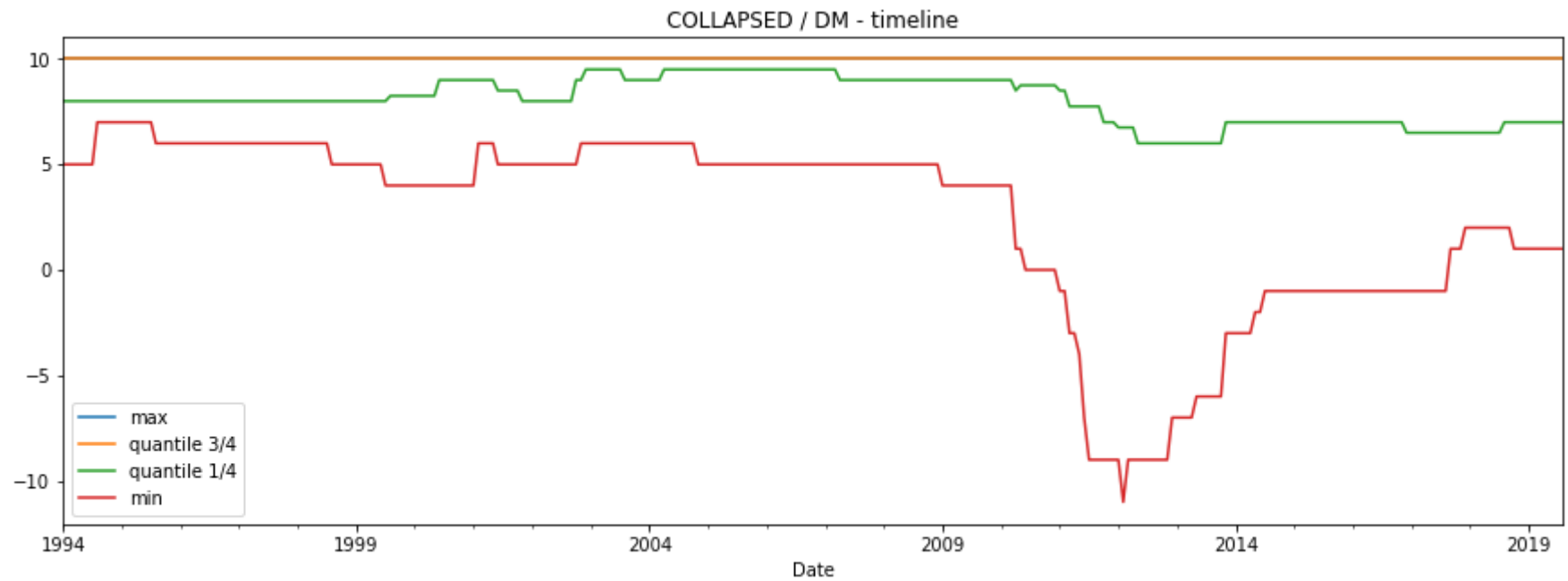
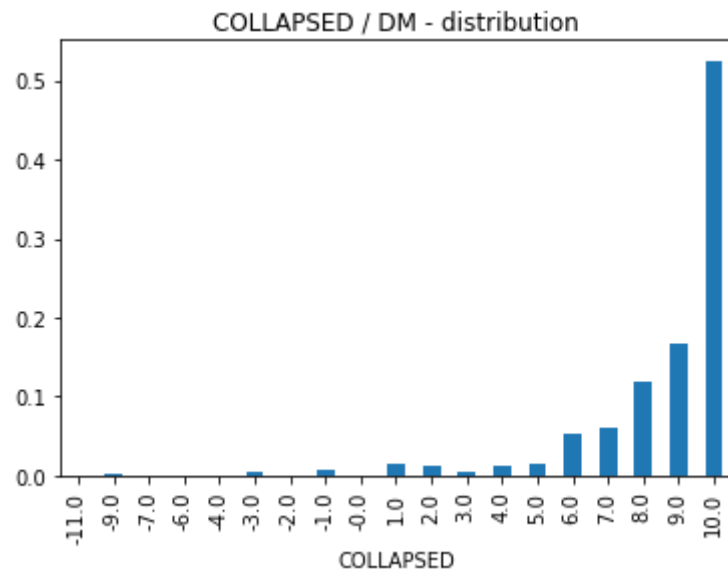
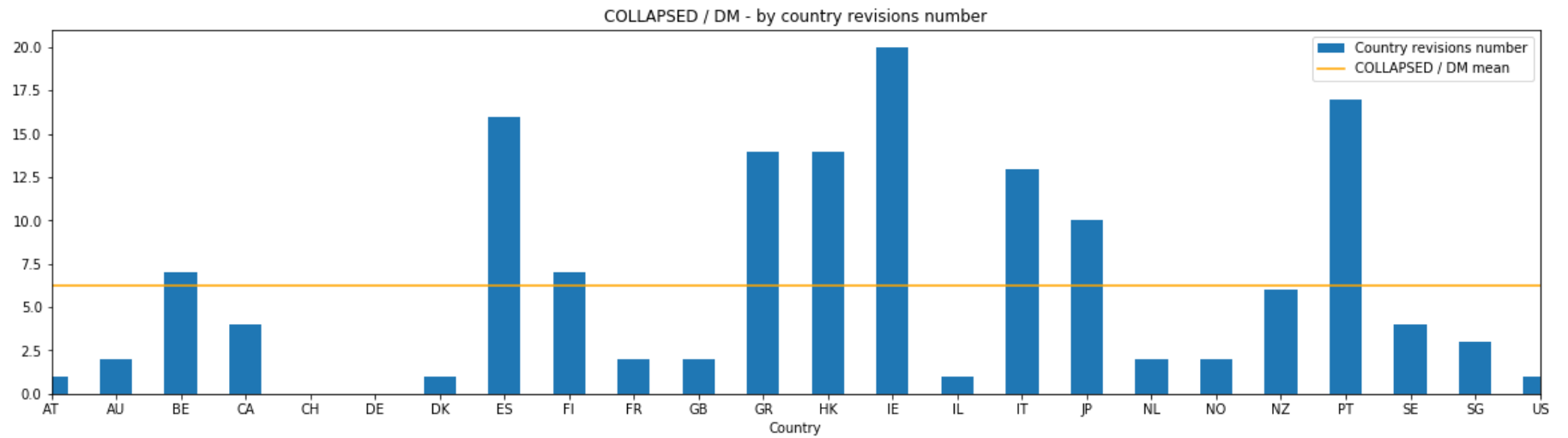
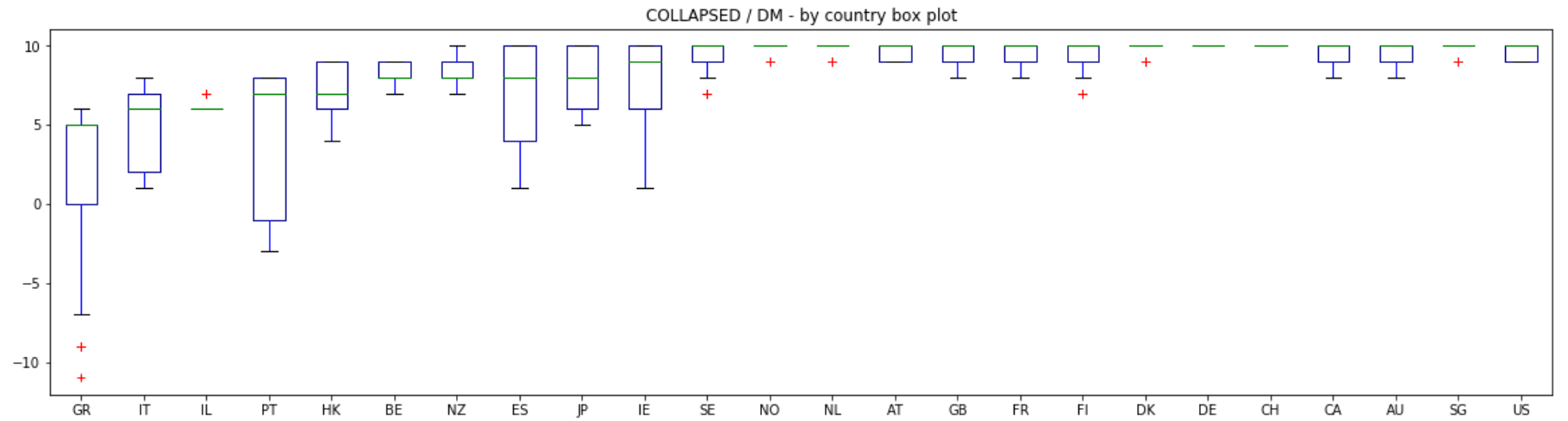
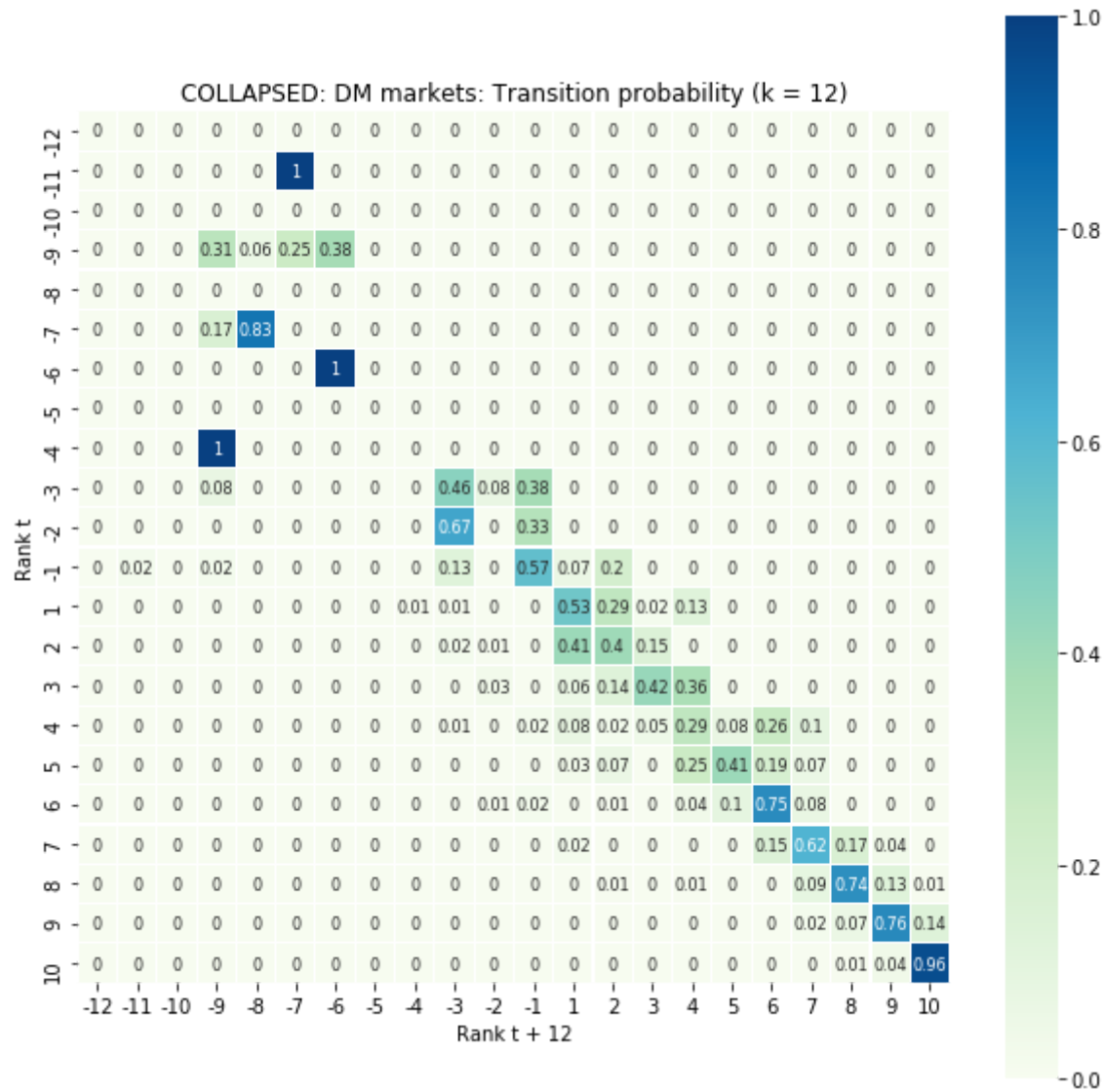
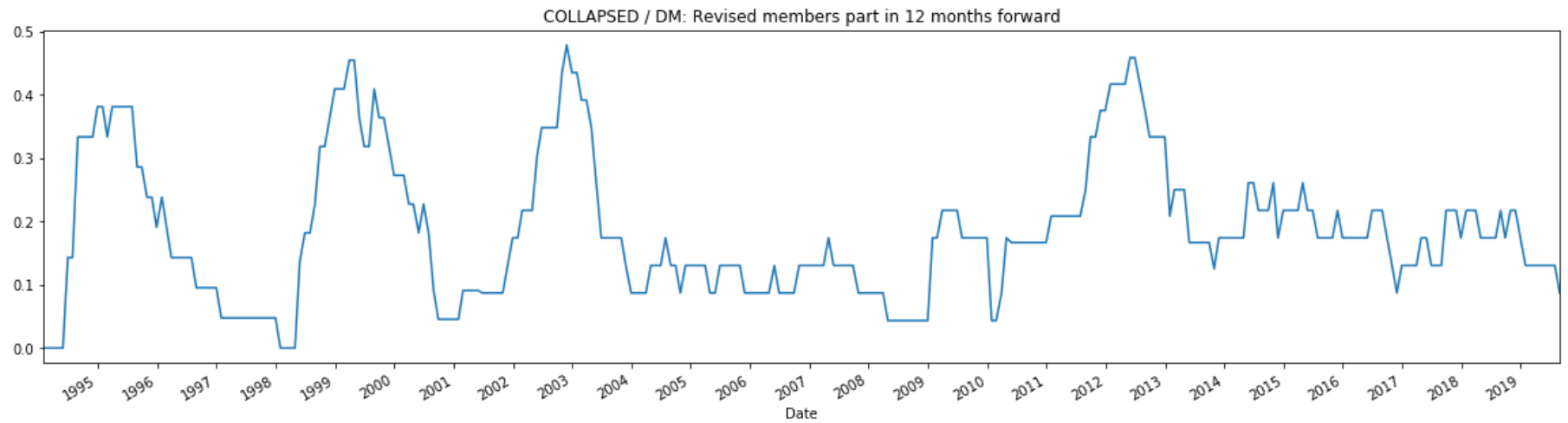
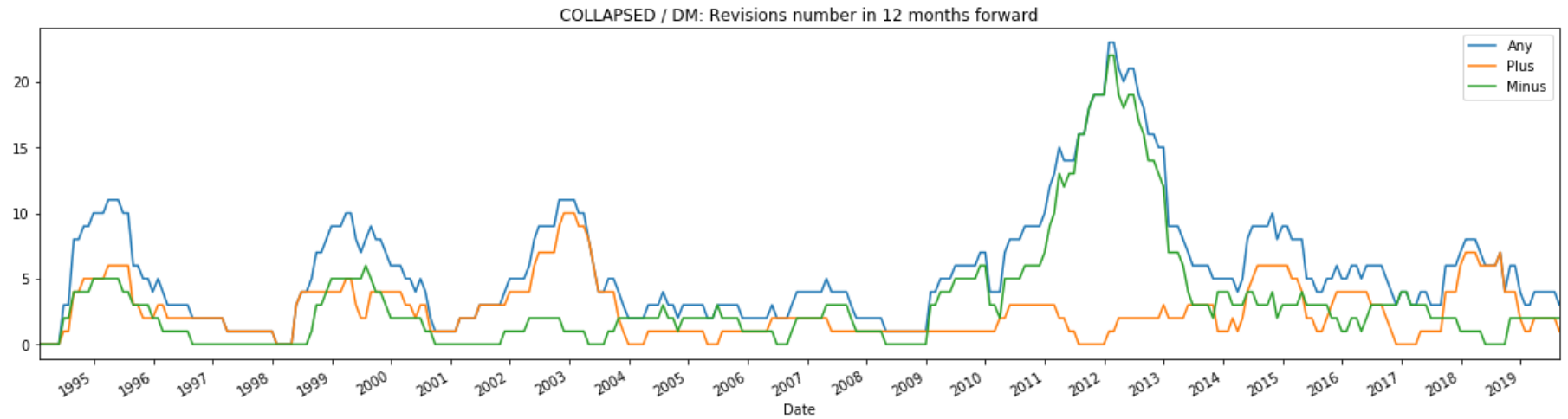


