squared Residual UNVR MA (1) = Ada Otokorelasi

	AC	PAC	Q-Stat	Prob
1	0.322	0.322	29.451	
2	0.207	0.116	41.704	0.000
3	0.090	-0.007	44.028	0.000
4	0.108	0.068	47.392	0.000
5	0.077	0.022	49.101	0.000
6	0.030	-0.024	49.369	0.000
7	0.170	0.173	57.797	0.000
8	0.123	0.029	62.214	0.000
9	0.212	0.137	75.376	0.000
10	0.029	-0.103	75.617	0.000
11	0.038	-0.011	76.037	0.000
12	-0.003	-0.026	76.040	0.000
13	0.003	-0.007	76.042	0.000
14	0.001	-0.017	76.042	0.000
15	0.001	0.004	76.043	0.000
16	0.024	-0.032	76.211	0.000
17	0.002	-0.001	76.212	0.000
18	-0.005	-0.035	76.218	0.000
19	-0.033	0.000	76.552	0.000
20	-0.025	-0.011	76.739	0.000
21	-0.016	0.014	76.817	0.000
22	0.051	0.073	77.601	0.000
23	0.029	0.005	77.859	0.000
24	-0.021	-0.052	77.991	0.000
25	-0.010	0.010	78.023	0.000
26	-0.033	-0.030	78.361	0.000
27	0.038	0.079	78.815	0.000
28	0.031	0.031	79.121	0.000
29	0.084	0.058	81.358	0.000
30	0.056	-0.004	82.363	0.000
31	0.022	-0.043	82.511	0.000
32	0.016	0.003	82.596	0.000
33	-0.003	0.013	82.598	0.000
34	-0.020	-0.045	82.721	0.000
35	0.040	0.081	83.237	0.000
36	0.108	0.055	87.040	0.000

Sampel	Q-stat	Probabilitas	Otokorelasi
INTP	> 43.7729	< 0.05	Signifikan

Estimasi UNVR GARCH (1,1) dengan Model

$$Y_t = 15.12639 - 0.27905 e_{a1} + e_{it}$$

$$SE = (6.141341) (0.06462)$$

$$z = (2.463044) (-4.31828)$$

$$s_t^2 = 3563.522 + 0.458385 e_{a1}^2 + 0.523632 s_{t-1}^2$$

$$SE = (878.7102) (0.095644) \quad (0.068238)$$

$$z = (4.055401) (4.792603) \quad (7.673582)$$

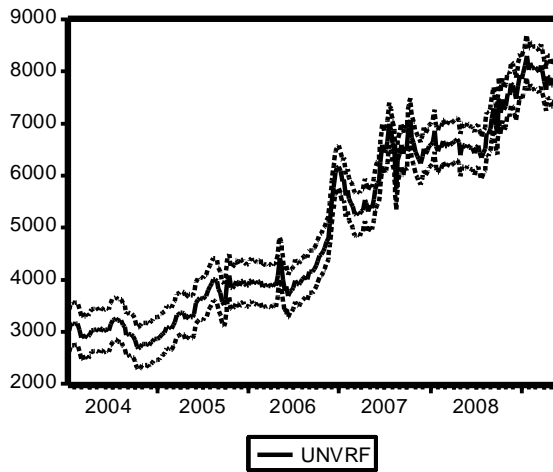
Dependent Variable: D(UNVR)				
Method: ML - ARCH (Marquardt) - Normal distribution				
Date: 08/03/09 Time: 08:39				
Sample (adjusted): 1/12/2004 5/25/2009				
Included observations: 281 after adjustments				
Convergence achieved after 14 iterations				
MA backcast: 12/29/2003, Variance backcast: ON				
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)				
	Coefficient	Std. Error	z-Statistic	Prob.
C	15.12639	6.141341	2.463044	0.0138
MA(1)	-0.27905	0.06462	-4.31828	0
	Variance Equation			
C	3563.522	878.7102	4.055401	0.0001
RESID(-1)^2	0.458385	0.095644	4.792603	0
GARCH(-1)	0.523632	0.068238	7.673582	0
R-squared	0.081356	Mean dependent var		17.28132
Adjusted R-squared	0.068042	S.D. dependent var		212.3929
S.E. of regression	205.0398	Akaike info criterion		13.10216
Sum squared resid	11603403	Schwarz criterion		13.1669
Log likelihood	-1835.85	F-statistic		6.110695
Durbin-Watson stat	2.035984	Prob(F-statistic)		0.0001
Inverted MA Roots	0.28			

