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LAMPIRAN

Lampiran 1 Data Harga Penutupan Saham Bank Syariah Indonesia (BSI)

Date	Close	Date	Close	Date	Close	Date	Close
1/4/2021	2360	2/26/2021	2940	4/23/2021	2320	6/23/2021	1750
1/5/2021	2350	3/1/2021	2920	4/26/2021	2310	6/24/2021	1725
1/6/2021	2510	3/2/2021	2850	4/27/2021	2290	6/25/2021	1945
1/7/2021	2710	3/3/2021	2810	4/28/2021	2220	6/28/2021	2250
1/8/2021	2860	3/4/2021	2680	4/29/2021	2260	6/29/2021	2190
1/11/2021	3040	3/5/2021	2630	4/30/2021	2280	6/30/2021	2300
1/12/2021	3760	3/8/2021	2680	5/3/2021	2240	7/1/2021	2280
1/13/2021	3770	3/9/2021	2620	5/4/2021	2250	7/2/2021	2230
1/14/2021	3760	3/10/2021	2570	5/5/2021	2280	7/5/2021	2160
1/15/2021	3670	3/12/2021	2620	5/6/2021	2420	7/6/2021	2180
1/18/2021	3420	3/15/2021	2600	5/7/2021	2310	7/7/2021	2330
1/19/2021	3190	3/16/2021	2680	5/10/2021	2280	7/8/2021	2430
1/20/2021	3650	3/17/2021	2700	5/11/2021	2250	7/9/2021	2380
1/21/2021	3480	3/18/2021	2720	5/17/2021	2100	7/12/2021	2360
1/22/2021	3240	3/19/2021	2670	5/18/2021	2010	7/13/2021	2290
1/25/2021	3240	3/22/2021	2620	5/19/2021	1905	7/14/2021	2350
1/26/2021	3020	3/23/2021	2590	5/20/2021	1925	7/15/2021	2390
1/27/2021	2810	3/24/2021	2600	5/21/2021	1855	7/16/2021	2440
1/28/2021	2620	3/25/2021	2490	5/24/2021	1760	7/19/2021	2590
1/29/2021	2440	3/26/2021	2540	5/25/2021	1850	7/21/2021	2570
2/1/2021	2800	3/29/2021	2450	5/27/2021	1830	7/22/2021	2580
2/2/2021	2610	3/30/2021	2350	5/28/2021	1870	7/23/2021	2640
2/3/2021	2750	3/31/2021	2290	5/31/2021	1905	7/26/2021	2680
2/4/2021	2680	4/1/2021	2330	6/2/2021	1925	7/27/2021	2710
2/5/2021	2710	4/5/2021	2230	6/3/2021	1920	7/28/2021	2800
2/8/2021	2960	4/6/2021	2260	6/4/2021	2050	7/29/2021	2820
2/9/2021	2830	4/7/2021	2240	6/7/2021	1915	7/30/2021	2630
2/10/2021	2870	4/8/2021	2440	6/8/2021	1825	8/2/2021	2600
2/11/2021	2870	4/9/2021	2380	6/9/2021	1860	8/3/2021	2540
2/15/2021	2870	4/12/2021	2270	6/10/2021	1880	8/4/2021	2580
2/16/2021	2900	4/13/2021	2270	6/11/2021	1835	8/5/2021	2700
2/17/2021	2740	4/14/2021	2330	6/14/2021	1810	8/6/2021	2690
2/18/2021	2700	4/15/2021	2300	6/15/2021	1795	8/9/2021	2510
2/19/2021	2690	4/16/2021	2330	6/16/2021	1780	8/10/2021	2340
2/22/2021	2770	4/19/2021	2460	6/17/2021	1855	8/12/2021	2350
2/23/2021	2790	4/20/2021	2380	6/18/2021	1765	8/13/2021	2370
2/24/2021	2820	4/21/2021	2340	6/21/2021	1725	8/16/2021	2250
2/25/2021	2960	4/22/2021	2340	6/22/2021	1810	8/18/2021	2170

Date	Close
8/19/2021	2060
8/20/2021	2150
8/23/2021	2200
8/24/2021	2180
8/25/2021	2200
8/26/2021	2190
8/27/2021	2160
8/30/2021	2210
8/31/2021	2220
9/1/2021	2180
9/2/2021	2140
9/3/2021	2140
9/6/2021	2130
9/7/2021	2110
9/8/2021	2070
9/9/2021	2040
9/10/2021	2090
9/13/2021	2130
9/14/2021	2120
9/15/2021	2090
9/16/2021	2150
9/17/2021	2150
9/20/2021	2080
9/21/2021	2070
9/22/2021	2110
9/23/2021	2140
9/24/2021	2110
9/27/2021	2070
9/28/2021	2060
9/29/2021	2040
9/30/2021	2040
10/1/2021	2040
10/4/2021	2120
10/5/2021	2080
10/6/2021	2200
10/7/2021	2140
10/8/2021	2150
10/11/2021	2090