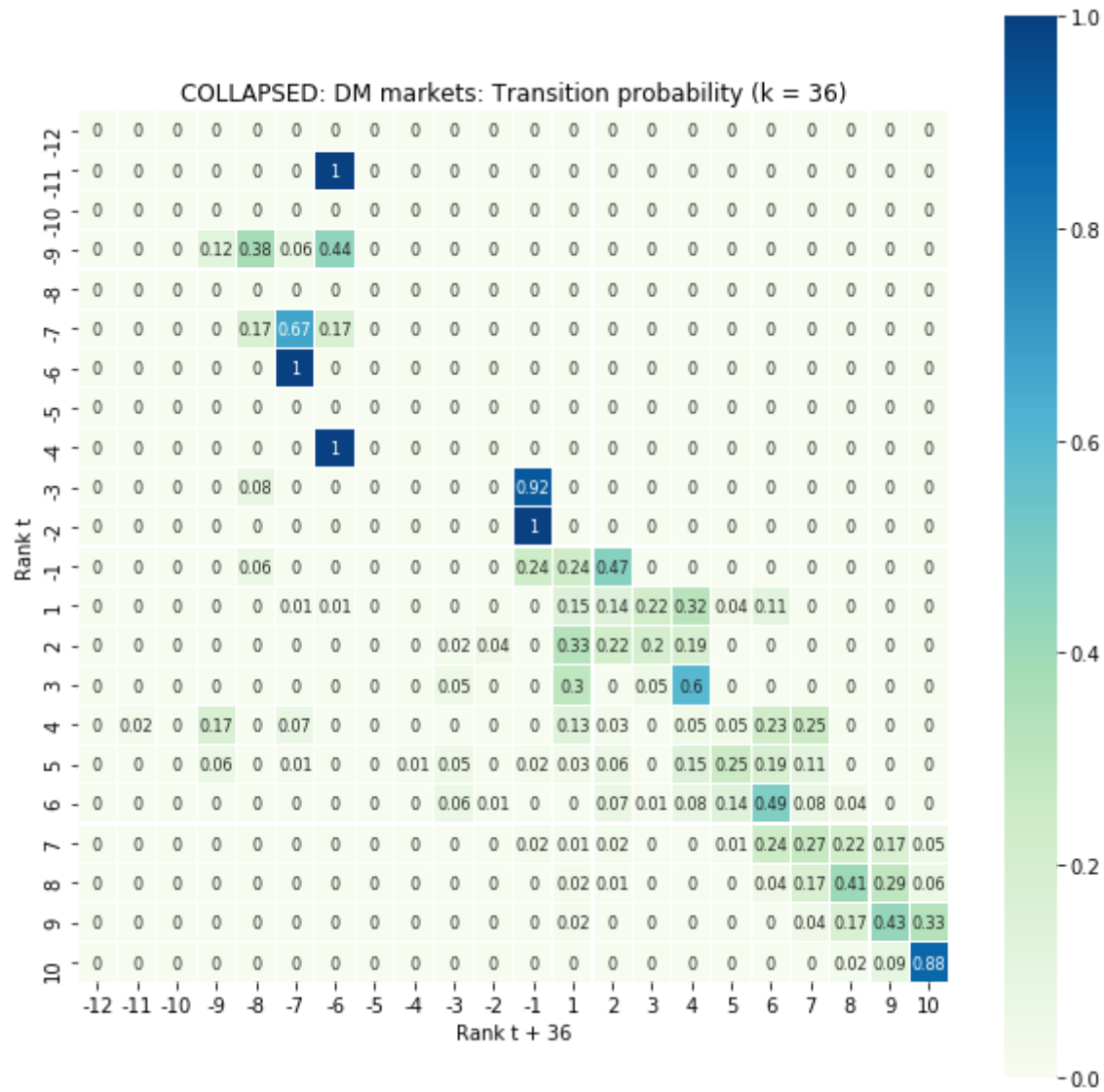
COLLAPSED : All markets (18461) : Investment grade: 72.18% (13325)
COLLAPSED : All markets (18461) : Non-investment grade: 25.25% (4662)
COLLAPSED : All markets (18461) : Any revisions frequency: 3.42% (631)
COLLAPSED : All markets (18461) : Positive revisions frequency: 1.73% (320)
COLLAPSED : All markets (18461) : Negative revisions frequency: 1.68% (311)
COLLAPSED : All markets (18461) : Average revisions number for country: 7.6
COLLAPSED : All markets (18461) : Average stable rating period length (months): 25.86
COLLAPSED : All markets: Mean revision absolute step: 1.28
COLLAPSED : All markets: Mean revision positive step: 1.24
COLLAPSED : All markets: Mean revision negative step: -1.31
COLLAPSED : All markets (308 datepoints) : Datepoints with at least one revision in 12 months forward: 97.08% (299)
COLLAPSED : All markets (308 datepoints) : Datepoints with no revisions in 12 months forward: 2.92% (9)
COLLAPSED : All markets: Mean any revisions number in 12 months forward from datepoint: 23.9
COLLAPSED : All markets: Mean positive revisions number in 12 months forward from datepoint: 12.15
COLLAPSED : All markets: Mean negative revisions number in 12 months forward from datepoint: 11.75
COLLAPSED : All markets: Mean part of members revised in 12 months forward from market: 28.37%
COLLAPSED : All markets (308 datepoints) : Datepoints with at least one revision in 36 months forward: 94.48% (291)
COLLAPSED : All markets (308 datepoints) : Datepoints with no revisions in 36 months forward: 5.52% (17)
COLLAPSED : All markets: Mean any revisions number in 36 months forward from datepoint: 66.15
COLLAPSED : All markets: Mean positive revisions number in 36 months forward from datepoint: 33.28
COLLAPSED : All markets: Mean negative revisions number in 36 months forward from datepoint: 32.87
COLLAPSED : All markets: Mean part of members revised in 36 months forward from market: 52.65%
COLLAPSED : All markets (308 datepoints) : Datepoints with at least one revision in 60 months forward: 90.58% (279)
COLLAPSED : All markets (308 datepoints) : Datepoints with no revisions in 60 months forward: 9.42% (29)
COLLAPSED : All markets: Mean any revisions number in 60 months forward from datepoint: 101.41
COLLAPSED : All markets: Mean positive revisions number in 60 months forward from datepoint: 51.21
COLLAPSED : All markets: Mean negative revisions number in 60 months forward from datepoint: 50.2
COLLAPSED : All markets: Mean part of members revised in 60 months forward from market: 60.64%

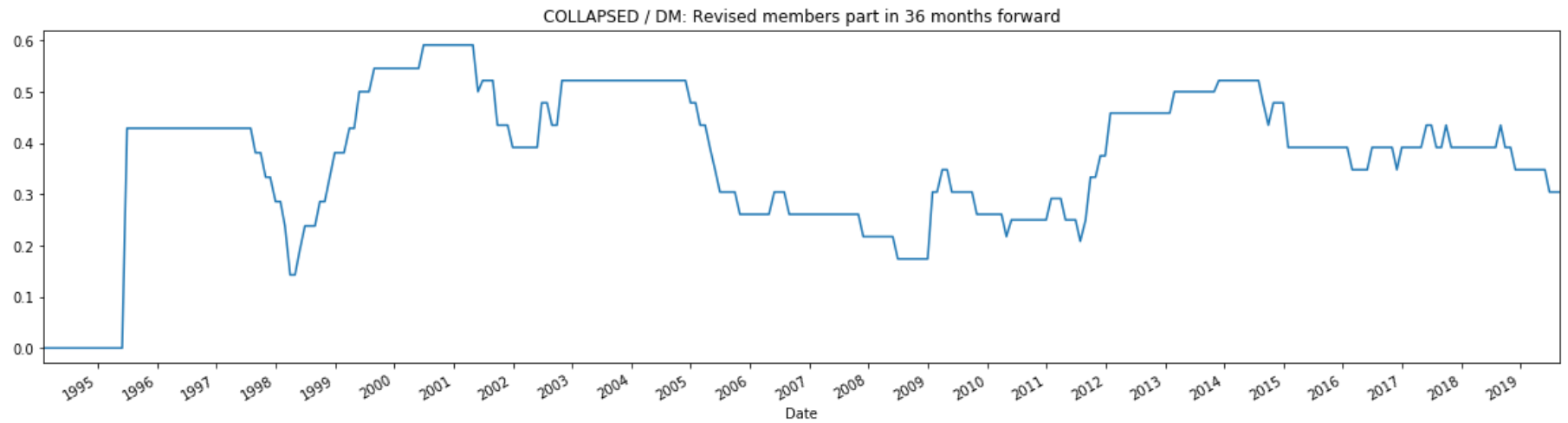
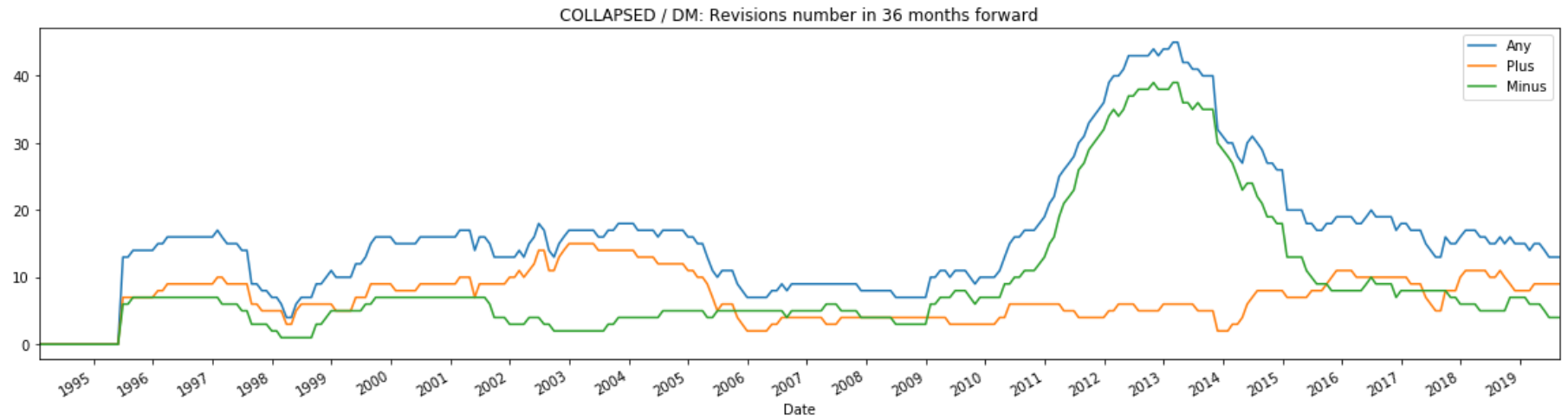


