Test Statistic -1.602525e+01

p-value 6.141582e-29

#Lags Used 1.000000e+00

Number of Observations Used 6.560000e+02

Critical Value (1%) -3.440358e+00

Critical Value (5%) -2.865956e+00

Critical Value (10%) -2.569122e+00

dtype: float64

是否平稳(1/0): 1

BIC 最小的p值 和 q 值：0,0

RUNNING THE L-BFGS-B CODE

\* \* \*

Machine precision = 2.220D-16

N = 6 M = 10

This problem is unconstrained.

At X0 0 variables are exactly at the bounds

At iterate 0 f= 6.10270D+00 |proj g|= 9.38381D-02

At iterate 5 f= 6.08348D+00 |proj g|= 4.00209D-02

At iterate 10 f= 6.07830D+00 |proj g|= 1.31118D-02

At iterate 15 f= 6.07788D+00 |proj g|= 2.12211D-02

At iterate 20 f= 6.07776D+00 |proj g|= 4.32079D-04

At iterate 25 f= 6.07774D+00 |proj g|= 5.38613D-03

At iterate 30 f= 6.07599D+00 |proj g|= 2.52291D-02

At iterate 35 f= 6.06199D+00 |proj g|= 7.74122D-02

At iterate 40 f= 6.00573D+00 |proj g|= 8.58065D-02

At iterate 45 f= 6.00366D+00 |proj g|= 1.29802D-02

\* \* \*

Tit = total number of iterations

Tnf = total number of function evaluations

Tnint = total number of segments explored during Cauchy searches

Skip = number of BFGS updates skipped

Nact = number of active bounds at final generalized Cauchy point

Projg = norm of the final projected gradient

F = final function value

\* \* \*

N Tit Tnf Tnint Skip Nact Projg F

6 49 58 1 0 0 1.848D-05 6.004D+00

F = 6.00363103105052

CONVERGENCE: REL\_REDUCTION\_OF\_F\_<=\_FACTR\*EPSMCH

==============================================================================

coef std err z P>|z| [0.025 0.975]

------------------------------------------------------------------------------

ma.L1 -0.9786 0.019 -51.271 0.000 -1.016 -0.941

ar.S.L52 -0.6104 0.564 -1.082 0.279 -1.716 0.495

ar.S.L104 -0.2666 0.080 -3.315 0.001 -0.424 -0.109

ma.S.L52 -0.3543 0.565 -0.627 0.531 -1.462 0.754

ma.S.L104 -0.3206 0.535 -0.600 0.549 -1.368 0.727

sigma2 4.282e+05 3952.337 108.332 0.000 4.2e+05 4.36e+05

==============================================================================

RMSE: 601.7903827432813

result

date

2023-01-01 105.754493

2023-01-02 172.634437

2023-01-03 80.270910

2023-01-04 133.525140

2023-01-05 97.037011

2023-01-06 183.075146

2023-01-07 227.512673

2023-01-08 99.693314

2023-01-09 130.667550

2023-01-10 114.534511

2023-01-11 66.426821

2023-01-12 201.552216

2023-01-13 82.565040

2023-01-14 134.613203

2023-01-15 165.511715

2023-01-16 63.864937

2023-01-17 55.706920

2023-01-18 72.224685

2023-01-19 140.568366

2023-01-20 163.913337

2023-01-21 229.698142

2023-01-22 574.618220

2023-01-23 400.147643

2023-01-24 106.873423

2023-01-25 57.924778

2023-01-26 70.200974

2023-01-27 194.170006

2023-01-28 86.007203

2023-01-29 70.042137

2023-01-30 250.526470

2023-01-31 129.458953