

MASE ERRORS

Note: All QGTSE (Ensemble) tests are performed with quantile parameter set to 10.

10 ensemble

10 quantiles

Tourism monthly

KAN

SeasonalMBB	1.185180
Jittering	1.198235
Scaling	1.207650
TimeWarping	1.224621
MagnitudeWarping	1.209316
TSMixup	1.187113
DBA	1.196505
original	1.187969
qgts	1.178720
qgtse	1.203035
SeasonalNaive	1.344768

10 ensemble

10 quantiles

Gluonts monthly

KAN

SeasonalMBB	0.945387
Jittering	0.955405
Scaling	0.934455
TimeWarping	0.998096
MagnitudeWarping	0.972956
TSMixup	0.964076
DBA	0.960801
original	0.961395
qgts	0.938075
qgtse	0.934782
SeasonalNaive	1.220704

10 ensemble

10 quantiles

M3 quarterly

KAN

SeasonalMBB	1.209027
Jittering	1.232810
Scaling	1.149415

TimeWarping	1.186764
MagnitudeWarping	1.211455
TSMixup	1.235956
DBA	1.158431
original	1.223391
qgts	1.203939
qgtse	1.220222
SeasonalNaive	1.416804

10 ensemble

10 quantiles

M3 monthly

KAN

SeasonalMBB	0.776649
Jittering	0.784602
Scaling	0.798766
TimeWarping	0.802431
MagnitudeWarping	0.798727
TSMixup	0.786394
DBA	0.777508
original	0.784306
qgts	0.780542
qgtse	0.780248
SeasonalNaive	1.091028

10 ensemble

10 quantiles

Tourism monthly

KAN

SeasonalMBB	1.213189
Jittering	1.233915
Scaling	1.229466
TimeWarping	1.281903
MagnitudeWarping	1.231159
TSMixup	1.218355
DBA	1.201995
original	1.226844
qgts	1.185769
qgtse	1.191259
SeasonalNaive	1.344768

10 ensemble
10 quantiles
Tourism quarterly
KAN

SeasonalIMBB	1.608760
Jittering	1.611823
Scaling	1.619349
TimeWarping	1.667173
MagnitudeWarping	1.584814
TSMixup	1.649472
DBA	1.616249
original	1.568191
qgts	1.523319
qgtse	1.551499
SeasonalNaive	1.701593

10 ensemble
10 quantiles
Tourism quarterly
NHITS

SeasonalIMBB	1.635493
Jittering	1.668637
Scaling	1.616809
TimeWarping	1.633628
MagnitudeWarping	1.652534
TSMixup	1.567471
DBA	1.665907
original	1.586140
qgts	1.536701
qgtse	1.554478
SeasonalNaive	1.701593

10 ensemble

10 quantiles

M3 quarterly

NHITS

SeasonalIMBB	1.195457
Jittering	1.218951
Scaling	1.112220
TimeWarping	1.169556
MagnitudeWarping	1.216145
TSMixup	1.177874
DBA	1.156558
original	1.214659
qgts	1.211291
qgtse	1.199240
SeasonalNaive	1.416804

10 ensemble

10 quantiles

M3 monthly

NHITS

SeasonalIMBB	0.760457
Jittering	0.797429
Scaling	0.773763
TimeWarping	0.759720
MagnitudeWarping	0.770742
TSMixup	0.763248
DBA	0.764170
original	0.794920
qgts	0.762371
qgtse	0.764134
SeasonalNaive	1.091028

10 ensemble

10 quantiles

Gluonts quarterly

NHITS

SeasonalIMBB	1.045248
Jittering	0.998299
Scaling	1.038062
TimeWarping	1.089290
MagnitudeWarping	0.985803
TSMixup	1.031106
DBA	1.064726
original	1.021101
qgts	1.008185
qgtse	1.109919
SeasonalNaive	1.646973

10 ensemble

10 quantiles

Gluonts monthly

NHITS

SeasonalIMBB	0.953004
Jittering	0.955879
Scaling	0.949770
TimeWarping	0.975828
MagnitudeWarping	0.982476
TSMixup	0.998318
DBA	0.976784
original	0.969180
qgts	0.951873
qgtse	0.949429
SeasonalNaive	1.220704

