

Online Supplement – Section A

This section puts forth an analysis on the frequency that each ETS model form was selected as the 'best model form' in the automated ETS routine, before and after treating. It also depicts the times that each model form was considered as outlier during treating. The results are detailed per time series frequency (monthly, quarterly and yearly) and per competition considered (M1, M3 and M4) in the following pages.

Table A1. ETS model forms diagnostics before and after treating (continues next page)

Model forms	Before treatment (M1)	After treatment (M1)	Before treatment (M3)	After treatment (M3)	Before treatment (M4)	After treatment (M4)
<i>Monthly series</i>						
ETS(A,N,N)	80	78	157	155	5834	6135
ETS(A,N,A)	84	81	90	86	3901	3720
ETS(M,N,N)	78	81	214	220	6844	7104
ETS(M,N,A)	40	39	45	54	1763	1952
ETS(M,N,M)	54	54	163	155	2718	2587
ETS(A,A,N)	25	27	83	84	1563	1487
ETS(A,A,A)	34	34	49	51	2174	2214
ETS(M,A,N)	55	42	154	144	4042	3752
ETS(M,A,A)	13	17	26	28	1486	1565
ETS(M,A,M)	64	65	66	62	2243	2215
ETS(A,A _d ,N)	8	9	83	83	2557	2277
ETS(A,A _d ,A)	6	7	39	37	2357	2329
ETS(M,A _d ,N)	21	28	137	138	3514	3511
ETS(M,A _d ,A)	1	1	11	12	913	997
ETS(M,A _d ,M)	54	54	111	119	6091	6155
Total	617	617	1428	1428	48000	48000
<i>Quarterly series</i>						
ETS(A,N,N)	14	15	81	83	2570	2561
ETS(A,N,A)	8	7	30	26	699	664
ETS(M,N,N)	35	36	115	116	3732	3779
ETS(M,N,A)	5	5	33	35	627	669
ETS(M,N,M)	21	20	49	46	1639	1638
ETS(A,A,N)	10	10	98	91	1309	1338
ETS(A,A,A)	7	9	33	35	584	583
ETS(M,A,N)	55	53	142	137	5461	5350
ETS(M,A,A)	8	8	30	32	1178	1203
ETS(M,A,M)	25	25	70	68	2560	2544
ETS(A,A _d ,N)	3	4	22	26	917	923
ETS(A,A _d ,A)	4	4	4	5	361	356
ETS(M,A _d ,N)	3	3	27	32	1486	1493
ETS(M,A _d ,A)	1	1	6	6	236	244
ETS(M,A _d ,M)	4	3	16	18	641	655
Total	203	203	756	756	24000	24000

Table A1 (cont.). ETS model forms diagnostics before and after treating

Model forms	Before treatment (M1)	After treatment (M1)	Before treatment (M3)	After treatment (M3)	Before treatment (M4)	After treatment (M4)
<i>Yearly series</i>						
ETS(A,N,N)	50	49	121	122	3242	3193
ETS(A,N,A)	0	0	0	0	0	0
ETS(M,N,N)	39	39	190	190	4944	5002
ETS(M,N,A)	0	0	0	0	0	0
ETS(M,N,M)	0	0	0	0	0	0
ETS(A,A,N)	35	38	110	117	3007	3114
ETS(A,A,A)	0	0	0	0	0	0
ETS(M,A,N)	54	49	212	201	10903	10657
ETS(M,A,A)	0	0	0	0	0	0
ETS(M,A,M)	0	0	0	0	0	0
ETS(A,A _d ,N)	2	3	1	1	330	345
ETS(A,A _d ,A)	0	0	0	0	0	0
ETS(M,A _d ,N)	1	3	11	14	574	689
ETS(M,A _d ,A)	0	0	0	0	0	0
ETS(M,A _d ,M)	0	0	0	0	0	0
Total	181	181	645	645	23000	23000

Table A2. Times each model form was considered as outlier during treating (continues next page)

	Times considered as outlier in M1	Times considered as outlier in M3	Times considered as outlier in M4
<i>Monthly series</i>			
ETS(A,N,N)	70	120	2057
ETS(A,N,A)	58	166	3201
ETS(M,N,N)	68	132	3756
ETS(M,N,A)	67	242	3146
ETS(M,N,M)	127	442	11983
ETS(A,A,N)	77	172	5751
ETS(A,A,A)	33	55	2200
ETS(M,A,N)	199	385	12574
ETS(M,A,A)	71	154	4399
ETS(M,A,M)	179	437	14289
ETS(A,A _d ,N)	53	62	3656
ETS(A,A _d ,A)	25	25	1618
ETS(M,A _d ,N)	81	131	5597
ETS(M,A _d ,A)	31	35	1436
ETS(M,A _d ,M)	48	96	2315
Total	1187	2654	77978
<i>Quarterly series</i>			
ETS(A,N,N)	30	77	1875
ETS(A,N,A)	24	70	1863
ETS(M,N,N)	24	73	2142
ETS(M,N,A)	21	89	2636
ETS(M,N,M)	26	130	2853
ETS(A,A,N)	12	37	774
ETS(A,A,A)	9	34	986
ETS(M,A,N)	29	108	3219
ETS(M,A,A)	13	35	1507
ETS(M,A,M)	30	94	2937
ETS(A,A _d ,N)	2	19	459
ETS(A,A _d ,A)	5	23	653
ETS(M,A _d ,N)	20	50	1693
ETS(M,A _d ,A)	3	15	583
ETS(M,A _d ,M)	9	11	489
Total	257	865	24669

Table A2 (cont.). Times each model form was considered as outlier during treating

	Times considered as outlier in M1	Times considered as outlier in M3	Times considered as outlier in M4
<i>Yearly series</i>			
ETS(A,N,N)	27	80	3120
ETS(A,N,A)	0	0	0
ETS(M,N,N)	31	93	3544
ETS(M,N,A)	0	0	0
ETS(M,N,M)	0	0	0
ETS(A,A,N)	4	21	661
ETS(A,A,A)	0	0	0
ETS(M,A,N)	16	65	1726
ETS(M,A,A)	0	0	0
ETS(M,A,M)	0	0	0
ETS(A,A _d ,N)	4	17	416
ETS(A,A _d ,A)	0	0	0
ETS(M,A _d ,N)	8	40	917
ETS(M,A _d ,A)	0	0	0
ETS(M,A _d ,M)	0	0	0
Total	90	316	10384