US Treasury 1 Month Yield - Spot

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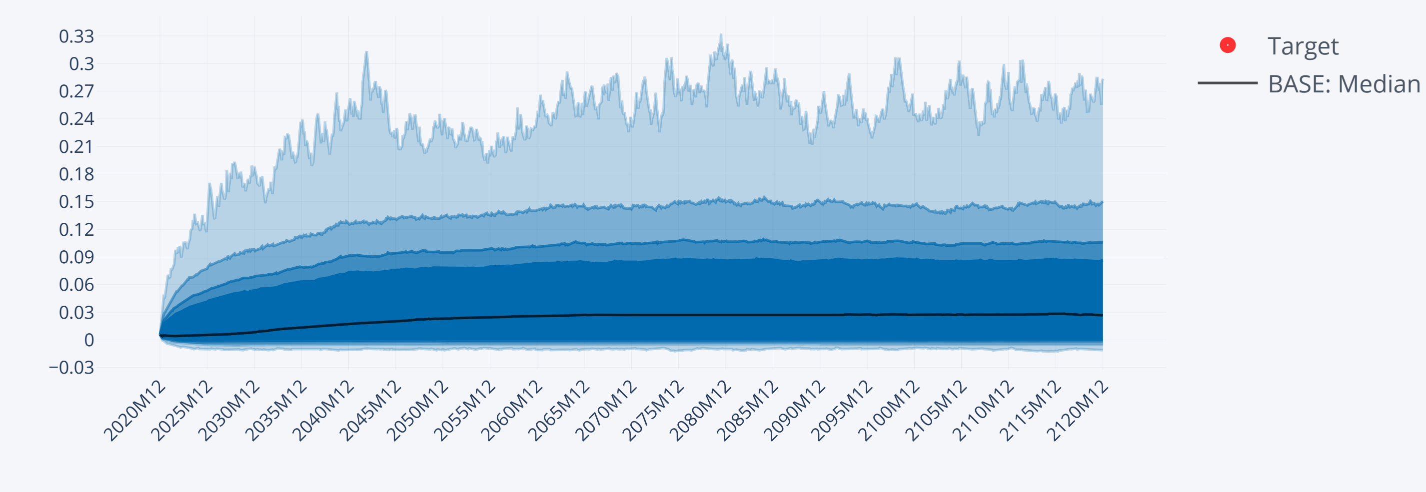
Validation Report

Simulated Data in Percentiles : US Treasury 1 Month Yield - Spot

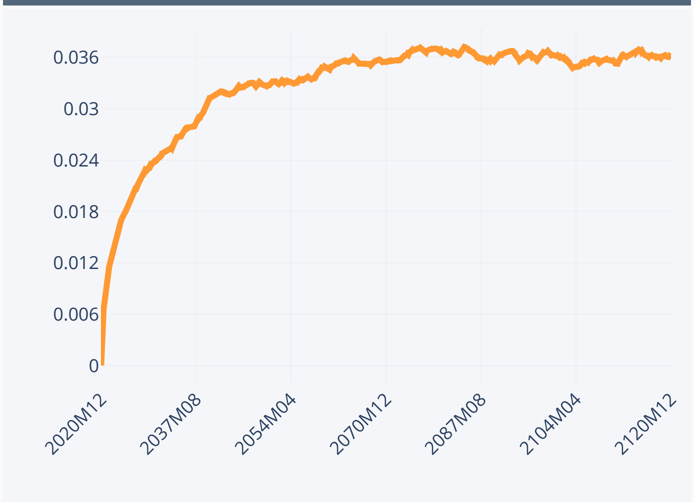


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0091	0.0317
std	0.0097	0.0331
min	-0.0044	-0.0101
1%	-0.0017	-0.0053
5%	-0.0003	-0.0024
10%	0.0006	-0.0006
50%	0.0045	0.0228
90%	0.0233	0.0784
95%	0.0291	0.0956
99%	0.0409	0.1333
max	0.0677	0.2354

Cross Sectional Volatility Over Time : BASE



US Treasury 3 Month Yield - Spot

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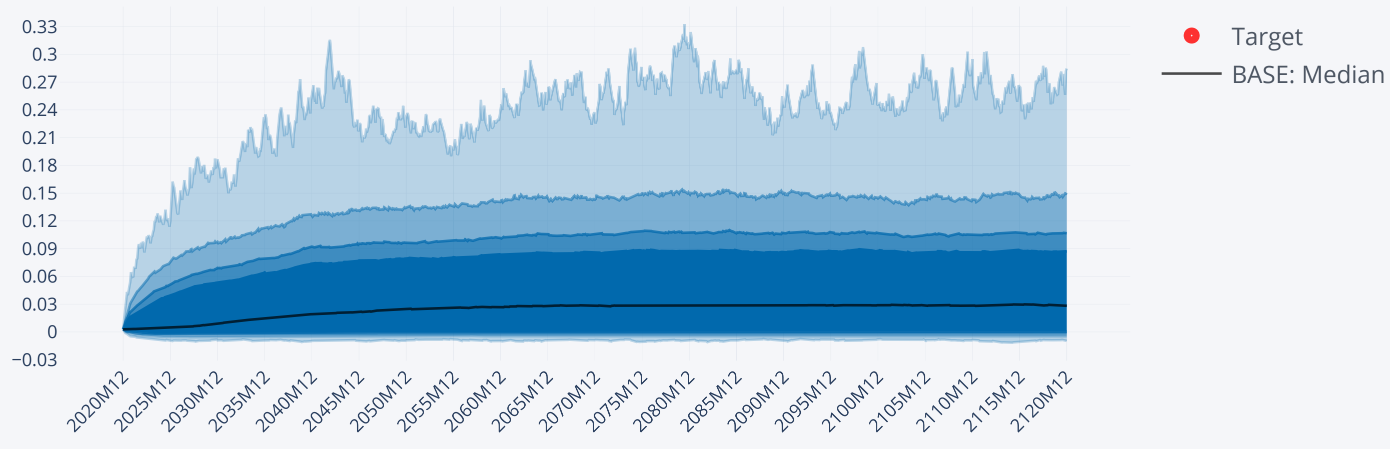
Validation Report

Simulated Data in Percentiles : US Treasury 3 Month Yield - Spot

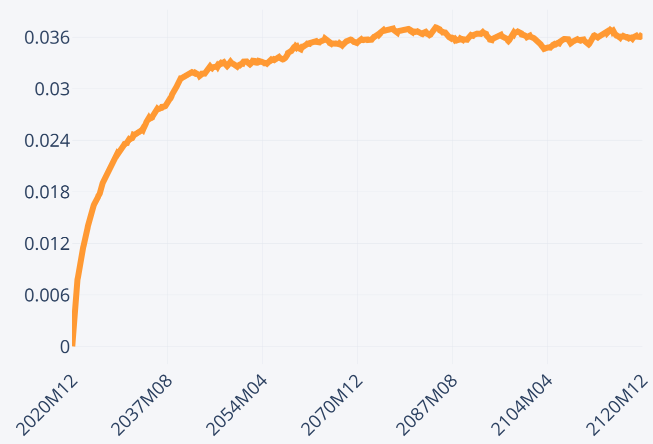


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0063	0.0326
std	0.0080	0.0331
min	-0.0049	-0.0091
1%	-0.0024	-0.0047
5%	-0.0010	-0.0020
10%	-0.0001	-0.0001
50%	0.0032	0.0244
90%	0.0178	0.0793
95%	0.0236	0.0963
99%	0.0345	0.1343
max	0.0595	0.2323

Cross Sectional Volatility Over Time : BASE



US Treasury 6 Month Yield - Spot

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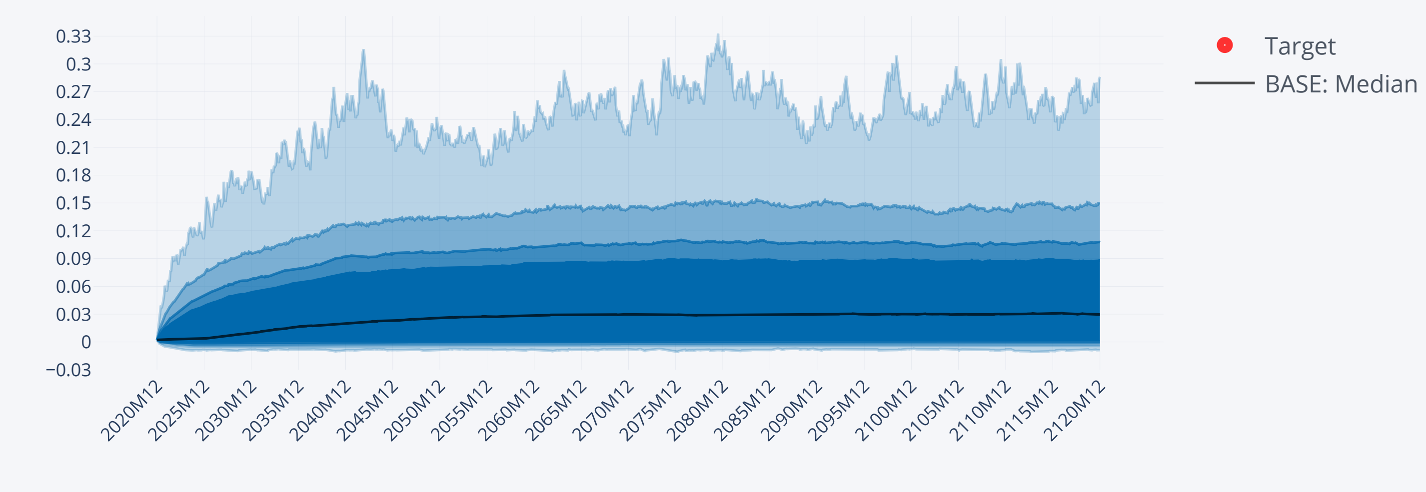
Validation Report

Simulated Data in Percentiles : US Treasury 6 Month Yield - Spot

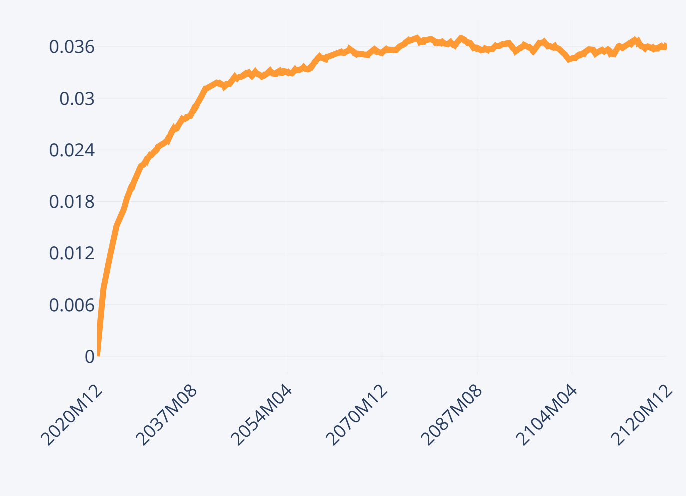


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0051	0.0335
std	0.0072	0.0330
min	-0.0050	-0.0085
1%	-0.0027	-0.0042
5%	-0.0013	-0.0016
10%	-0.0005	0.0003
50%	0.0027	0.0257
90%	0.0152	0.0799
95%	0.0209	0.0968
99%	0.0315	0.1344
max	0.0544	0.2296

Cross Sectional Volatility Over Time : BASE



US Treasury 1 Year Yield - Spot
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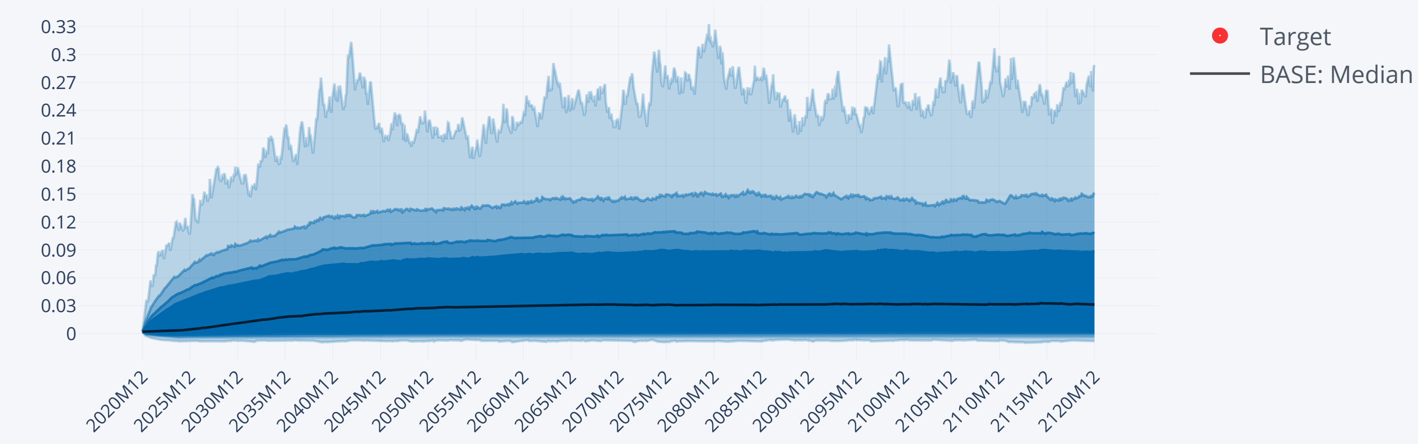
Validation Report

