Ljung-Box test for white noise		
H0: Logreturns are uncorrelated upto lag 12		
Chi-Square	**df**	**P-Value**
0.009	1	0.924
32.111	2	0.000
33.044	3	0.000
34.872	4	0.000
51.925	5	0.000
58.830	6	0.000
58.879	7	0.000
61.011	8	0.000
61.380	9	0.000
79.333	10	0.000
80.054	11	0.000
86.697	12	0.000

| Breusch-Godfrey test for serial correlation H0: there is no serial correlation of any order up to 12		
Chi-Square	**df**	**P-value**
1262.879	12	0.000

von Neuman rank statistic	Test statistic Z	p-value A	p-value B	p-value C
1.80271	-3.52364	0.000426	0.999787	0.000213

von Neuman rank statistic	Test statistic Z	p-value A	p-value B	p-value C
1.80271	-3.52364	0.000426	0.999787	0.000213

Wald-Wolfowitz Test for Randomness
H0: The data are random

Wald-Wolfowitz Z	Pr > |Z|
-2.29694	0.0216

Logprice

Time series of logreturns
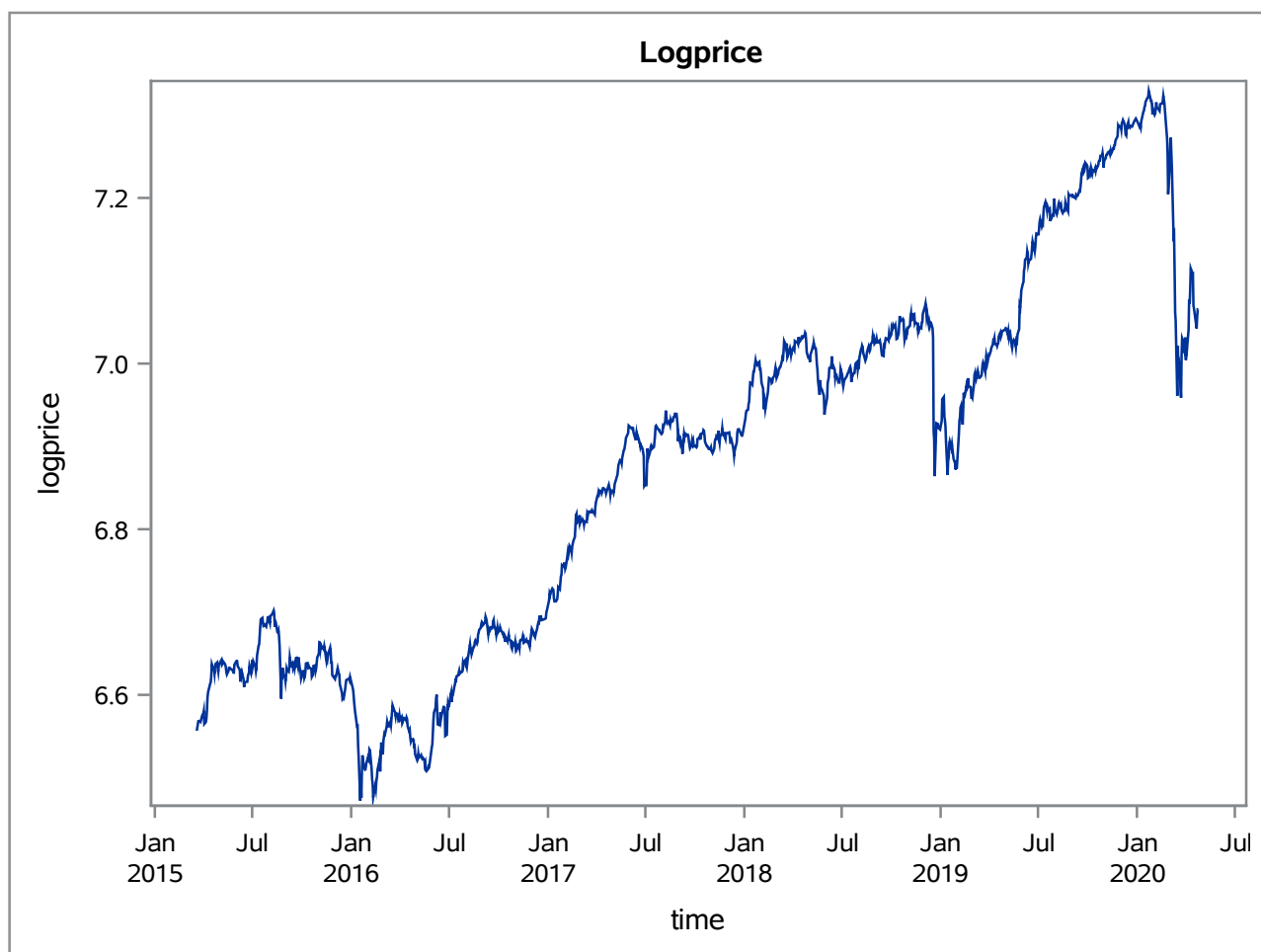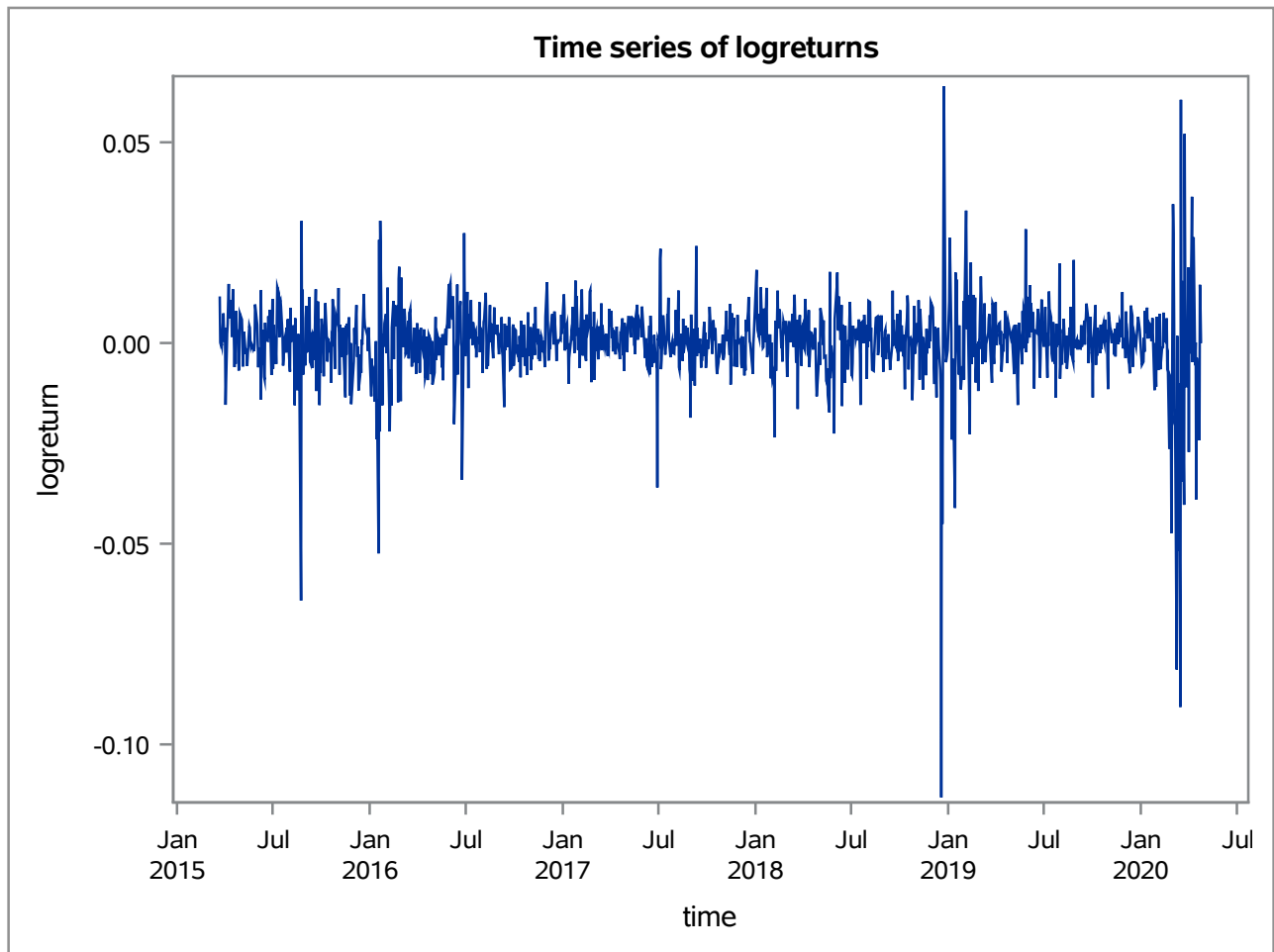
Obs	q	nq	VR	z	z_star	z_critic	Decision	lower_homo	upper_homo	lower_hetero	upper_hetero
1	2	1275	1.00374	0.13371	0.05478	2.57583	Cannot Reject RW	0.93161	1.07588	0.82768	1.17981
2	3	1275	1.11178	2.67739	1.09696	2.57583	Reject Homoskedastic RW	1.00424	1.21931	0.84931	1.37424
3	4	1275	1.15251	2.91089	1.19263	2.57583	Reject Homoskedastic RW	1.01755	1.28747	0.82312	1.48191
4	5	1275	1.16330	2.66149	1.09045	2.57583	Reject Homoskedastic RW	1.00526	1.32135	0.77755	1.54905
