The SAS System

The AUTOREG Procedure

Dependent Variable	return

The SAS System

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	0.64491032	**DFE**	1509
MSE	0.0004274	**Root MSE**	0.02067
SBC	-7422.8343	**AIC**	-7428.1541
MAE	0.01447432	**AICC**	-7428.1515
MAPE	115.633514	**HQC**	-7426.1729
Durbin-Watson	2.2221	**Total R-Square**	0.0000

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	0.001001	0.000532	1.88	0.0600

Algorithm converged.

The SAS System

The AUTOREG Procedure

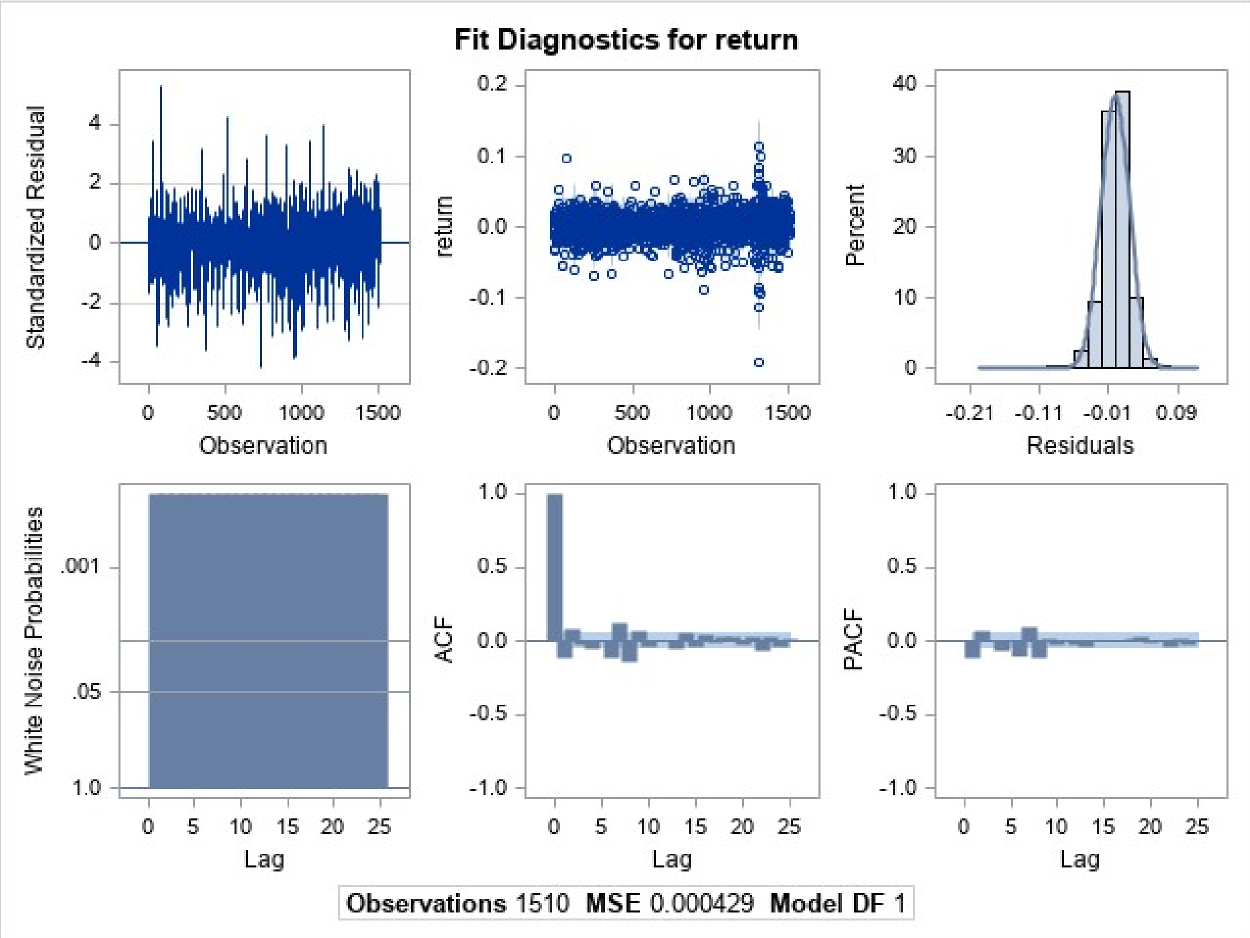
GARCH Estimates			
SSE	0.6452042	**Observations**	1510
MSE	0.0004273	**Uncond Var**	0.00042506
Log Likelihood	3919.27412	**Total R-Square**	.
SBC	-7801.9489	**AIC**	-7828.5482
MAE	0.0144622	**AICC**	-7828.5084
MAPE	124.650251	**HQC**	-7818.6423
		Normality Test	256.7820
		Pr > ChiSq	<.0001