Simulated Data in Percentiles : US Treasury 1 Year Yield - Spot

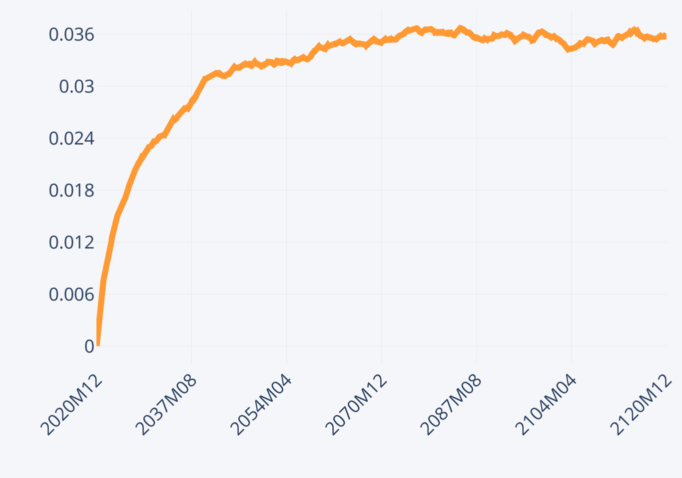


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

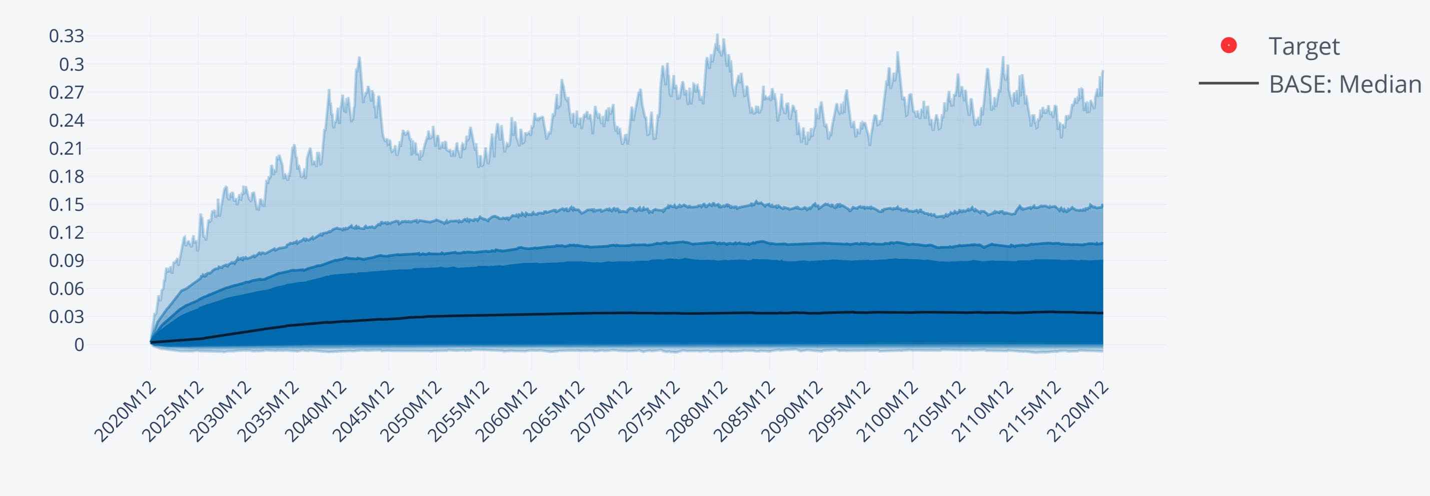
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0047	0.0346
std	0.0066	0.0327
min	-0.0048	-0.0079
1%	-0.0025	-0.0036
5%	-0.0013	-0.0010
10%	-0.0004	0.0008
50%	0.0026	0.0274
90%	0.0139	0.0807
95%	0.0192	0.0970
99%	0.0296	0.1334
max	0.0503	0.2260

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 2 Year Yield - Spot

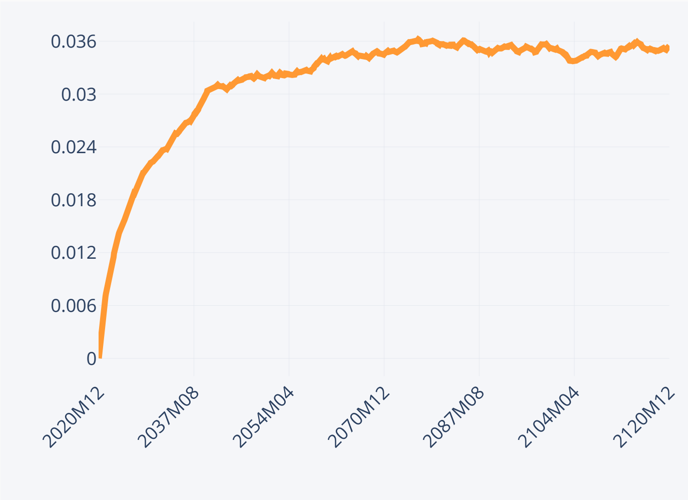


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

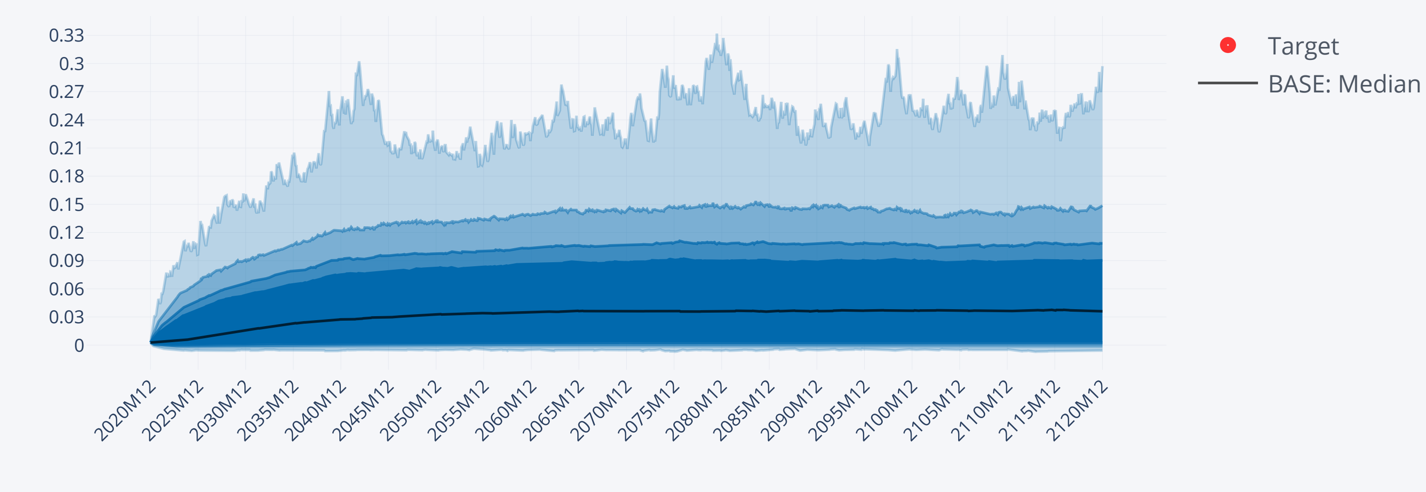
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0050	0.0365
std	0.0062	0.0322
min	-0.0041	-0.0067
1%	-0.0019	-0.0026
5%	-0.0007	-0.0000
10%	0.0000	0.0017
50%	0.0029	0.0302
90%	0.0138	0.0814
95%	0.0185	0.0971
99%	0.0280	0.1334
max	0.0466	0.2203

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 3 Year Yield - Spot

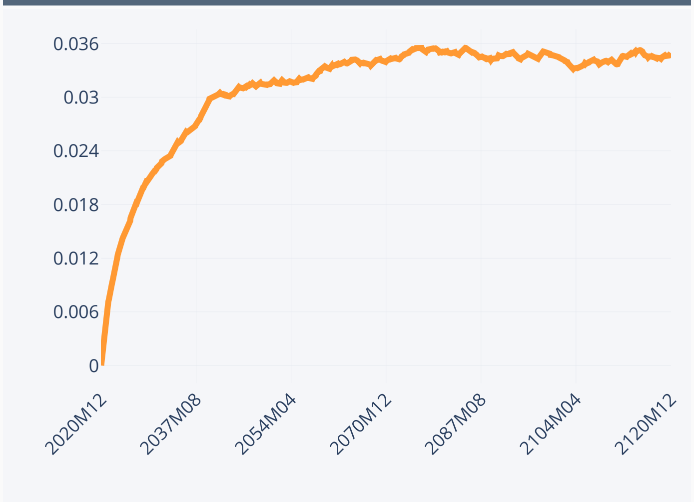


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

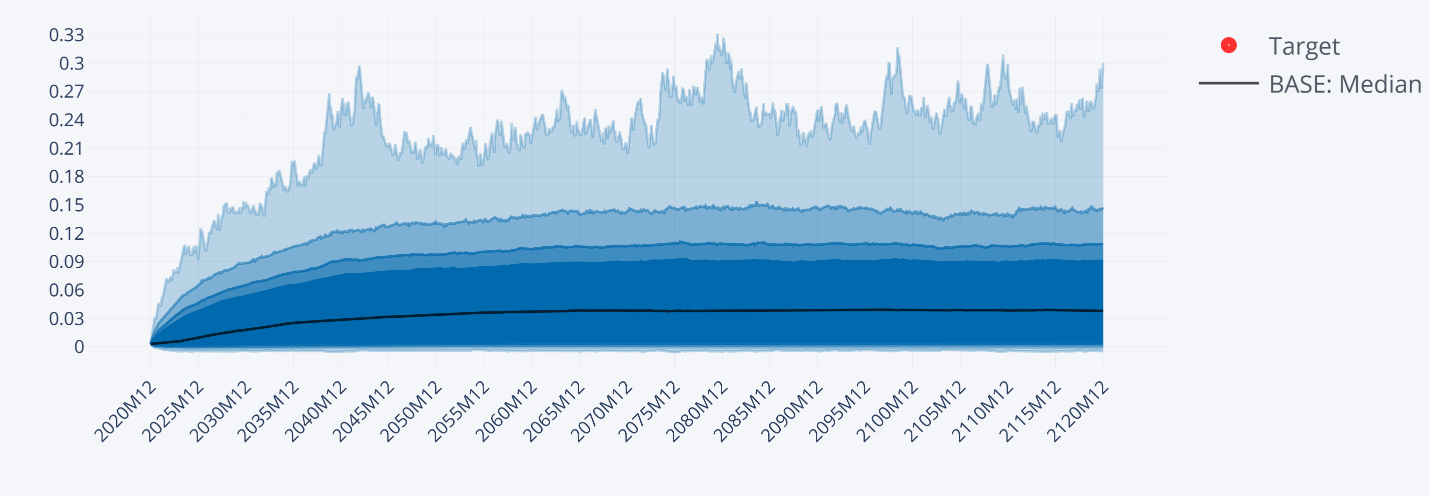
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0054	0.0382
std	0.0061	0.0317
min	-0.0033	-0.0057
1%	-0.0012	-0.0016
5%	-0.0001	0.0007
10%	0.0005	0.0024
50%	0.0032	0.0326
90%	0.0141	0.0820
95%	0.0184	0.0973
99%	0.0271	0.1324
max	0.0438	0.2153

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 4 Year Yield - Spot

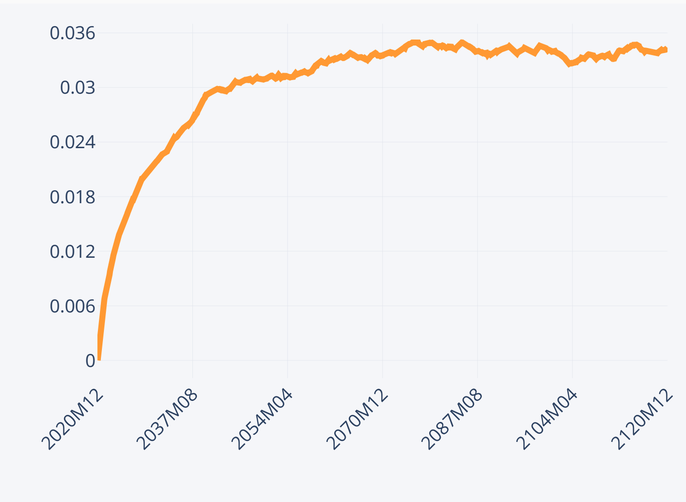


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

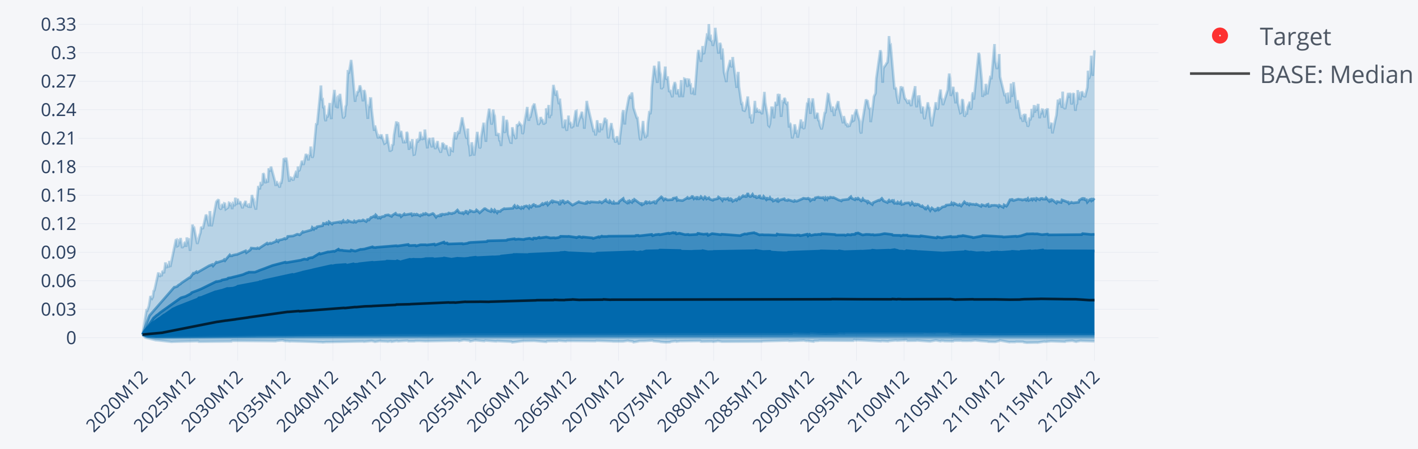
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0059	0.0397
std	0.0060	0.0312
min	-0.0026	-0.0047
1%	-0.0006	-0.0008
5%	0.0004	0.0014
10%	0.0010	0.0031
50%	0.0035	0.0345
90%	0.0145	0.0826
95%	0.0186	0.0977
99%	0.0267	0.1303
max	0.0424	0.2108

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 5 Year Yield - Spot

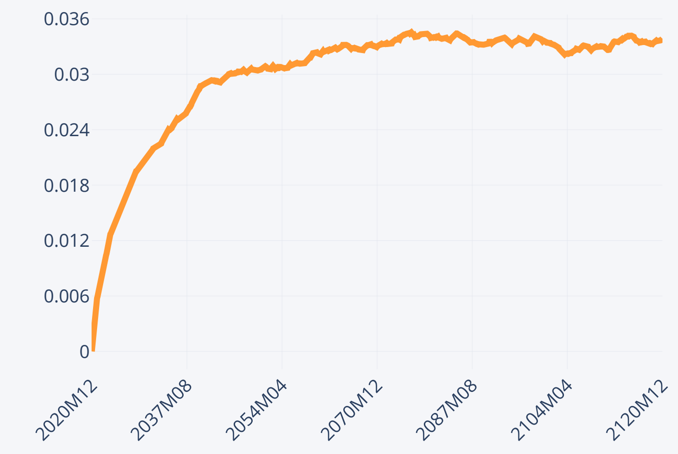


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0064	0.0410
std	0.0059	0.0307
min	-0.0019	-0.0039
1%	-0.0001	-0.0001
5%	0.0009	0.0020
10%	0.0015	0.0036
50%	0.0037	0.0363
90%	0.0152	0.0831
95%	0.0188	0.0981
99%	0.0262	0.1295
max	0.0413	0.2067

