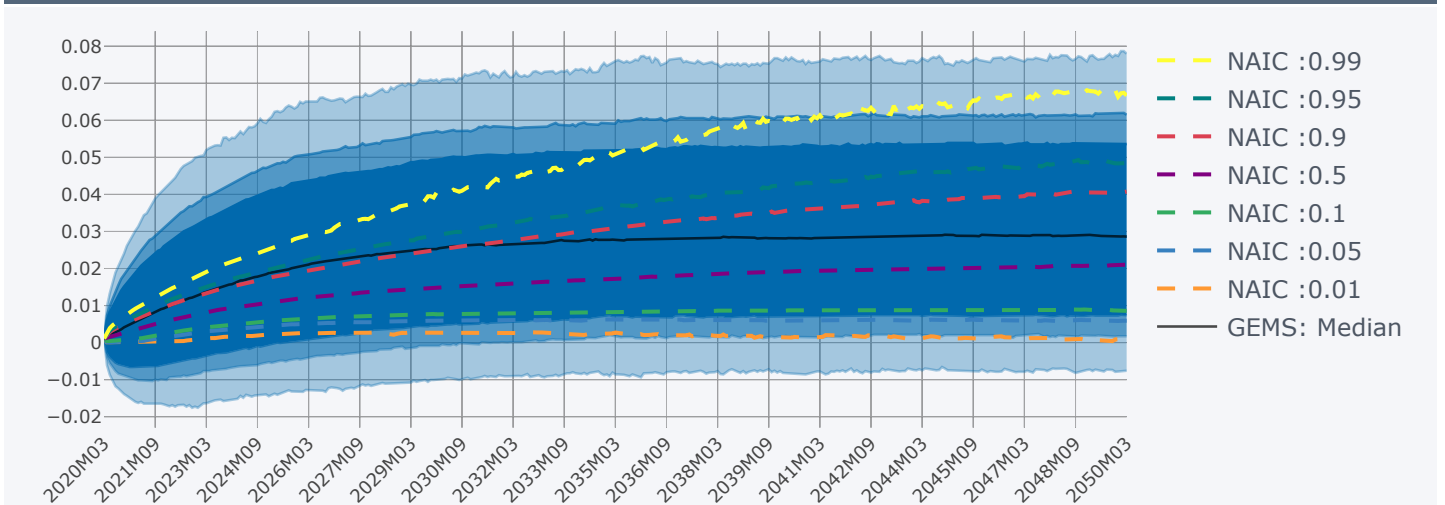


Simulated Data in Percentiles : US Treasury 3 Month Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

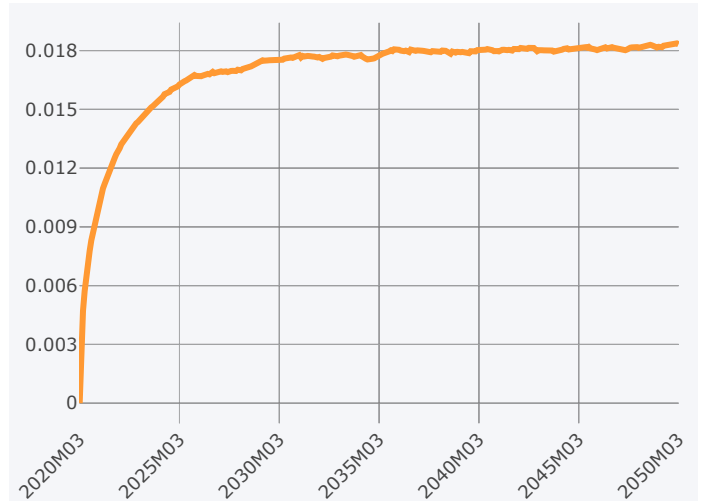
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

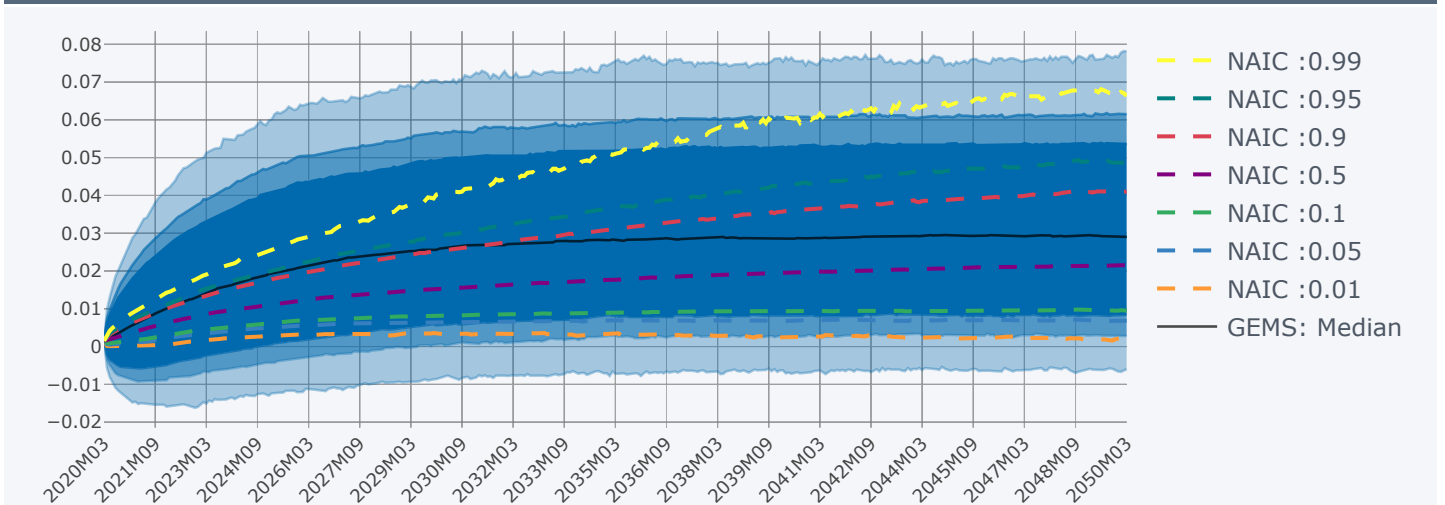
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0064	0.0298	0.0038	0.0232
std	0.0103	0.0183	0.0022	0.0137
min	-0.0287	-0.0256	0.0001	0.0001
1%	-0.0163	-0.0076	0.0001	0.0011
5%	-0.0102	0.0017	0.0002	0.0059
10%	-0.0067	0.0074	0.001	0.0086
50%	0.0062	0.0286	0.0037	0.021
90%	0.0197	0.0536	0.0066	0.0408
95%	0.0237	0.0615	0.0075	0.0485
99%	0.0313	0.078	0.0095	0.0667
max	0.0536	0.1203	0.0141	0.1357

