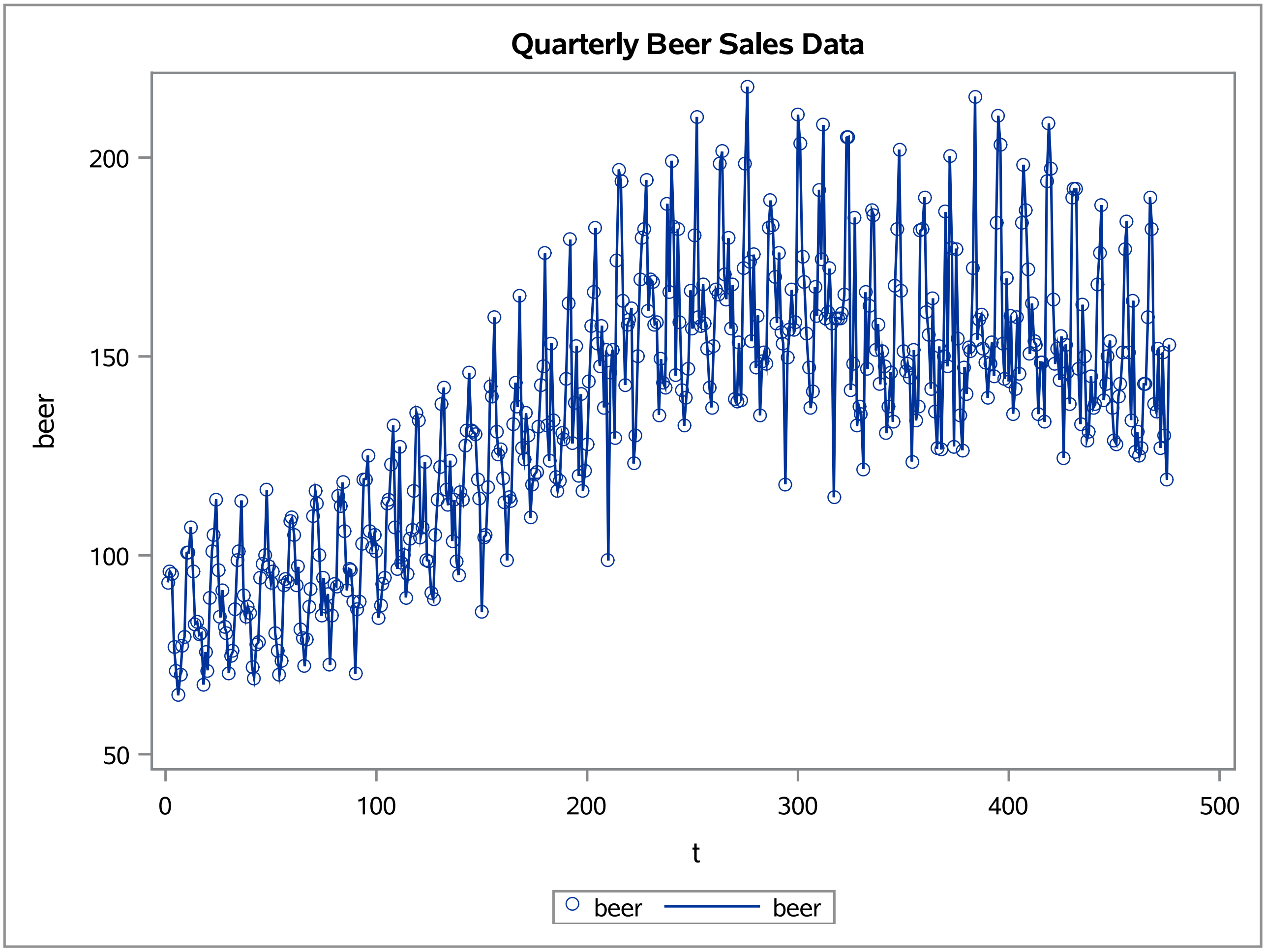
Quarterly Beer Sales Data
200
150
100
50
beer
0
100
200
300
400
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t
beer
beer

