

The AUTOREG Procedure

| | |
|--------------------|-----------|
| Dependent Variable | logreturn |
|--------------------|-----------|

The AUTOREG Procedure

| Ordinary Least Squares Estimates | | | |
|----------------------------------|------------|-----------------------|------------|
| SSE | 0.12891012 | DFE | 1076 |
| MSE | 0.0001198 | Root MSE | 0.01095 |
| SBC | -6662.5533 | AIC | -6667.5352 |
| MAE | 0.00648396 | AICC | -6667.5315 |
| MAPE | 129.992309 | HQC | -6665.6486 |
| Durbin-Watson | 1.9748 | Total R-Square | 0.0000 |

| Parameter Estimates | | | | | |
|---------------------|----|----------|----------------|---------|----------------|
| Variable | DF | Estimate | Standard Error | t Value | Approx Pr > t |
| Intercept | 1 | 0.000407 | 0.000334 | 1.22 | 0.2231 |

Algorithm converged.

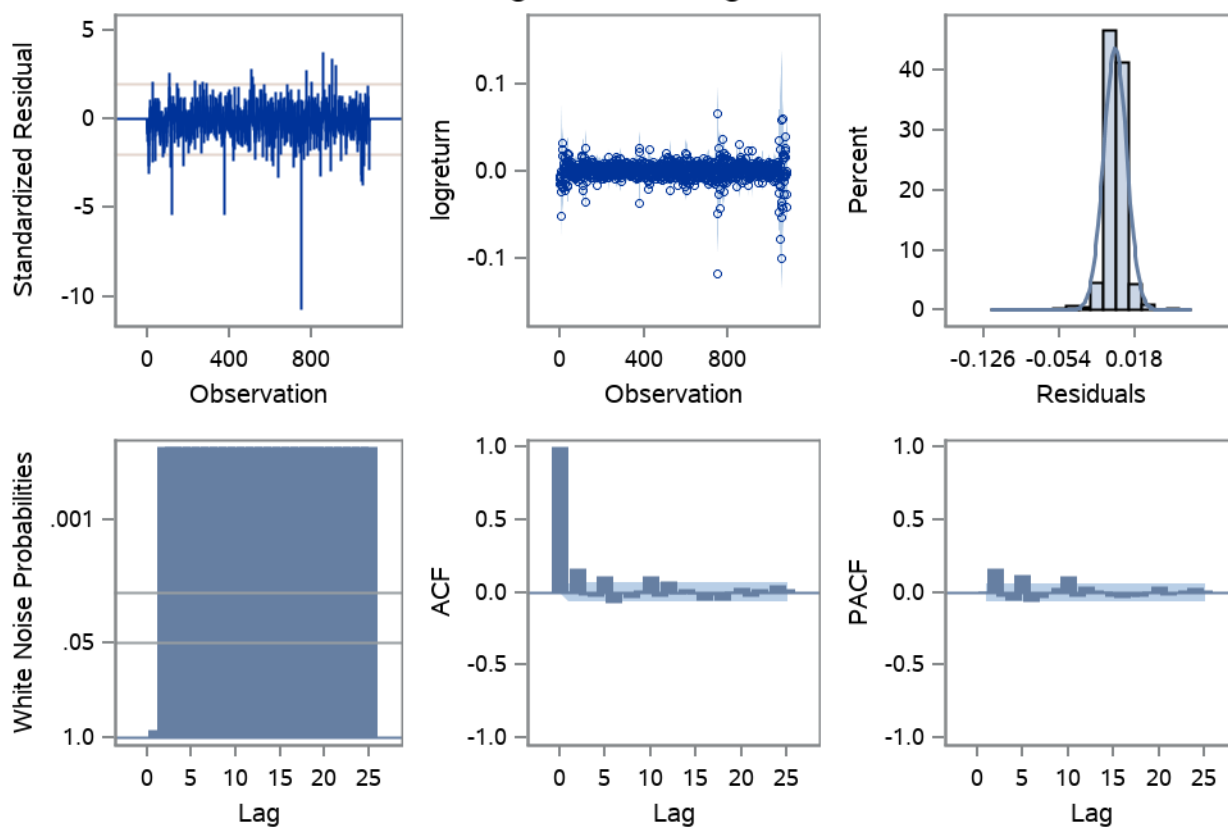
The AUTOREG Procedure

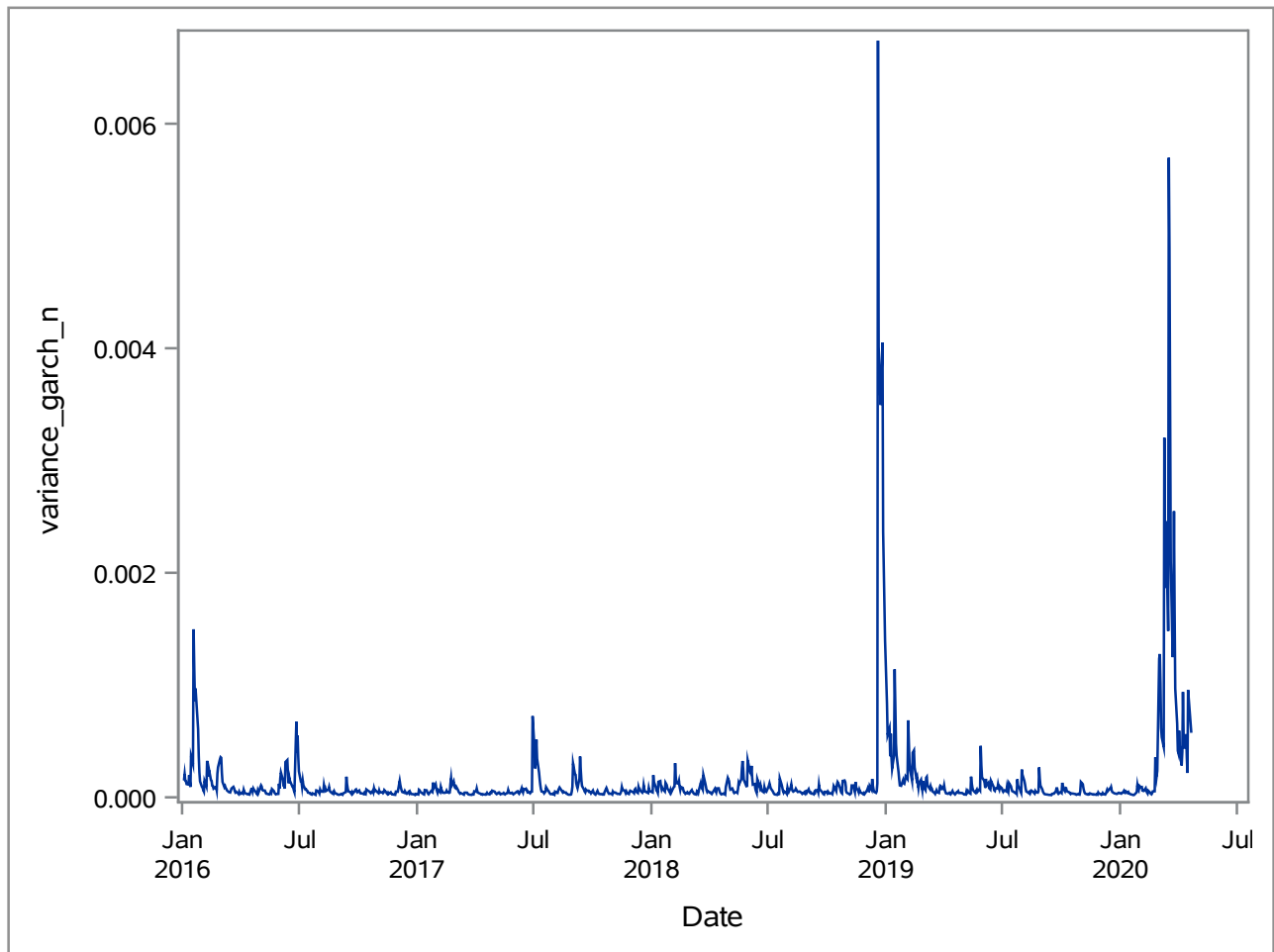
| GARCH Estimates | | | |
|-----------------------|------------|-----------------------|------------|
| SSE | 0.12965615 | Observations | 1077 |
| MSE | 0.0001204 | Uncond Var | . |
| Log Likelihood | 3630.7347 | Total R-Square | . |
| SBC | -7233.5417 | AIC | -7253.4694 |
| MAE | 0.0064963 | AICC | -7253.4321 |
| MAPE | 210.813981 | HQC | -7245.9228 |
| | | Normality Test | 9580.2912 |
| | | Pr > ChiSq | <.0001 |