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 6 Month Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

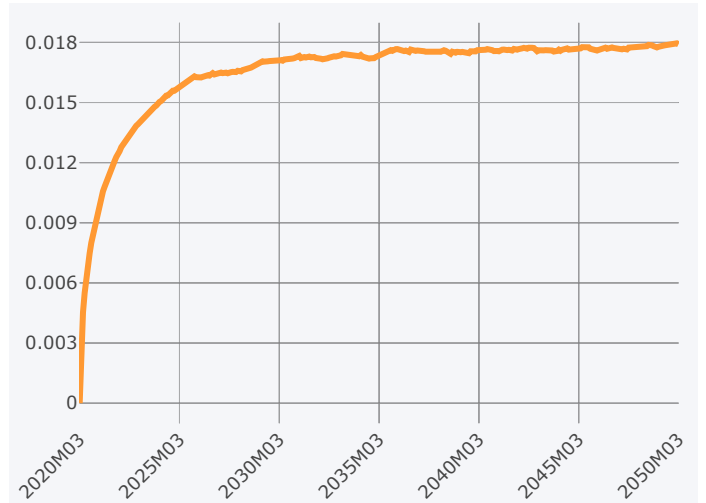
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

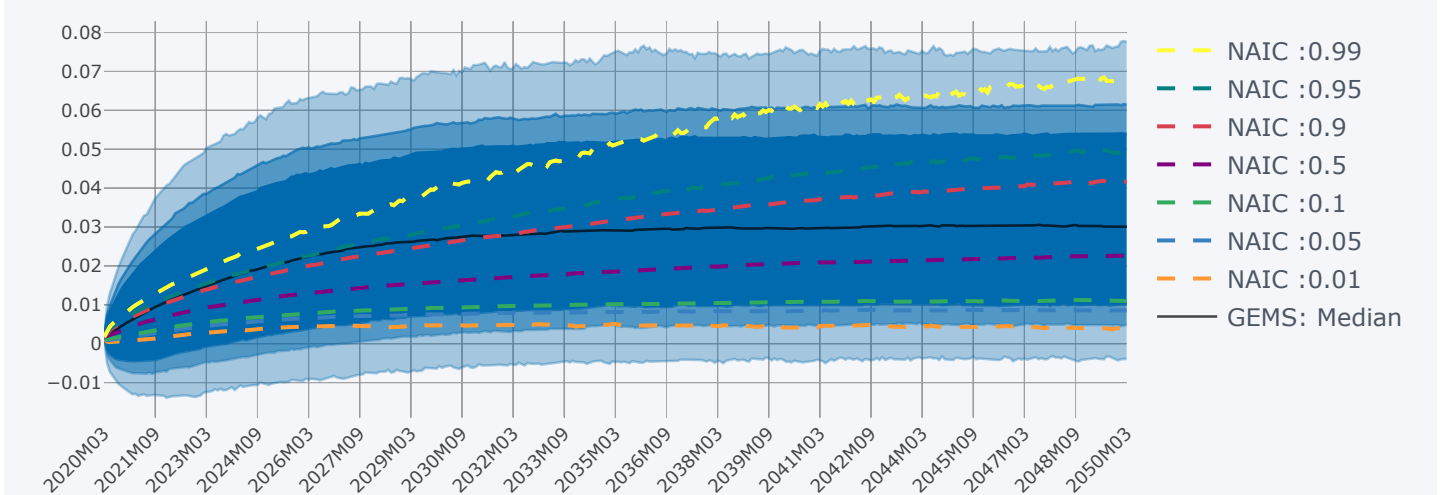
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0068	0.0303	0.0043	0.0238
std	0.01	0.0179	0.0021	0.0135
min	-0.0268	-0.0241	0.0001	0.0001
1%	-0.0152	-0.006	0.0001	0.0022
5%	-0.0093	0.0028	0.0009	0.0068
10%	-0.0058	0.0084	0.0016	0.0095
50%	0.0065	0.029	0.0042	0.0216
90%	0.0197	0.0536	0.007	0.041
95%	0.0234	0.0615	0.0079	0.0487
99%	0.031	0.0781	0.0098	0.0663
max	0.0529	0.1185	0.0143	0.1351

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 1 Year Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

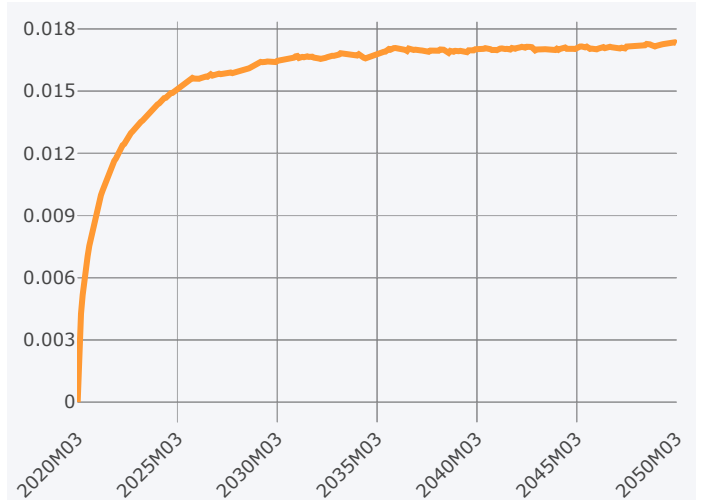
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