Cross Sectional Volatility Over Time : BASE



US Treasury 6 Year Yield - Spot

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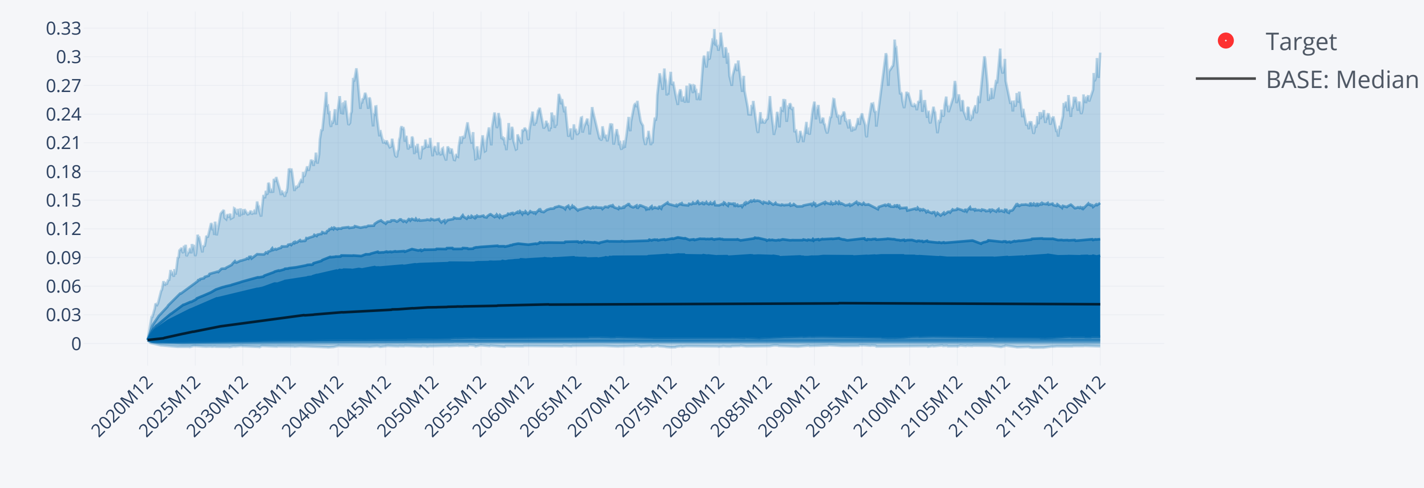
Validation Report

Simulated Data in Percentiles : US Treasury 6 Year Yield - Spot

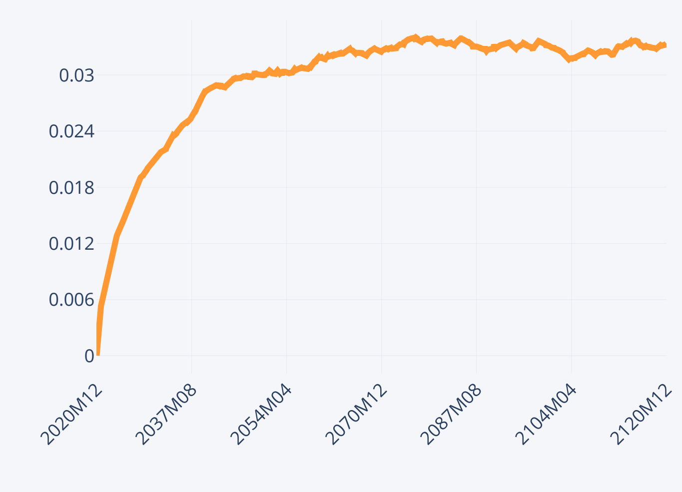


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

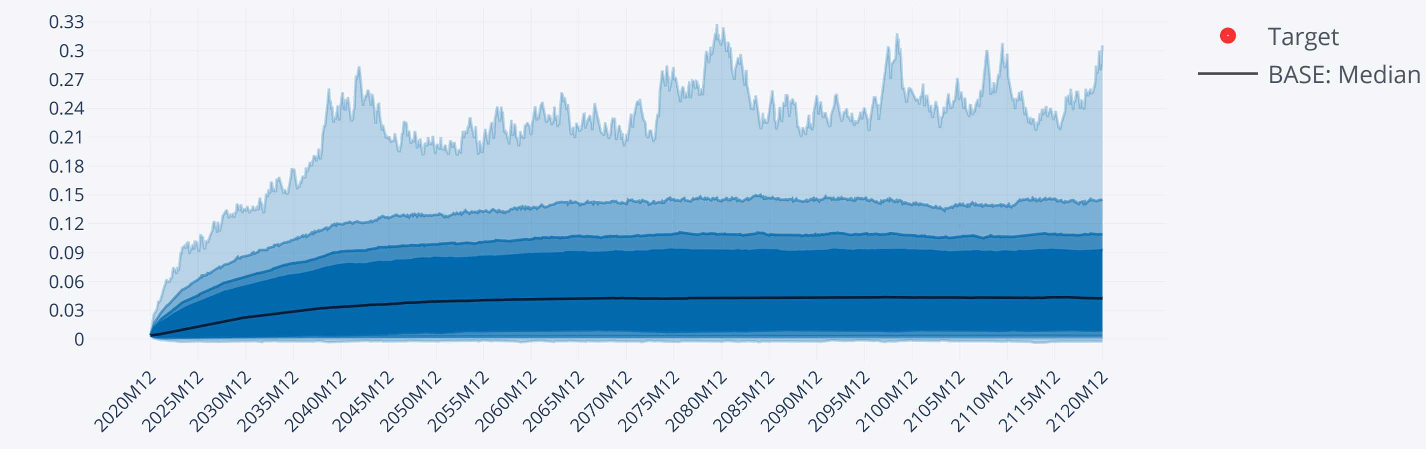
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0069	0.0423
std	0.0059	0.0303
min	-0.0013	-0.0031
1%	0.0004	0.0005
5%	0.0013	0.0026
10%	0.0019	0.0045
50%	0.0040	0.0378
90%	0.0157	0.0839
95%	0.0190	0.0980
99%	0.0260	0.1295
max	0.0404	0.2030

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 7 Year Yield - Spot

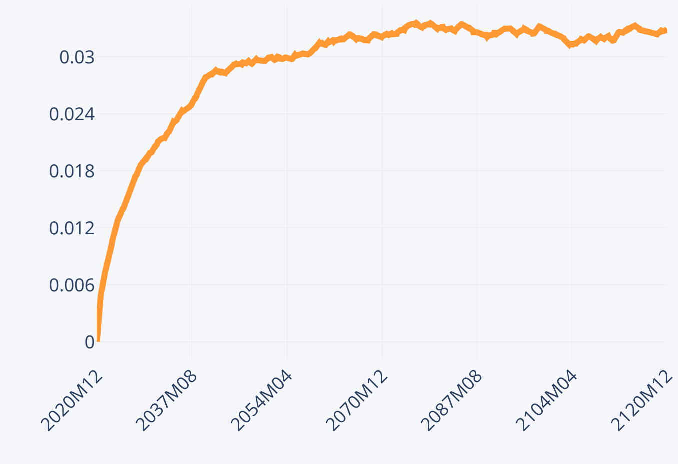


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0075	0.0434
std	0.0059	0.0298
min	-0.0008	-0.0024
1%	0.0008	0.0011
5%	0.0017	0.0031
10%	0.0023	0.0067
50%	0.0052	0.0390
90%	0.0162	0.0846
95%	0.0193	0.0982
99%	0.0260	0.1291
max	0.0395	0.1996

Cross Sectional Volatility Over Time : BASE



US Treasury 8 Year Yield - Spot

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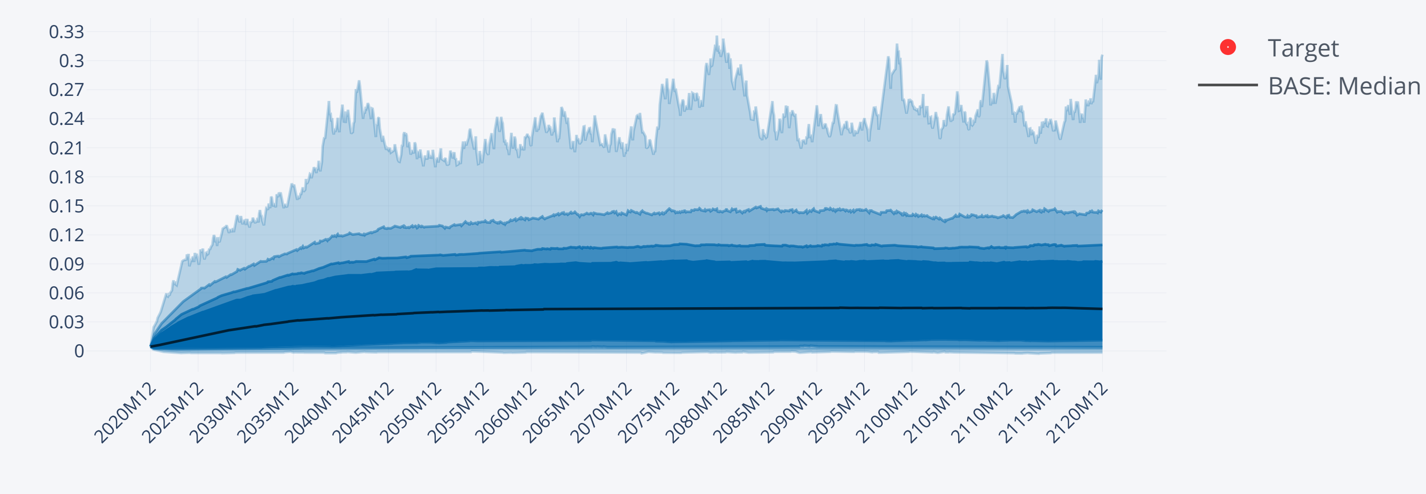
Validation Report

Simulated Data in Percentiles : US Treasury 8 Year Yield - Spot

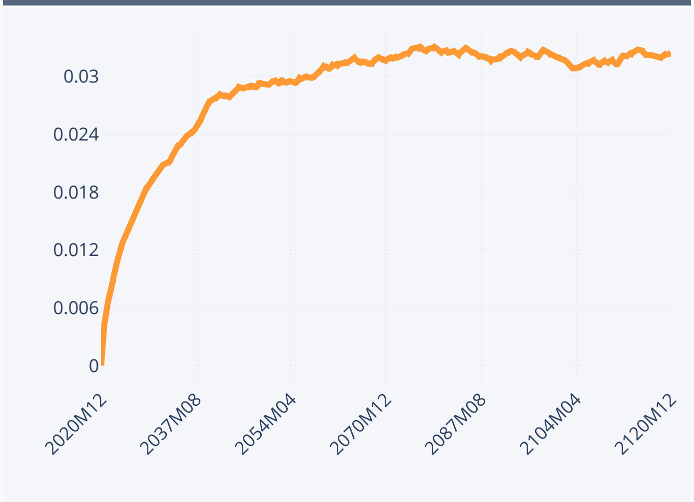


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

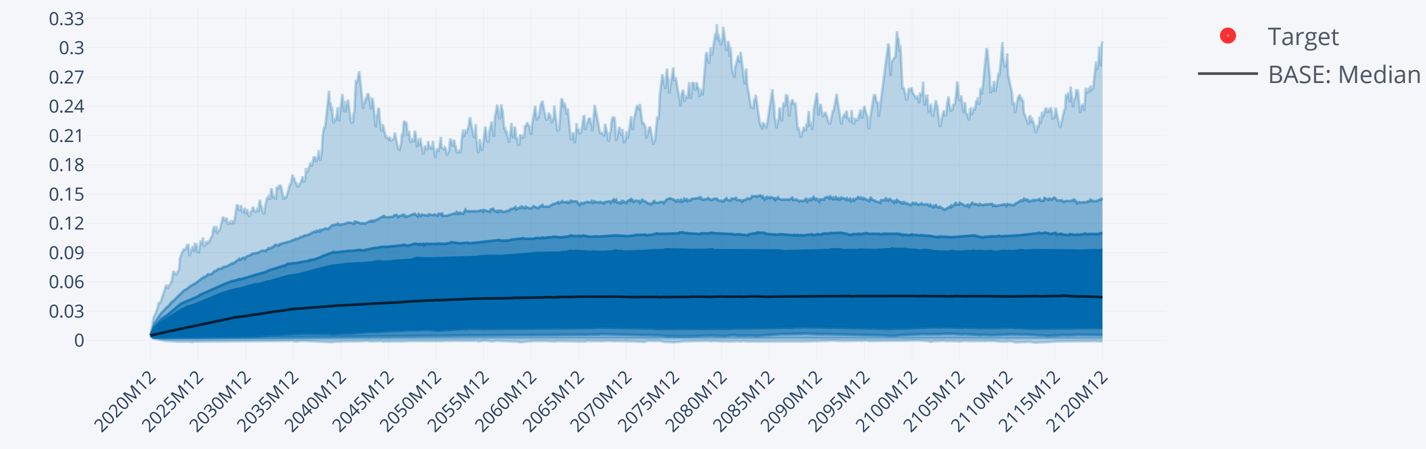
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0081	0.0444
std	0.0059	0.0294
min	-0.0004	-0.0018
1%	0.0012	0.0016
5%	0.0021	0.0035
10%	0.0026	0.0086
50%	0.0062	0.0402
90%	0.0166	0.0850
95%	0.0196	0.0986
99%	0.0261	0.1291
max	0.0388	0.1964