10 ensemble

10 quantiles

Tourism monthly

NHITS

SeasonalIMBB	1.208963
Jittering	1.227386
Scaling	1.229024
TimeWarping	1.273236
MagnitudeWarping	1.223307
TSMixup	1.199015
DBA	1.202159
original	1.226844

qgts	1.184336
qgtse	1.183432
SeasonalNaive	1.344768

10 ensemble
10 quantiles
m3 monthly
MLP

SeasonalIMBB	0.764288
Jittering	0.764847
Scaling	0.762060
TimeWarping	0.765572
MagnitudeWarping	0.780660
TSMixup	0.762749
DBA	0.769726
original	0.770798
qgts	0.770547
qgtse	0.773116
SeasonalNaive	1.091028

10 ensemble
10 quantiles
tourism quarterly
MLP

SeasonalIMBB	1.626354
Jittering	1.594688
Scaling	1.618421
TimeWarping	1.688599
MagnitudeWarping	1.572953
TSMixup	1.580101
DBA	1.627813
original	1.585478
qgts	1.502263
qgtse	1.484263
SeasonalNaive	1.701593

10 ensemble
10 quantiles
gluonts monthly
MLP

SeasonalIMBB	0.930746
Jittering	0.935250
Scaling	0.932083
TimeWarping	0.975059
MagnitudeWarping	0.995431
TSMixup	0.939068
DBA	0.945575
original	0.931617
qgts	0.939712
qgtse	0.949626
SeasonalNaive	1.220704

10 ensemble
10 quantiles
Gluonts quarterly
MLP

SeasonalIMBB	1.008099
Jittering	1.004198
Scaling	1.026414
TimeWarping	1.070608
MagnitudeWarping	0.957352
TSMixup	1.005070
DBA	1.047648
original	1.013096
qgts	1.025687
qgtse	1.027735
SeasonalNaive	1.646973

25 Ensemble
5 quantiles
Tourism monthly
KAN

SeasonalMBB	1.211424
Jittering	1.226101
Scaling	1.220594
TimeWarping	1.271146
MagnitudeWarping	1.224799
TSMixup	1.217507
DBA	1.217084
original	1.226844
qgts	1.185086 - worse than 10 quantiles
qgtse	1.182799 - better than 10 ensemble
SeasonalNaive	1.344768

1quantile
50ensemble
Tourism monthly
NHITS

SeasonalMBB	1.182771
Jittering	1.218217
Scaling	1.197301
TimeWarping	1.242273
MagnitudeWarping	1.218935
TSMixup	1.204370
DBA	1.199772
original	1.187969
qgts	1.201700 worse than 10 quantiles
qgtse	1.181319 better than 10 ensemble
SeasonalNaive	1.344768

100quantile
100ensemble
Tourism monthly
NHITS

SeasonalMBB	1.184141
Jittering	1.193480
Scaling	1.214836
TimeWarping	1.254401
MagnitudeWarping	1.190027
TSMixup	1.181385
DBA	1.217122
original	1.187969
qgts	1.175681 better than 10 quantiles
qgtse	1.204963
SeasonalNaive	1.344768

dtype: float64

25 Quantiles
20 Ensemble
Tourism monthly
NHITS

SeasonalMBB	1.193729
Jittering	1.204131
Scaling	1.201333
TimeWarping	1.225668
MagnitudeWarping	1.194947
TSMixup	1.179150
DBA	1.206237
original	1.187969
qgts	1.184631
qgtse	1.179751
SeasonalNaive	1.344768

100 Quantiles
50 Ensemble
M3 monthly
NHITS

SeasonalMBB	0.757326
Jittering	0.799762
Scaling	0.772104
TimeWarping	0.754457
MagnitudeWarping	0.770979
TSMixup	0.766824
DBA	0.768760
original	0.794920
qgts	0.747555
qgtse	0.757919
SeasonalNaive	1.091028

100 Quantiles
50 Ensemble
M3 monthly
KAN

SeasonalMBB	0.776277
Jittering	0.784630
Scaling	0.796684
TimeWarping	0.797593
MagnitudeWarping	0.798621
TSMixup	0.779454
DBA	0.777702
original	0.784306
qgts	0.777319
qgtse	0.779707

100 Quantiles
50 Ensemble
M3 monthly
MLP

SeasonalMBB	0.755775
Jittering	0.766837
Scaling	0.758777
TimeWarping	0.774130
MagnitudeWarping	0.775939
TSMixup	0.770077