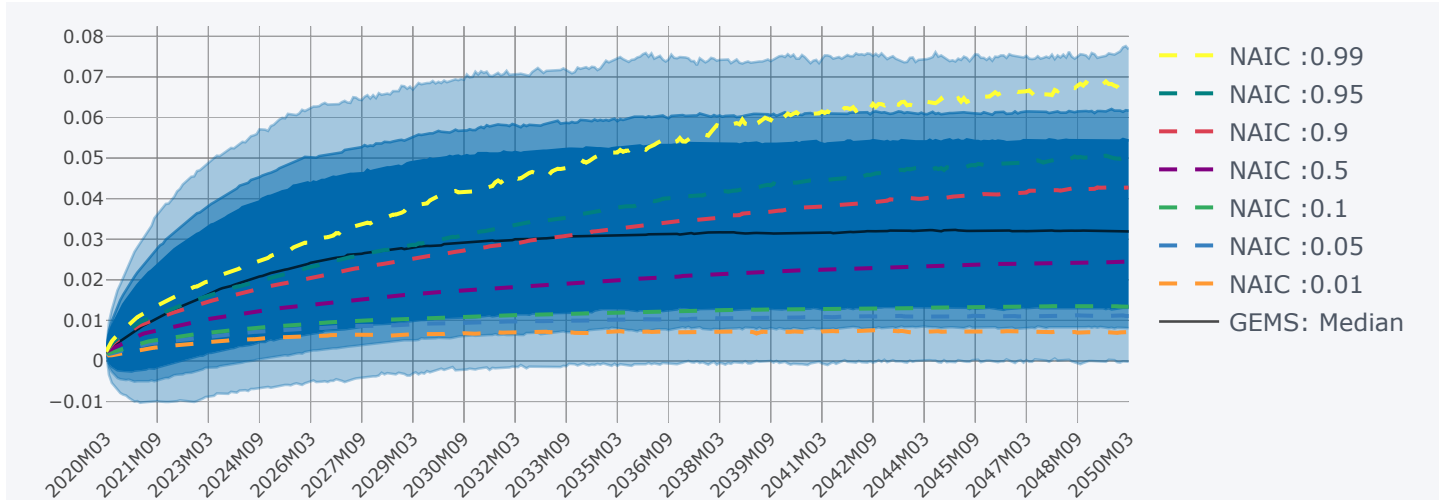
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0074	0.0313	0.0051	0.0249
std	0.0094	0.0173	0.002	0.0132
min	-0.0241	-0.0214	0.0001	0.0001
1%	-0.0134	-0.0039	0.0008	0.0041
5%	-0.0077	0.0048	0.002	0.0085
10%	-0.0045	0.0101	0.0027	0.011
50%	0.0071	0.0301	0.005	0.0226
90%	0.0197	0.0539	0.0077	0.0417
95%	0.0232	0.0614	0.0086	0.0493
99%	0.0303	0.0776	0.0104	0.0663
max	0.0513	0.1162	0.0147	0.134

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 2 Year Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

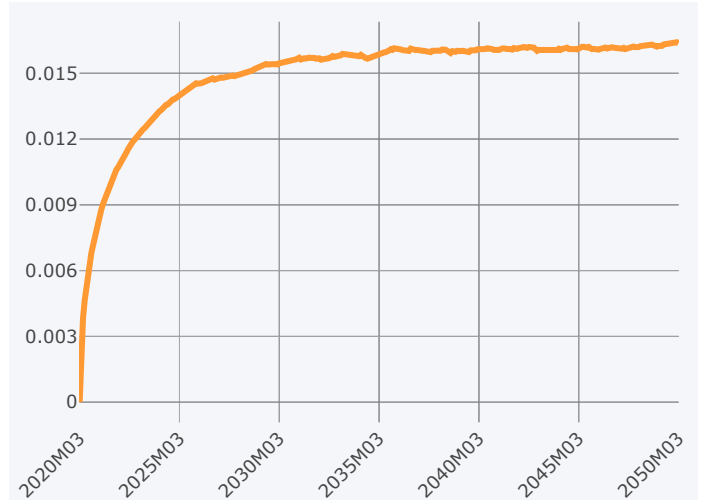
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

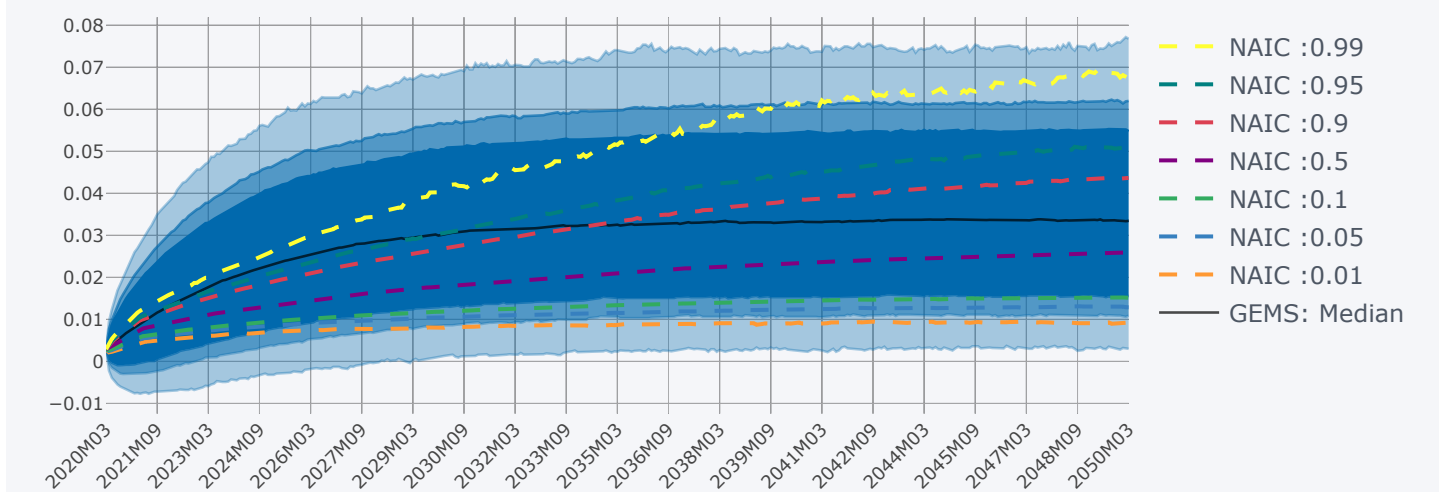
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0084	0.0331	0.0066	0.0267
std	0.0085	0.0164	0.0017	0.0126
min	-0.0204	-0.0164	0.002	0.0024
1%	-0.0103	-0.0002	0.0029	0.0071
5%	-0.0051	0.0081	0.0039	0.0111
10%	-0.0022	0.0131	0.0045	0.0134
50%	0.0082	0.0319	0.0065	0.0245
90%	0.0195	0.0543	0.0088	0.0427
95%	0.0227	0.0617	0.0096	0.0501
99%	0.0291	0.0768	0.0113	0.0675
max	0.0484	0.113	0.0153	0.1322

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 3 Year Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

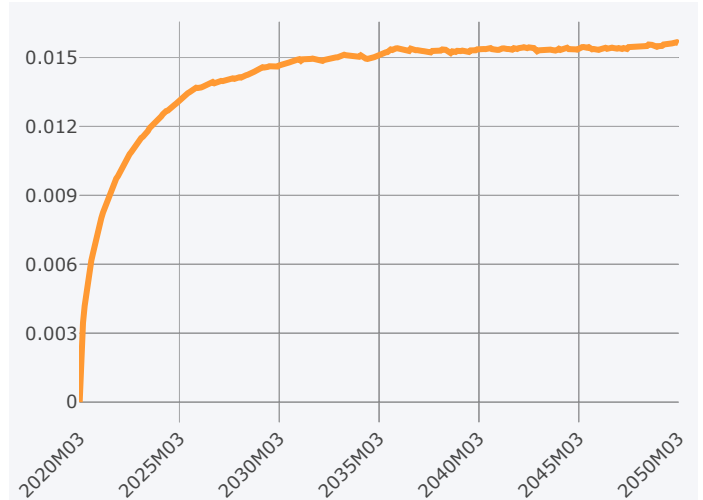
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