Date	Close
10/12/2021	2080
10/13/2021	2080
10/14/2021	2090
10/15/2021	2130
10/18/2021	2250
10/19/2021	2210
10/21/2021	2150
10/22/2021	2160
10/25/2021	2130
10/26/2021	2150
10/27/2021	2140
10/28/2021	2080
10/29/2021	2110
11/1/2021	2090
11/2/2021	2070
11/3/2021	2090
11/4/2021	2060
11/5/2021	2080
11/8/2021	2090
11/9/2021	2080
11/10/2021	2080
11/11/2021	2070
11/12/2021	2060
11/15/2021	2070
11/16/2021	2090
11/17/2021	2080
11/18/2021	2070
11/19/2021	2070
11/22/2021	2060
11/23/2021	2050
11/24/2021	2050
11/25/2021	2050
11/26/2021	2010
11/29/2021	1965
11/30/2021	1955
12/1/2021	1855
12/2/2021	1810
12/3/2021	1875

Date	Close
12/6/2021	1880
12/7/2021	1865
12/8/2021	1915
12/9/2021	1900
12/10/2021	1905
12/13/2021	1895
12/14/2021	1880
12/15/2021	1870
12/16/2021	1845
12/17/2021	1835
12/20/2021	1800
12/21/2021	1785
12/22/2021	1765
12/23/2021	1770
12/24/2021	1795
12/27/2021	1860
12/28/2021	1800
12/29/2021	1790
12/30/2021	1780
1/3/2022	1780
1/4/2022	1795
1/5/2022	1790
1/6/2022	1745
1/7/2022	1745
1/10/2022	1760
1/11/2022	1740
1/12/2022	1620
1/13/2022	1615
1/14/2022	1585
1/17/2022	1540
1/18/2022	1495
1/19/2022	1505
1/20/2022	1550
1/21/2022	1555
1/24/2022	1550
1/25/2022	1510
1/26/2022	1515
1/27/2022	1505
1/28/2022	1520
1/31/2022	1545

Lampiran 2 Statistik deskriptif

Date: 08/23/22 Time: 18:44	
Sample: 1/04/2021 1/31/2022	
	CLOSE_BSI
Mean	2251.679
Median	2160.000
Maximum	3770.000
Minimum	1495.000
Std. Dev.	432.0168
Skewness	0.940027
Kurtosis	4.349614
Jarque-Bera	59.80939
Probability	0.000000
Sum	603450.0
Sum Sq. Dev.	49832494
Observations	268

Lampiran 3 Data Transformasi Box-Cox

Date	Close_BSI	Trans_close_BSI
1/4/2021	2360	0.000423729
1/5/2021	2350	0.000425532
1/6/2021	2510	0.000398406
1/7/2021	2710	0.000369004
1/8/2021	2860	0.00034965
1/11/2021	3040	0.000328947
1/12/2021	3760	0.000265957
1/13/2021	3770	0.000265252
1/14/2021	3760	0.000265957
1/15/2021	3670	0.00027248
1/18/2021	3420	0.000292398
1/19/2021	3190	0.00031348
1/20/2021	3650	0.000273973
1/21/2021	3480	0.000287356
1/22/2021	3240	0.000308642
1/25/2021	3240	0.000308642
1/26/2021	3020	0.000331126
1/27/2021	2810	0.000355872
1/28/2021	2620	0.000381679
1/29/2021	2440	0.000409836
2/1/2021	2800	0.000357143
2/2/2021	2610	0.000383142
2/3/2021	2750	0.000363636
2/4/2021	2680	0.000373134

Date	Close_BSI	Trans_close_BSI
2/5/2021	2710	0.000369004
2/8/2021	2960	0.000337838
2/9/2021	2830	0.000353357
2/10/2021	2870	0.000348432
2/11/2021	2870	0.000348432
2/15/2021	2870	0.000348432
2/16/2021	2900	0.000344828
2/17/2021	2740	0.000364964
2/18/2021	2700	0.00037037
2/19/2021	2690	0.000371747
2/22/2021	2770	0.000361011
2/23/2021	2790	0.000358423
2/24/2021	2820	0.00035461
2/25/2021	2960	0.000337838
2/26/2021	2940	0.000340136
3/1/2021	2920	0.000342466
3/2/2021	2850	0.000350877
3/3/2021	2810	0.000355872
3/4/2021	2680	0.000373134
3/5/2021	2630	0.000380228
3/8/2021	2680	0.000373134
3/9/2021	2620	0.000381679
3/10/2021	2570	0.000389105
3/12/2021	2620	0.000381679