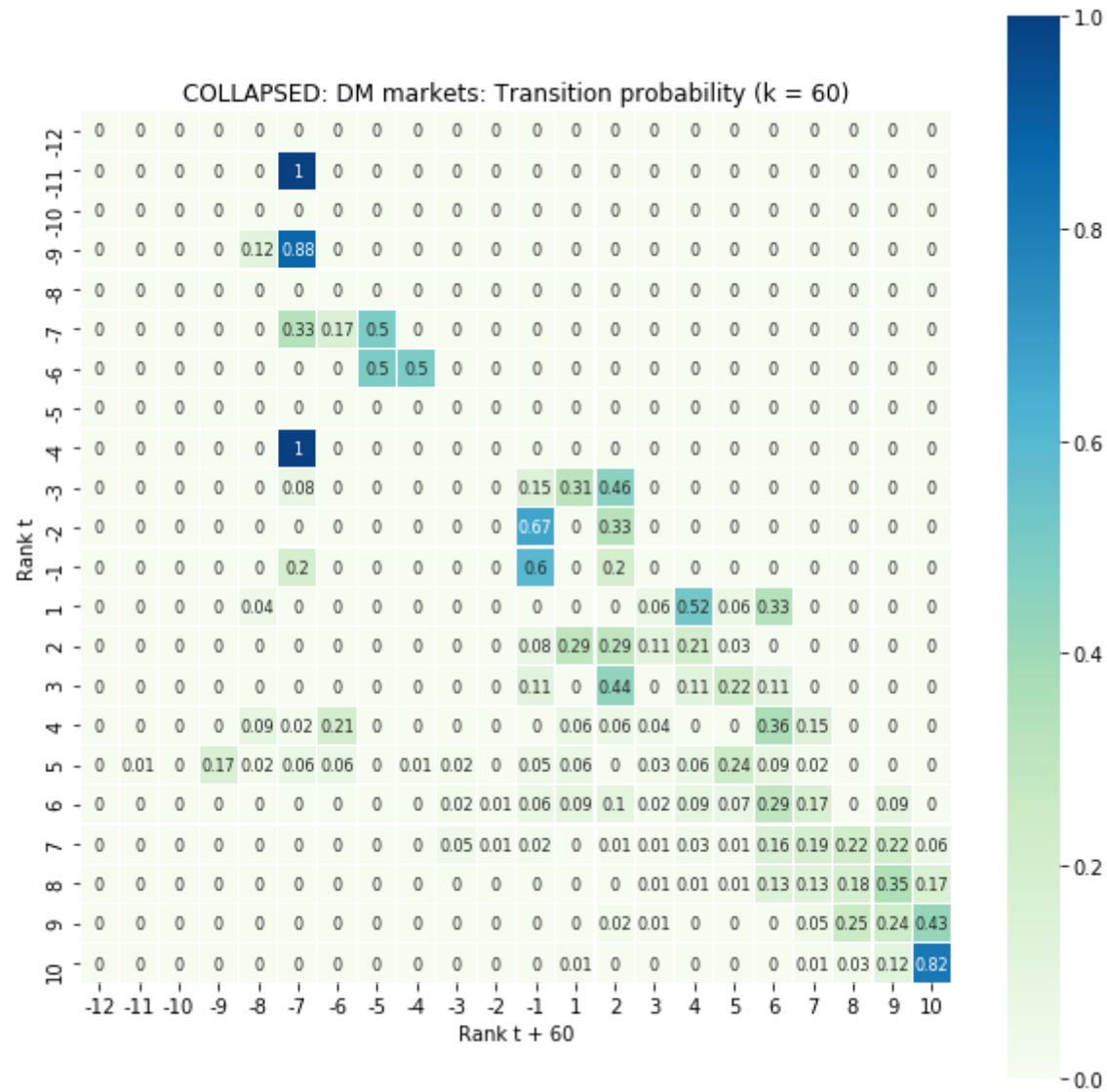


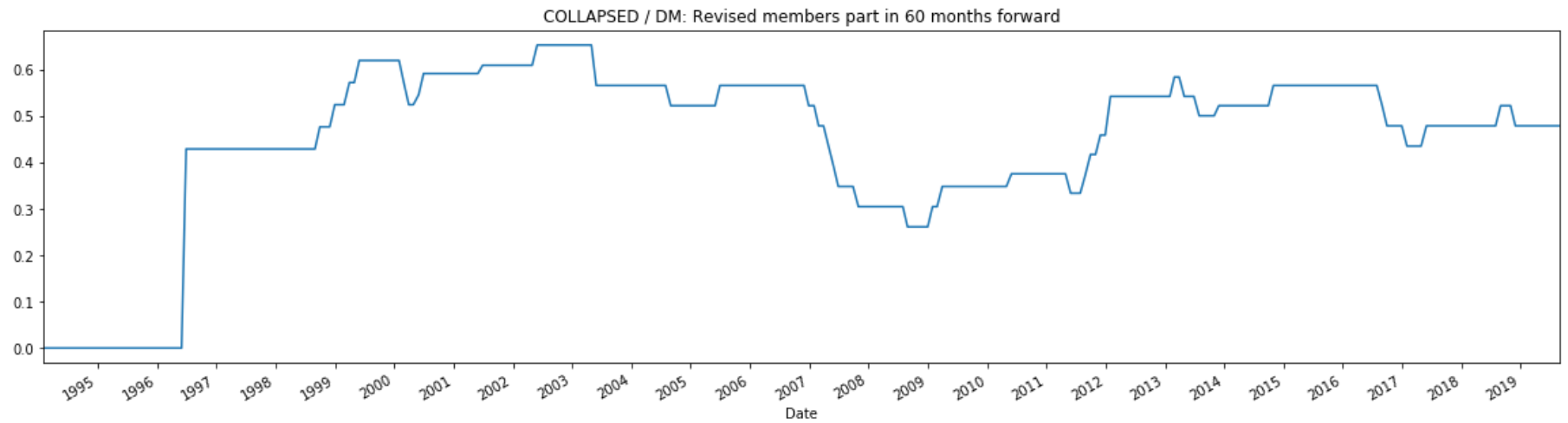
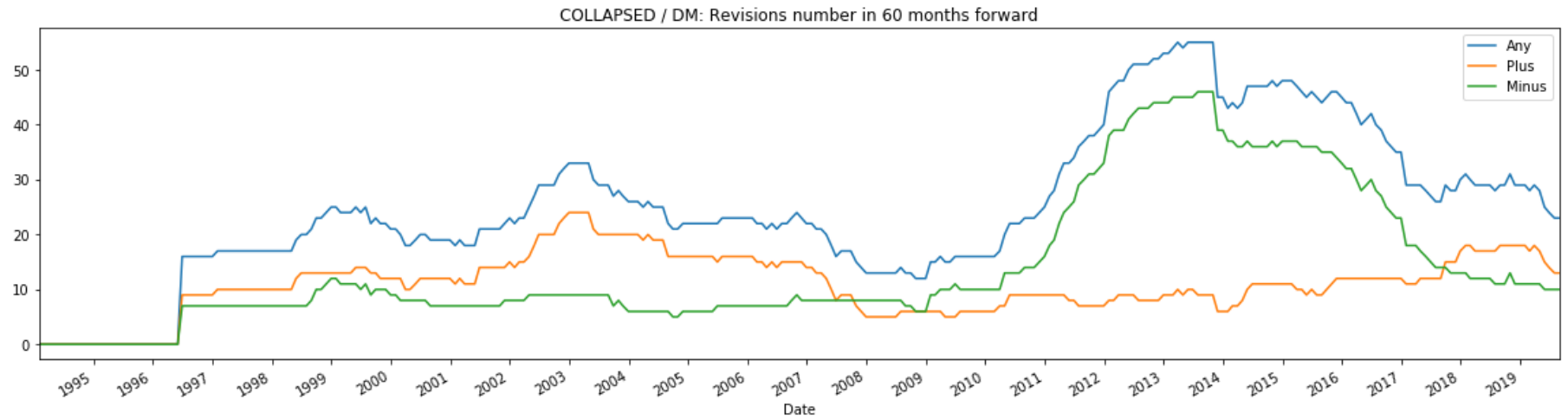




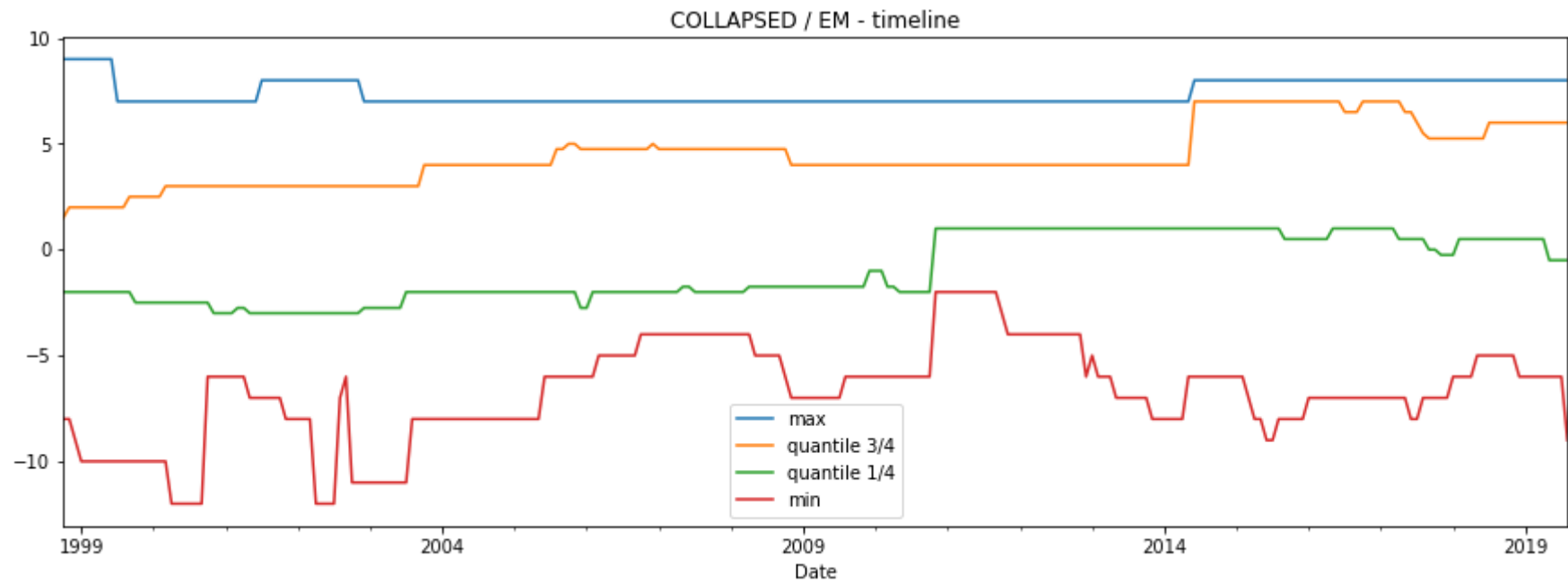
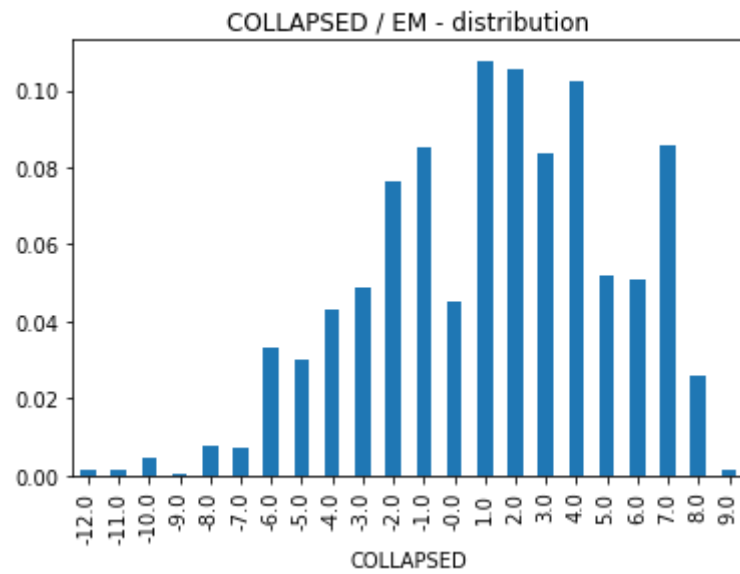