| Parameter Estimates | | | | | |
|---------------------|----|-----------|----------------|---------|----------------|
| Variable | DF | Estimate | Standard Error | t Value | Approx Pr > t |
| Intercept | 1 | 0.001239 | 0.000200 | 6.20 | <.0001 |
| ARCH0 | 1 | 7.3433E-6 | 1.2549E-6 | 5.85 | <.0001 |
| ARCH1 | 1 | 0.4640 | 0.0219 | 21.16 | <.0001 |
| GARCH1 | 1 | 0.5818 | 0.0208 | 27.97 | <.0001 |

The AUTOREG Procedure

Fit Diagnostics for logreturn

**Observations 1077 MSE 0.00012 Model DF 1**



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|----------------------------------|------------|-----------------------|------------|
| SSE | 0.12891012 | DFE | 1076 |
| MSE | 0.0001198 | Root MSE | 0.01095 |
| SBC | -6662.5533 | AIC | -6667.5352 |
| MAE | 0.00648396 | AICC | -6667.5315 |
| MAPE | 129.992309 | HQC | -6665.6486 |
| Durbin-Watson | 1.9748 | Total R-Square | 0.0000 |

| Parameter Estimates | | | | | |
|---------------------|----|----------|----------------|---------|----------------|
| Variable | DF | Estimate | Standard Error | t Value | Approx Pr > t |
| Intercept | 1 | 0.000407 | 0.000334 | 1.22 | 0.2231 |