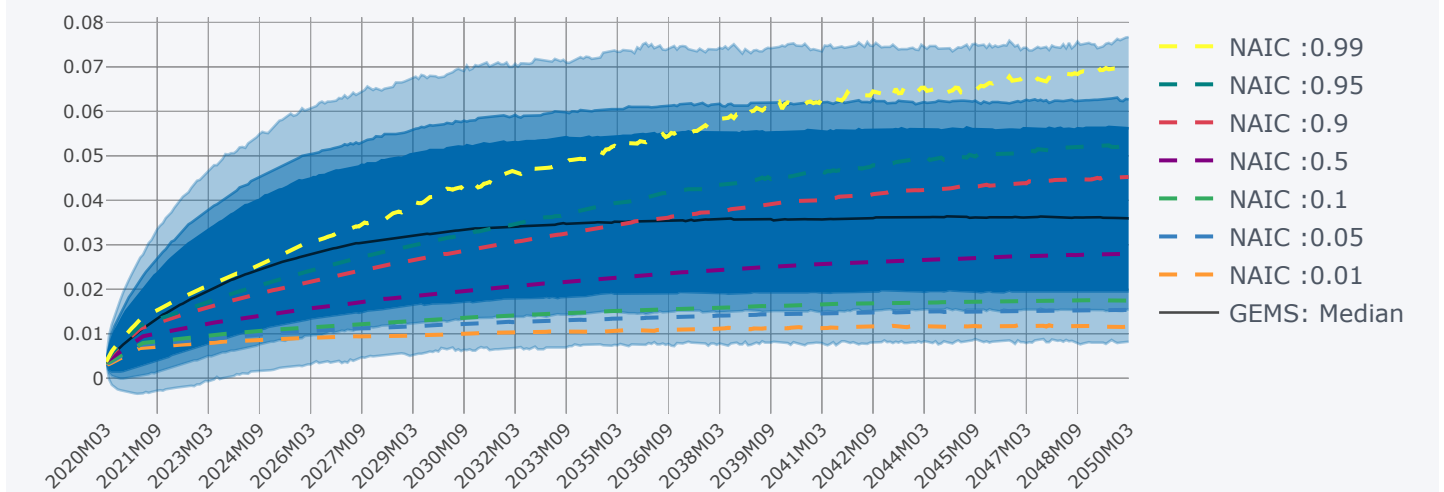
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0093	0.0346	0.0078	0.0281
std	0.0077	0.0156	0.0016	0.0123
min	-0.0172	-0.0122	0.0036	0.0042
1%	-0.0077	0.003	0.0045	0.0093
5%	-0.003	0.0109	0.0054	0.0129
10%	-0.0003	0.0156	0.0059	0.0151
50%	0.0091	0.0335	0.0077	0.0259
90%	0.0195	0.0548	0.0098	0.0437
95%	0.0223	0.062	0.0105	0.051
99%	0.0282	0.0768	0.0121	0.0674
max	0.0458	0.1117	0.0159	0.1308

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 5 Year Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

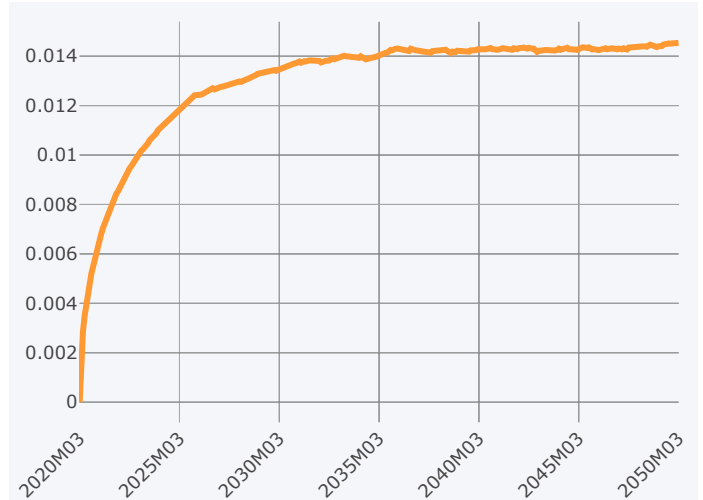
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

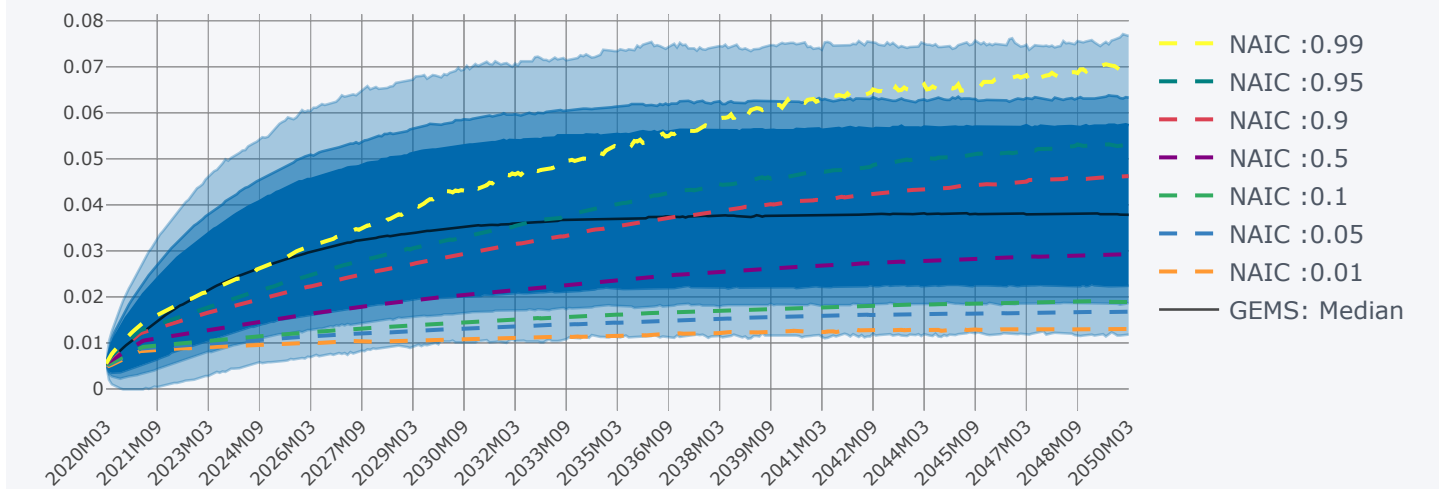
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0109	0.0372	0.0094	0.0301
std	0.0066	0.0145	0.0013	0.0119
min	-0.0119	-0.0054	0.0057	0.0068
1%	-0.0035	0.0082	0.0068	0.0117
5%	0.0005	0.0155	0.0075	0.0154
10%	0.0026	0.0195	0.0078	0.0174
50%	0.0107	0.0359	0.0093	0.028
90%	0.0194	0.0562	0.0111	0.0453
95%	0.022	0.0627	0.0118	0.052
99%	0.0271	0.0767	0.0132	0.0686
max	0.042	0.111	0.0167	0.129