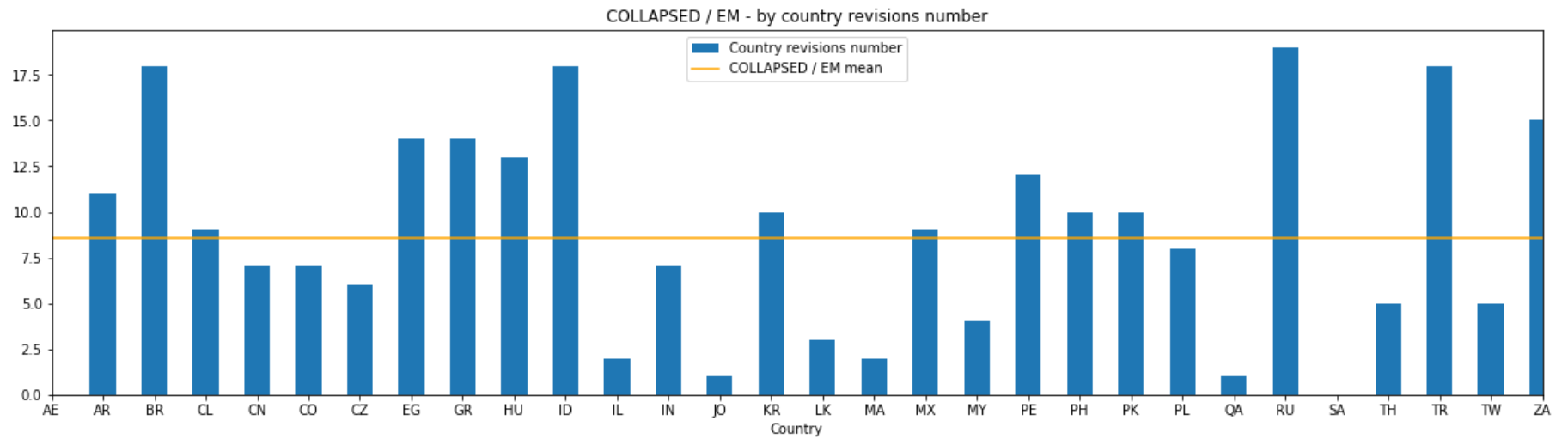
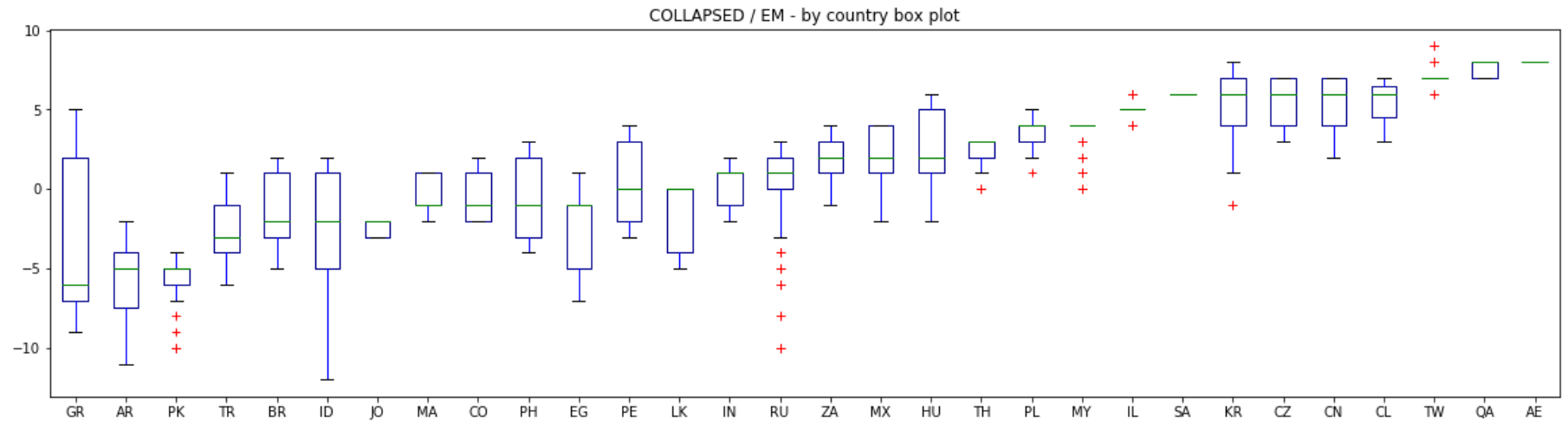


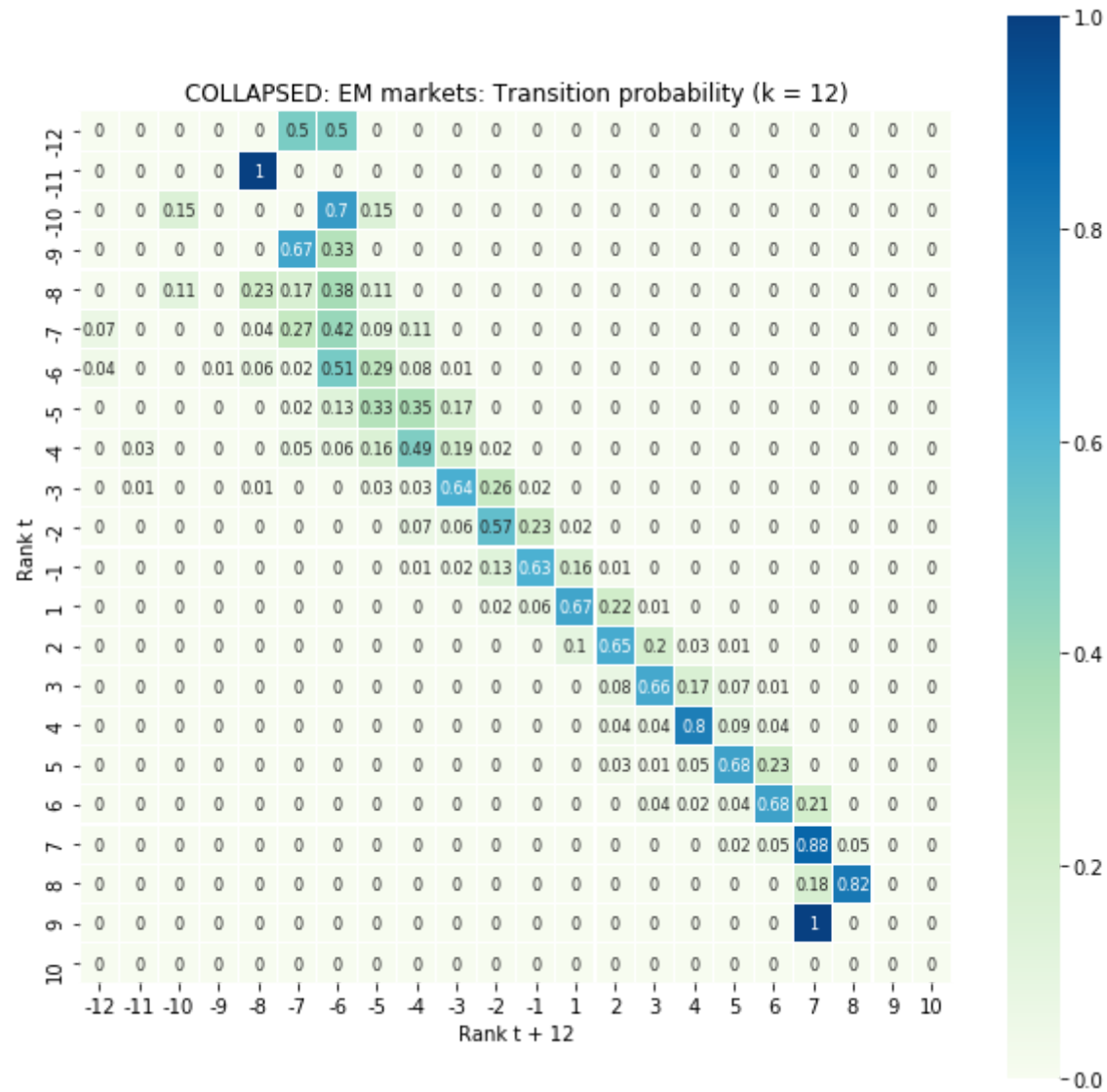


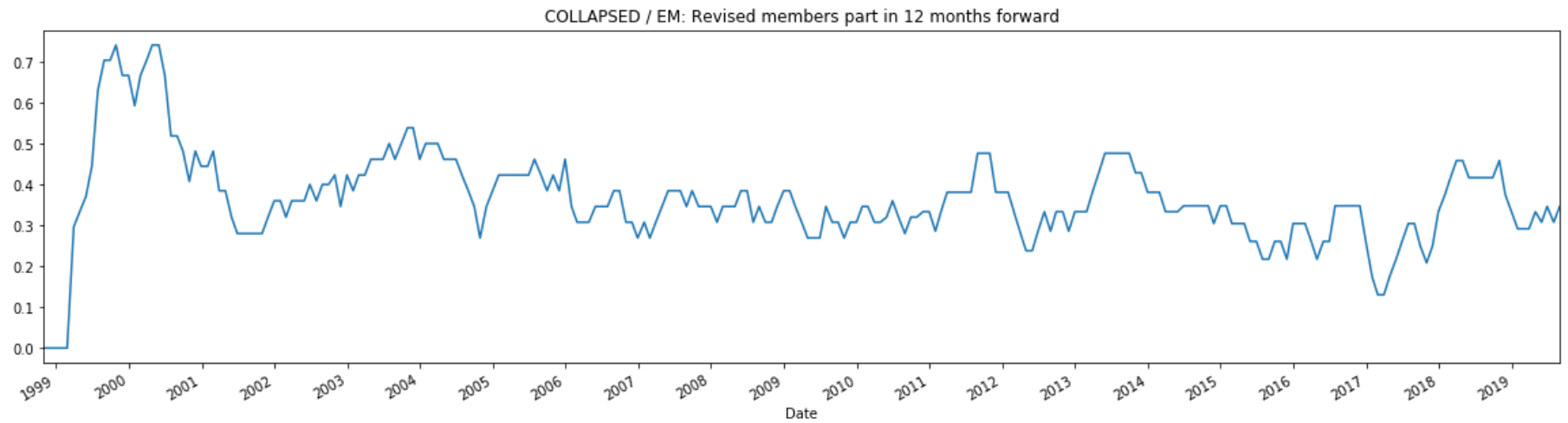
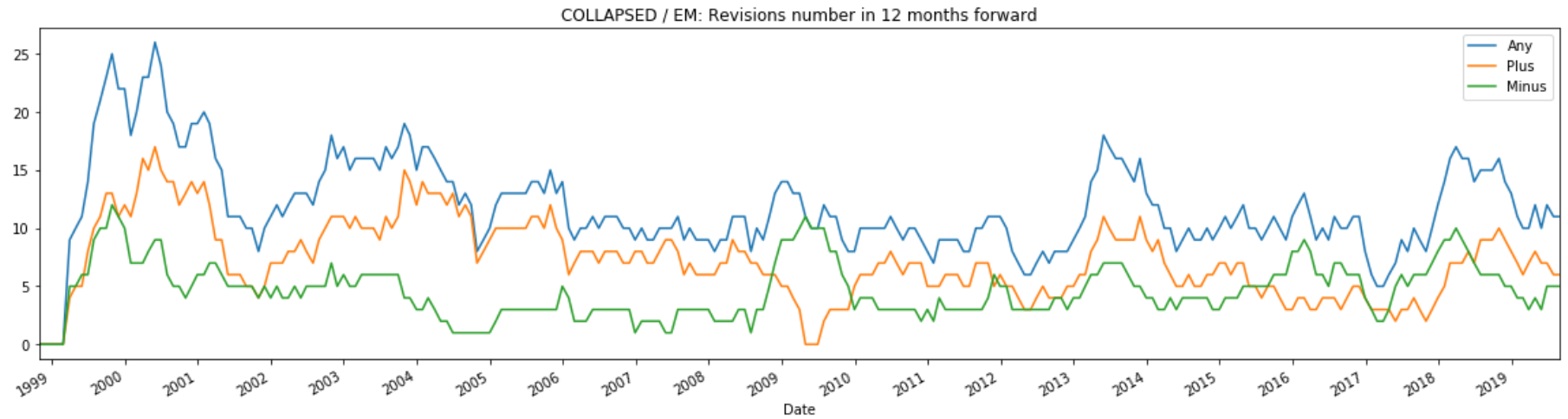