5	6	1275	1.20982	3.03068	1.24171	2.57583	Reject Homoskedastic RW	1.03149	1.38815	0.77457	1.64507
6	7	1275	1.22005	2.88286	1.18114	2.57583	Reject Homoskedastic RW	1.02344	1.41666	0.74017	1.69993
7	8	1275	1.22973	2.77307	1.13617	2.57583	Reject Homoskedastic RW	1.01634	1.44311	0.70891	1.75054
8	9	1275	1.22804	2.56546	1.05110	2.57583	Cannot Reject RW	0.99908	1.45700	0.66920	1.78688
9	10	1275	1.23201	2.45363	1.00529	2.57583	Cannot Reject RW	0.98845	1.47557	0.63753	1.82649
10	11	1275	1.25810	2.58332	1.05842	2.57583	Reject Homoskedastic RW	1.00075	1.51545	0.62997	1.88623
11	12	1275	1.27613	2.62994	1.07752	2.57583	Reject Homoskedastic RW	1.00568	1.54658	0.61604	1.93622
12	13	1275	1.30286	2.75714	1.12964	2.57583	Reject Homoskedastic RW	1.01992	1.58581	0.61227	1.99346
13	14	1275	1.32188	2.81132	1.15183	2.57583	Reject Homoskedastic RW	1.02696	1.61680	0.60206	2.04171
14	15	1275	1.34250	2.87898	1.17956	2.57583	Reject Homoskedastic RW	1.03606	1.64893	0.59458	2.09041
15	16	1275	1.36038	2.92343	1.19777	2.57583	Reject Homoskedastic RW	1.04285	1.67791	0.58538	2.13538
16	17	1275	1.36909	2.89624	1.18663	2.57583	Reject Homoskedastic RW	1.04083	1.69734	0.56791	2.17026
17	18	1275	1.37578	2.85832	1.17109	2.57583	Reject Homoskedastic RW	1.03714	1.71442	0.54925	2.20231
18	19	1275	1.37620	2.77883	1.13852	2.57583	Reject Homoskedastic RW	1.02748	1.72492	0.52507	2.22733