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 7 Year Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

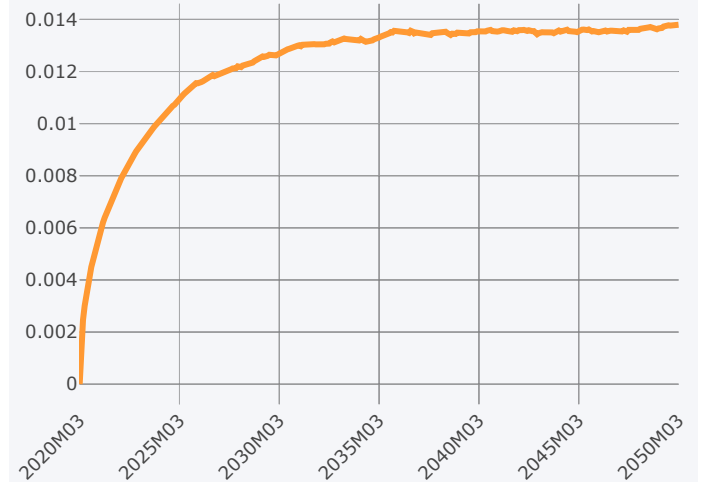
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

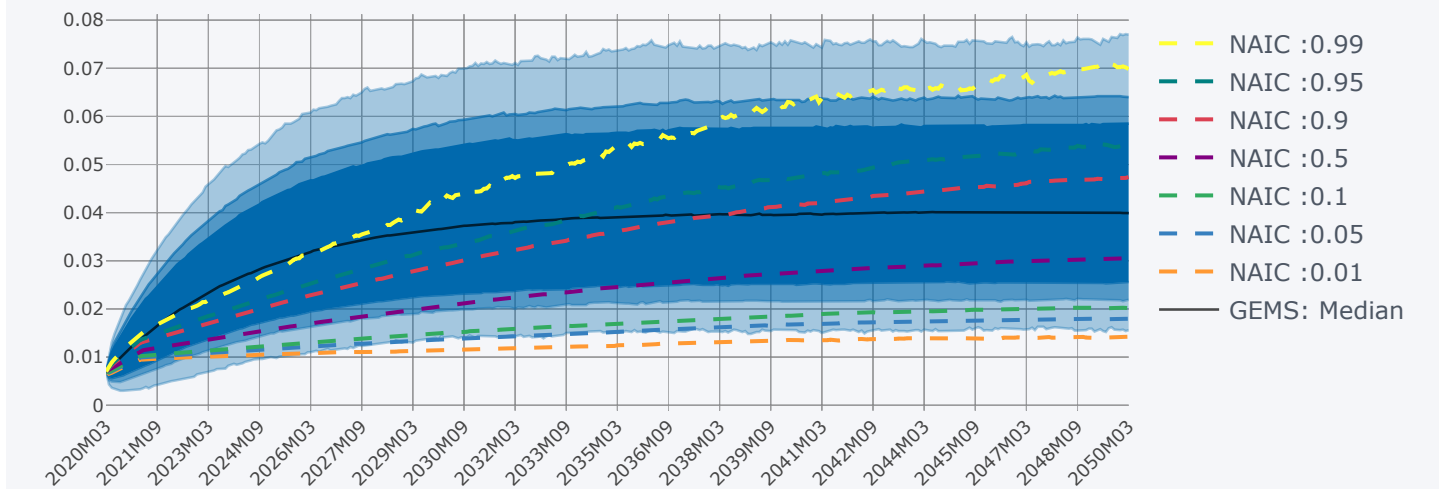
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0123	0.0391	0.0105	0.0314
std	0.0058	0.0138	0.0012	0.0117
min	-0.0078	-0.0002	0.0071	0.0084
1%	-0.0003	0.0118	0.0082	0.013
5%	0.0032	0.0187	0.0088	0.0168
10%	0.005	0.0224	0.0091	0.0189
50%	0.0121	0.0378	0.0103	0.0293
90%	0.0197	0.0573	0.012	0.0462
95%	0.022	0.0633	0.0127	0.0531
99%	0.0265	0.0767	0.0141	0.0691
max	0.0394	0.1104	0.0175	0.1278

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 10 Year Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

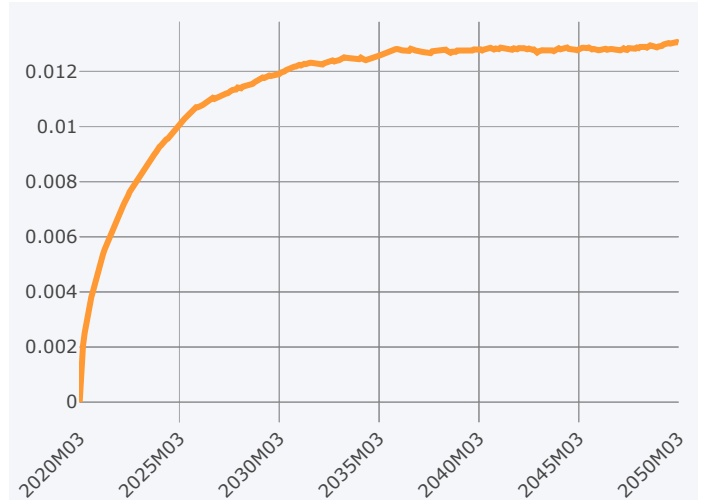
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