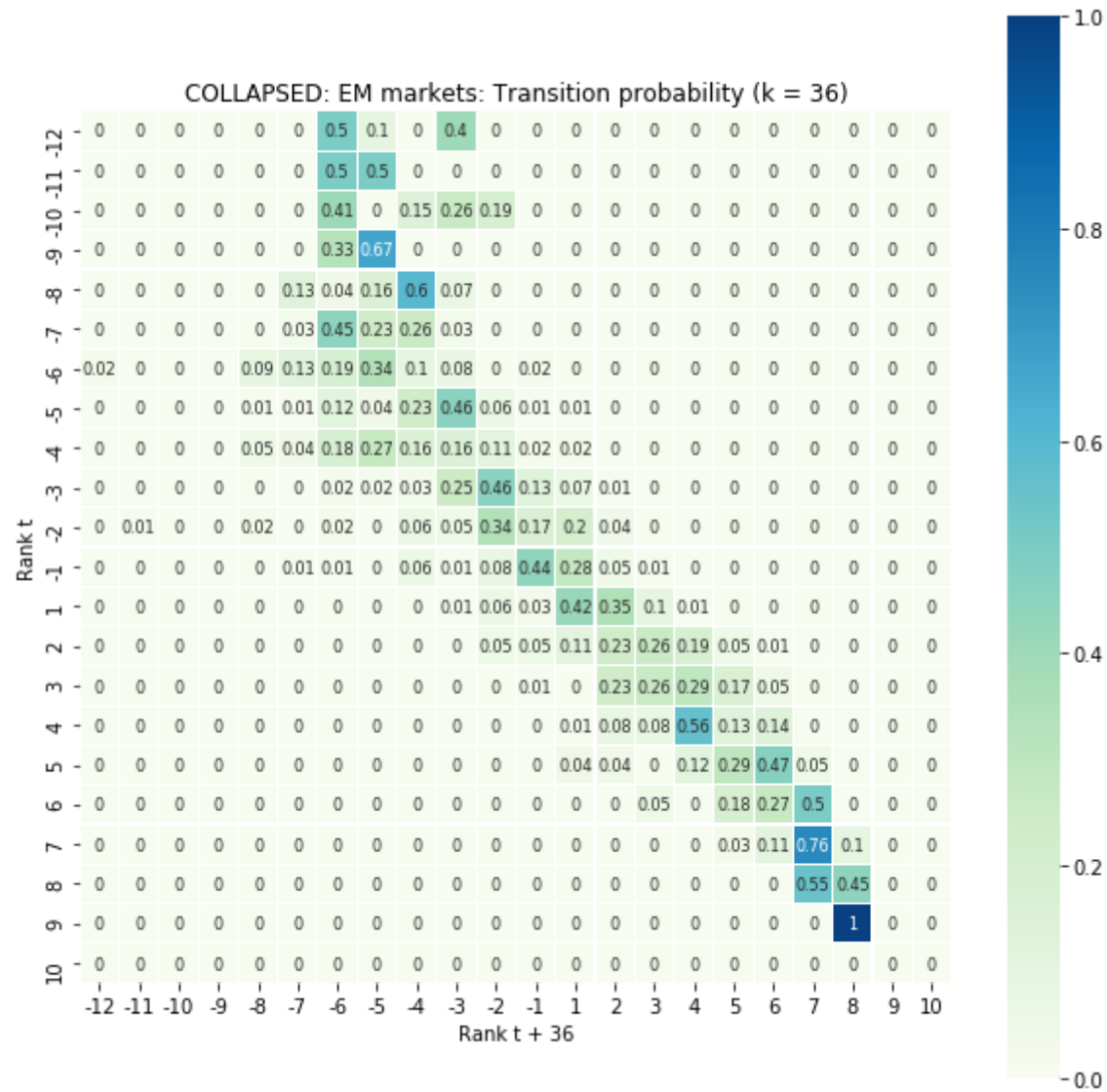
COLLAPSED : DM markets (6990) : Investment grade: 98.35% (6875)
COLLAPSED : DM markets (6990) : Non-investment grade: 1.55% (108)
COLLAPSED : DM markets (6990) : Any revisions frequency: 2.13% (149)
COLLAPSED : DM markets (6990) : Positive revisions frequency: 0.94% (66)
COLLAPSED : DM markets (6990) : Negative revisions frequency: 1.19% (83)
COLLAPSED : DM markets (6990) : Average revisions number for country: 6.21
COLLAPSED : DM markets (6990) : Average stable rating period length (months): 40.56
COLLAPSED : DM markets: Mean revision absolute step: 1.18
COLLAPSED : DM markets: Mean revision positive step: 1.14
COLLAPSED : DM markets: Mean revision negative step: -1.22
COLLAPSED : DM markets (308 datepoints) : Datepoints with at least one revision in 12 months forward: 97.08% (299)
COLLAPSED : DM markets (308 datepoints) : Datepoints with no revisions in 12 months forward: 2.92% (9)
COLLAPSED : DM markets: Mean any revisions number in 12 months forward from datepoint: 5.77
COLLAPSED : DM markets: Mean positive revisions number in 12 months forward from datepoint: 2.55
COLLAPSED : DM markets: Mean negative revisions number in 12 months forward from datepoint: 3.21
COLLAPSED : DM markets: Mean part of members revised in 12 months forward from market: 18.49%
COLLAPSED : DM markets (308 datepoints) : Datepoints with at least one revision in 36 months forward: 94.48% (291)
COLLAPSED : DM markets (308 datepoints) : Datepoints with no revisions in 36 months forward: 5.52% (17)
COLLAPSED : DM markets: Mean any revisions number in 36 months forward from datepoint: 16.16
COLLAPSED : DM markets: Mean positive revisions number in 36 months forward from datepoint: 6.98
COLLAPSED : DM markets: Mean negative revisions number in 36 months forward from datepoint: 9.18
COLLAPSED : DM markets: Mean part of members revised in 36 months forward from market: 37.05%
COLLAPSED : DM markets (308 datepoints) : Datepoints with at least one revision in 60 months forward: 90.58% (279)
COLLAPSED : DM markets (308 datepoints) : Datepoints with no revisions in 60 months forward: 9.42% (29)
COLLAPSED : DM markets: Mean any revisions number in 60 months forward from datepoint: 25.19
COLLAPSED : DM markets: Mean positive revisions number in 60 months forward from datepoint: 10.93
COLLAPSED : DM markets: Mean negative revisions number in 60 months forward from datepoint: 14.25
COLLAPSED : DM markets: Mean part of members revised in 60 months forward from market: 44.90%

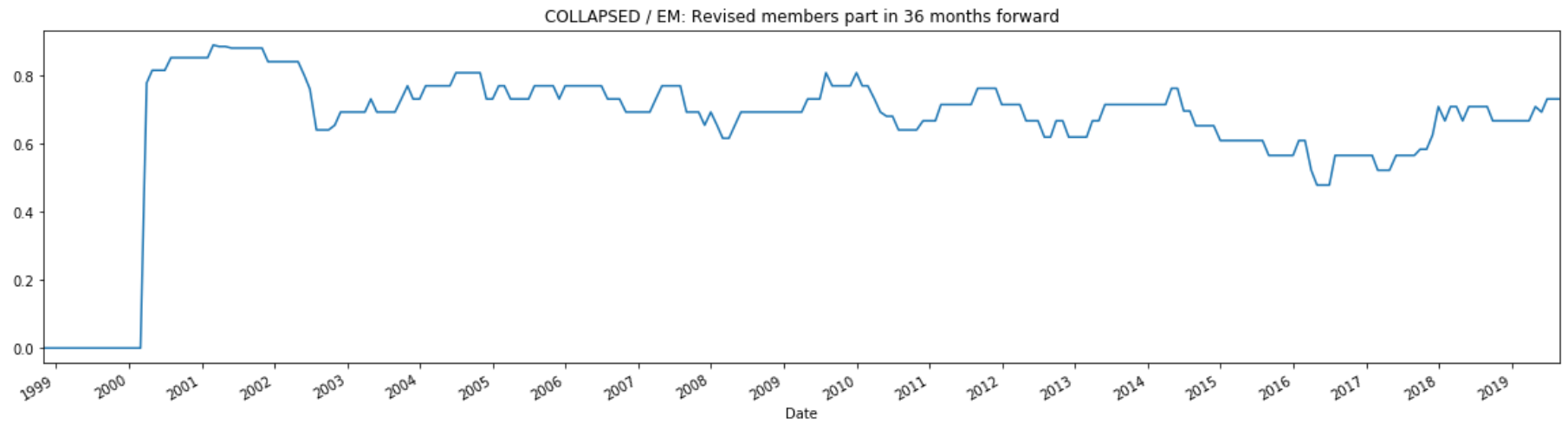
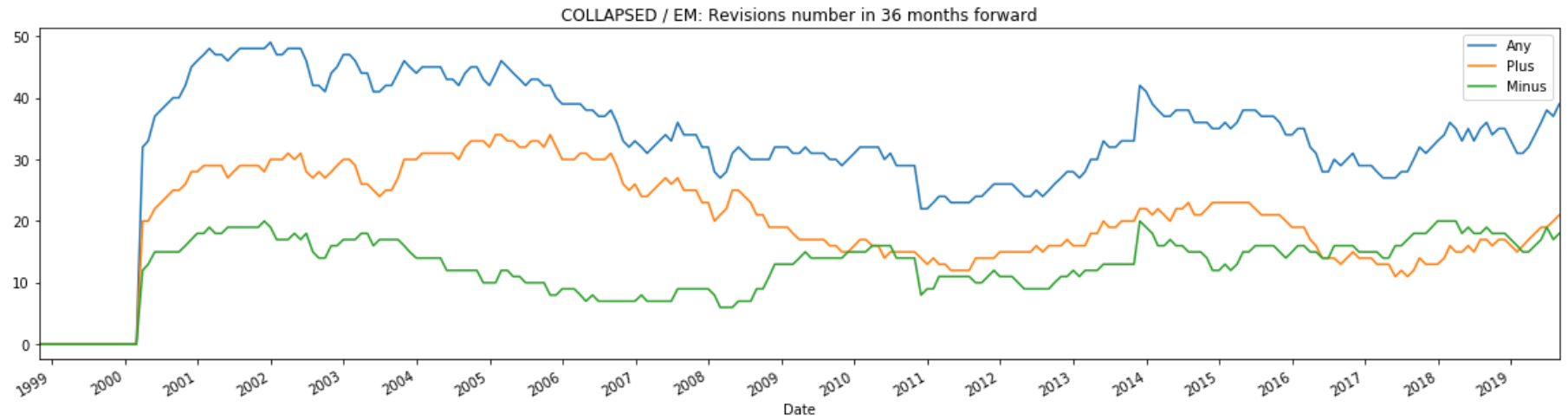