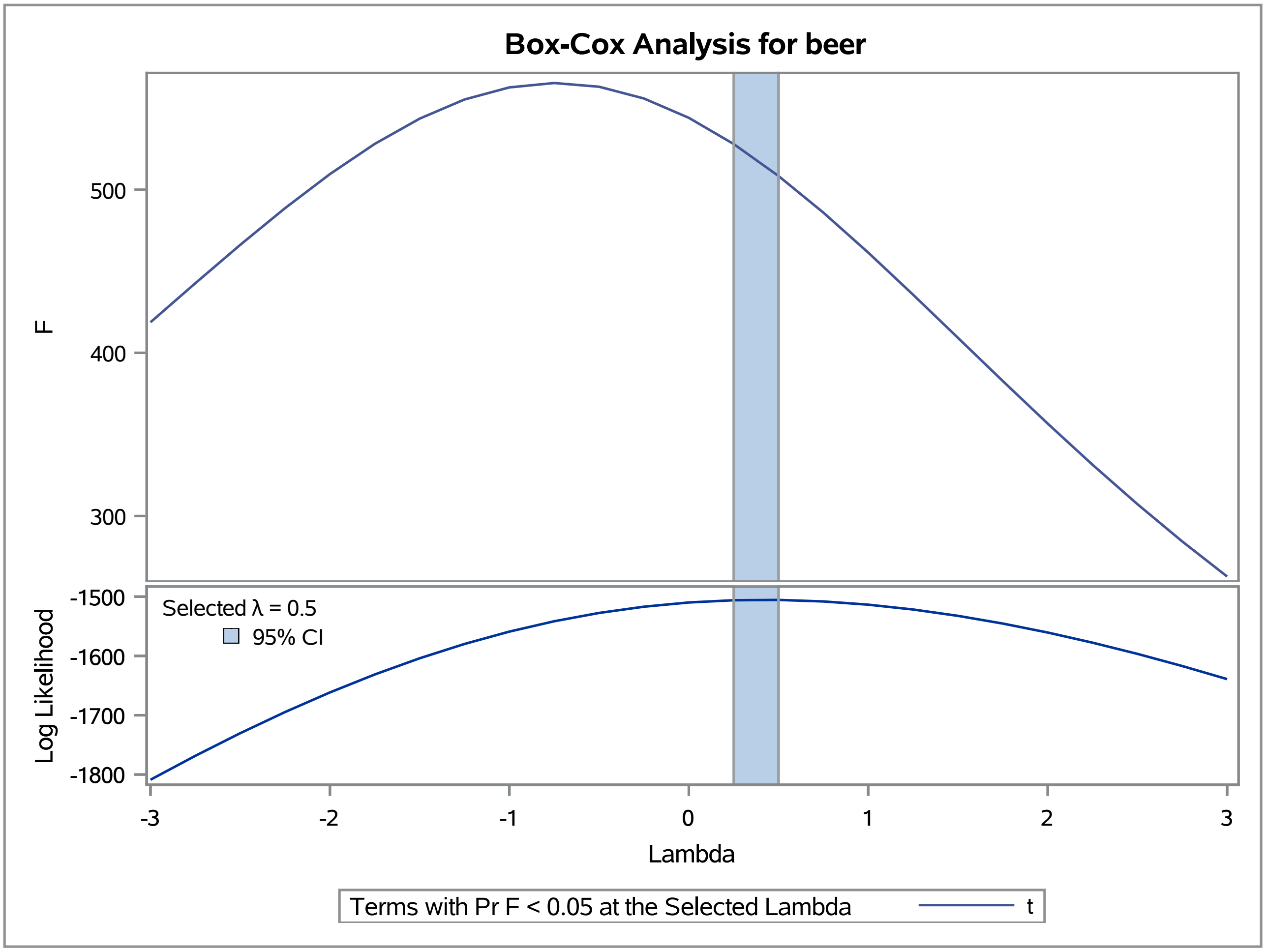
Quarterly Beer Sales Data

The MEANS Procedure

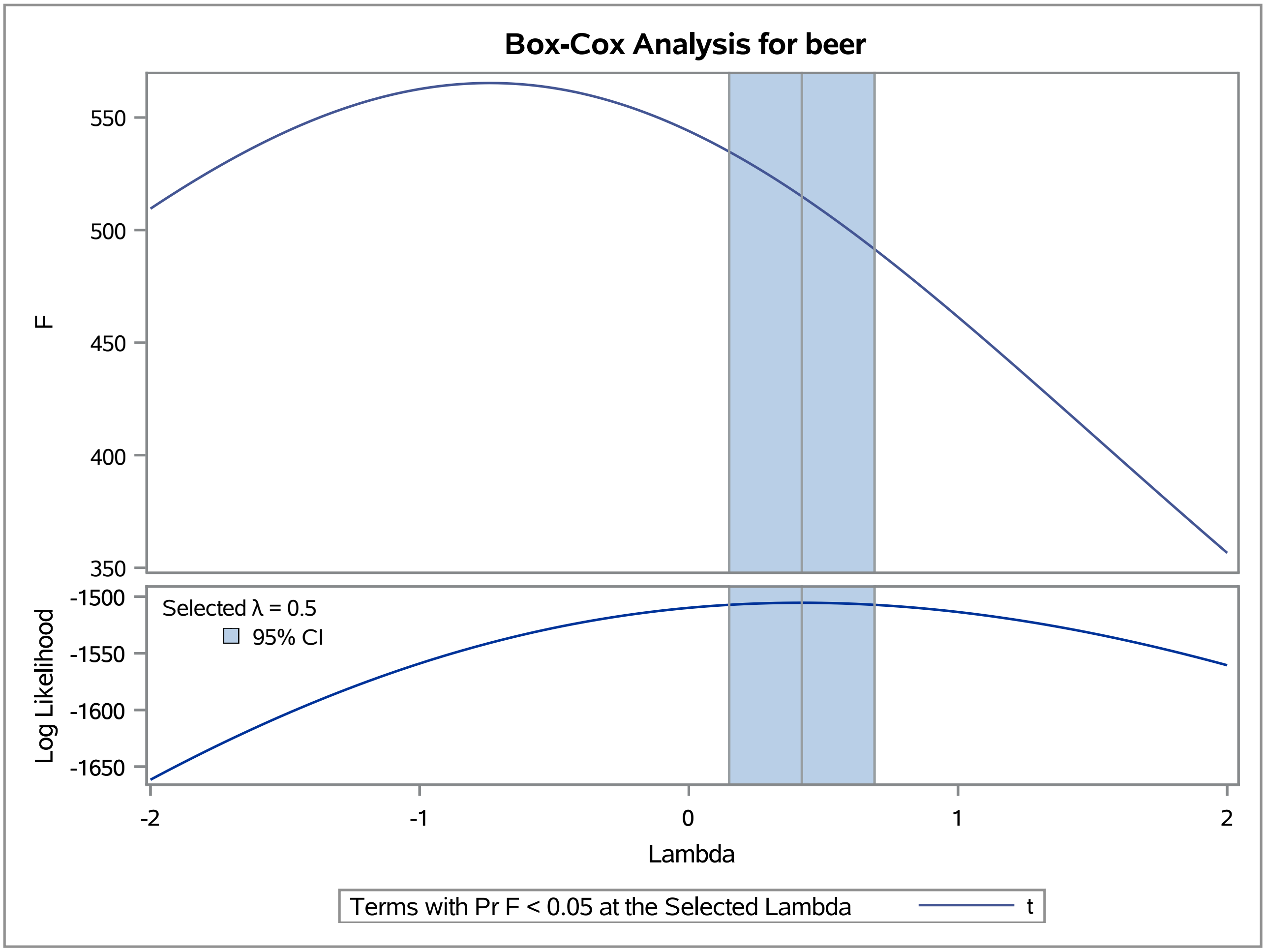
Variable	Minimum	Maximum	Median
Month	-1461.00	12996.00	5767.50
beer	64.8000000	217.8000000	139.1500000
t	1.0000000	476.0000000	238.5000000