Residual Tes UNVR GARCH (1,1) = Tidak Ada Otokorelasi

	AC	PAC	Q-Stat	Prob
1	0.095	0.095	2.5711	
2	-0.018	-0.028	2.6682	0.102
3	0.038	0.043	3.0864	0.214
4	0.036	0.028	3.4678	0.325
5	0.049	0.045	4.1587	0.385
6	-0.050	-0.060	4.8823	0.430
7	-0.078	-0.068	6.6456	0.355
8	0.051	0.059	7.3937	0.389
9	0.012	-0.001	7.4333	0.491
10	-0.055	-0.048	8.3339	0.501
11	0.012	0.028	8.3764	0.592
12	0.017	0.012	8.4598	0.672
13	-0.036	-0.049	8.8443	0.716
14	0.029	0.040	9.0962	0.766
15	-0.130	-0.131	14.187	0.436
16	-0.051	-0.031	14.953	0.455
17	-0.008	-0.014	14.974	0.527
18	-0.075	-0.056	16.658	0.478
19	-0.026	-0.010	16.858	0.533
20	0.023	0.035	17.026	0.588
21	-0.056	-0.058	17.978	0.589
22	-0.078	-0.089	19.845	0.531
23	-0.020	0.000	19.975	0.585
24	-0.025	-0.023	20.162	0.632
25	0.083	0.073	22.278	0.563
26	0.105	0.112	25.701	0.424
27	-0.043	-0.045	26.286	0.447
28	0.026	-0.001	26.497	0.491
29	0.089	0.085	29.023	0.411
30	0.086	0.058	31.384	0.348
31	0.124	0.101	36.260	0.200
32	-0.066	-0.069	37.637	0.191
33	0.005	0.004	37.647	0.226
34	0.059	0.010	38.774	0.225
35	-0.047	-0.039	39.480	0.238
36	-0.018	0.002	39.580	0.273

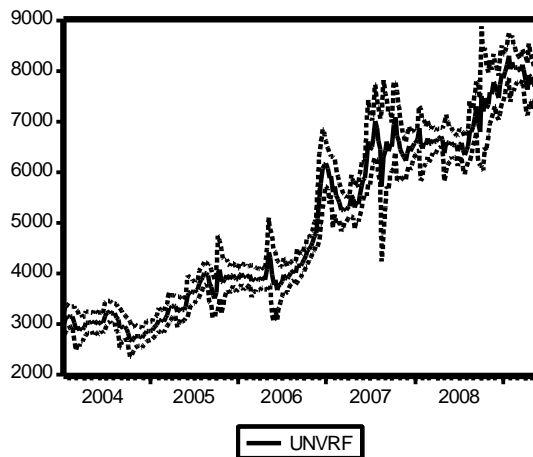
Sampel	Q-stat	Probabilitas	Otokorelasi
UNVR	< 43.7729	> 0.05	Tidak Signifikan

Forecasting Plot UNVR MA (1)



Forecast: UNVRF	
Actual: UNVR	
Forecast sample: 1/05/2004 5/25/2009	
Adjusted sample: 1/05/2004 5/25/2009	
Included observations: 281	
Root Mean Squared Error	203.1198
Mean Absolute Error	138.8556
Mean Abs. Percent Error	2.690151
Theil Inequality Coefficient	0.019230
Bias Proportion	0.000001
Variance Proportion	0.002513
Covariance Proportion	0.997487

Forecasting Plot UNVR GARCH (1,1)



Forecast: UNVRF	
Actual: UNVR	
Forecast sample: 1/05/2004 5/25/2009	
Adjusted sample: 1/05/2004 5/25/2009	
Included observations: 281	
Root Mean Squared Error	203.2074
Mean Absolute Error	138.7307
Mean Abs. Percent Error	2.684010
Theil Inequality Coefficient	0.019243
Bias Proportion	0.000220
Variance Proportion	0.002249
Covariance Proportion	0.997531