Date	Close_BSI	Trans_close_BSI
3/15/2021	2600	0.000384615
3/16/2021	2680	0.000373134
3/17/2021	2700	0.00037037
3/18/2021	2720	0.000367647
3/19/2021	2670	0.000374532
3/22/2021	2620	0.000381679
3/23/2021	2590	0.0003861
3/24/2021	2600	0.000384615
3/25/2021	2490	0.000401606
3/26/2021	2540	0.000393701
3/29/2021	2450	0.000408163
3/30/2021	2350	0.000425532
3/31/2021	2290	0.000436681
4/1/2021	2330	0.000429185
4/5/2021	2230	0.00044843
4/6/2021	2260	0.000442478
4/7/2021	2240	0.000446429
4/8/2021	2440	0.000409836
4/9/2021	2380	0.000420168
4/12/2021	2270	0.000440529
4/13/2021	2270	0.000440529
4/14/2021	2330	0.000429185
4/15/2021	2300	0.000434783
4/16/2021	2330	0.000429185
4/19/2021	2460	0.000406504
4/20/2021	2380	0.000420168
4/21/2021	2340	0.00042735
4/22/2021	2340	0.00042735
4/23/2021	2320	0.000431034
4/26/2021	2310	0.0004329
4/27/2021	2290	0.000436681
4/28/2021	2220	0.00045045
4/29/2021	2260	0.000442478
4/30/2021	2280	0.000438596
5/3/2021	2240	0.000446429
5/4/2021	2250	0.000444444
5/5/2021	2280	0.000438596
5/6/2021	2420	0.000413223
5/7/2021	2310	0.0004329
5/10/2021	2280	0.000438596
5/11/2021	2250	0.000444444
5/17/2021	2100	0.00047619

Date	Close_BSI	Trans_close_BSI
5/18/2021	2010	0.000497512
5/19/2021	1905	0.000524934
5/20/2021	1925	0.000519481
5/21/2021	1855	0.000539084
5/24/2021	1760	0.000568182
5/25/2021	1850	0.000540541
5/27/2021	1830	0.000546448
5/28/2021	1870	0.000534759
5/31/2021	1905	0.000524934
6/2/2021	1925	0.000519481
6/3/2021	1920	0.000520833
6/4/2021	2050	0.000487805
6/7/2021	1915	0.000522193
6/8/2021	1825	0.000547945
6/9/2021	1860	0.000537634
6/10/2021	1880	0.000531915
6/11/2021	1835	0.000544959
6/14/2021	1810	0.000552486
6/15/2021	1795	0.000557103
6/16/2021	1780	0.000561798
6/17/2021	1855	0.000539084
6/18/2021	1765	0.000566572
6/21/2021	1725	0.00057971
6/22/2021	1810	0.000552486
6/23/2021	1750	0.000571429
6/24/2021	1725	0.00057971
6/25/2021	1945	0.000514139
6/28/2021	2250	0.000444444
6/29/2021	2190	0.000456621
6/30/2021	2300	0.000434783
7/1/2021	2280	0.000438596
7/2/2021	2230	0.00044843
7/5/2021	2160	0.000462963
7/6/2021	2180	0.000458716
7/7/2021	2330	0.000429185
7/8/2021	2430	0.000411523
7/9/2021	2380	0.000420168
7/12/2021	2360	0.000423729
7/13/2021	2290	0.000436681
7/14/2021	2350	0.000425532
7/15/2021	2390	0.00041841
7/16/2021	2440	0.000409836

Date	Close_BSI	Trans_close_BSI
7/19/2021	2590	0.0003861
7/21/2021	2570	0.000389105
7/22/2021	2580	0.000387597
7/23/2021	2640	0.000378788
7/26/2021	2680	0.000373134
7/27/2021	2710	0.000369004
7/28/2021	2800	0.000357143
7/29/2021	2820	0.00035461
7/30/2021	2630	0.000380228
8/2/2021	2600	0.000384615
8/3/2021	2540	0.000393701
8/4/2021	2580	0.000387597
8/5/2021	2700	0.00037037
8/6/2021	2690	0.000371747
8/9/2021	2510	0.000398406
8/10/2021	2340	0.00042735
8/12/2021	2350	0.000425532
8/13/2021	2370	0.000421941
8/16/2021	2250	0.000444444
8/18/2021	2170	0.000460829
8/19/2021	2060	0.000485437
8/20/2021	2150	0.000465116
8/23/2021	2200	0.000454545
8/24/2021	2180	0.000458716
8/25/2021	2200	0.000454545
8/26/2021	2190	0.000456621
8/27/2021	2160	0.000462963
8/30/2021	2210	0.000452489
8/31/2021	2220	0.00045045
9/1/2021	2180	0.000458716
9/2/2021	2140	0.00046729
9/3/2021	2140	0.00046729
9/6/2021	2130	0.000469484
9/7/2021	2110	0.000473934
9/8/2021	2070	0.000483092
9/9/2021	2040	0.000490196
9/10/2021	2090	0.000478469
9/13/2021	2130	0.000469484
9/14/2021	2120	0.000471698
9/15/2021	2090	0.000478469
9/16/2021	2150	0.000465116
9/17/2021	2150	0.000465116
11/18/2021	2070	0.000483092