Quarterly Beer Sales Data
Defaults no graphs

The TRANSREG Procedure



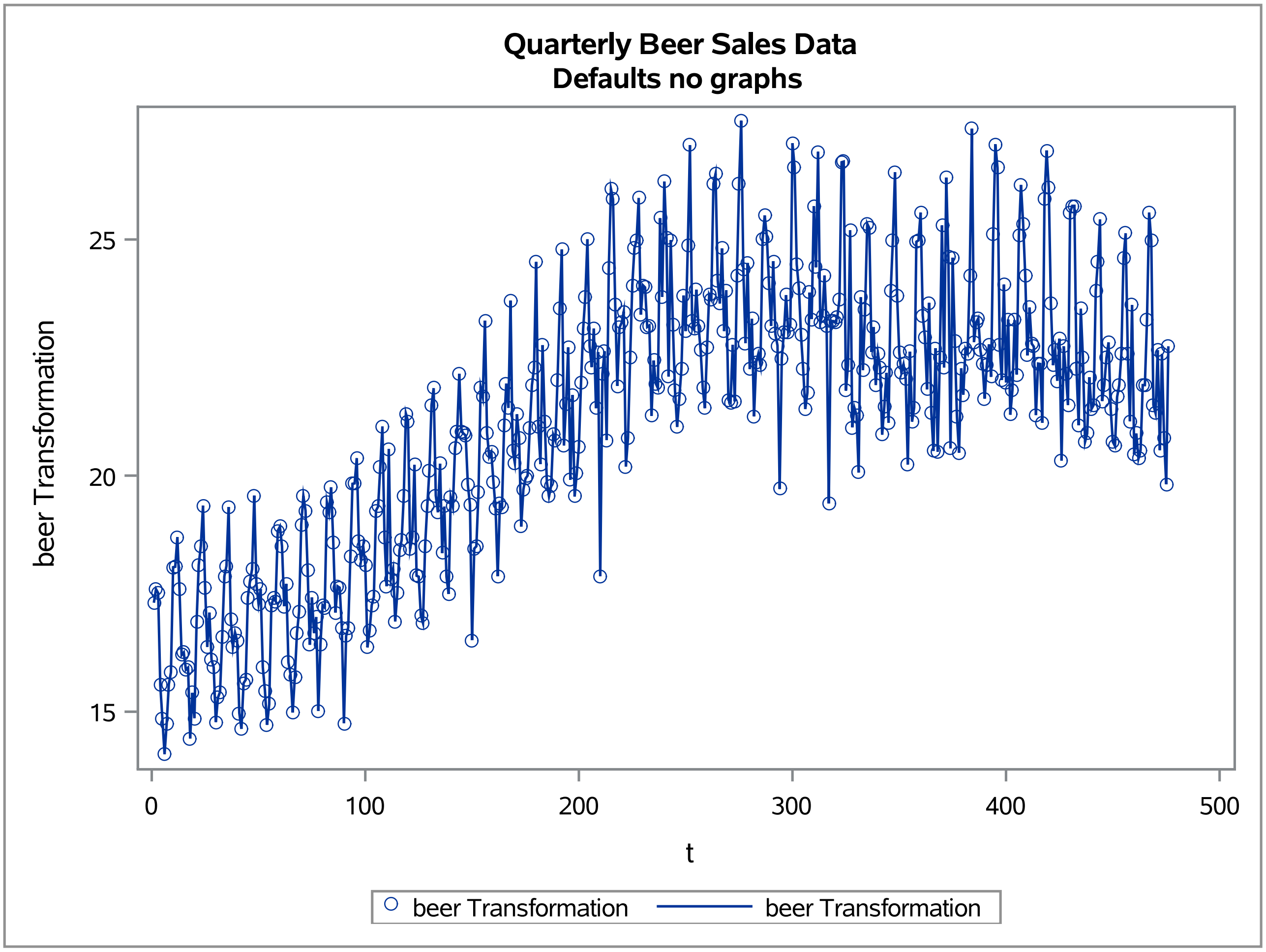
The TRANSREG Procedure



Quarterly Beer Sales Data
Defaults no graphs

The TRANSREG Procedure

Model Statement Specification Details				
Type	**DF**	**Variable**	**Description**	**Value**
Dep	1	BoxCox(beer)	Lambda Used	0.5
			Lambda	0.42
			Log Likelihood	-1505.4