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|	Variable Label
Intercept	1	0.001443	0.000417	3.46	0.0005	
ARCH0	1	0.0000325	9.2526E-6	3.51	0.0004	
ARCH1	1	0.1424	0.0300	4.75	<.0001	
GARCH1	1	0.7812	0.0416	18.76	<.0001	
TDFI	1	0.1856	0.0284	6.54	<.0001	Inverse of t DF

The SAS System

The AUTOREG Procedure



The SAS System

The AUTOREG Procedure

Dependent Variable	return

The SAS System

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	0.64491032	**DFE**	1509
MSE	0.0004274	**Root MSE**	0.02067
SBC	-7422.8343	**AIC**	-7428.1541
MAE	0.01447432	**AICC**	-7428.1515
MAPE	115.633514	**HQC**	-7426.1729
Durbin-Watson	2.2221	**Total R-Square**	0.0000

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	0.001001	0.000532	1.88	0.0600

ERROR: Convergence not attained in 50 iterations. Interpret the estimates with care.

The SAS System

The AUTOREG Procedure

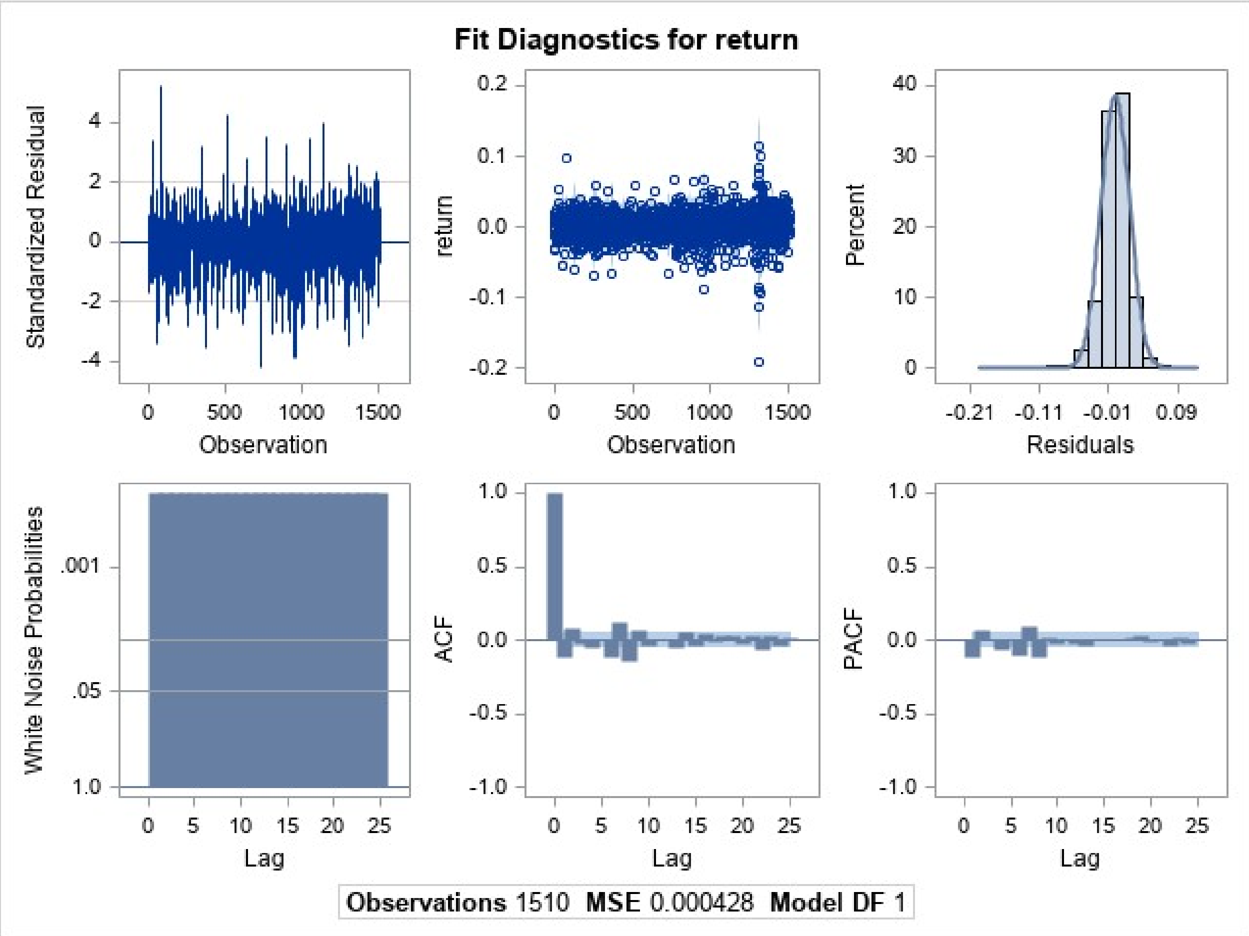
GARCH Estimates			
SSE	0.64521209	**Observations**	1510
MSE	0.0004273	**Uncond Var**	0.00042509
Log Likelihood	3919.74829	**Total R-Square**	.
SBC	-7817.537	**AIC**	-7833.4966
MAE	0.0144621	**AICC**	-7833.4806
MAPE	124.775165	**HQC**	-7827.553
		Normality Test	258.3713
		Pr > ChiSq	<.0001