19	20	1275	1.37865	2.72050	1.11462	2.57583	Reject Homoskedastic RW	1.02014	1.73717	0.50361	2.25370
20	21	1275	1.38395	2.68706	1.10092	2.57583	Reject Homoskedastic RW	1.01589	1.75201	0.48562	2.28227
21	22	1275	1.38608	2.63539	1.07975	2.57583	Reject Homoskedastic RW	1.00873	1.76343	0.46506	2.30710
22	23	1275	1.38808	2.58686	1.05987	2.57583	Reject Homoskedastic RW	1.00165	1.77451	0.44491	2.33125
23	24	1275	1.39154	2.55133	1.04531	2.57583	Cannot Reject RW	0.99624	1.78683	0.42672	2.35635
24	25	1275	1.39792	2.53723	1.03954	2.57583	Cannot Reject RW	0.99395	1.80189	0.41193	2.38390
25	26	1275	1.40510	2.52984	1.03651	2.57583	Cannot Reject RW	0.99264	1.81756	0.39839	2.41181
26	27	1275	1.41119	2.51712	1.03130	2.57583	Cannot Reject RW	0.99041	1.83198	0.38417	2.43821
27	28	1275	1.41440	2.48847	1.01956	2.57583	Cannot Reject RW	0.98545	1.84334	0.36746	2.46133
28	29	1275	1.41750	2.46113	1.00836	2.57583	Cannot Reject RW	0.98054	1.85445	0.35101	2.48398
29	30	1275	1.41963	2.43000	0.99560	2.57583	Cannot Reject RW	0.97482	1.86445	0.33396	2.50531
30	31	1275	1.41982	2.38955	0.97903	2.57583	Cannot Reject RW	0.96727	1.87236	0.31528	2.52436
31	32	1275	1.41565	2.32678	0.95331	2.57583	Cannot Reject RW	0.95551	1.87580	0.29257	2.53874

Variance Ratio under Homoskedasticity

Variance Ratio under Heteroskedasticity