			Conv. Lambda	0.5
			Conv. Lambda LL	-1505.6
			CI Limit	-1507.4
			Alpha	0.05
			Options	Convenient Lambda Used
Ind	1	Identity(t)	DF	1


Quarterly Beer Sales Data
Defaults no graphs
beer Transformation
25
20
15
0
100
200
300
400
500
t
beer Transformation
beer Transformation

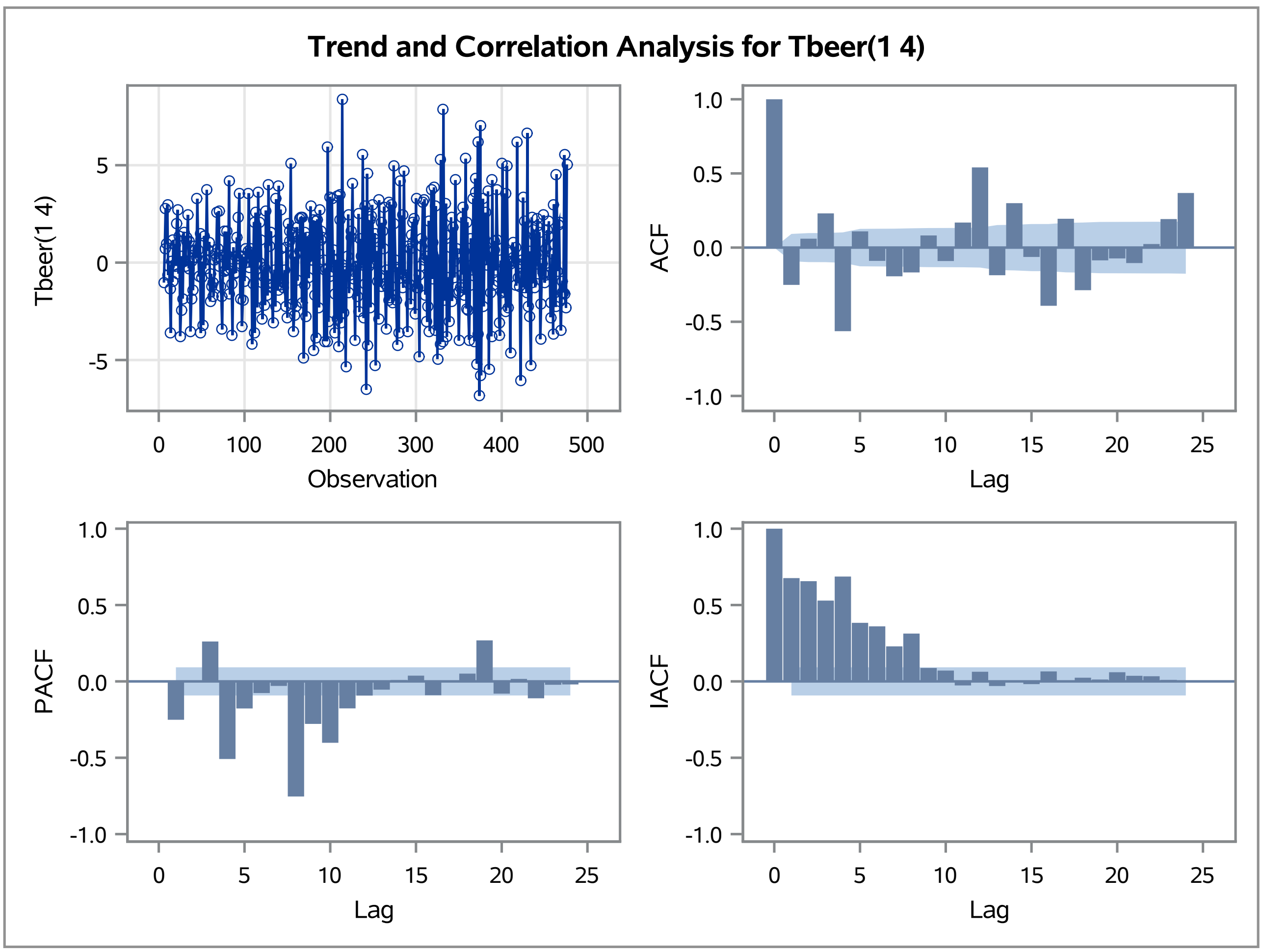
Quarterly Beer Sales Data
Defaults no graphs