Date	Close_BSI	Trans_close_BSI
9/20/2021	2080	0.000480769
9/21/2021	2070	0.000483092
9/22/2021	2110	0.000473934
9/23/2021	2140	0.00046729
9/24/2021	2110	0.000473934
9/27/2021	2070	0.000483092
9/28/2021	2060	0.000485437
9/29/2021	2040	0.000490196
9/30/2021	2040	0.000490196
10/1/2021	2040	0.000490196
10/4/2021	2120	0.000471698
10/5/2021	2080	0.000480769
10/6/2021	2200	0.000454545
10/7/2021	2140	0.00046729
10/8/2021	2150	0.000465116
10/11/2021	2090	0.000478469
10/12/2021	2080	0.000480769
10/13/2021	2080	0.000480769
10/14/2021	2090	0.000478469
10/15/2021	2130	0.000469484
10/18/2021	2250	0.000444444
10/19/2021	2210	0.000452489
10/21/2021	2150	0.000465116
10/22/2021	2160	0.000462963
10/25/2021	2130	0.000469484
10/26/2021	2150	0.000465116
10/27/2021	2140	0.00046729
10/28/2021	2080	0.000480769
10/29/2021	2110	0.000473934
11/1/2021	2090	0.000478469
11/2/2021	2070	0.000483092
11/3/2021	2090	0.000478469
11/4/2021	2060	0.000485437
11/5/2021	2080	0.000480769
11/8/2021	2090	0.000478469
11/9/2021	2080	0.000480769
11/10/2021	2080	0.000480769
11/11/2021	2070	0.000483092
11/12/2021	2060	0.000485437
11/15/2021	2070	0.000483092
11/16/2021	2090	0.000478469
11/17/2021	2080	0.000480769
1/18/2022	1495	0.000668896

Date	Close_BSI	Trans_close_BSI
11/19/2021	2070	0.000483092
11/22/2021	2060	0.000485437
11/23/2021	2050	0.000487805
11/24/2021	2050	0.000487805
11/25/2021	2050	0.000487805
11/26/2021	2010	0.000497512
11/29/2021	1965	0.000508906
11/30/2021	1955	0.000511509
12/1/2021	1855	0.000539084
12/2/2021	1810	0.000552486
12/3/2021	1875	0.000533333
12/6/2021	1880	0.000531915
12/7/2021	1865	0.000536193
12/8/2021	1915	0.000522193
12/9/2021	1900	0.000526316
12/10/2021	1905	0.000524934
12/13/2021	1895	0.000527704
12/14/2021	1880	0.000531915
12/15/2021	1870	0.000534759
12/16/2021	1845	0.000542005
12/17/2021	1835	0.000544959
12/20/2021	1800	0.000555556
12/21/2021	1785	0.000560224
12/22/2021	1765	0.000566572
12/23/2021	1770	0.000564972
12/24/2021	1795	0.000557103
12/27/2021	1860	0.000537634
12/28/2021	1800	0.000555556
12/29/2021	1790	0.000558659
12/30/2021	1780	0.000561798
1/3/2022	1780	0.000561798
1/4/2022	1795	0.000557103
1/5/2022	1790	0.000558659
1/6/2022	1745	0.000573066
1/7/2022	1745	0.000573066
1/10/2022	1760	0.000568182
1/11/2022	1740	0.000574713
1/12/2022	1620	0.000617284
1/13/2022	1615	0.000619195
1/14/2022	1585	0.000630915
1/17/2022	1540	0.000649351

Date	Close_BSI	Trans_close_BSI
1/19/2022	1505	0.000664452
1/20/2022	1550	0.000645161
1/21/2022	1555	0.000643087
1/24/2022	1550	0.000645161
1/25/2022	1510	0.000662252
1/26/2022	1515	0.000660066
1/27/2022	1505	0.000664452
1/28/2022	1520	0.000657895
1/31/2022	1545	0.000647249

Lampiran 4 Estimasi Parameter Model ARIMA

ARIMA(1,0,0)

Final Estimates of Parameters

Type	Coef	SE Coef	T-Value	P-Value
AR 1	0.9966	0.0115	86.43	0.000
Constant	0.000001	0.000001	1.41	0.159
Mean	0.000425	0.000300		

ARIMA(2,0,0)

Final Estimates of Parameters

Type	Coef	SE Coef	T-Value	P-Value
AR 1	1.0757	0.0614	17.52	0.000
AR 2	-0.0814	0.0621	-1.31	0.191
Constant	0.000002	0.000001	2.37	0.018
Mean	0.000425	0.000179		

ARIMA(0,0,1)