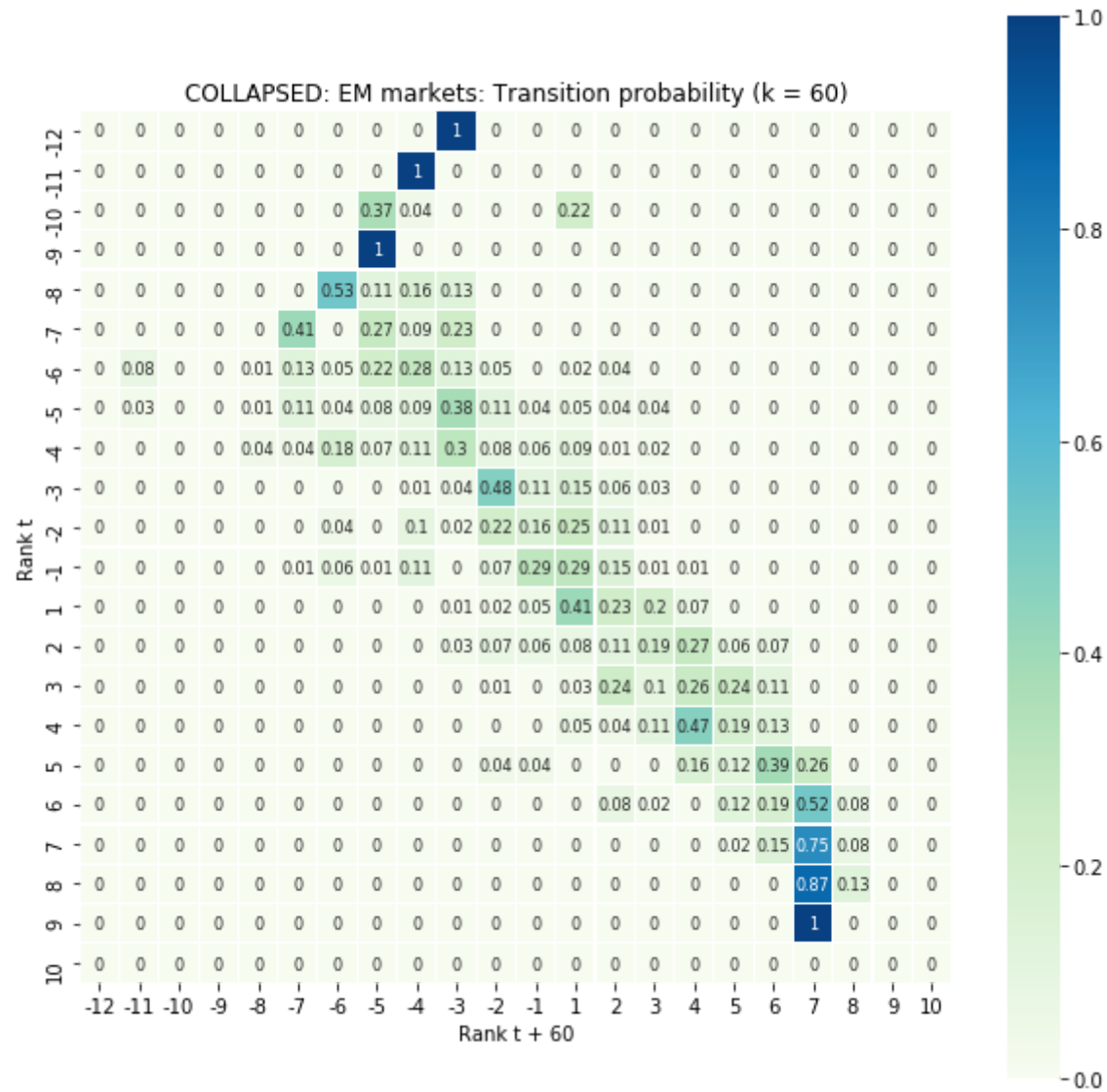


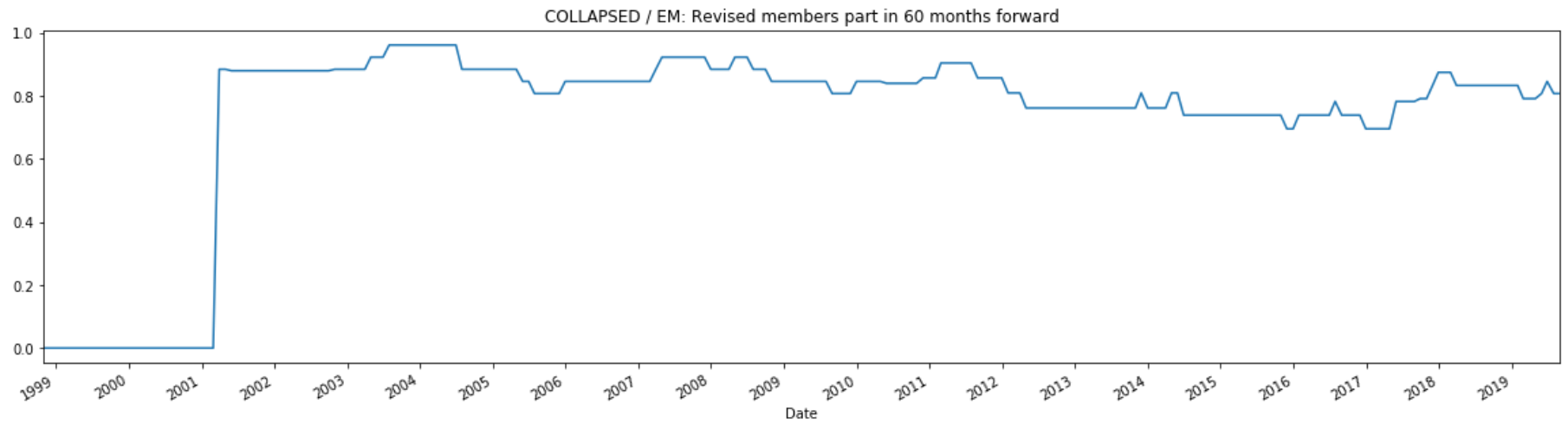
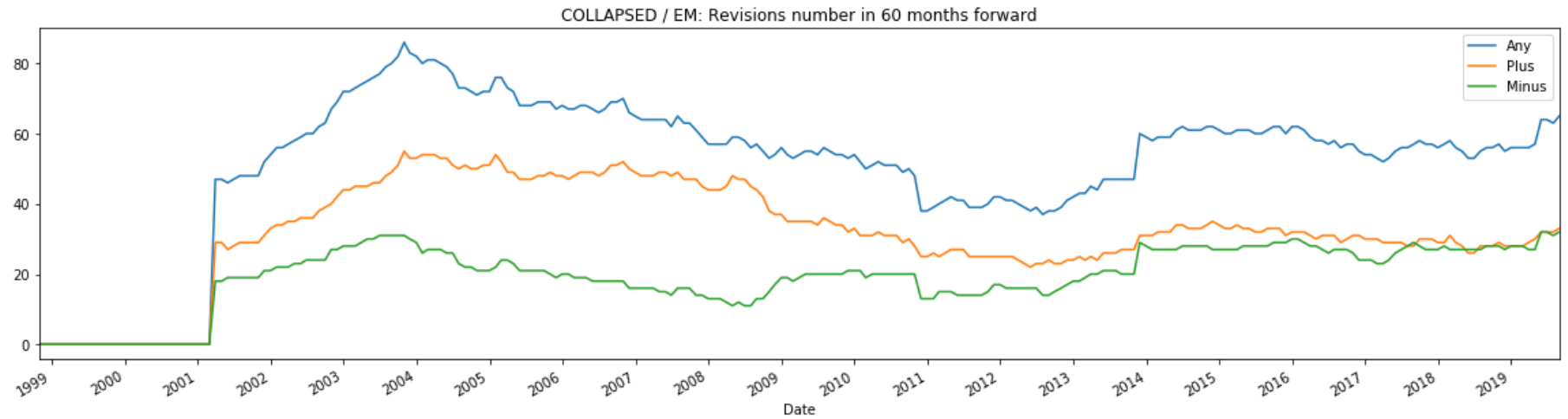




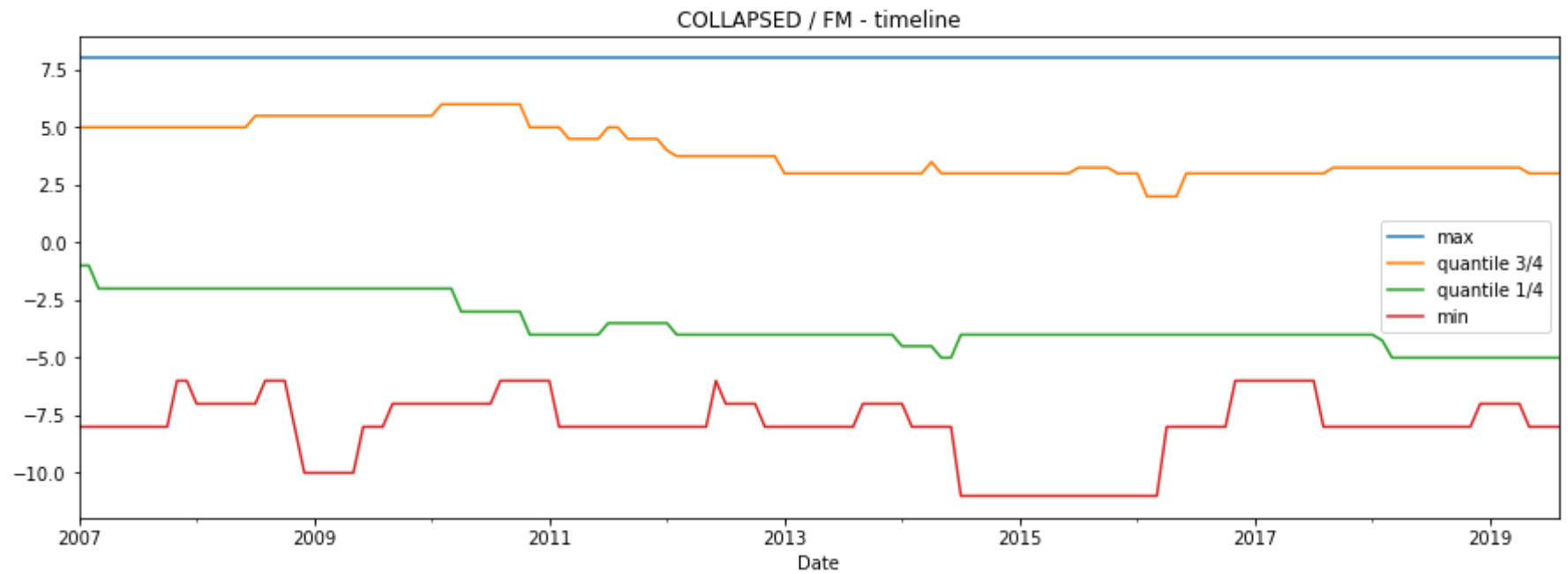
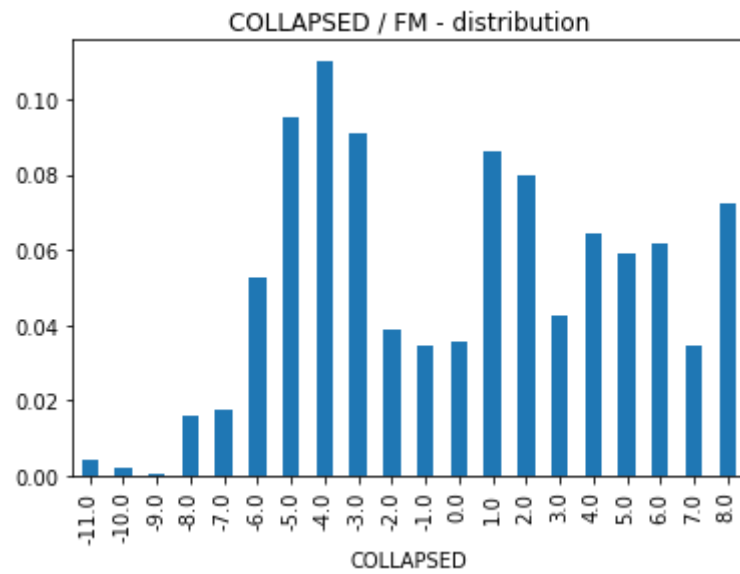


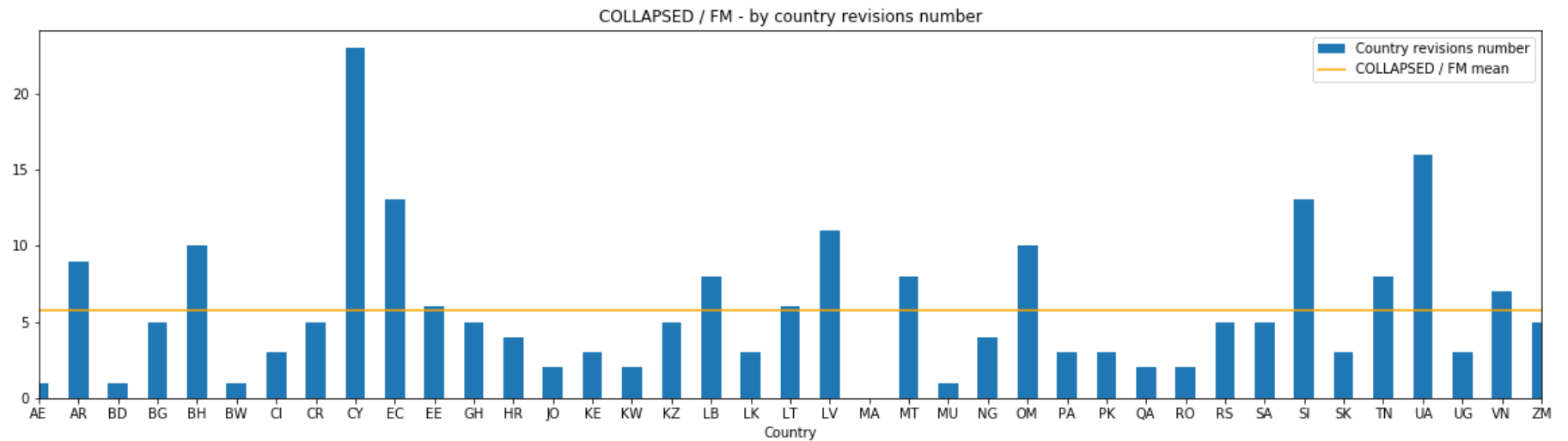
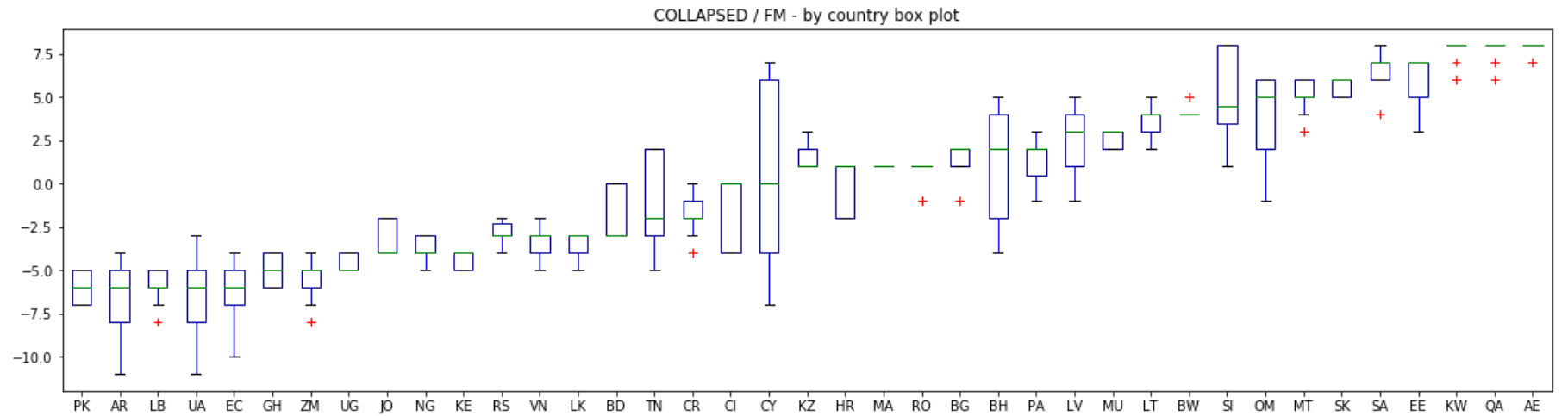