The ARIMA Procedure

Name of Variable = Tbeer	
Period(s) of Differencing	1,4
Mean of Working Series	0.00991
Standard Deviation	2.464675
Number of Observations	471
Observation(s) eliminated by differencing	5

Autocorrelation Check for White Noise

To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	217.99	6	<.0001	-0.251	0.060	0.230	-0.564	0.109	-0.090
12	412.26	12	<.0001	-0.194	-0.167	0.082	-0.091	0.169	0.541
18	609.24	18	<.0001	-0.186	0.299	-0.063	-0.392	0.194	-0.287
24	707.06	24	<.0001	-0.086	-0.073	-0.104	0.024	0.192	0.368



The ARIMA Procedure

Maximum Likelihood Estimation					
Parameter	Estimate	Standard Error	t Value	Approx Pr > |t|	Lag
MA1,1	1.52241	0.04475	34.02	<.0001	4
MA1,2	-0.82557	0.07408	-11.14	<.0001	8
MA1,3	0.27603	0.04500	6.13	<.0001	12
AR1,1	-0.31877	0.04375	-7.29	<.0001	1

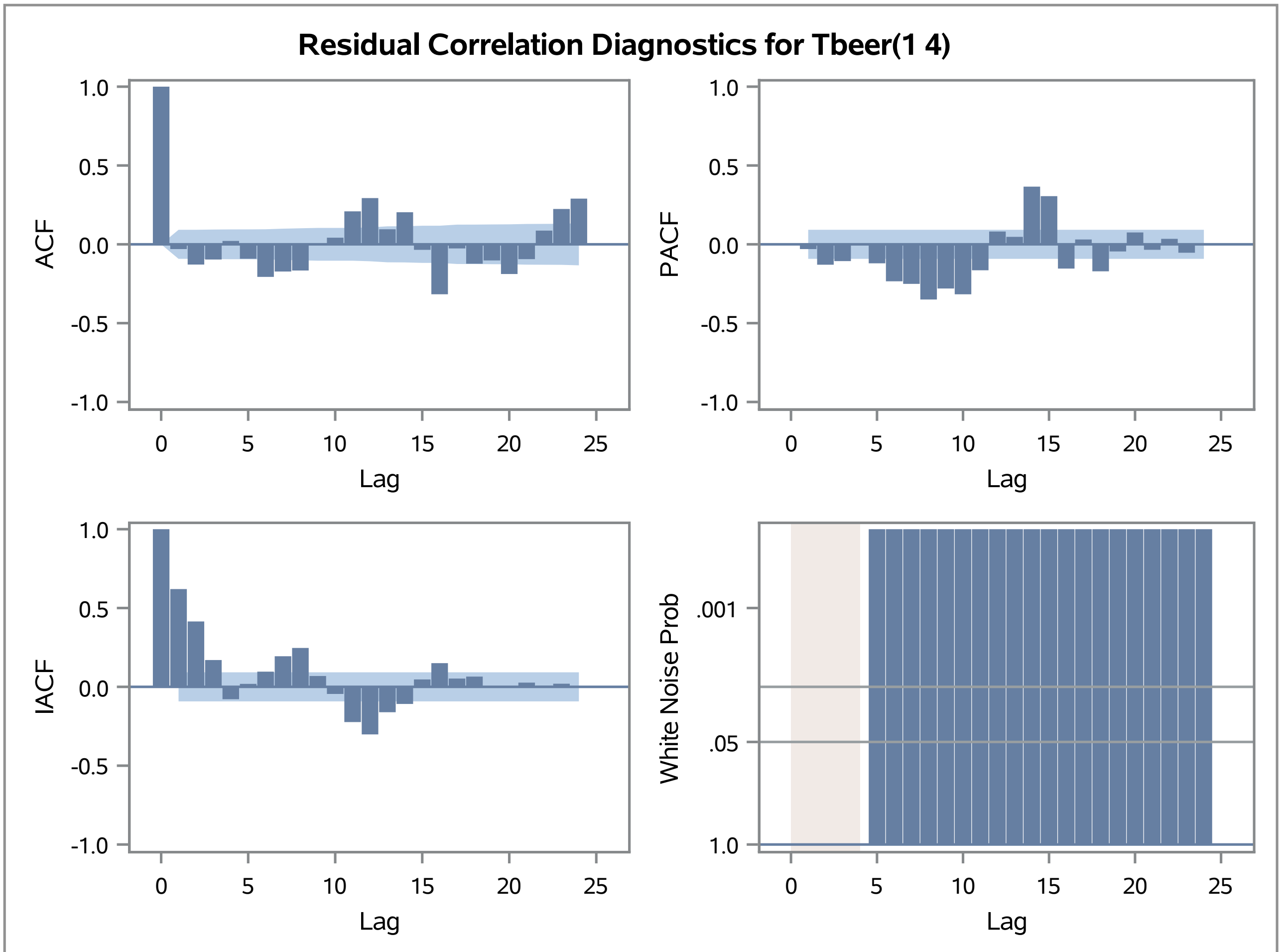
Variance Estimate	1.733602
Std Error Estimate	1.316663
AIC	1614.377
SBC	1630.997
Number of Residuals	471