Final Estimates of Parameters

Type	Coef	SE Coef	T-Value	P-Value
MA 1	-0.8868	0.0261	-33.91	0.000
Constant	0.000460	0.000005	85.72	0.000
Mean	0.000460	0.000005		

ARIMA(0,0,2)

Final Estimates of Parameters

Type	Coef	SE Coef	T-Value	P-Value
MA 1	-1.3257	0.0472	-28.09	0.000
MA 2	-0.7063	0.0454	-15.56	0.000
Constant	0.000459	0.000006	76.94	0.000
Mean	0.000459	0.000006		

ARIMA(1,0,1)

Final Estimates of Parameters

Type	Coef	SE Coef	T-Value	P-Value
AR 1	0.9939	0.0127	78.51	0.000
MA 1	-0.0866	0.0622	-1.39	0.165
Constant	0.000003	0.000001	2.33	0.021
Mean	0.000425	0.000183		

ARIMA(1,0,2)

Final Estimates of Parameters

Type	Coef	SE Coef	T-Value	P-Value
AR 1	0.9950	0.0126	78.91	0.000
MA 1	-0.0890	0.0628	-1.42	0.157
MA 2	0.0293	0.0629	0.47	0.641
Constant	0.000002	0.000001	1.95	0.052
Mean	0.000424	0.000217		

ARIMA(2,0,2)

Final Estimates of Parameters

Type	Coef	SE Coef	T-Value	P-Value
AR 1	1.9701	0.0455	43.30	0.000
AR 2	-0.9698	0.0453	-21.42	0.000
MA 1	0.941113	0.000032	29587.27	0.000
MA 2	0.0489	0.0376	1.30	0.194
Constant	-0.000000	-0.000000	7.32	0.000
Mean	0.000414	0.000057		

Lampiran 5 Uji Indepensi Residual

ARIMA(1,0,0)

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	12.36	20.08	31.57	44.03
DF	10	22	34	46
P-Value	0.262	0.578	0.587	0.555

ARIMA(0,0,1)

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

Lag	12	24	36	48
Chi-Square	1679.19	2297.65	2468.84	2500.98
DF	10	22	34	46
P-Value	0.000	0.000	0.000	0.000

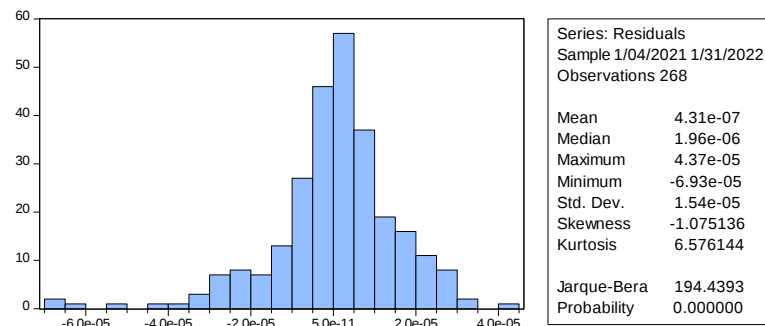
ARIMA(0,0,2)

Modified Box-Pierce (Ljung-Box) Chi-Square Statistic

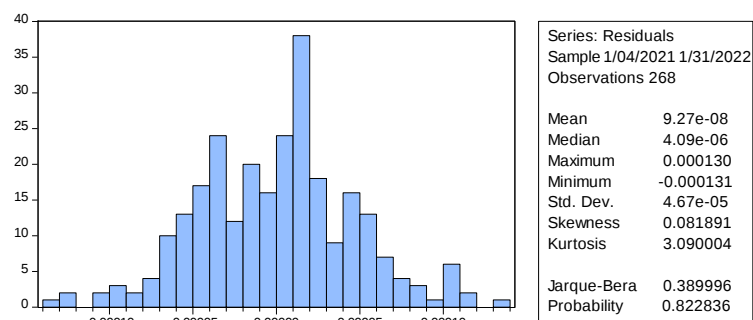
Lag	12	24	36	48
Chi-Square	1065.83	1469.09	1581.61	1604.62
DF	9	21	33	45
P-Value	0.000	0.000	0.000	0.000

Lampiran 6 Uji Normalitas Residual ARIMA

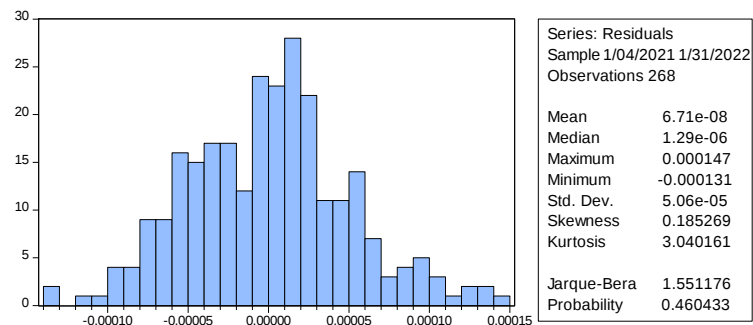
ARIMA(1,0,0)