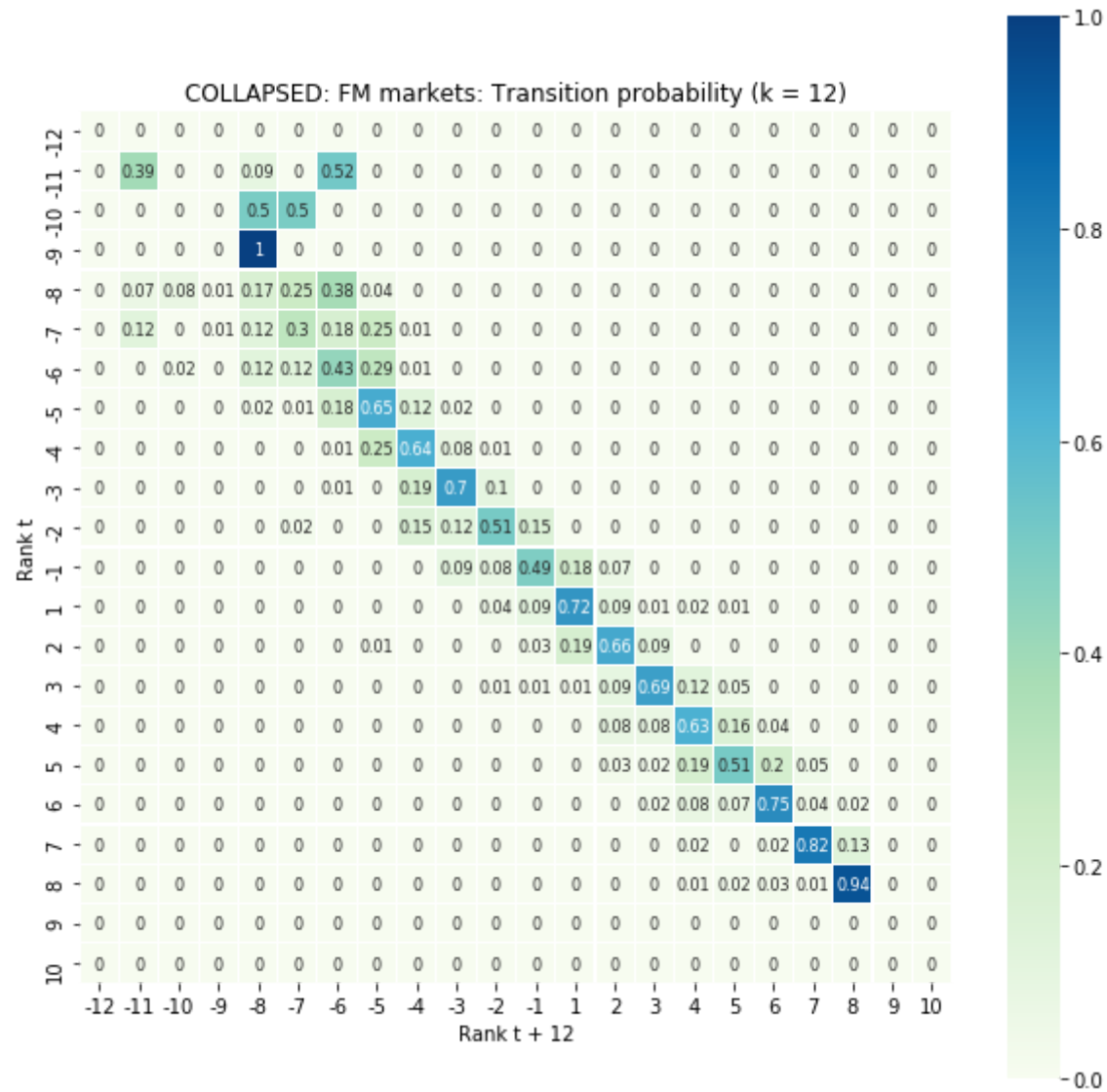


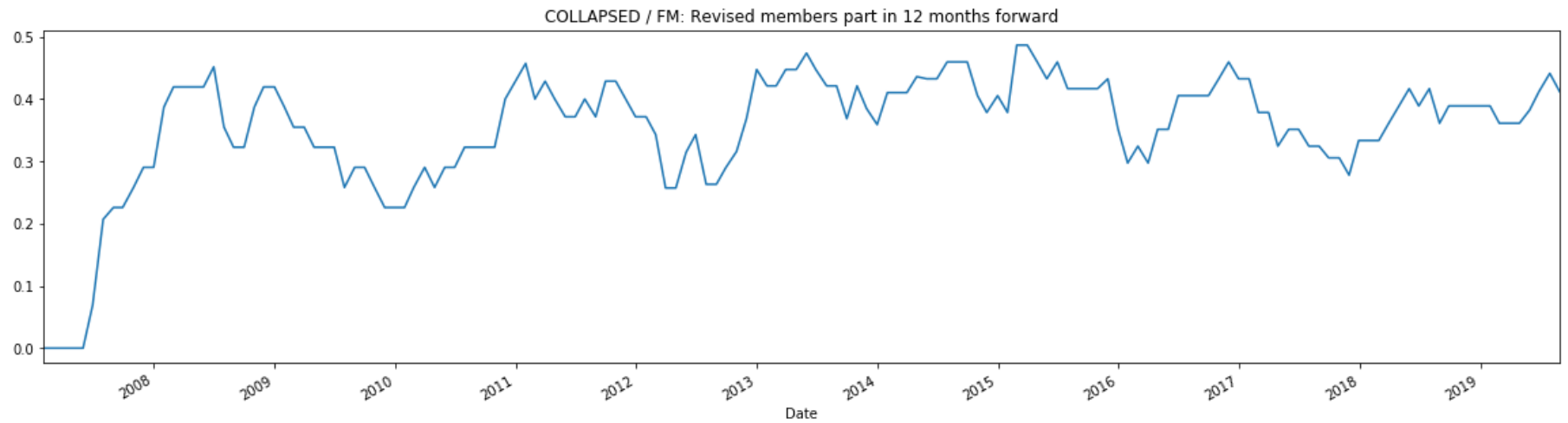
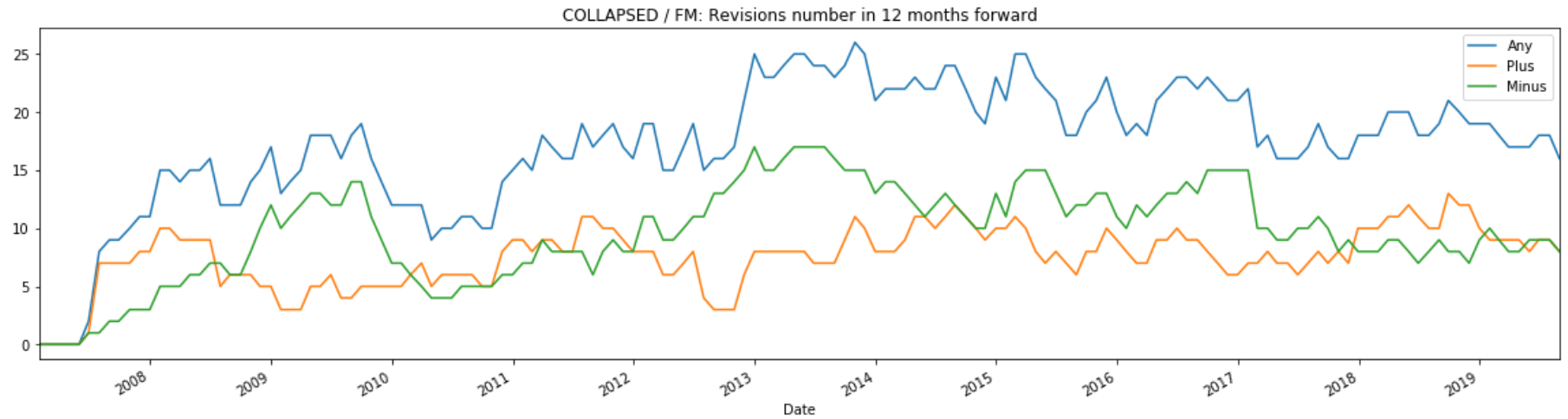


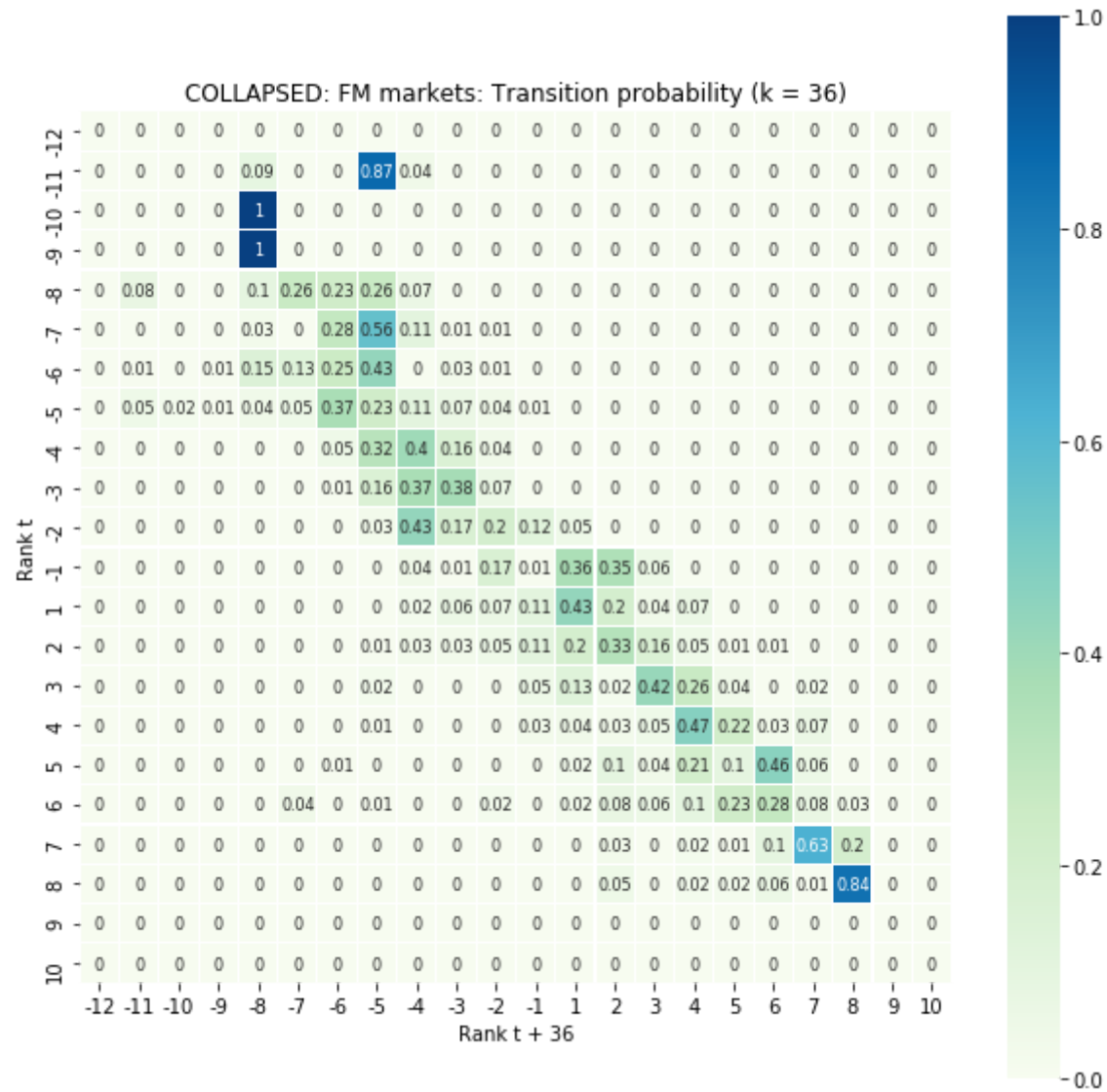
COLLAPSED : EM markets (6160) : Investment grade: 61.46% (3786)
COLLAPSED : EM markets (6160) : Non-investment grade: 34.03% (2096)
COLLAPSED : EM markets (6160) : Any revisions frequency: 4.19% (258)
COLLAPSED : EM markets (6160) : Positive revisions frequency: 2.55% (157)
COLLAPSED : EM markets (6160) : Negative revisions frequency: 1.64% (101)
COLLAPSED : EM markets (6160) : Average revisions number for country: 8.6
COLLAPSED : EM markets (6160) : Average stable rating period length (months): 21.87
COLLAPSED : EM markets: Mean revision absolute step: 1.32
COLLAPSED : EM markets: Mean revision positive step: 1.26
COLLAPSED : EM markets: Mean revision negative step: -1.41
COLLAPSED : EM markets (251 datepoints) : Datepoints with at least one revision in 12 months forward: 98.01% (246)
COLLAPSED : EM markets (251 datepoints) : Datepoints with no revisions in 12 months forward: 1.99% (5)
COLLAPSED : EM markets: Mean any revisions number in 12 months forward from datepoint: 11.83
COLLAPSED : EM markets: Mean positive revisions number in 12 months forward from datepoint: 7.21
COLLAPSED : EM markets: Mean negative revisions number in 12 months forward from datepoint: 4.62
COLLAPSED : EM markets: Mean part of members revised in 12 months forward from market: 36.41%
COLLAPSED : EM markets (251 datepoints) : Datepoints with at least one revision in 36 months forward: 93.23% (234)
COLLAPSED : EM markets (251 datepoints) : Datepoints with no revisions in 36 months forward: 6.77% (17)
COLLAPSED : EM markets: Mean any revisions number in 36 months forward from datepoint: 32.94
COLLAPSED : EM markets: Mean positive revisions number in 36 months forward from datepoint: 20.28
COLLAPSED : EM markets: Mean negative revisions number in 36 months forward from datepoint: 12.66
COLLAPSED : EM markets: Mean part of members revised in 36 months forward from market: 65.73%
COLLAPSED : EM markets (251 datepoints) : Datepoints with at least one revision in 60 months forward: 88.45% (222)
COLLAPSED : EM markets (251 datepoints) : Datepoints with no revisions in 60 months forward: 11.55% (29)
COLLAPSED : EM markets: Mean any revisions number in 60 months forward from datepoint: 51.31
COLLAPSED : EM markets: Mean positive revisions number in 60 months forward from datepoint: 31.78
COLLAPSED : EM markets: Mean negative revisions number in 60 months forward from datepoint: 19.53
COLLAPSED : EM markets: Mean part of members revised in 60 months forward from market: 73.73%