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 9 Year Yield - Spot

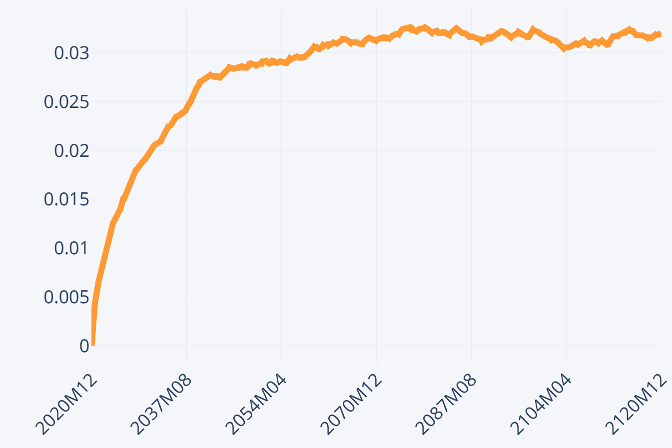


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

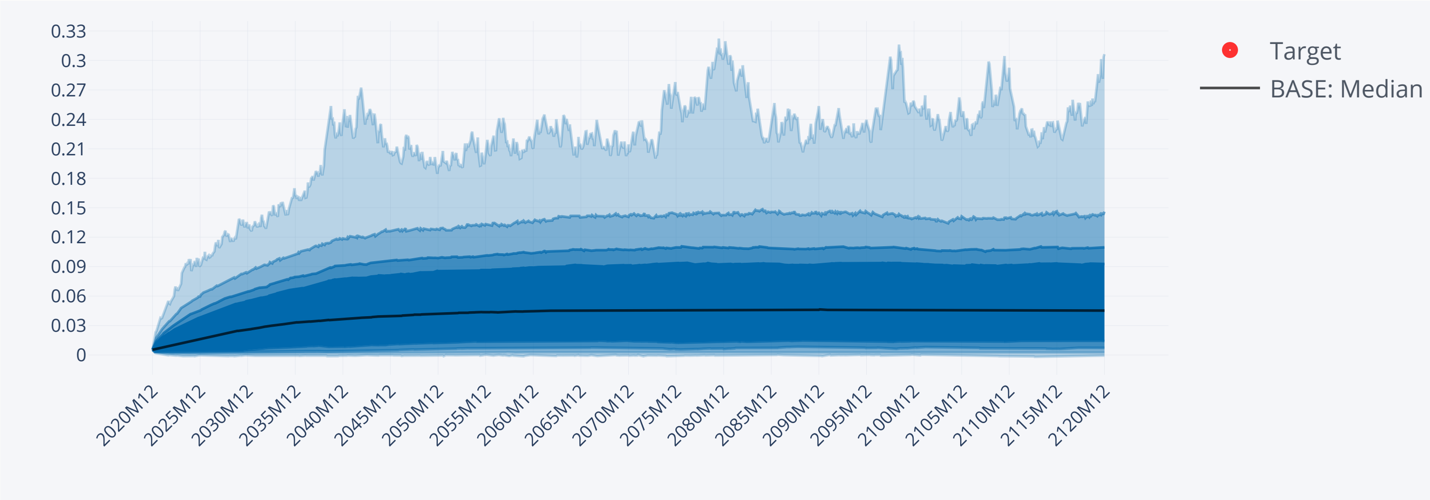
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0086	0.0453
std	0.0059	0.0290
min	0.0000	-0.0012
1%	0.0016	0.0021
5%	0.0024	0.0039
10%	0.0029	0.0103
50%	0.0072	0.0413
90%	0.0171	0.0850
95%	0.0199	0.0985
99%	0.0261	0.1290
max	0.0382	0.1934

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 10 Year Yield - Spot

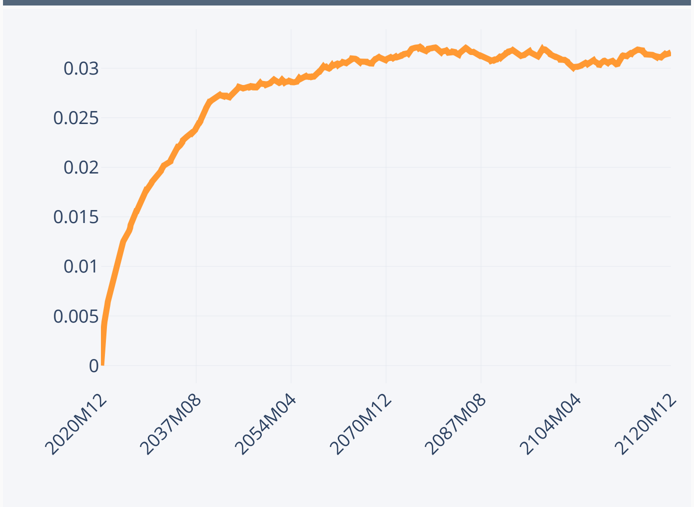


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

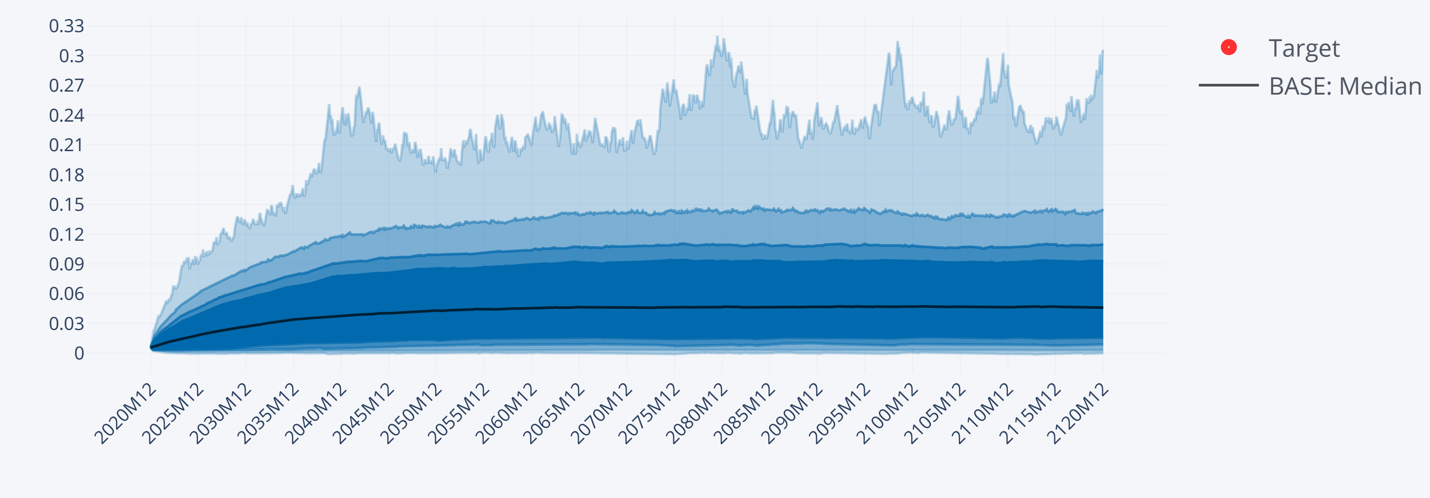
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0092	0.0461
std	0.0059	0.0287
min	0.0004	-0.0007
1%	0.0019	0.0025
5%	0.0027	0.0053
10%	0.0031	0.0119
50%	0.0081	0.0422
90%	0.0176	0.0854
95%	0.0202	0.0987
99%	0.0262	0.1291
max	0.0377	0.1906

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 11 Year Yield - Spot

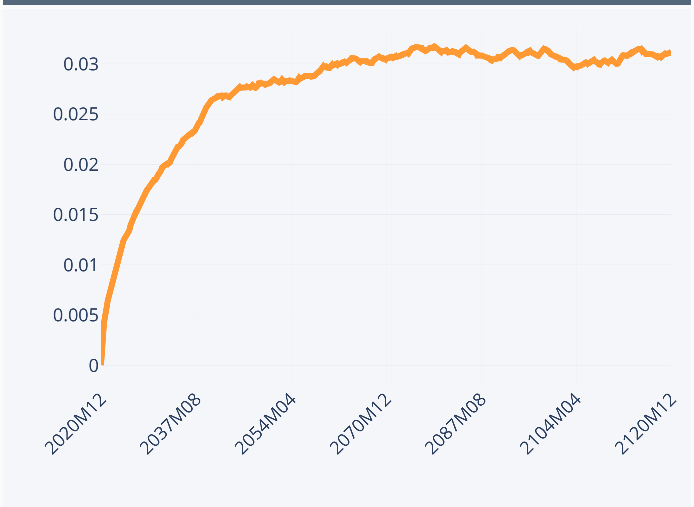


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

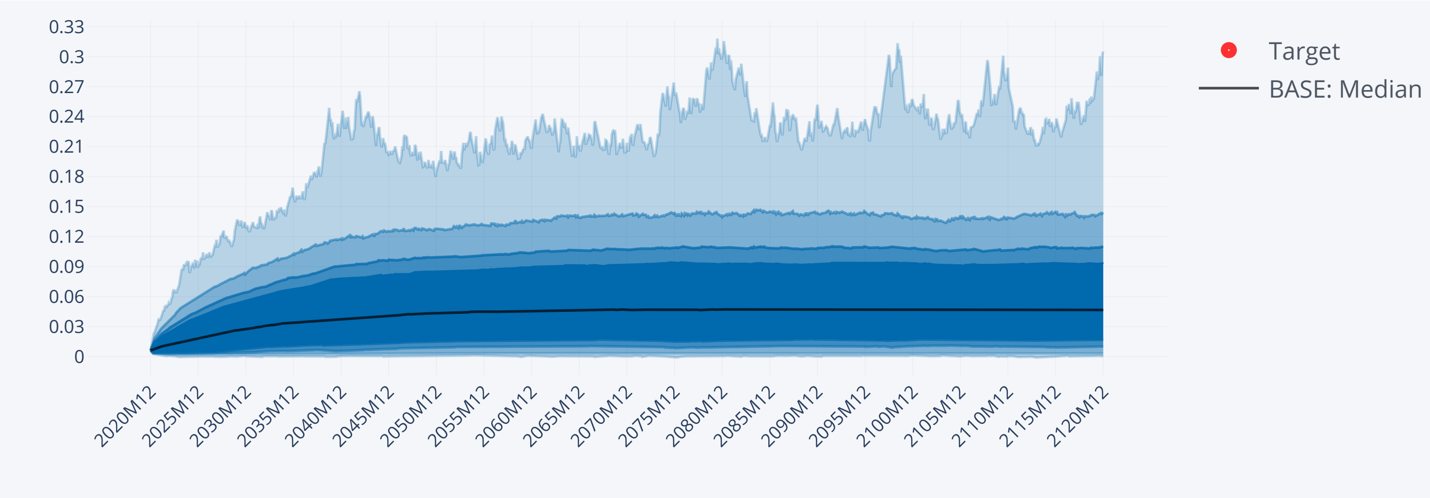
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0098	0.0468
std	0.0059	0.0283
min	0.0007	-0.0003
1%	0.0022	0.0028
5%	0.0029	0.0068
10%	0.0034	0.0133
50%	0.0089	0.0431
90%	0.0181	0.0856
95%	0.0206	0.0987
99%	0.0262	0.1286
max	0.0373	0.1879

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 12 Year Yield - Spot

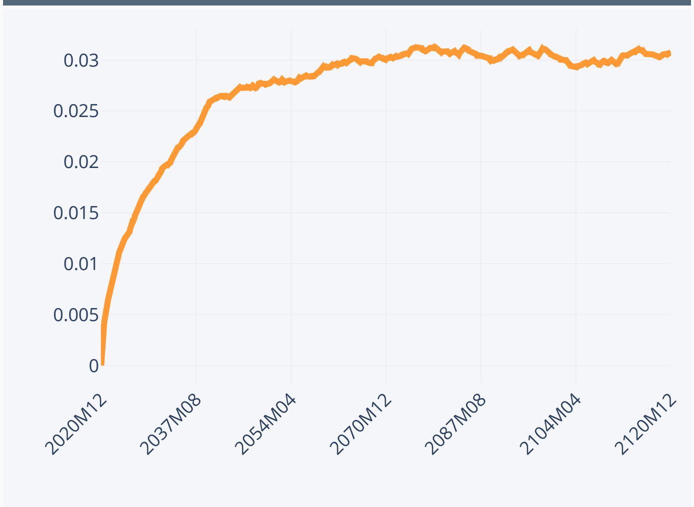


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0104	0.0474
std	0.0058	0.0279
min	0.0010	0.0002
1%	0.0025	0.0031
5%	0.0032	0.0081
10%	0.0036	0.0146
50%	0.0097	0.0438
90%	0.0185	0.0855
95%	0.0210	0.0987
99%	0.0265	0.1277
max	0.0369	0.1853

Cross Sectional Volatility Over Time : BASE



US Treasury 13 Year Yield - Spot

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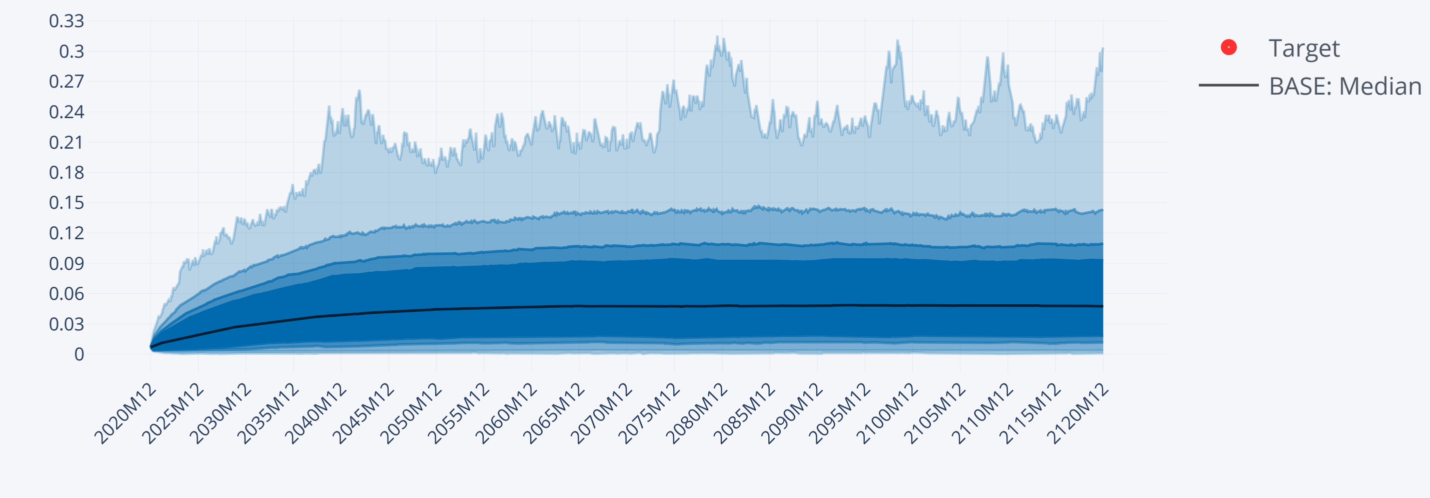
Validation Report