ARIMA(0,0,1)



ARIMA(0,0,2)



Lampiran 7 Uji Heteroskedastisitas

ARIMA(1,0,0)

Heteroskedasticity Test: ARCH

F-statistic	25.40056	Prob. F(1,265)	0.0000
Obs*R-squared	23.35377	Prob. Chi-Square(1)	0.0000

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 09/05/22 Time: 02:10

Sample (adjusted): 1/05/2021 1/31/2022

Included observations: 267 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	1.67E-10	3.54E-11	4.725270	0.0000
RESID^2(-1)	0.295766	0.058685	5.039896	0.0000
R-squared	0.087467	Mean dependent var	2.37E-10	
Adjusted R-squared	0.084024	S.D. dependent var	5.55E-10	
S.E. of regression	5.31E-10	Akaike info criterion	-39.86681	
Sum squared resid	7.47E-17	Schwarz criterion	-39.83994	
Log likelihood	5324.220	Hannan-Quinn criter.	-39.85602	
F-statistic	25.40056	Durbin-Watson stat	1.983626	
Prob(F-statistic)	0.000001			

Lampiran 8 Estimasi Paramater Model ARCH/GARCH

ARCH(1)

Dependent Variable: TRANS_CLOSE_BSI
Method: ML ARCH - Normal distribution (OPG - BHHH / Marquardt steps)
Date: 09/05/22 Time: 06:15
Sample: 1/04/2021 1/31/2022
Included observations: 268
Convergence achieved after 172 iterations
Coefficient covariance computed using Bollerslev-Wooldridge QML sandwich with expected Hessian
Presample variance: backcast (parameter = 0.7)
GARCH = C(1) + C(2)*RESID(-1)^2

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Variance Equation				
C	3.77E-09	2.59E-09	1.456716	0.1452
RESID(-1)^2	0.986571	0.012577	78.44192	0.0000
R-squared	-30.889574	Mean dependent var	0.000459	
Adjusted R-squared	-30.770583	S.D. dependent var	8.28E-05	
S.E. of regression	0.000467	Akaike info criterion	-12.54890	
Sum squared resid	5.84E-05	Schwarz criterion	-12.52210	
Log likelihood	1683.552	Hannan-Quinn criter.	-12.53813	
Durbin-Watson stat	0.001089			

GARCH(0,1)

Dependent Variable: TRANS_CLOSE_BSI
Method: ML ARCH - Normal distribution (OPG - BHHH / Marquardt steps)
Date: 09/05/22 Time: 06:14
Sample: 1/04/2021 1/31/2022
Included observations: 268
Convergence not achieved after 500 iterations
Coefficient covariance computed using Bollerslev-Wooldridge QML sandwich with expected Hessian
Presample variance: backcast (parameter = 0.7)
GARCH = C(1) + C(2)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Variance Equation				
C	1.42E-07	6.83E-08	2.076094	0.0379

GARCH(-1)	0.350318	0.315418	1.110649	0.2667
R-squared	-30.889574	Mean dependent var	0.000459	
Adjusted R-squared	-30.770583	S.D. dependent var	8.28E-05	
S.E. of regression	0.000467	Akaike info criterion	-12.48661	
Sum squared resid	5.84E-05	Schwarz criterion	-12.45981	
Log likelihood	1675.206	Hannan-Quinn criter.	-12.47585	
Durbin-Watson stat	0.001089			

GARCH(1,1)

Dependent Variable: TRANS_CLOSE_BSI
Method: ML ARCH - Normal distribution (OPG - BHHH / Marquardt steps)
Date: 09/05/22 Time: 06:13
Sample: 1/04/2021 1/31/2022
Included observations: 268
Convergence not achieved after 500 iterations
Coefficient covariance computed using Bollerslev-Wooldridge QML sandwich with expected Hessian
Presample variance: backcast (parameter = 0.7)
GARCH = C(1) + C(2)*RESID(-1)^2 + C(3)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Variance Equation				
C	2.36E-09	1.98E-09	1.192390	0.2331
RESID(-1)^2	0.473807	0.076897	6.161622	0.0000
GARCH(-1)	0.516532	0.081201	6.361127	0.0000
R-squared	-30.889574	Mean dependent var	0.000459	
Adjusted R-squared	-30.770583	S.D. dependent var	8.28E-05	
S.E. of regression	0.000467	Akaike info criterion	-12.54003	
Sum squared resid	5.84E-05	Schwarz criterion	-12.49983	
Log likelihood	1683.364	Hannan-Quinn criter.	-12.52388	
Durbin-Watson stat	0.001089			

Lampiran 9 Uji Independensi Residual Model ARCH/GARCH

ARCH(1)

Date: 09/05/22 Time: 06:16
Sample: 1/04/2021 1/31/2022
Included observations: 268