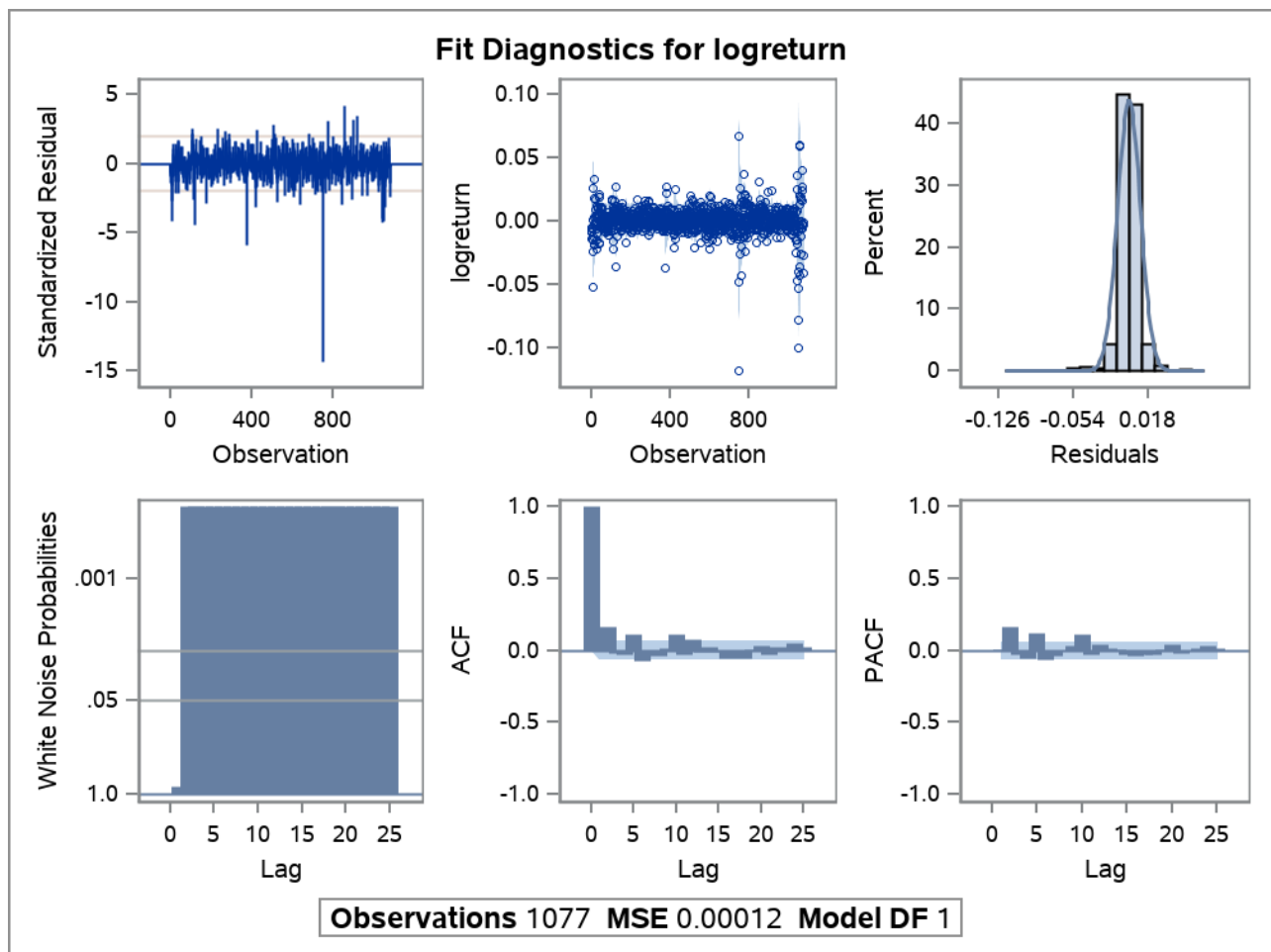
Algorithm converged.

