**Time Series Modeler**

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| **Notes** | | |
| Output Created | | 27-DEC-2023 22:38:53 |
| Comments | |  |
| Input | Data | D:\university\sem 6\Data Mining\output.csv |
| Active Dataset | DataSet3 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| Date | WEEK, not periodic, DAY, period 5 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Only cases with valid data for the dependent variable are used in computing any statistics. |
| Syntax | | TSMODEL /MODELSUMMARY PRINT=[MODELFIT] /MODELSTATISTICS DISPLAY=YES MODELFIT=[ SRSQUARE] /MODELDETAILS PRINT=[ FORECASTS] /SERIESPLOT OBSERVED FORECAST FIT FORECASTCI /OUTPUTFILTER DISPLAY=ALLMODELS /SAVE PREDICTED(Predicted) LCL(LCL) UCL(UCL) /AUXILIARY CILEVEL=95 MAXACFLAGS=24 /MISSING USERMISSING=EXCLUDE /MODEL DEPENDENT=Price INDEPENDENT=WEEK\_ DAY\_ PREFIX='Model' /EXPERTMODELER TYPE=[ARIMA EXSMOOTH] TRYSEASONAL=YES /AUTOOUTLIER DETECT=OFF. |
| Resources | Processor Time | 00:00:01.44 |
| Elapsed Time | 00:00:02.72 |
| Variables Created or Modified | Predicted\_Price\_Model\_1 | Predicted value from Price-Model\_1 |
| LCL\_Price\_Model\_1 | LCL from Price-Model\_1 |
| UCL\_Price\_Model\_1 | UCL from Price-Model\_1 |
| Use | From | First observation |
| To | Last observation |
| Predict | From | First observation |
| To | WEEK\_ 320, DAY\_ 5 |

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| **Model Description** | | | |
|  | | | Model Type |
| Model ID | Price | Model\_1 | ARIMA(0,1,2)(0,0,1) |

**Model Summary**

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| **Model Fit** | | | | | | | |
| Fit Statistic | Mean | SE | Minimum | Maximum | Percentile | | |
| 5 | 10 | 25 |
| Stationary R-squared | .176 | . | .176 | .176 | .176 | .176 | .176 |
| R-squared | .992 | . | .992 | .992 | .992 | .992 | .992 |
| RMSE | 18.806 | . | 18.806 | 18.806 | 18.806 | 18.806 | 18.806 |
| MAPE | 2.644 | . | 2.644 | 2.644 | 2.644 | 2.644 | 2.644 |
| MaxAPE | 89.205 | . | 89.205 | 89.205 | 89.205 | 89.205 | 89.205 |
| MAE | 8.214 | . | 8.214 | 8.214 | 8.214 | 8.214 | 8.214 |
| MaxAE | 338.980 | . | 338.980 | 338.980 | 338.980 | 338.980 | 338.980 |
| Normalized BIC | 5.883 | . | 5.883 | 5.883 | 5.883 | 5.883 | 5.883 |

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| **Model Fit** | | | | |
| Fit Statistic | Percentile | | | |
| 50 | 75 | 90 | 95 |
| Stationary R-squared | .176 | .176 | .176 | .176 |
| R-squared | .992 | .992 | .992 | .992 |
| RMSE | 18.806 | 18.806 | 18.806 | 18.806 |
| MAPE | 2.644 | 2.644 | 2.644 | 2.644 |
| MaxAPE | 89.205 | 89.205 | 89.205 | 89.205 |
| MAE | 8.214 | 8.214 | 8.214 | 8.214 |
| MaxAE | 338.980 | 338.980 | 338.980 | 338.980 |
| Normalized BIC | 5.883 | 5.883 | 5.883 | 5.883 |

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| **Model Statistics** | | | | | | |
| Model | Number of Predictors | Model Fit statistics | Ljung-Box Q(18) | | | Number of Outliers |
| Stationary R-squared | Statistics | DF | Sig. |
| Price-Model\_1 | 0 | .176 | 28.283 | 15 | .020 | <.001 |