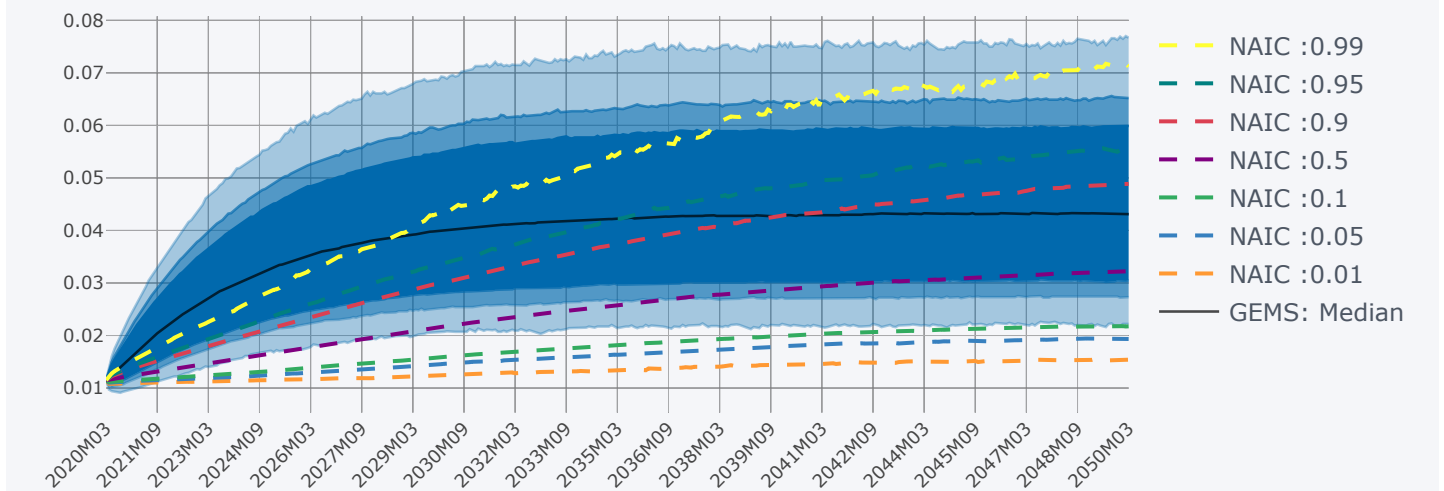
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0139	0.0412	0.0115	0.0326
std	0.005	0.013	0.0011	0.0116
min	-0.0031	0.0054	0.0084	0.0095
1%	0.0033	0.0156	0.0095	0.0142
5%	0.0062	0.0219	0.0099	0.018
10%	0.0077	0.0256	0.0102	0.0202
50%	0.0137	0.0399	0.0113	0.0305
90%	0.0203	0.0585	0.0129	0.0474
95%	0.0223	0.064	0.0136	0.0538
99%	0.0261	0.077	0.0149	0.0698
max	0.0369	0.1096	0.0182	0.1267

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 20 Year Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

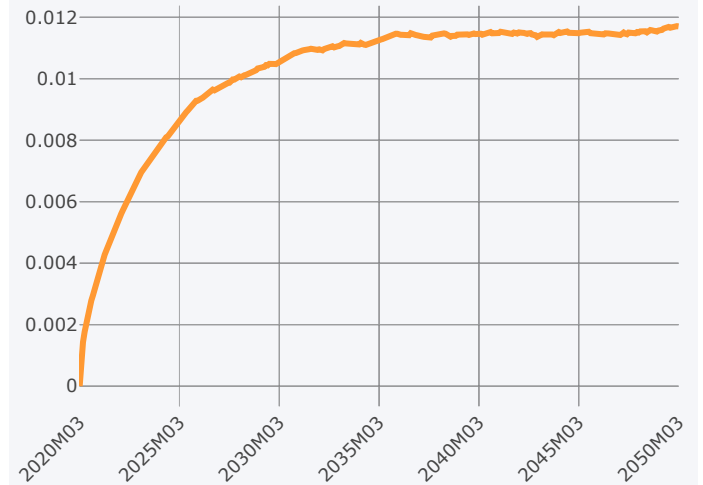
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

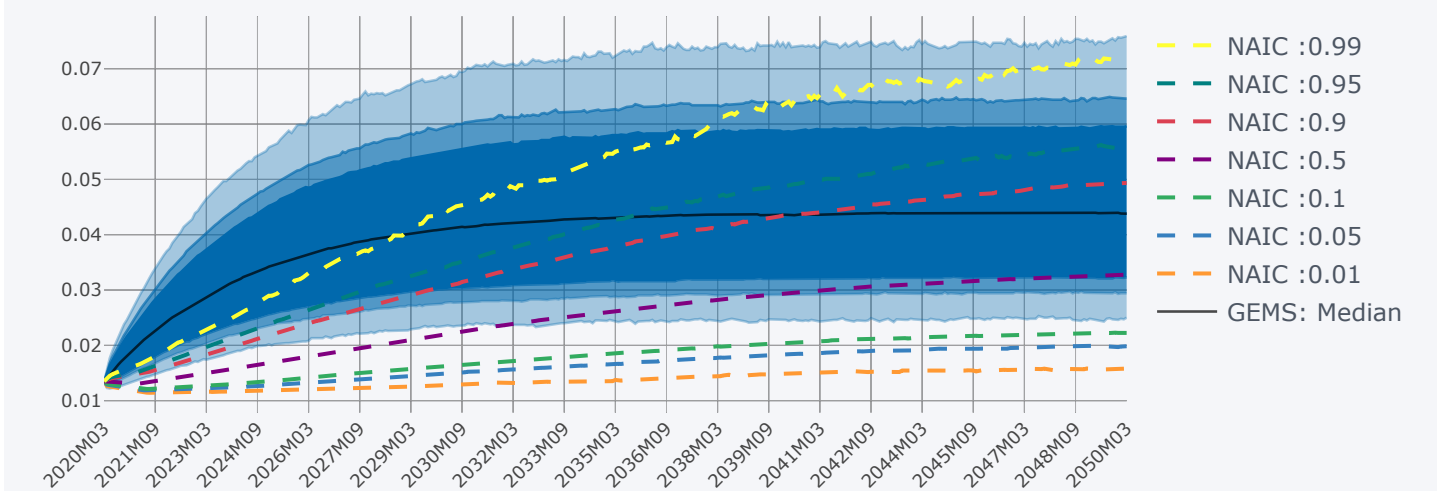
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0179	0.0443	0.0128	0.0341
std	0.0037	0.0117	0.0011	0.0116
min	0.0058	0.0145	0.0097	0.0108
1%	0.0101	0.0222	0.011	0.0154
5%	0.0121	0.0273	0.0114	0.0193
10%	0.0133	0.0305	0.0116	0.0217
50%	0.0177	0.0431	0.0126	0.0322
90%	0.0228	0.0599	0.0142	0.0489
95%	0.0244	0.0652	0.0148	0.0552
99%	0.0274	0.0767	0.016	0.0712
max	0.0343	0.1074	0.0194	0.1253