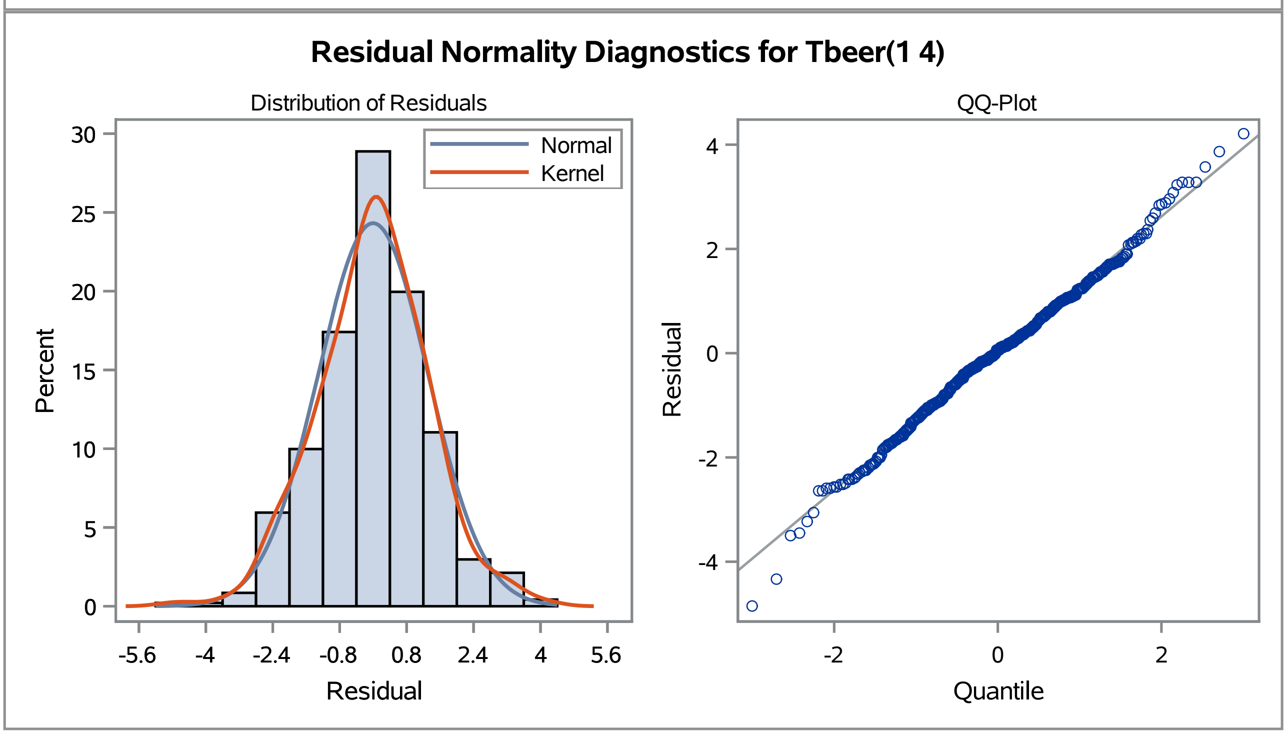
Correlations of Parameter Estimates				
Parameter	MA1,1	MA1,2	MA1,3	AR1,1
MA1,1	1.000	-0.843	0.446	-0.116
MA1,2	-0.843	1.000	-0.837	0.091
MA1,3	0.446	-0.837	1.000	-0.022
AR1,1	-0.116	0.091	-0.022	1.000

Autocorrelation Check of Residuals									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	37.33	2	<.0001	-0.030	-0.128	-0.096	0.021	-0.091	-0.207
12	128.71	8	<.0001	-0.172	-0.166	0.006	0.042	0.209	0.293
18	210.78	14	<.0001	0.095	0.203	-0.035	-0.317	-0.026	-0.123
24	308.47	20	<.0001	-0.102	-0.188	-0.094	0.087	0.224	0.290
30	369.95	26	<.0001	0.089	0.165	-0.077	-0.165	-0.070	-0.221
36	447.39	32	<.0001	-0.089	-0.087	-0.120	0.083	0.152	0.303
42	520.77	38	<.0001	0.238	0.010	-0.080	-0.101	-0.070	-0.252
48	618.67	44	<.0001	0.007	-0.183	-0.133	0.185	0.097	0.303

Quarterly Beer Sales Data
Defaults no graphs

The ARIMA Procedure





Model for variable Tbeer	
Period(s) of Differencing	1,4

Quarterly Beer Sales Data
Defaults no graphs

The ARIMA Procedure

No mean term in this model.