Simulated Data in Percentiles : US Treasury 13 Year Yield - Spot

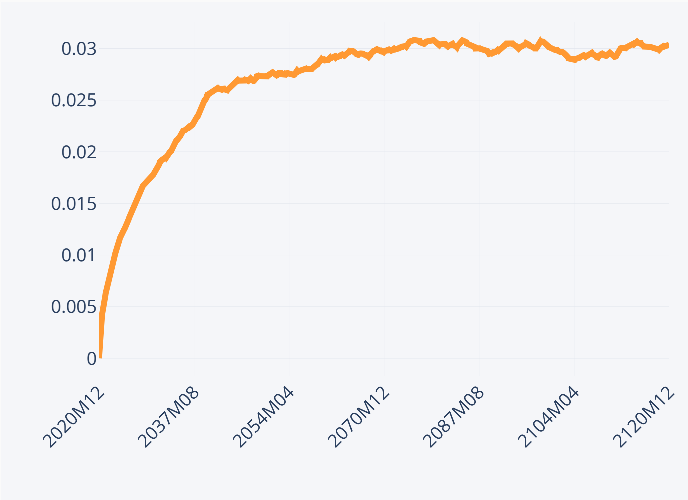


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

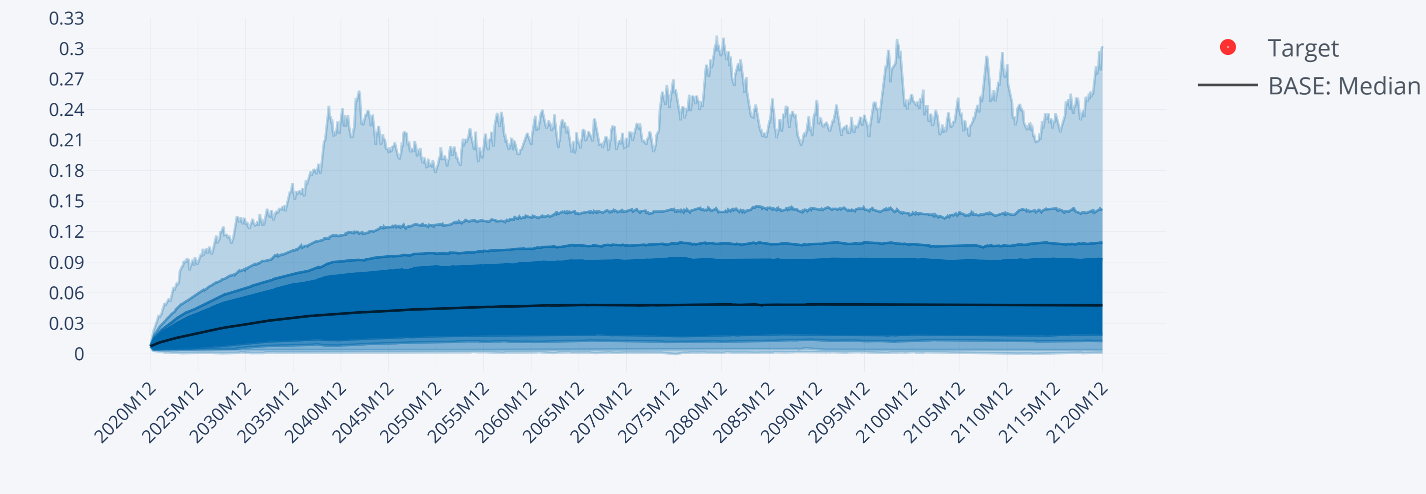
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0111	0.0480
std	0.0058	0.0275
min	0.0013	0.0005
1%	0.0028	0.0034
5%	0.0034	0.0094
10%	0.0038	0.0157
50%	0.0105	0.0444
90%	0.0189	0.0856
95%	0.0214	0.0987
99%	0.0267	0.1267
max	0.0366	0.1829

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 14 Year Yield - Spot

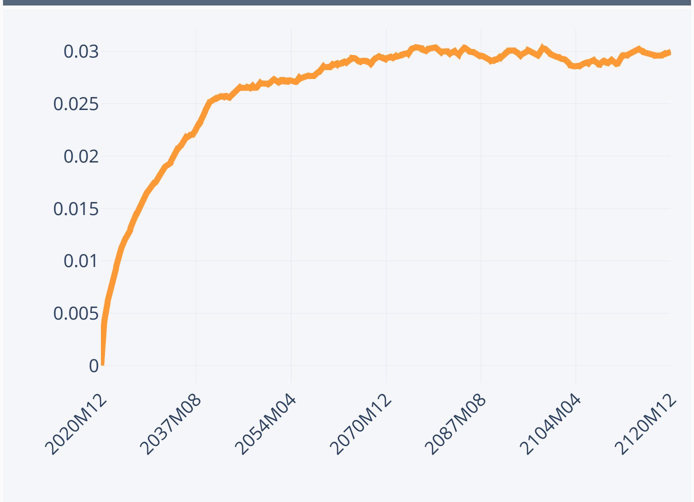


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

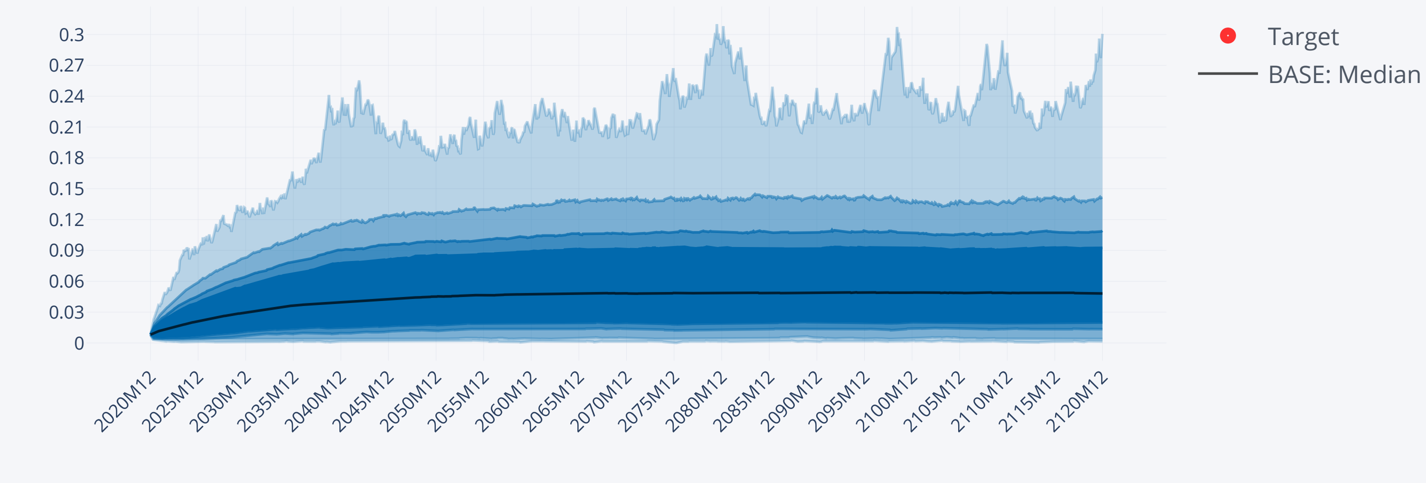
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0117	0.0484
std	0.0057	0.0272
min	0.0016	0.0009
1%	0.0030	0.0037
5%	0.0036	0.0106
10%	0.0041	0.0167
50%	0.0112	0.0448
90%	0.0194	0.0856
95%	0.0218	0.0984
99%	0.0270	0.1265
max	0.0363	0.1805

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 15 Year Yield - Spot

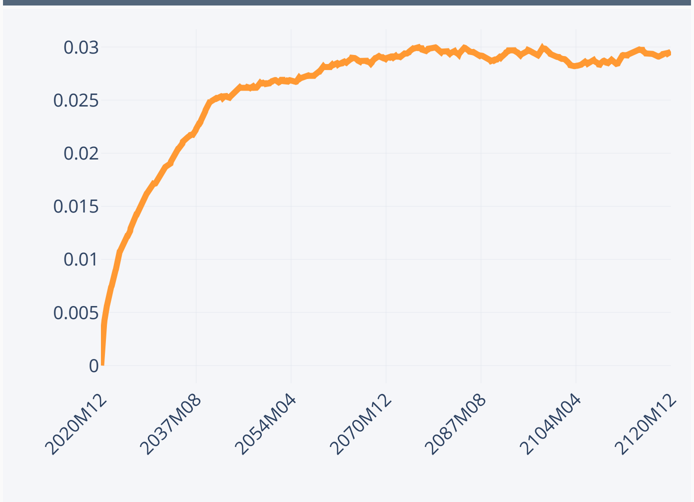


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0123	0.0488
std	0.0056	0.0268
min	0.0019	0.0012
1%	0.0032	0.0040
5%	0.0038	0.0117
10%	0.0050	0.0176
50%	0.0119	0.0452
90%	0.0198	0.0855
95%	0.0222	0.0983
99%	0.0273	0.1261
max	0.0361	0.1781

Cross Sectional Volatility Over Time : BASE



US Treasury 16 Year Yield - Spot
Conning | Risk Solutions

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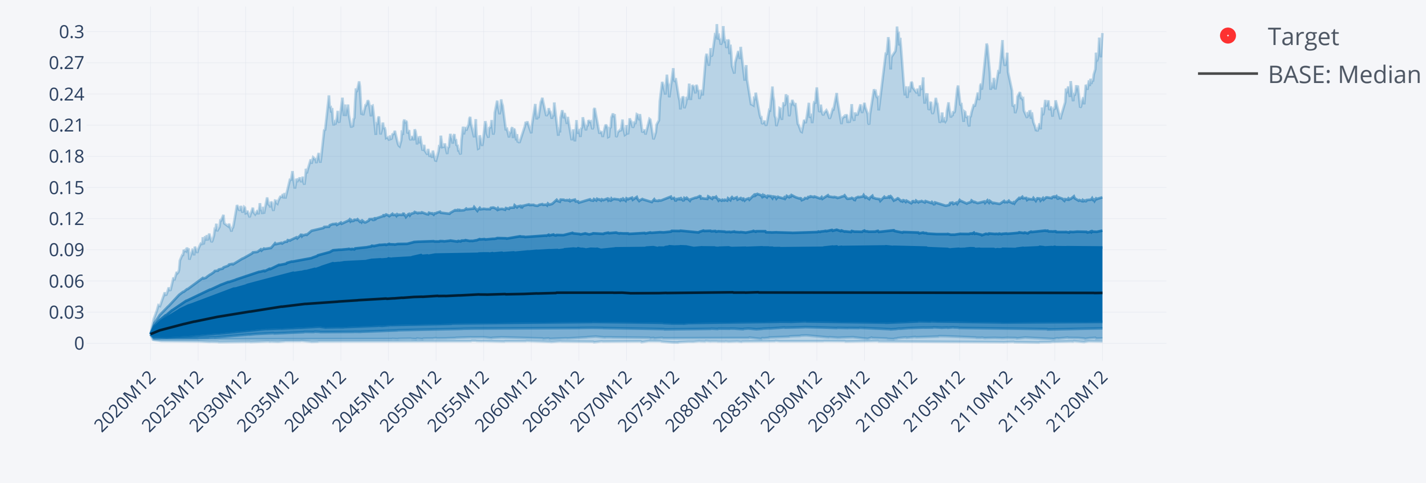
Simulated Data in Percentiles : US Treasury 16 Year Yield - Spot

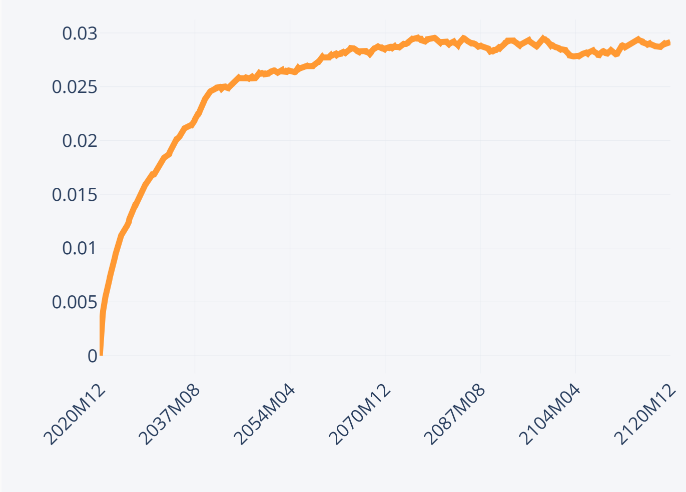


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0129	0.0491
std	0.0055	0.0264
min	0.0021	0.0015
1%	0.0034	0.0050
5%	0.0041	0.0126
10%	0.0059	0.0184
50%	0.0125	0.0456
90%	0.0202	0.0854
95%	0.0226	0.0981
99%	0.0275	0.1252
max	0.0359	0.1758

Cross Sectional Volatility Over Time : BASE



US Treasury 17 Year Yield - Spot
Conning | Risk Solutions

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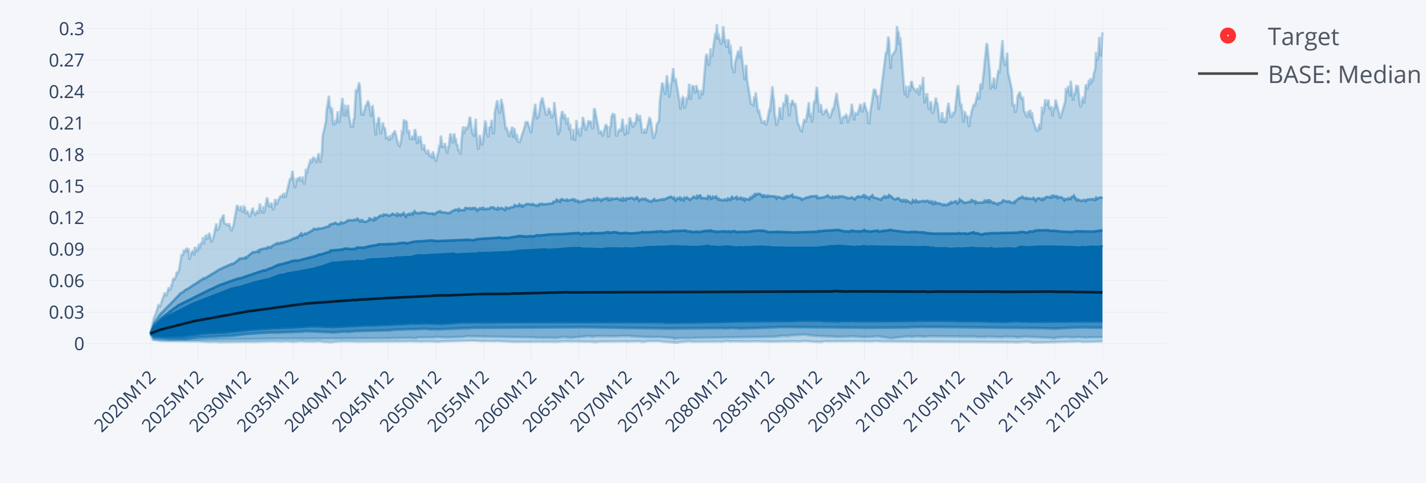
Validation Report