Autocorrelation		Partial Correlation		AC	PAC	Q-Stat	Prob*	
. *		. *		1	0.087	0.087	2.0514	0.152
. .		. .		2	0.016	0.008	2.1209	0.346
. *		. *		3	0.093	0.091	4.4748	0.215
. .		. .		4	-0.012	-0.028	4.5127	0.341
. .		. .		5	-0.034	-0.032	4.8229	0.438
. .		* .		6	-0.066	-0.069	6.0081	0.422
. .		. .		7	-0.015	0.001	6.0673	0.532
. .		. .		8	0.027	0.036	6.2715	0.617
. .		. .		9	-0.052	-0.046	7.0175	0.635
. .		. .		10	-0.015	-0.010	7.0828	0.718
* .		* .		11	-0.139	-0.151	12.529	0.325

. .	. .	12	-0.028	0.002	12.757	0.387
. .	. .	13	-0.011	-0.006	12.794	0.464
. .	. .	14	0.017	0.051	12.876	0.536
. .	. .	15	0.002	-0.013	12.878	0.612
. .	. .	16	0.074	0.065	14.439	0.566
. .	. .	17	-0.011	-0.049	14.472	0.633
. .	. .	18	0.030	0.033	14.740	0.680
. *	. *	19	0.082	0.079	16.708	0.610
. .	. .	20	-0.001	-0.015	16.709	0.672
. .	. .	21	0.032	0.031	17.002	0.711
. .	. .	22	0.002	-0.039	17.003	0.763
* .	* .	23	-0.078	-0.076	18.815	0.712
. .	. .	24	0.028	0.036	19.042	0.750
. .	. .	25	-0.012	0.018	19.087	0.793
* .	* .	26	-0.088	-0.083	21.400	0.721
. .	. .	27	-0.031	-0.008	21.696	0.753
. .	. .	28	0.015	0.012	21.763	0.792
. .	. .	29	0.012	0.024	21.807	0.828
* .	. .	30	-0.080	-0.058	23.759	0.783
. .	. .	31	0.021	0.037	23.897	0.815
. *	. .	32	0.095	0.073	26.666	0.733
. .	. .	33	-0.016	-0.023	26.744	0.771
. .	* .	34	-0.049	-0.075	27.491	0.778
. .	. .	35	0.024	0.009	27.674	0.806
. .	. .	36	-0.023	-0.023	27.844	0.833
. .	. .	37	-0.021	-0.026	27.985	0.857
. .	. .	38	0.005	0.011	27.993	0.883
. .	. .	39	-0.057	-0.063	29.034	0.878
. .	. .	40	0.025	0.027	29.228	0.896
. .	. .	41	0.010	0.001	29.261	0.915
* .	* .	42	-0.104	-0.077	32.723	0.847
. .	. .	43	0.030	0.050	33.011	0.864
. .	. .	44	0.050	0.063	33.813	0.867
. .	. .	45	0.065	0.060	35.201	0.853
. .	* .	46	-0.047	-0.077	35.927	0.857
. .	. .	47	-0.017	-0.025	36.020	0.878
. .	. .	48	0.043	0.012	36.640	0.884

*Probabilities may not be valid for this equation specification.

GARCH(1,1)

Date: 09/05/22 Time: 06:17

Sample: 1/04/2021 1/31/2022

Included observations: 268

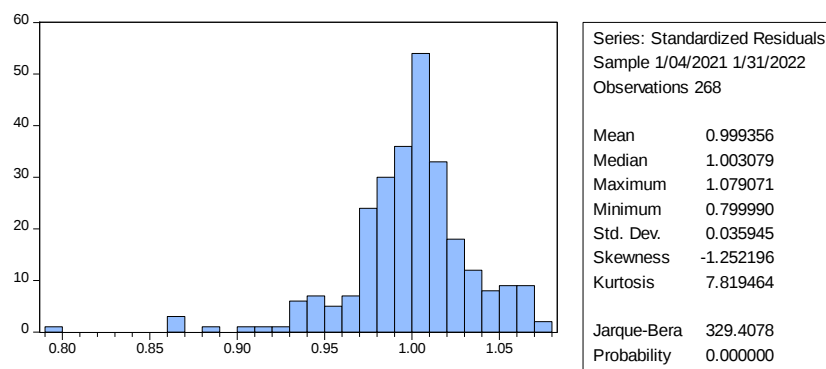
Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob*	
. ****	. ****	1	0.589	0.589	94.007	0.000
. **	. .	2	0.329	-0.028	123.38	0.000
. *	. .	3	0.206	0.036	134.97	0.000
. .	* .	4	0.071	-0.091	136.34	0.000
. .	. .	5	-0.009	-0.027	136.37	0.000
* .	. .	6	-0.067	-0.055	137.61	0.000
. .	. .	7	-0.064	0.024	138.75	0.000
. .	. .	8	-0.054	-0.008	139.56	0.000
* .	* .	9	-0.104	-0.094	142.60	0.000
* .	. .	10	-0.122	-0.035	146.79	0.000
* .	* .	11	-0.167	-0.104	154.60	0.000
* .	. *	12	-0.101	0.091	157.48	0.000