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|	Variable Label
Intercept	1	0.001448	0.000416	3.48	0.0005	
ARCH0	1	0.0000469	0.0000250	1.87	0.0609	
ARCH1	1	0.1692	0.0486	3.48	0.0005	
ARCH2	1	0.0406	0.1160	0.35	0.7266	
GARCH1	1	0.2223	0.5940	0.37	0.7082	
GARCH2	1	0.4576	0.4524	1.01	0.3118	
TDFI	1	0.1862	0.0284	6.56	<.0001	Inverse of t DF

The SAS System

The AUTOREG Procedure



The SAS System

The AUTOREG Procedure

Dependent Variable	return

The SAS System

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	0.64491032	**DFE**	1509
MSE	0.0004274	**Root MSE**	0.02067
SBC	-7422.8343	**AIC**	-7428.1541
MAE	0.01447432	**AICC**	-7428.1515
MAPE	115.633514	**HQC**	-7426.1729
Durbin-Watson	2.2221	**Total R-Square**	0.0000

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	0.001001	0.000532	1.88	0.0600

ERROR: Convergence not attained in 50 iterations. Interpret the estimates with care.

The SAS System

The AUTOREG Procedure

GARCH Estimates			
SSE	0.64524657	**Observations**	1510
MSE	0.0004273	**Uncond Var**	0.00041245
Log Likelihood	3919.81218	**Total R-Square**	.
SBC	-7795.7052	**AIC**	-7827.6244
MAE	0.01446168	**AICC**	-7827.5685
MAPE	125.303766	**HQC**	-7815.7373
		Normality Test	237.1046
		Pr > ChiSq	<.0001

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|	Variable Label
Intercept	1	0.001473	0.000415	3.55	0.0004	
ARCH0	1	0.000147	0.0000419	3.52	0.0004	
ARCH1	1	0.1734	0.0372	4.66	<.0001	
ARCH2	1	0.2005	0.0497	4.04	<.0001	
ARCH3	1	0.1301	0.0444	2.93	0.0034	
GARCH1	1	-0.5105	0.0910	-5.61	<.0001	
GARCH2	1	-0.0302	0.0880	-0.34	0.7312	
GARCH3	1	0.6798	0.0611	11.13	<.0001	
TDFI	1	0.1924	0.0297	6.48	<.0001	Inverse of t DF

The SAS System

The AUTOREG Procedure