Simulated Data in Percentiles : US Treasury 17 Year Yield - Spot

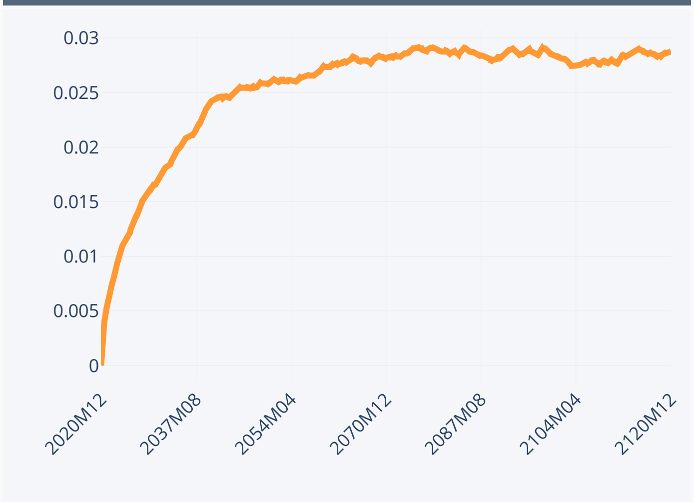


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

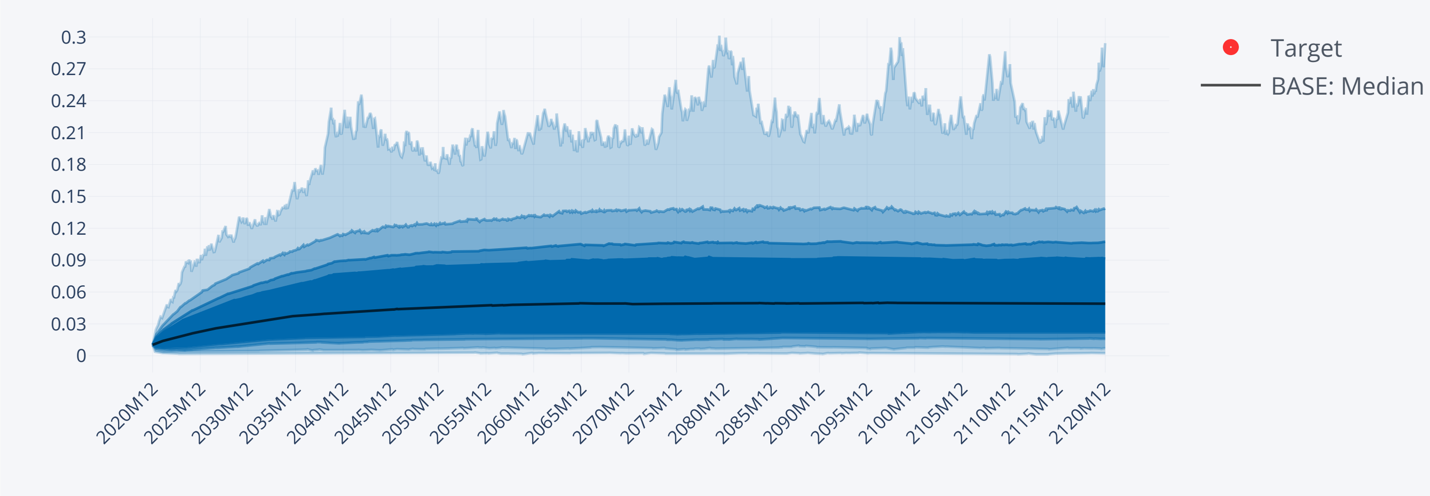
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0135	0.0494
std	0.0054	0.0260
min	0.0023	0.0018
1%	0.0036	0.0061
5%	0.0050	0.0135
10%	0.0067	0.0192
50%	0.0132	0.0459
90%	0.0207	0.0853
95%	0.0230	0.0978
99%	0.0277	0.1242
max	0.0358	0.1736

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 18 Year Yield - Spot

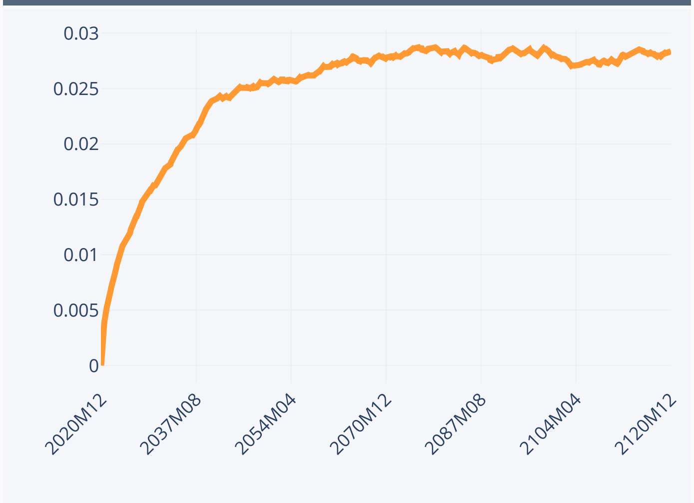


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0140	0.0496
std	0.0053	0.0257
min	0.0025	0.0021
1%	0.0038	0.0071
5%	0.0058	0.0143
10%	0.0075	0.0199
50%	0.0137	0.0461
90%	0.0211	0.0851
95%	0.0233	0.0974
99%	0.0279	0.1232
max	0.0357	0.1714

Cross Sectional Volatility Over Time : BASE



US Treasury 19 Year Yield - Spot
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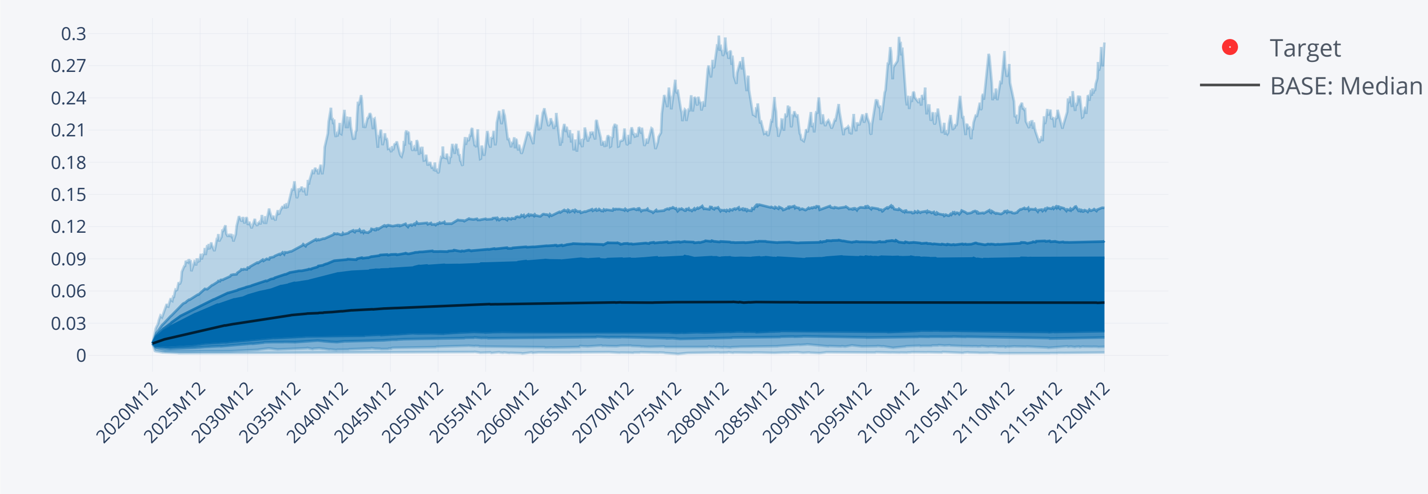
Simulated Data in Percentiles : US Treasury 19 Year Yield - Spot

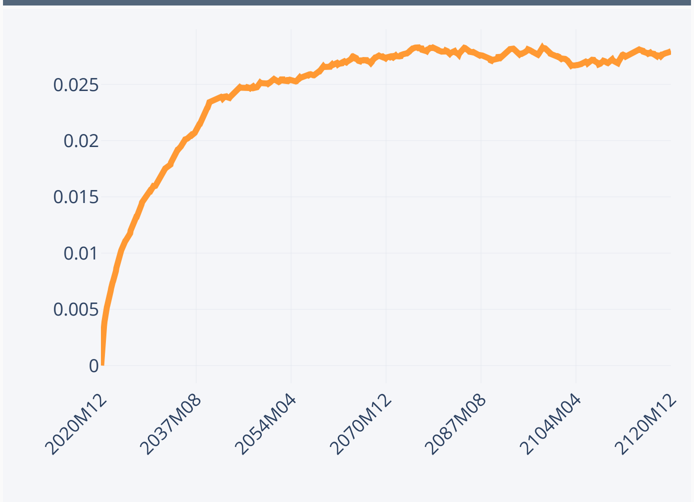


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

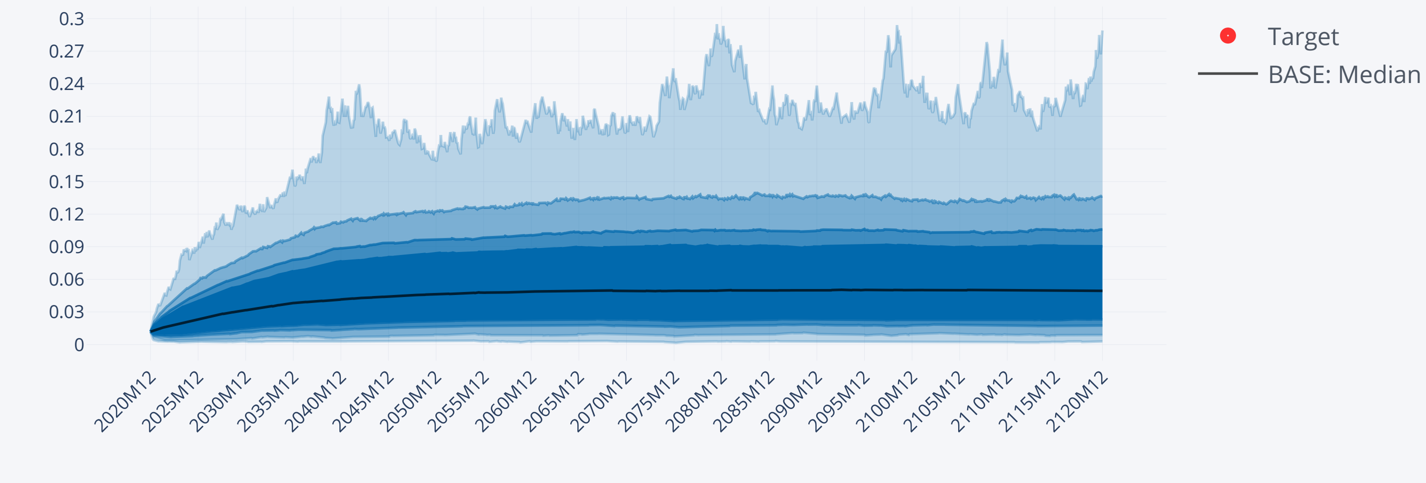
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0146	0.0498
std	0.0052	0.0253
min	0.0027	0.0023
1%	0.0040	0.0079
5%	0.0066	0.0150
10%	0.0082	0.0206
50%	0.0143	0.0464
90%	0.0215	0.0848
95%	0.0236	0.0970
99%	0.0282	0.1225
max	0.0355	0.1699

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 20 Year Yield - Spot

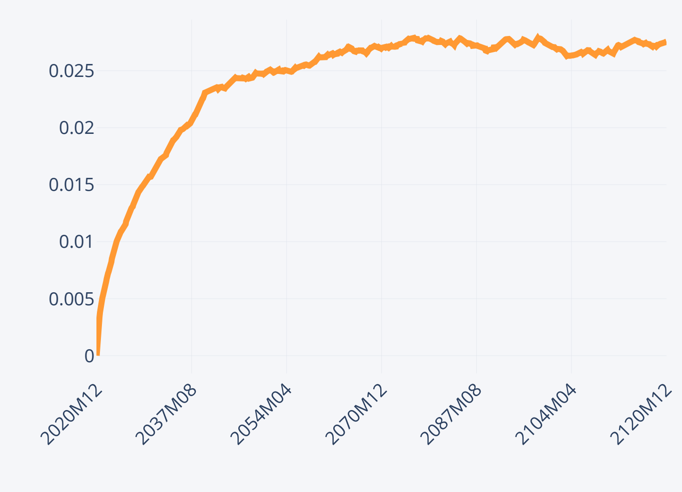


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0151	0.0499
std	0.0051	0.0249
min	0.0029	0.0025
1%	0.0047	0.0088
5%	0.0073	0.0158
10%	0.0089	0.0212
50%	0.0148	0.0465
90%	0.0218	0.0843
95%	0.0240	0.0966
99%	0.0284	0.1218
max	0.0356	0.1685

Cross Sectional Volatility Over Time : BASE



US Treasury 21 Year Yield - Spot

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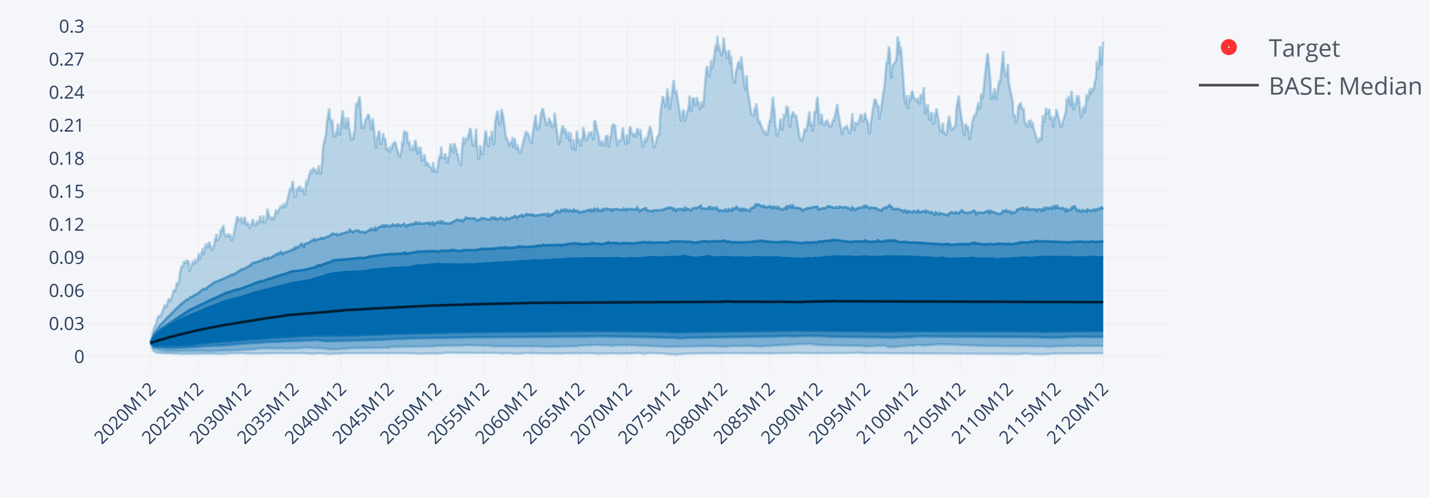
Validation Report