DBA	0.790688
original	0.770798
qgts	0.774744
qgtse	0.775665

100 Quantiles
50 Ensemble
M3 quarterly
NHITS

SeasonalMBB	1.188769
Jittering	1.165688
Scaling	1.109654
TimeWarping	1.152166
MagnitudeWarping	1.177706
TSMixup	1.221653
DBA	1.188710
original	1.214659
qgts	1.250087
qgtse	1.228098
SeasonalNaive	1.416804

100 Quantiles
50 Ensemble
Tourism Monthly
NHITS

SeasonalMBB	1.206497
Jittering	1.206172
Scaling	1.207491
TimeWarping	1.238711
MagnitudeWarping	1.193871
TSMixup	1.274536
DBA	1.186971
original	1.187969
qgts	1.183761
qgtse	1.201249
SeasonalNaive	1.344768

100 Quantiles
50 Ensemble
Tourism Monthly
MLP

SeasonalIMBB	1.198502
Jittering	1.207566
Scaling	1.205284
TimeWarping	1.279922
MagnitudeWarping	1.202496
TSMixup	1.203819
DBA	1.911578
original	1.193179
qgts	1.193075
qgtse	1.186198
SeasonalNaive	1.344768

100 Quantiles
50 Ensemble
Tourism Monthly
KAN

SeasonalIMBB	1.211419
Jittering	1.231002
Scaling	1.234126
TimeWarping	1.269256
MagnitudeWarping	1.229019
TSMixup	1.212002
DBA	1.196451
original	1.226844
qgts	1.189107
qgtse	1.187551
SeasonalNaive	1.344768

25 Quantiles
25 Ensemble
Tourism Monthly
KAN

SeasonalIMBB	1.213022
Jittering	1.228426
Scaling	1.234462
TimeWarping	1.270133
MagnitudeWarping	1.230914
TSMixup	1.231740
DBA	1.232958
original	1.226844
qgts	1.189218
qgtse	1.186302
SeasonalNaive	1.344768

1 Quantiles
1 Ensemble
Tourism Monthly
KAN

SeasonalIMBB	1.223743
Jittering	1.225342
Scaling	1.220004
TimeWarping	1.274530
MagnitudeWarping	1.224178
TSMixup	1.229517
DBA	1.211192
original	1.226844
qgts	1.193307
qgtse	1.182710
SeasonalNaive	1.344768

100 Quantiles
100 Ensemble
Tourism Quarterly
NHITS

SeasonalIMBB	1.623842
Jittering	1.628956
Scaling	1.613825
TimeWarping	1.589236
MagnitudeWarping	1.592825
TSMixup	1.570081
DBA	1.598285
original	1.586140

qgts	1.558401
qgtse	1.567534
SeasonalNaive	1.701593

50 Quantiles

50 Ensemble

Gluonts Monthly

NHITS

SeasonalMBB	0.952584
Jittering	0.953467
Scaling	0.946215
TimeWarping	0.987119
MagnitudeWarping	0.978606
TSMixup	0.974920
DBA	0.974066
original	0.969180
qgts	0.946617
qgtse	0.954476
SeasonalNaive	1.220704

100 Quantiles

100 Ensemble

Gluonts Monthly

NHITS

SeasonalMBB	0.957366
Jittering	0.975668
Scaling	0.936308
TimeWarping	0.983514
MagnitudeWarping	0.995145
TSMixup	0.951577
DBA	0.972800
original	0.969180
qgts	0.966841
qgtse	0.947618
SeasonalNaive	1.220704

5 Quantiles

5 Ensemble

Gluonts Quarterly

NHITS

SeasonalMBB	1.029537
Jittering	1.037231
Scaling	1.026965
TimeWarping	1.052020
MagnitudeWarping	0.980990
TSMixup	1.035888
DBA	1.039406
original	1.021101
qgts	1.040161
qgtse	1.027574
SeasonalNaive	1.646973

5 Quantiles

5 Ensemble

M3 Quarterly

KAN

SeasonalMBB	1.173451
Jittering	1.152739
Scaling	1.109495
TimeWarping	1.148925
MagnitudeWarping	1.169043
TSMixup	1.197732
DBA	1.178181
original	1.214659
qgts	1.190208
qgtse	1.209747
SeasonalNaive	1.416804