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| **Forecast** | | | | | | | |
| Model | | 311 5 | 312 1 | 312 2 | 312 3 | 312 4 | 312 5 |
| Price-Model\_1 | Forecast | 442.71 | 441.62 | 441.02 | 444.11 | 445.72 | 445.06 |
| UCL | 483.10 | 490.93 | 493.79 | 500.60 | 505.61 | 511.25 |
| LCL | 404.88 | 396.08 | 392.55 | 392.49 | 391.25 | 385.43 |

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| **Forecast** | | | | | | | |
| Model | | 313 1 | 313 2 | 313 3 | 313 4 | 313 5 | 314 1 |
| Price-Model\_1 | Forecast | 444.89 | 445.02 | 445.16 | 445.30 | 445.44 | 445.58 |
| UCL | 515.88 | 519.91 | 523.78 | 527.51 | 531.12 | 534.62 |
| LCL | 381.39 | 378.44 | 375.64 | 372.99 | 370.45 | 368.03 |

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| **Forecast** | | | | | | | |
| Model | | 314 2 | 314 3 | 314 4 | 314 5 | 315 1 | 315 2 |
| Price-Model\_1 | Forecast | 445.72 | 445.86 | 446.00 | 446.14 | 446.28 | 446.42 |
| UCL | 538.02 | 541.33 | 544.57 | 547.73 | 550.83 | 553.86 |
| LCL | 365.70 | 363.46 | 361.30 | 359.21 | 357.20 | 355.24 |

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| **Forecast** | | | | | | | |
| Model | | 315 3 | 315 4 | 315 5 | 316 1 | 316 2 | 316 3 |
| Price-Model\_1 | Forecast | 446.56 | 446.70 | 446.84 | 446.98 | 447.12 | 447.26 |
| UCL | 556.84 | 559.76 | 562.64 | 565.46 | 568.25 | 570.99 |
| LCL | 353.34 | 351.49 | 349.70 | 347.95 | 346.25 | 344.58 |

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| **Forecast** | | | | | | | |
| Model | | 316 4 | 316 5 | 317 1 | 317 2 | 317 3 | 317 4 |
| Price-Model\_1 | Forecast | 447.40 | 447.54 | 447.68 | 447.82 | 447.96 | 448.10 |
| UCL | 573.70 | 576.37 | 579.00 | 581.60 | 584.17 | 586.71 |
| LCL | 342.96 | 341.37 | 339.82 | 338.30 | 336.81 | 335.35 |

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| **Forecast** | | | | | | | |
| Model | | 317 5 | 318 1 | 318 2 | 318 3 | 318 4 | 318 5 |
| Price-Model\_1 | Forecast | 448.24 | 448.38 | 448.52 | 448.66 | 448.80 | 448.94 |
| UCL | 589.23 | 591.71 | 594.18 | 596.61 | 599.03 | 601.42 |
| LCL | 333.92 | 332.51 | 331.14 | 329.78 | 328.46 | 327.15 |

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| **Forecast** | | | | | | | |
| Model | | 319 1 | 319 2 | 319 3 | 319 4 | 319 5 | 320 1 |
| Price-Model\_1 | Forecast | 449.08 | 449.22 | 449.37 | 449.51 | 449.65 | 449.79 |
| UCL | 603.79 | 606.13 | 608.46 | 610.77 | 613.06 | 615.34 |
| LCL | 325.87 | 324.60 | 323.36 | 322.14 | 320.93 | 319.75 |

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| **Forecast** | | | | | |
| Model | | 320 2 | 320 3 | 320 4 | 320 5 |
| Price-Model\_1 | Forecast | 449.93 | 450.07 | 450.21 | 450.35 |
| UCL | 617.59 | 619.83 | 622.06 | 624.26 |
| LCL | 318.58 | 317.43 | 316.30 | 315.18 |

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| For each model, forecasts start after the last non-missing in the range of the requested estimation period, and end at the last period for which non-missing values of all the predictors are available or at the end date of the requested forecast period, whichever is earlier. |

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