. .	. .	13	-0.038	0.021	157.88	0.000
. .	. .	14	0.016	0.053	157.95	0.000
. .	. .	15	0.045	-0.015	158.54	0.000
. . *	. .	16	0.082	0.047	160.49	0.000
. .	. .	17	0.068	-0.037	161.82	0.000
. . *	. .	18	0.085	0.068	163.93	0.000
. . *	. .	19	0.093	0.025	166.46	0.000
. .	. .	20	0.047	-0.057	167.10	0.000
. .	. .	21	0.028	0.005	167.32	0.000
. .	. . *	22	-0.017	-0.072	167.41	0.000
. .	. .	23	-0.064	-0.019	168.61	0.000
. .	. .	24	-0.042	0.047	169.12	0.000
. .	. .	25	-0.069	-0.036	170.54	0.000
. . *	. .	26	-0.108	-0.074	174.02	0.000
. . *	. . *	27	-0.078	0.043	175.87	0.000
. .	. .	28	-0.041	0.012	176.38	0.000
. .	. .	29	-0.033	-0.005	176.72	0.000
. .	. .	30	-0.052	-0.036	177.54	0.000
. .	. .	31	0.009	0.068	177.56	0.000
. .	. .	32	0.048	0.000	178.27	0.000
. .	. . *	33	-0.006	-0.090	178.28	0.000
. .	. .	34	-0.038	-0.045	178.73	0.000
. .	. .	35	-0.018	0.032	178.83	0.000
. .	. .	36	-0.037	-0.044	179.26	0.000
. .	. .	37	-0.040	-0.015	179.76	0.000
. .	. .	38	-0.038	-0.001	180.22	0.000
. .	. .	39	-0.056	-0.046	181.21	0.000
. .	. .	40	-0.023	0.047	181.38	0.000
. .	. .	41	-0.029	-0.026	181.64	0.000
. .	. .	42	-0.061	-0.028	182.82	0.000
. .	. . *	43	0.013	0.102	182.87	0.000
. .	. .	44	0.051	0.019	183.73	0.000
. .	. .	45	0.052	-0.025	184.62	0.000
. .	. . *	46	-0.005	-0.090	184.63	0.000
. .	. .	47	-0.005	0.029	184.63	0.000
. .	. .	48	0.022	0.021	184.79	0.000

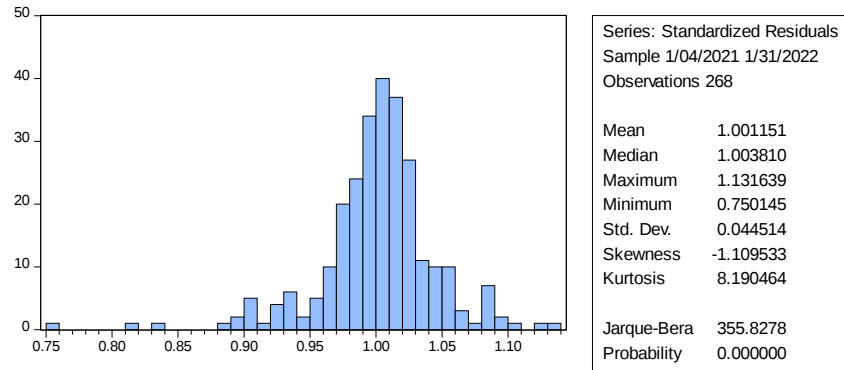
*Probabilities may not be valid for this equation specification.

Lampiran 10 Uji Normalitas Residual Model ARCH/GARCH

ARCH(1)



GARCH(1,1)



Lampiran 11 Uji Efek Asimetris

ARCH(1)

Heteroskedasticity Test: ARCH

F-statistic	2.045890	Prob. F(1,265)	0.1538
Obs*R-squared	2.045539	Prob. Chi-Square(1)	0.1527

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 09/05/22 Time: 06:21

Sample (adjusted): 1/05/2021 1/31/2022

Included observations: 267 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.912727	0.060734	15.02818	0.0000
WGT_RESID^2(-1)	0.086649	0.060579	1.430346	0.1538
R-squared	0.007661	Mean dependent var		0.999384
Adjusted R-squared	0.003917	S.D. dependent var		0.069695
S.E. of regression	0.069558	Akaike info criterion		-2.485838
Sum squared resid	1.282168	Schwarz criterion		-2.458967
Log likelihood	333.8594	Hannan-Quinn criter.		-2.475044
F-statistic	2.045890	Durbin-Watson stat		1.997252
Prob(F-statistic)	0.153796			