Autoregressive Factors	
Factor 1:	1 + 0.31877 B**(1)

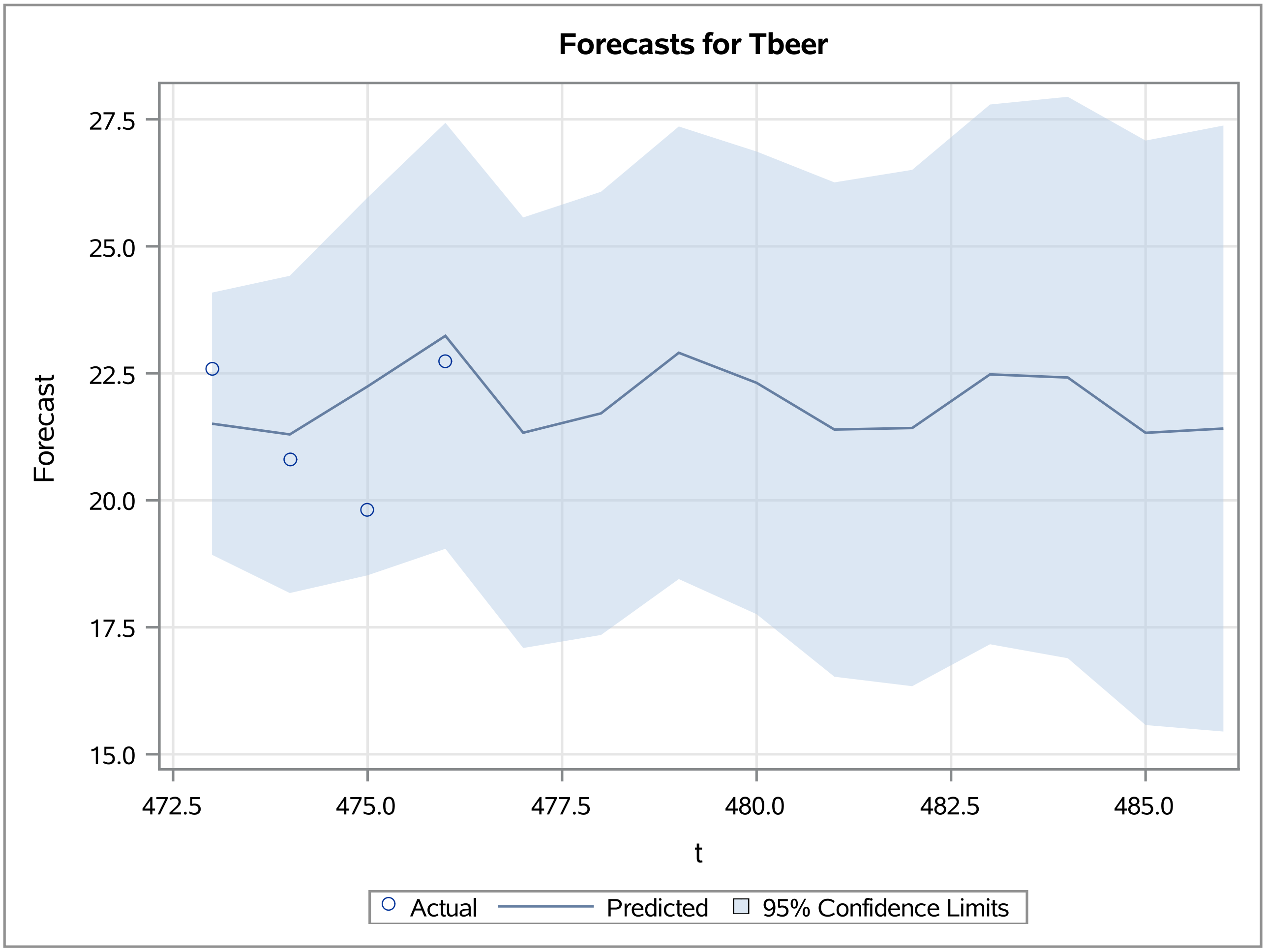
Moving Average Factors	
Factor 1:	1 - 1.52241 B**(4) + 0.82557 B**(8) - 0.27603 B**(12)