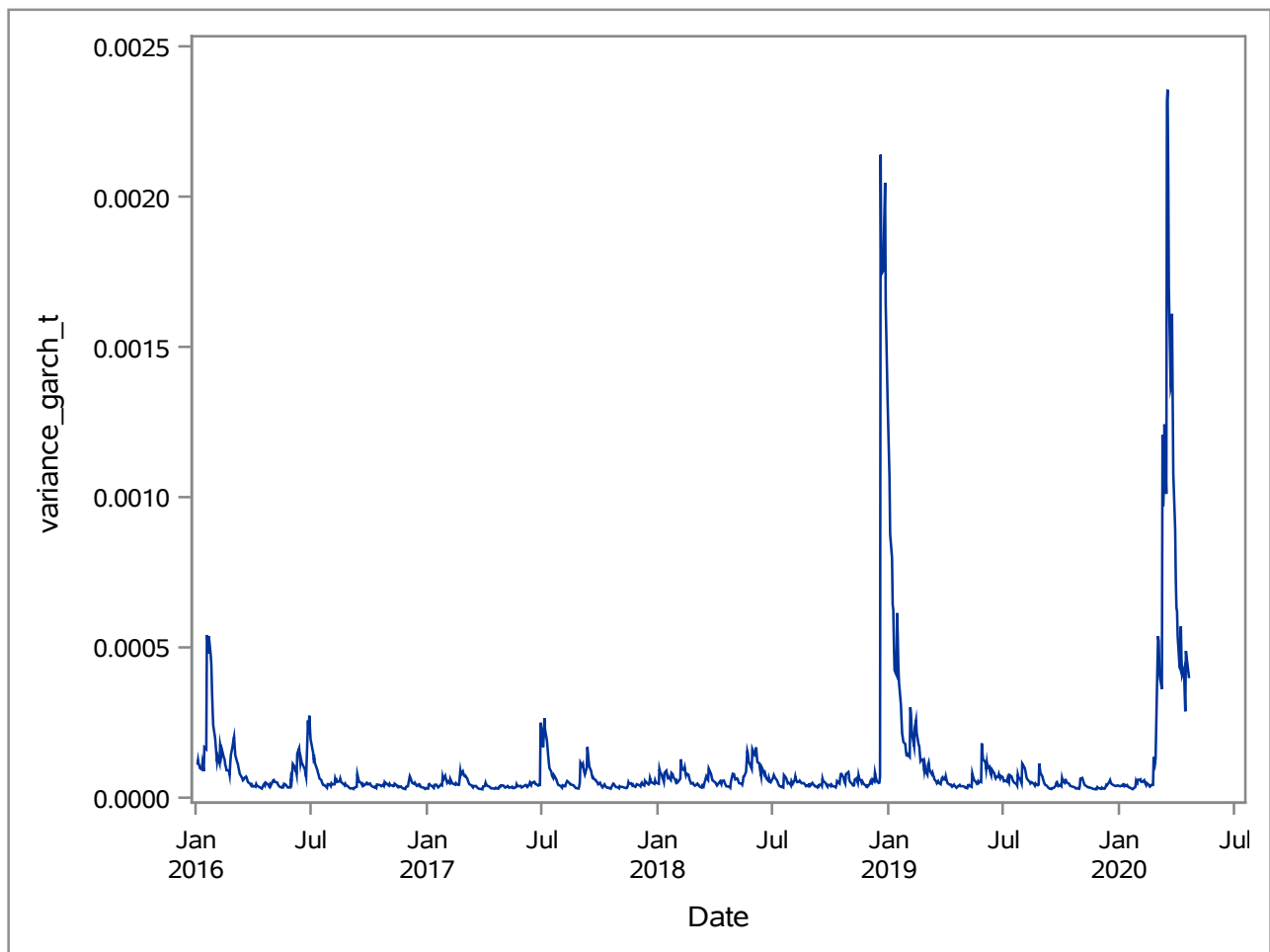
The AUTOREG Procedure

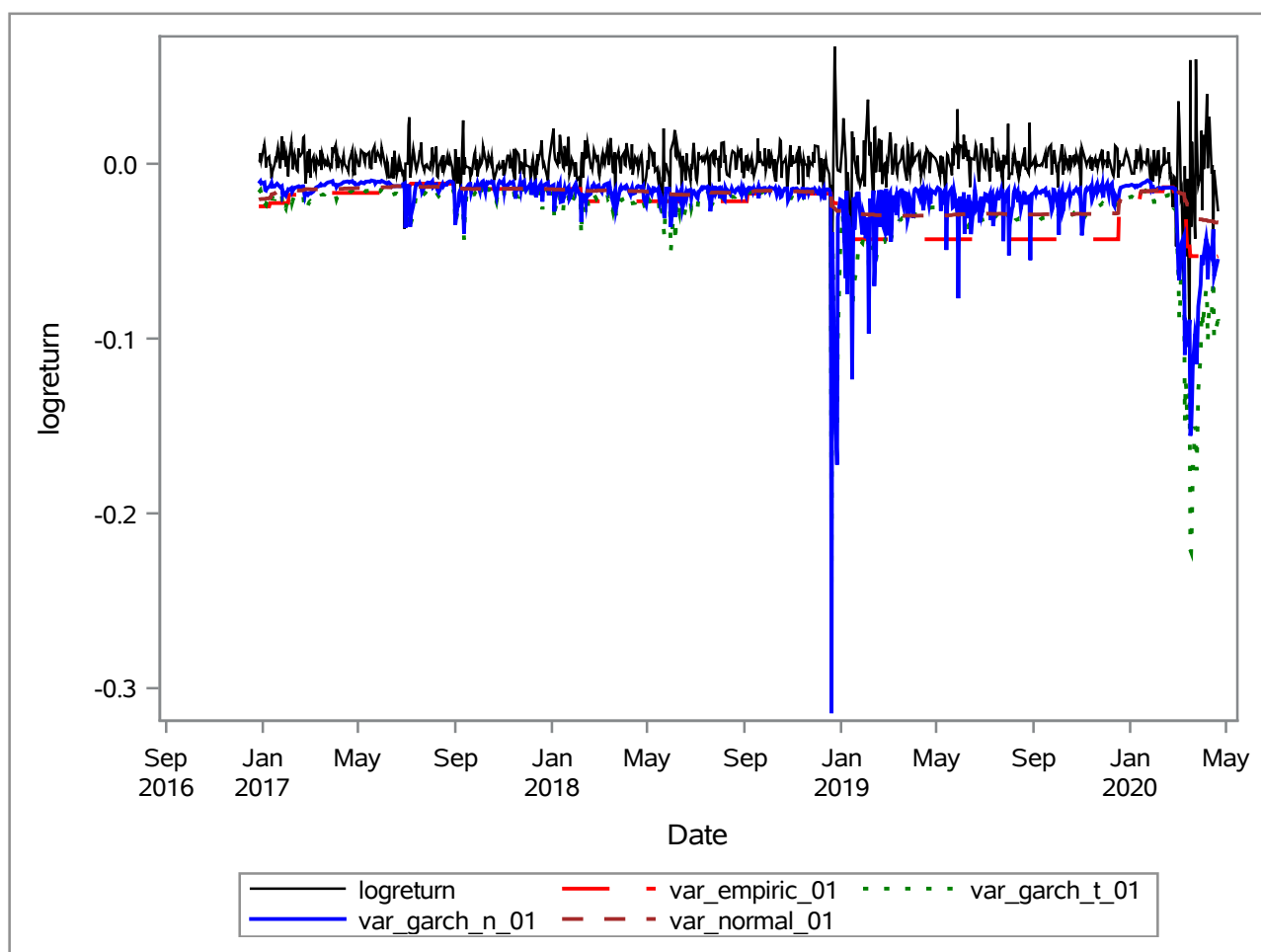
| GARCH Estimates | | | |
|-----------------------|------------|-----------------------|------------|
| SSE | 0.12912161 | Observations | 1077 |
| MSE | 0.0001199 | Uncond Var | 0.00008197 |
| Log Likelihood | 3737.39125 | Total R-Square | . |
| SBC | -7439.8728 | AIC | -7464.7825 |
| MAE | 0.00648006 | AICC | -7464.7265 |
| MAPE | 171.653288 | HQC | -7455.3492 |
| | | Normality Test | 45298.6644 |
| | | Pr > ChiSq | <.0001 |

| Parameter Estimates | | | | | | |
|---------------------|----|-----------|----------------|---------|----------------|-----------------|
| Variable | DF | Estimate | Standard Error | t Value | Approx Pr > t | Variable Label |
| Intercept | 1 | 0.000850 | 0.000193 | 4.40 | <.0001 | |
| ARCH0 | 1 | 4.4625E-6 | 1.3229E-6 | 3.37 | 0.0007 | |
| ARCH1 | 1 | 0.1458 | 0.0338 | 4.31 | <.0001 | |
| GARCH1 | 1 | 0.7998 | 0.0390 | 20.48 | <.0001 | |
| TDFI | 1 | 0.2135 | 0.0236 | 9.06 | <.0001 | Inverse of t DF |

The AUTOREG Procedure







| Obs | p | n | s | z | p_value |
|-----|----------|-----|----|---------|------------|
| 1 | 0.026602 | 827 | 22 | 4.79844 | .000000800 |

| Obs | p | n | s | z | p_value |
|-----|----------|-----|----|---------|------------|
| 1 | 0.018138 | 827 | 15 | 2.35204 | .009335382 |

| Obs | p | n | s | z | p_value |
|-----|----------|-----|----|---------|------------|
| 1 | 0.025393 | 827 | 21 | 4.44896 | .000004314 |

| Obs | p | n | s | z | p_value |
|-----|------------|-----|---|-----------|---------|
| 1 | .009673519 | 827 | 8 | -0.094361 | 0.53759 |