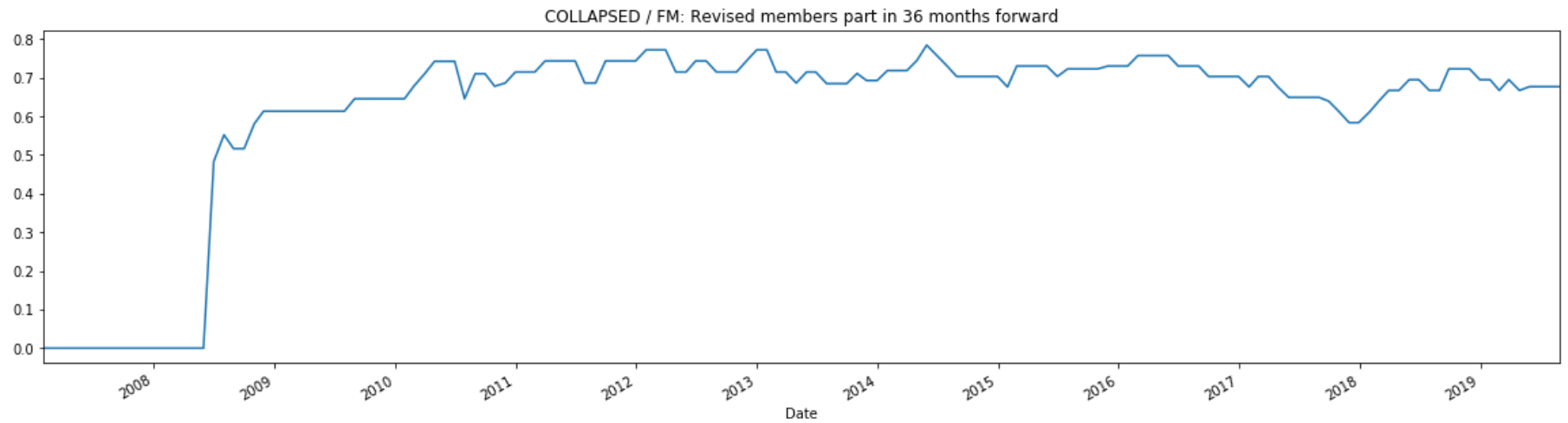
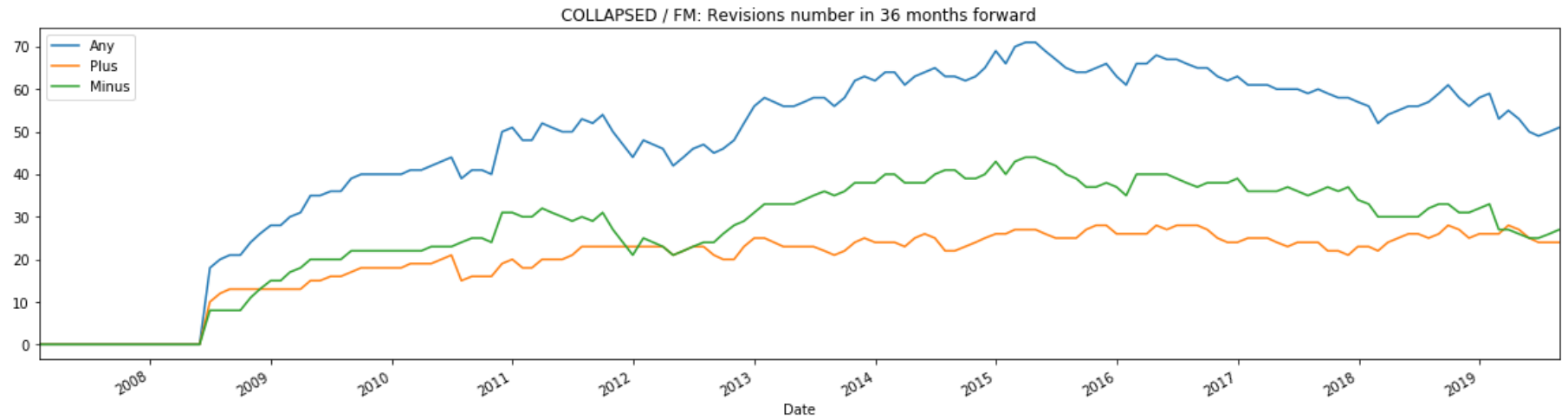


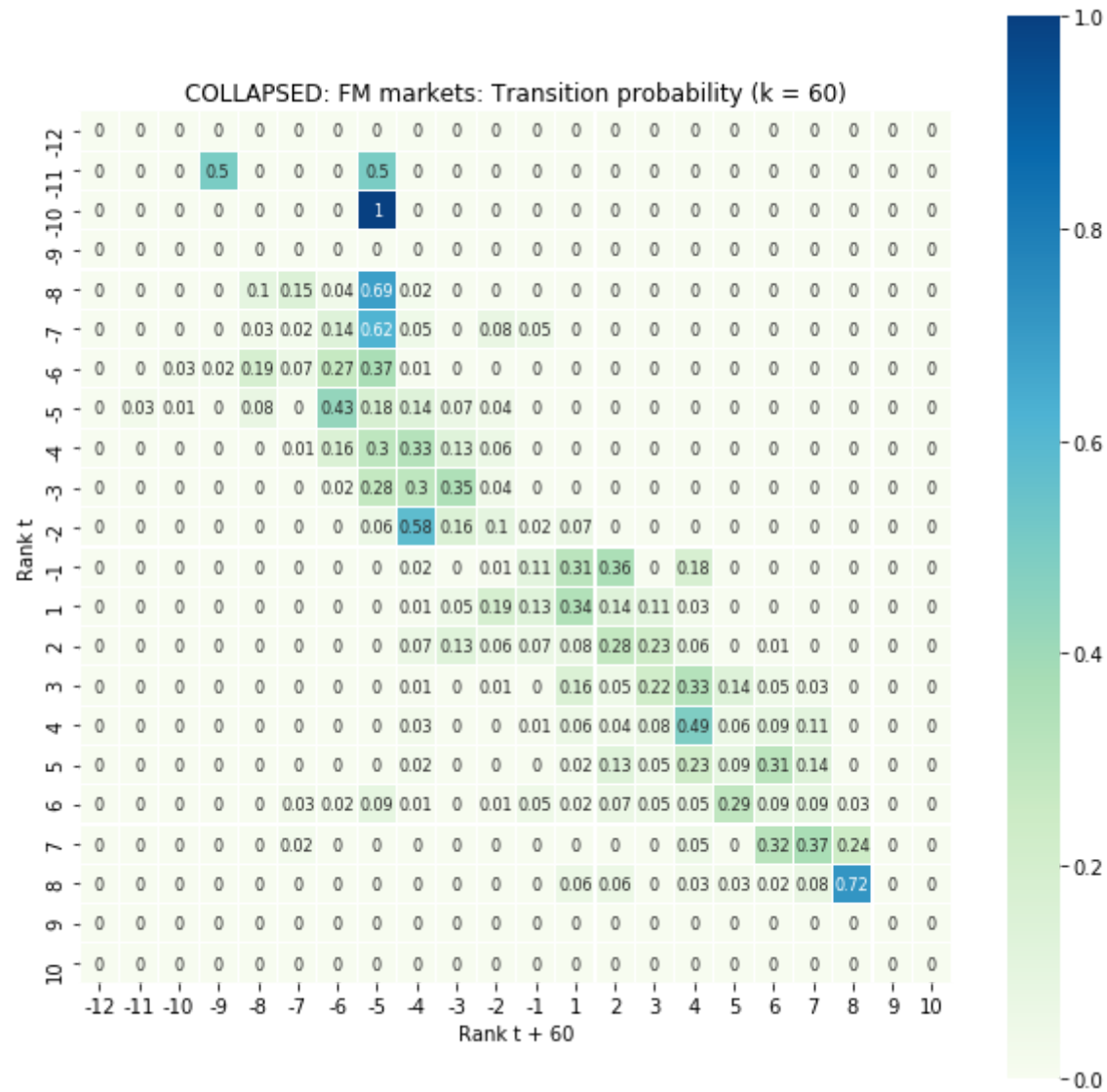


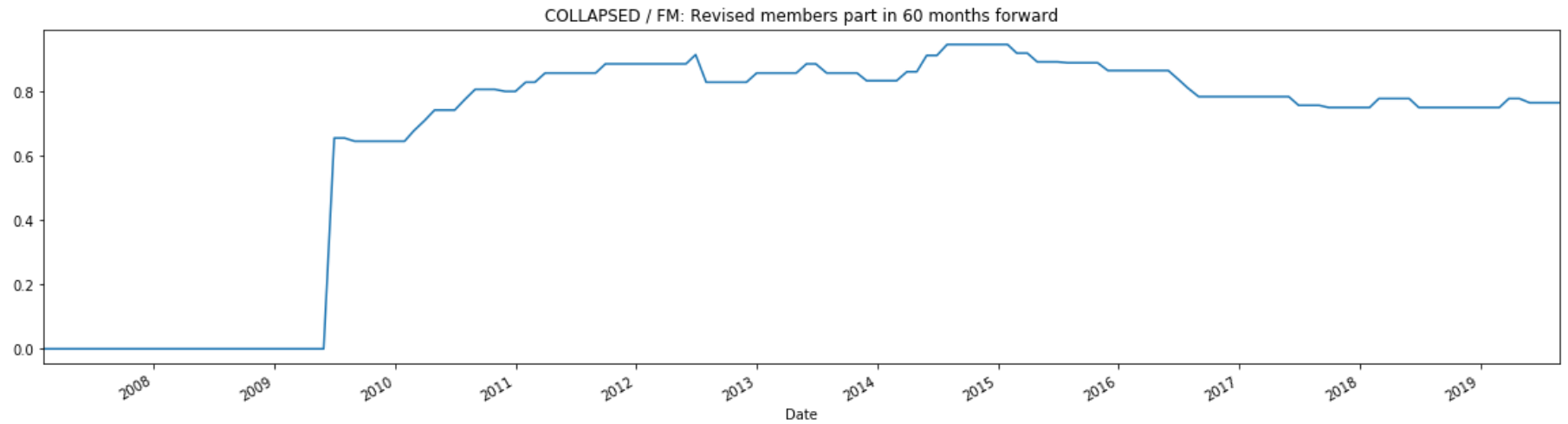
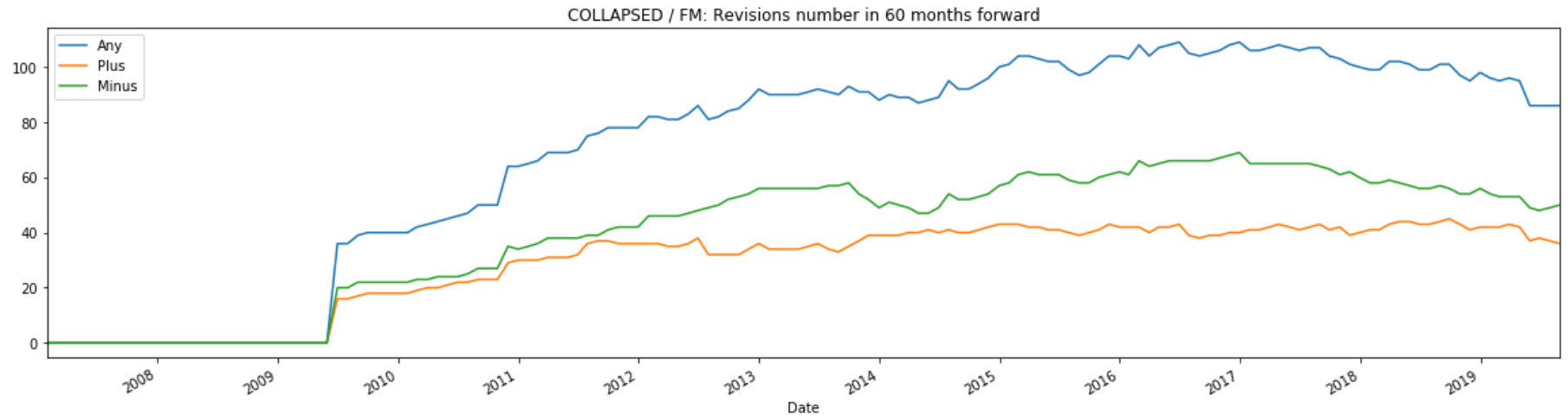












```

COLLAPSED : FM markets ( 5311 ) : Investment grade: 50.16% ( 2664 )
COLLAPSED : FM markets ( 5311 ) : Non-investment grade: 46.28% ( 2458 )
COLLAPSED : FM markets ( 5311 ) : Any revisions frequency: 4.22% ( 224 )
COLLAPSED : FM markets ( 5311 ) : Positive revisions frequency: 1.83% ( 97 )
COLLAPSED : FM markets ( 5311 ) : Negative revisions frequency: 2.39% ( 127 )
COLLAPSED : FM markets ( 5311 ) : Average revisions number for country: 5.74
COLLAPSED : FM markets ( 5311 ) : Average stable rating period length (months): 20.37
COLLAPSED : FM markets: Mean revision absolute step: 1.29
COLLAPSED : FM markets: Mean revision positive step: 1.29
COLLAPSED : FM markets: Mean revision negative step: -1.3
COLLAPSED : FM markets ( 152 datepoints ) : Datepoints with at least one revision in 12 months forward: 96.71% ( 147 )
COLLAPSED : FM markets ( 152 datepoints ) : Datepoints with no revisions in 12 months forward: 3.29% ( 5 )
COLLAPSED : FM markets: Mean any revisions number in 12 months forward from datepoint: 17.22
COLLAPSED : FM markets: Mean positive revisions number in 12 months forward from datepoint: 7.55
COLLAPSED : FM markets: Mean negative revisions number in 12 months forward from datepoint: 9.66
COLLAPSED : FM markets: Mean part of members revised in 12 months forward from market: 35.48%
COLLAPSED : FM markets ( 152 datepoints ) : Datepoints with at least one revision in 36 months forward: 88.82% ( 135 )
COLLAPSED : FM markets ( 152 datepoints ) : Datepoints with no revisions in 36 months forward: 11.18% ( 17 )
COLLAPSED : FM markets: Mean any revisions number in 36 months forward from datepoint: 46.88
COLLAPSED : FM markets: Mean positive revisions number in 36 months forward from datepoint: 19.79
COLLAPSED : FM markets: Mean negative revisions number in 36 months forward from datepoint: 27.09
COLLAPSED : FM markets: Mean part of members revised in 36 months forward from market: 61.40%
COLLAPSED : FM markets ( 152 datepoints ) : Datepoints with at least one revision in 60 months forward: 80.92% ( 123 )
COLLAPSED : FM markets ( 152 datepoints ) : Datepoints with no revisions in 60 months forward: 19.08% ( 29 )
COLLAPSED : FM markets: Mean any revisions number in 60 months forward from datepoint: 69.72
COLLAPSED : FM markets: Mean positive revisions number in 60 months forward from datepoint: 29.14
COLLAPSED : FM markets: Mean negative revisions number in 60 months forward from datepoint: 40.59
COLLAPSED : FM markets: Mean part of members revised in 60 months forward from market: 66.12%

```

```

In [12]: ### SAVING COLLAPSE RANKING TO HDF FILE
ser_ranking = df_rating_agg['COLLAPSED']
ser_ranking.name = 'Rank'
path_collapsed = 'Data_Files/Source_Files/Collapsed_Rank.h5'
key_collapsed = 'Rank'
ser_ranking.to_hdf(path_collapsed, key_collapsed, mode = 'w', format = 'fixed')

```