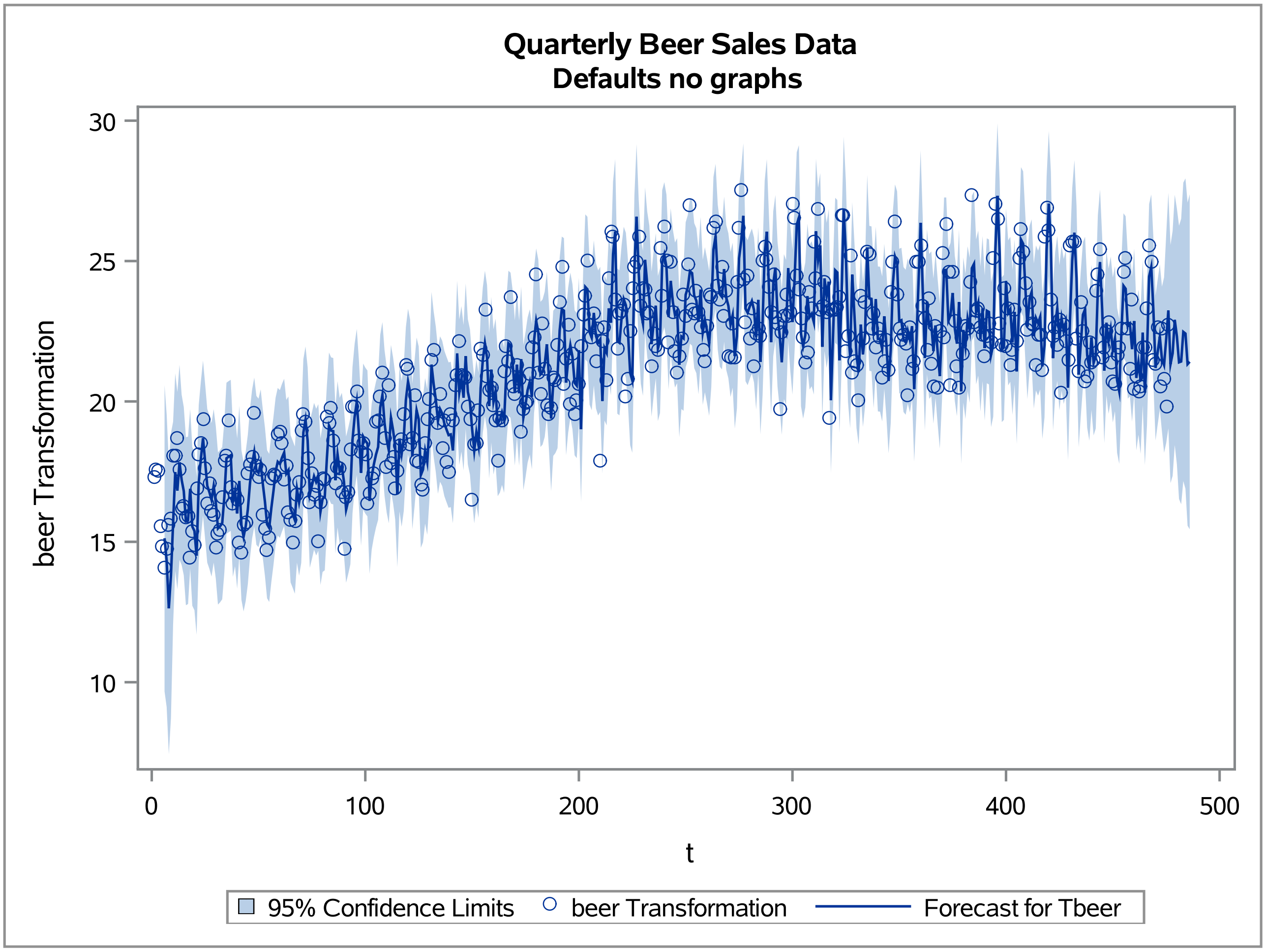
Forecasts for variable Tbeer

Obs	Forecast	Std Error	95% Confidence Limits		Actual	Residual
473	21.5081	1.3167	18.9275	24.0887	22.5764	1.0683
474	21.2967	1.5932	18.1742	24.4192	20.8035	-0.4932
475	22.2421	1.8975	18.5230	25.9612	19.8174	-2.4247
476	23.2380	2.1394	19.0449	27.4311	22.7386	-0.4994
477	21.3299	2.1623	17.0919	25.5679	.	.
478	21.7115	2.2260	17.3486	26.0743	.	.
479	22.9042	2.2731	18.4491	27.3594	.	.
480	22.3122	2.3236	17.7580	26.8665	.	.
481	21.3927	2.4827	16.5267	26.2586	.	.
482	21.4229	2.5933	16.3401	26.5056	.	.
483	22.4785	2.7107	17.1657	27.7914	.	.
484	22.4169	2.8197	16.8904	27.9435	.	.
485	21.3283	2.9355	15.5749	27.0817	.	.
486	21.4124	3.0434	15.4474	27.3774	.	.

Quarterly Beer Sales Data
Defaults no graphs

The ARIMA Procedure




Quarterly Beer Sales Data
Defaults no graphs
beer Transformation
30
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95% Confidence Limits
beer Transformation
Forecast for Tbeer