Simulated Data in Percentiles : US Treasury 21 Year Yield - Spot

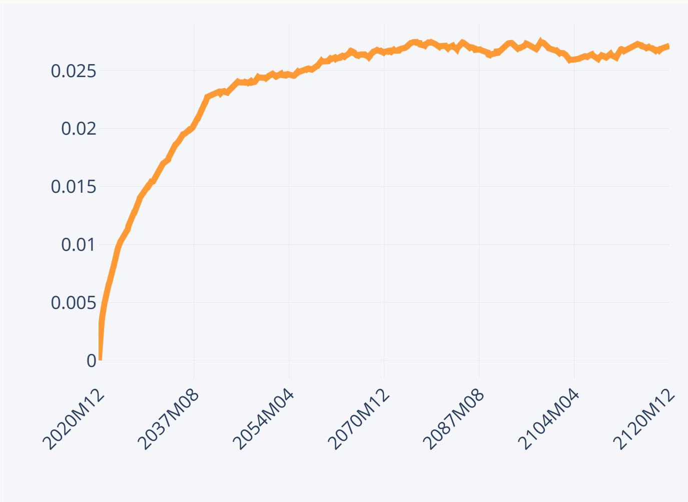


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0156	0.0500
std	0.0050	0.0246
min	0.0031	0.0028
1%	0.0055	0.0096
5%	0.0080	0.0164
10%	0.0095	0.0217
50%	0.0153	0.0466
90%	0.0222	0.0839
95%	0.0243	0.0962
99%	0.0286	0.1210
max	0.0357	0.1670

Cross Sectional Volatility Over Time : BASE



US Treasury 22 Year Yield - Spot
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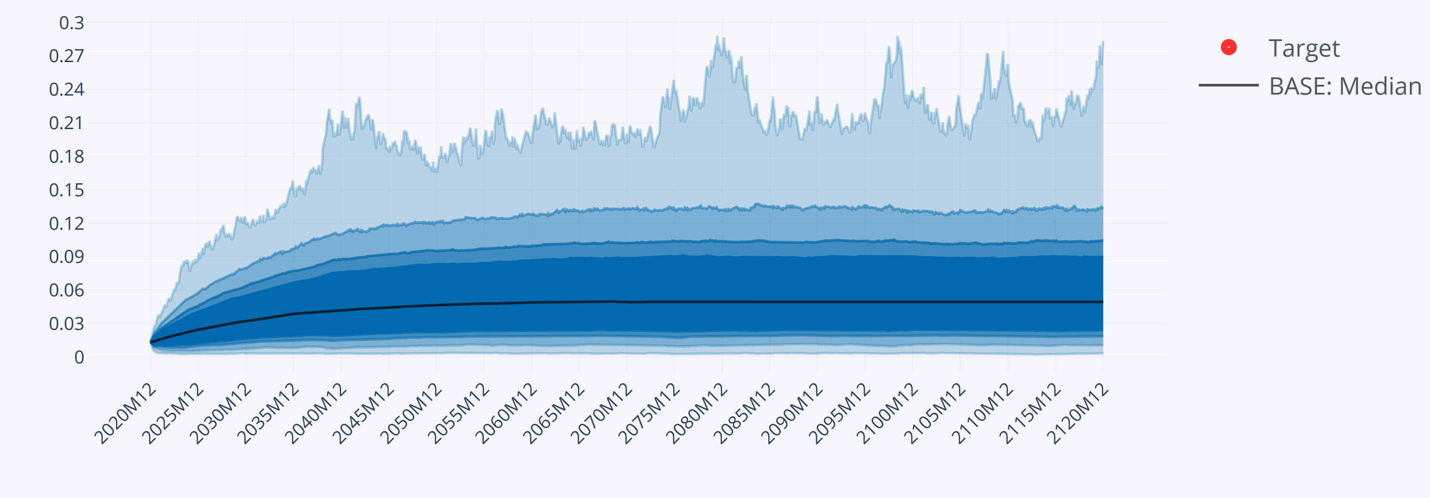
Simulated Data in Percentiles : US Treasury 22 Year Yield - Spot

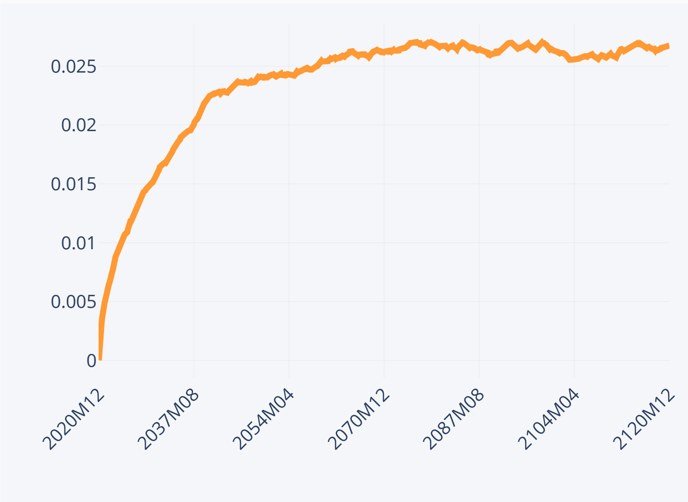


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0160	0.0501
std	0.0049	0.0242
min	0.0033	0.0030
1%	0.0062	0.0103
5%	0.0086	0.0169
10%	0.0101	0.0222
50%	0.0157	0.0467
90%	0.0224	0.0836
95%	0.0245	0.0956
99%	0.0287	0.1201
max	0.0358	0.1655

Cross Sectional Volatility Over Time : BASE



US Treasury 23 Year Yield - Spot
Conning | Risk Solutions

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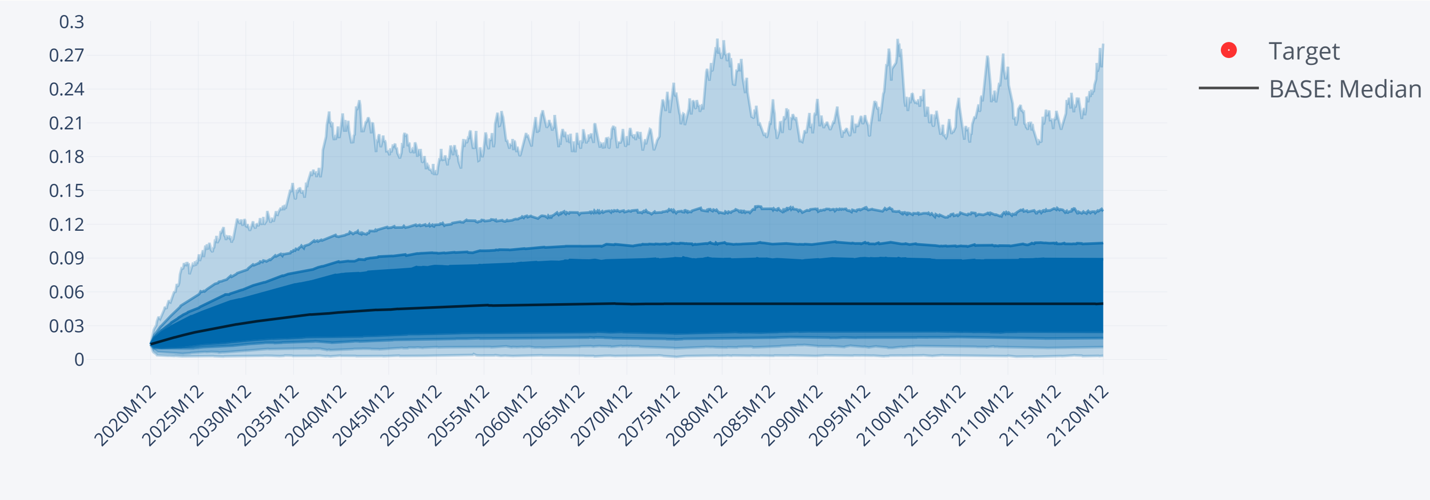
Simulated Data in Percentiles : US Treasury 23 Year Yield - Spot

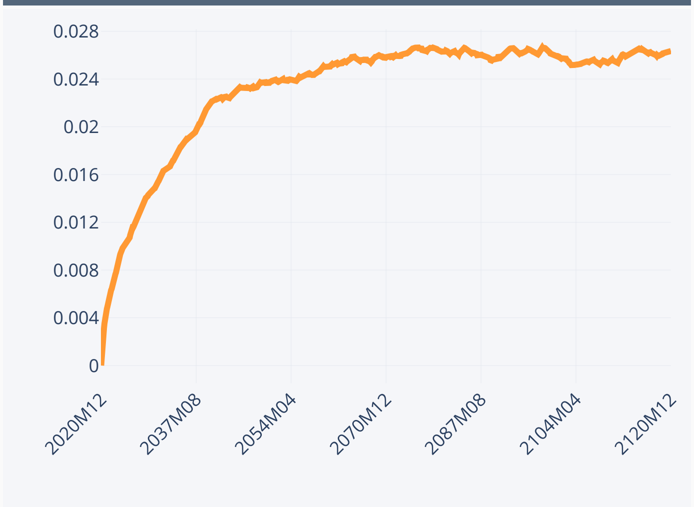


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

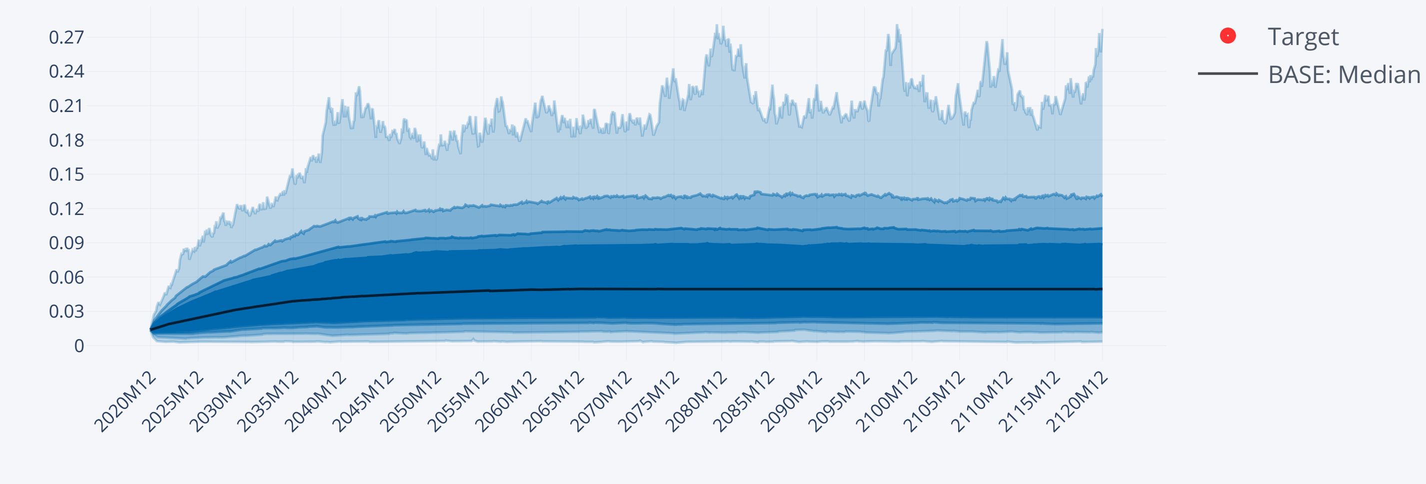
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0165	0.0501
std	0.0048	0.0239
min	0.0034	0.0031
1%	0.0068	0.0110
5%	0.0092	0.0175
10%	0.0107	0.0226
50%	0.0162	0.0468
90%	0.0228	0.0830
95%	0.0247	0.0948
99%	0.0288	0.1192
max	0.0359	0.1640

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 24 Year Yield - Spot

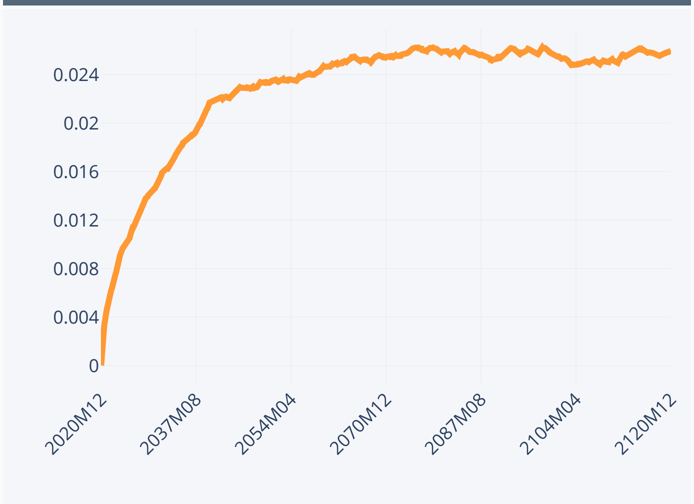


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

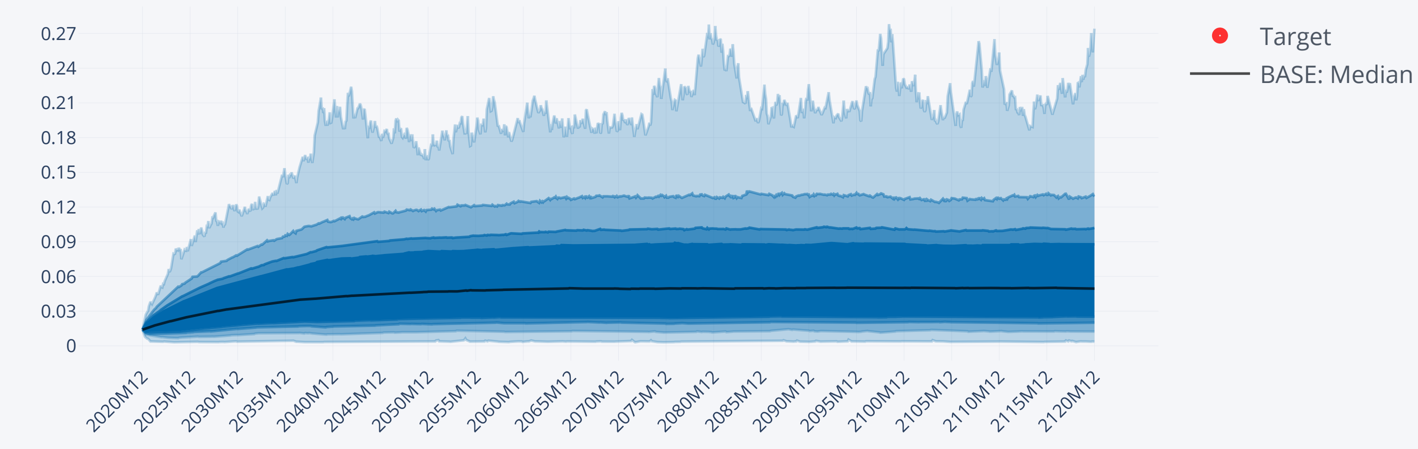
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0169	0.0501
std	0.0047	0.0235
min	0.0036	0.0033
1%	0.0075	0.0116
5%	0.0098	0.0180
10%	0.0112	0.0231
50%	0.0166	0.0468
90%	0.0230	0.0824
95%	0.0249	0.0943
99%	0.0290	0.1182
max	0.0360	0.1624