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Treasury 30 Year Yield



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

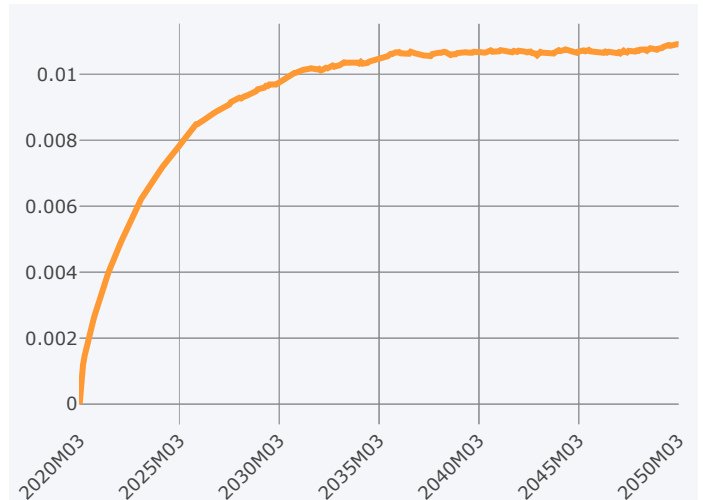
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

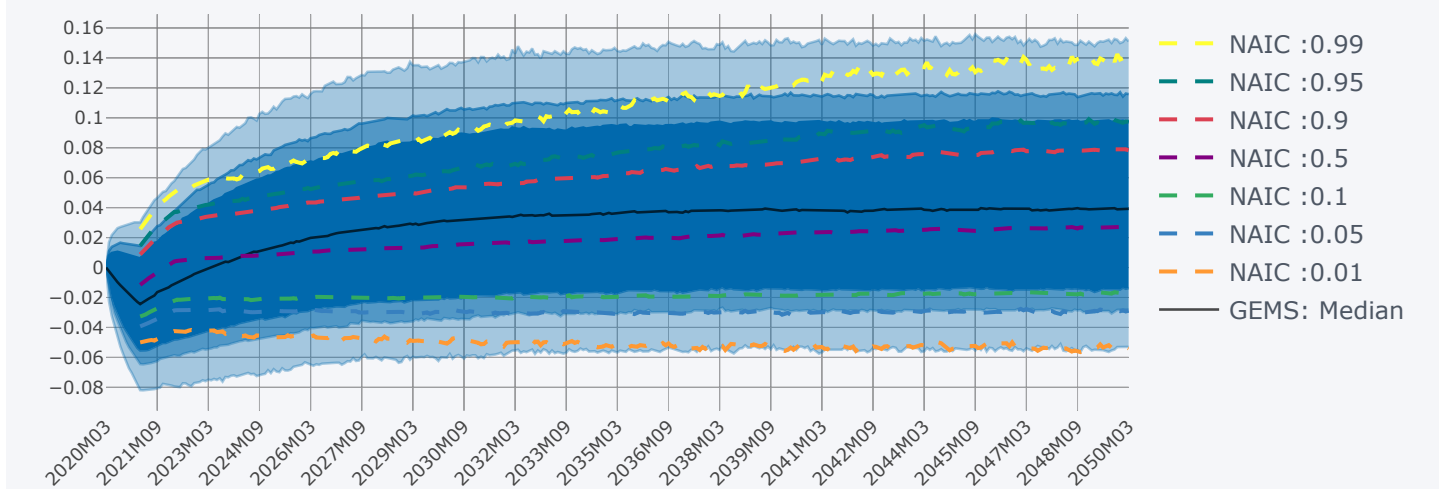
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0203	0.0451	0.0132	0.0347
std	0.0032	0.0109	0.0011	0.0116
min	0.0104	0.018	0.0102	0.011
1%	0.0137	0.025	0.0114	0.0158
5%	0.0154	0.0294	0.0118	0.0198
10%	0.0164	0.0323	0.0121	0.0222
50%	0.0201	0.0438	0.0131	0.0328
90%	0.0245	0.0596	0.0146	0.0494
95%	0.0259	0.0646	0.0152	0.0558
99%	0.0286	0.0759	0.0165	0.072
max	0.0349	0.1055	0.0198	0.1248

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : Int Govt Total Return



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

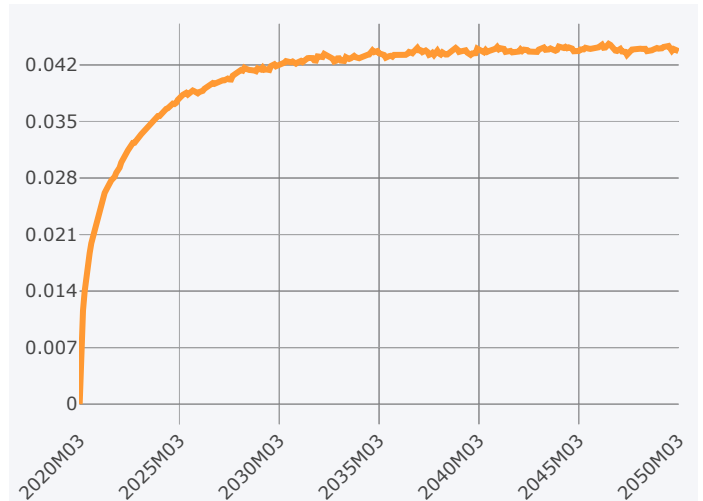
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

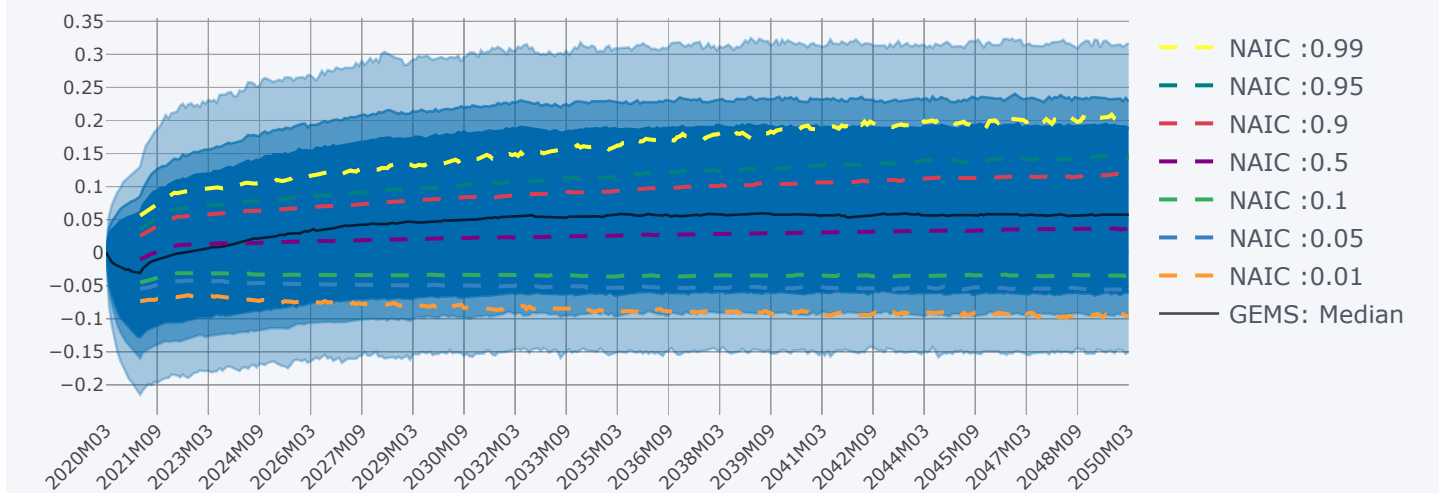
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	-0.0246	0.0408	-0.0119	0.0295
std	0.0242	0.0437	0.0163	0.0394
min	-0.1274	-0.1152	-0.0721	-0.1189
1%	-0.0819	-0.053	-0.05	-0.0541
5%	-0.0645	-0.0281	-0.0393	-0.0288
10%	-0.0554	-0.0137	-0.0327	-0.017
50%	-0.0244	0.0392	-0.0116	0.0268
90%	0.0061	0.0979	0.0087	0.0783
95%	0.0144	0.1158	0.0145	0.0974
99%	0.0302	0.151	0.0257	0.1442
max	0.0667	0.2704	0.0575	0.2798

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : Long Inv Corp Total Return



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

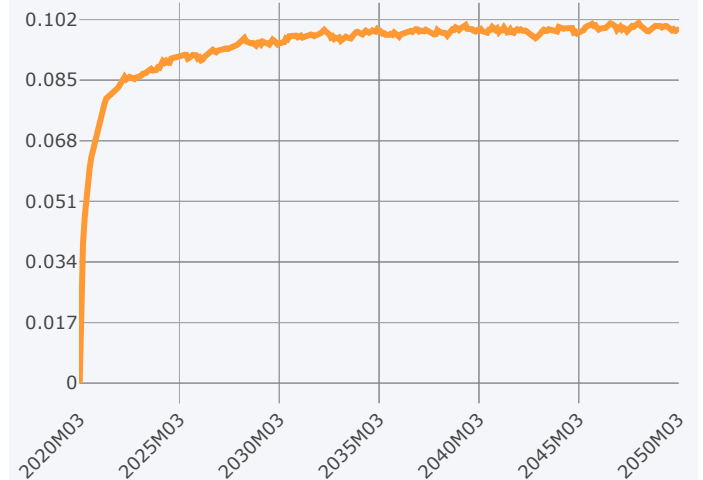
Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

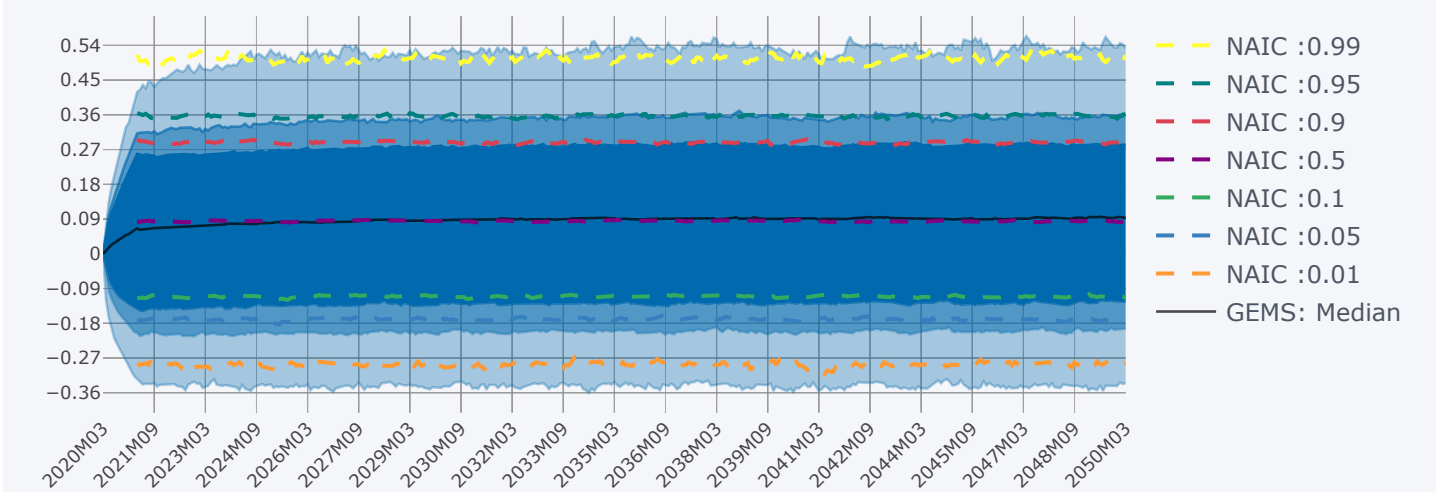
Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	-0.0329	0.0615	-0.0101	0.0393
std	0.074	0.0984	0.0277	0.0614
min	-0.3399	-0.2484	-0.1103	-0.1731
1%	-0.2151	-0.1498	-0.0736	-0.0968
5%	-0.1601	-0.0928	-0.0551	-0.0535
10%	-0.1279	-0.061	-0.0453	-0.0336
50%	-0.0308	0.0574	-0.0103	0.0359
90%	0.061	0.1875	0.0252	0.1172
95%	0.0852	0.2287	0.0354	0.1437
99%	0.1301	0.3173	0.0561	0.2105
max	0.2467	0.5811	0.0934	0.4158

Cross Sectional Volatility Over Time : GEMS



Simulated Data in Percentiles : US Large Cap Total Return



Simulated Data: There are 360 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

Percentiles Plotted :1%, 5%, 10%, 50%, 90%, 95%, 99%

The distributions shown are across the paths for a given time period.

Simulation Summary

	GEMS: 2021M03	GEMS: 2050M03	NAIC :2021M03	NAIC :2050M03
mean	0.0615	0.0873	0.0878	0.0873
std	0.159	0.1699	0.1641	0.1619
min	-0.5589	-0.639	-0.5952	-0.5342
1%	-0.3263	-0.335	-0.2845	-0.283
5%	-0.205	-0.1944	-0.1726	-0.1699
10%	-0.1461	-0.1238	-0.1153	-0.114
50%	0.0656	0.0924	0.0825	0.083
90%	0.2589	0.2828	0.297	0.2908
95%	0.3122	0.3614	0.3645	0.3623
99%	0.4192	0.5325	0.5155	0.5148
max	0.7955	1.423	0.8518	0.8749

Cross Sectional Volatility Over Time : GEMS