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 25 Year Yield - Spot

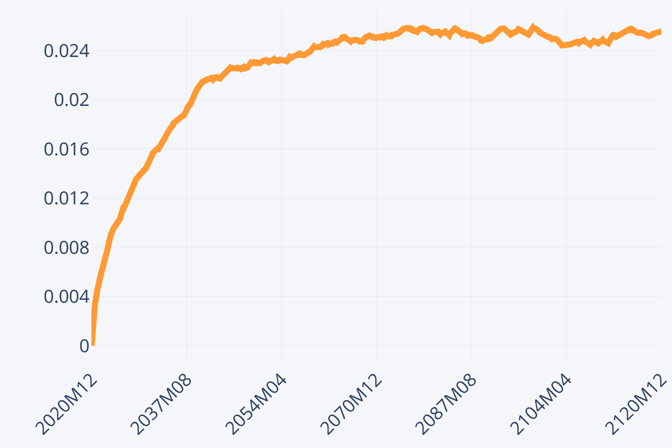


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

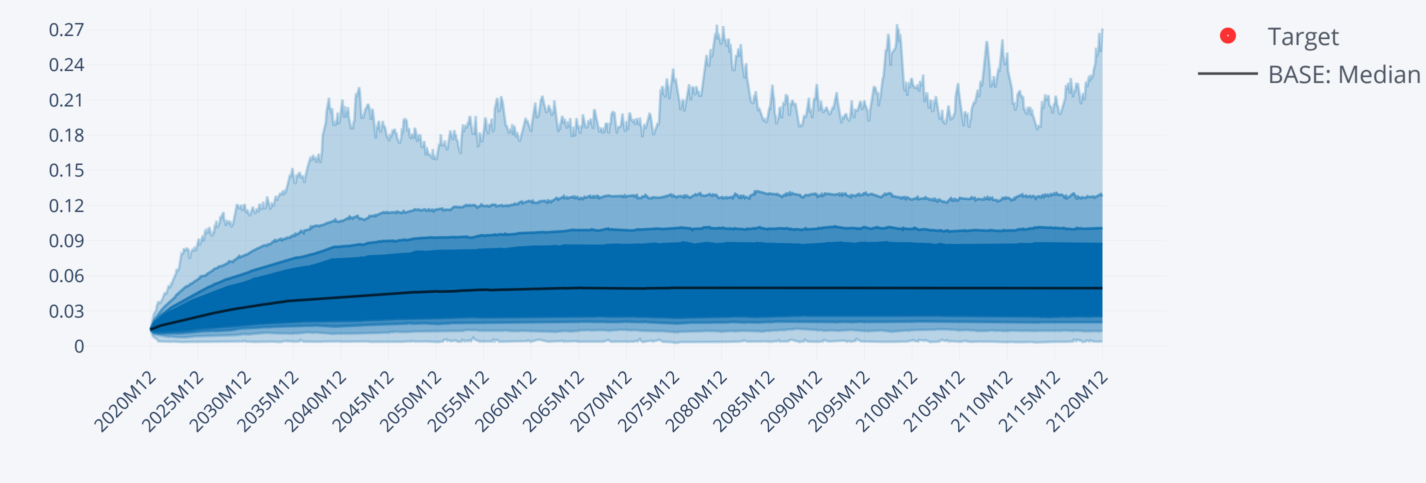
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0173	0.0501
std	0.0046	0.0231
min	0.0037	0.0035
1%	0.0080	0.0122
5%	0.0103	0.0185
10%	0.0117	0.0234
50%	0.0170	0.0468
90%	0.0233	0.0819
95%	0.0252	0.0935
99%	0.0292	0.1172
max	0.0361	0.1607

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 26 Year Yield - Spot

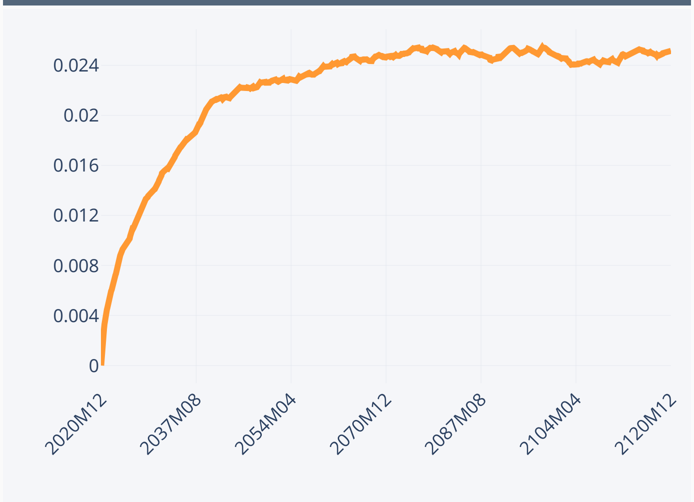


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

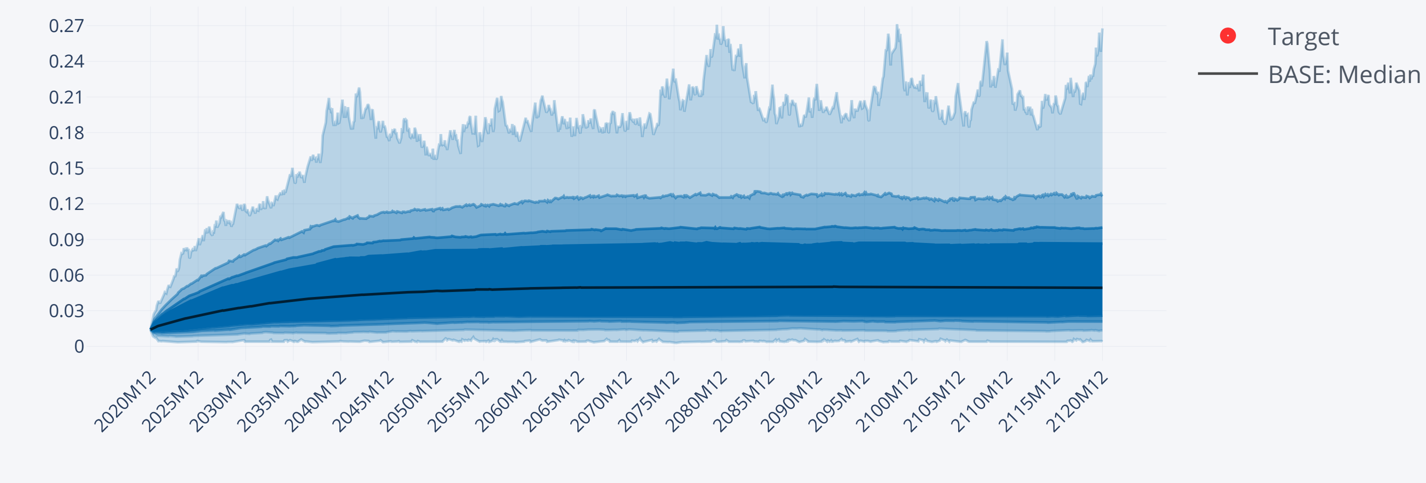
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0176	0.0500
std	0.0045	0.0228
min	0.0039	0.0037
1%	0.0086	0.0128
5%	0.0109	0.0190
10%	0.0122	0.0238
50%	0.0173	0.0469
90%	0.0235	0.0814
95%	0.0254	0.0927
99%	0.0293	0.1162
max	0.0361	0.1591

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 27 Year Yield - Spot

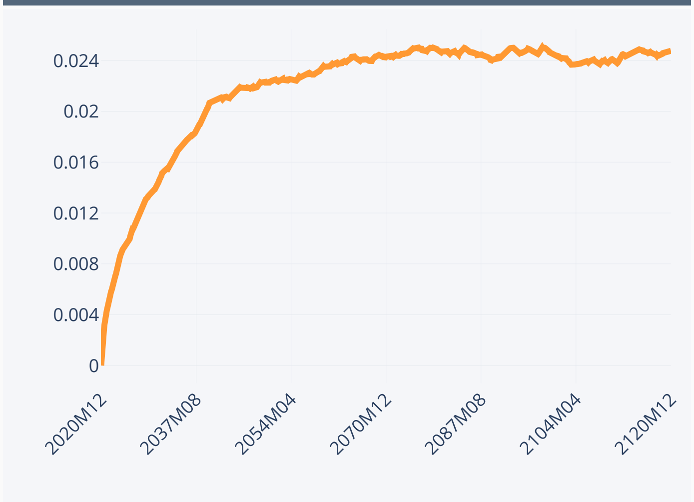


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0180	0.0499
std	0.0044	0.0224
min	0.0040	0.0038
1%	0.0091	0.0133
5%	0.0114	0.0195
10%	0.0127	0.0242
50%	0.0177	0.0468
90%	0.0237	0.0809
95%	0.0256	0.0920
99%	0.0294	0.1151
max	0.0362	0.1574

Cross Sectional Volatility Over Time : BASE



US Treasury 28 Year Yield - Spot
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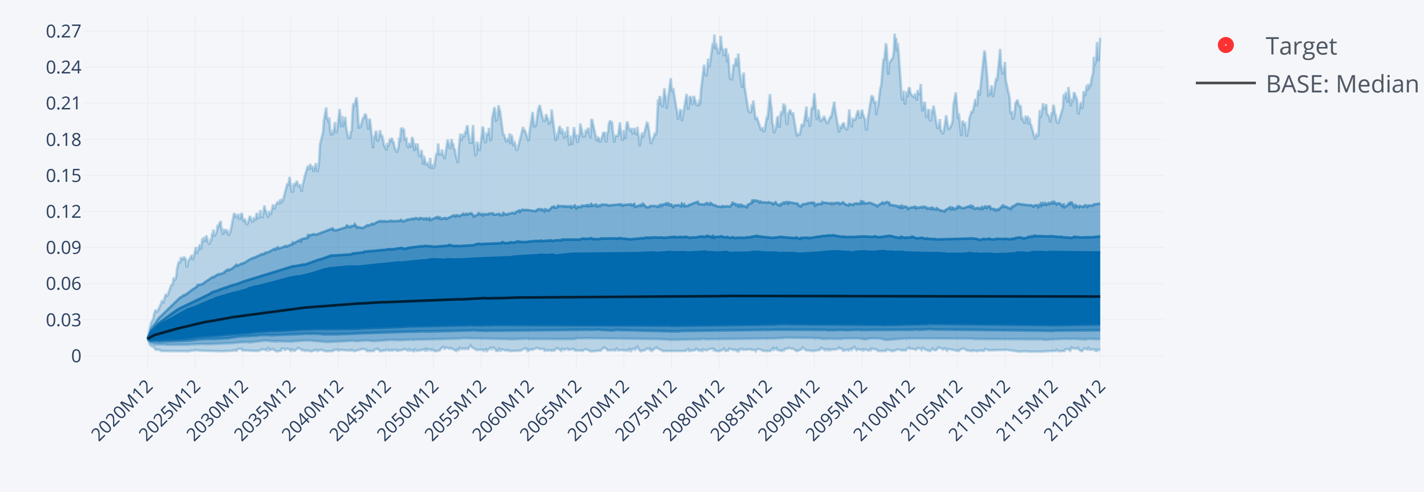
Validation Report

Simulated Data in Percentiles : US Treasury 28 Year Yield - Spot

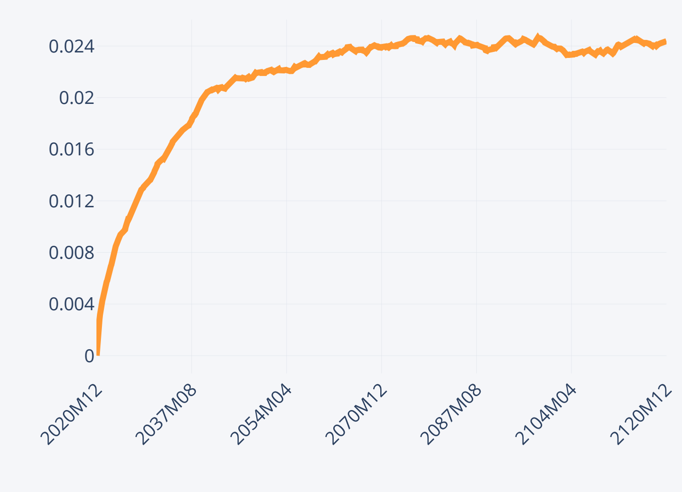


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0183	0.0498
std	0.0043	0.0221
min	0.0047	0.0040
1%	0.0096	0.0139
5%	0.0118	0.0199
10%	0.0131	0.0244
50%	0.0180	0.0467
90%	0.0239	0.0803
95%	0.0257	0.0913
99%	0.0295	0.1141
max	0.0362	0.1557

Cross Sectional Volatility Over Time : BASE



US Treasury 29 Year Yield - Spot
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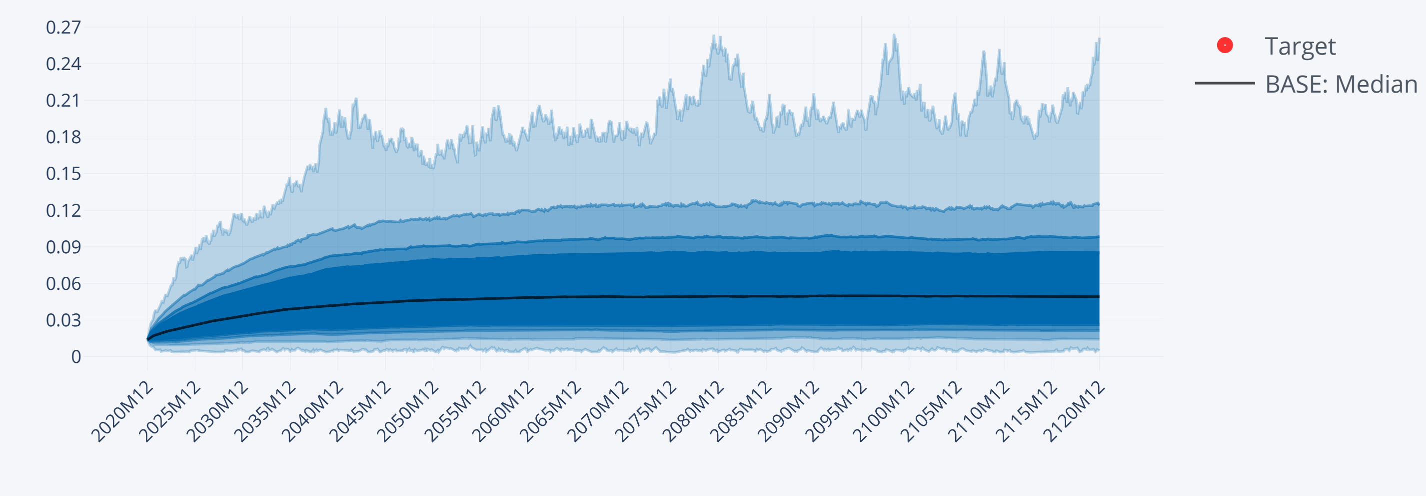
Simulated Data in Percentiles : US Treasury 29 Year Yield - Spot

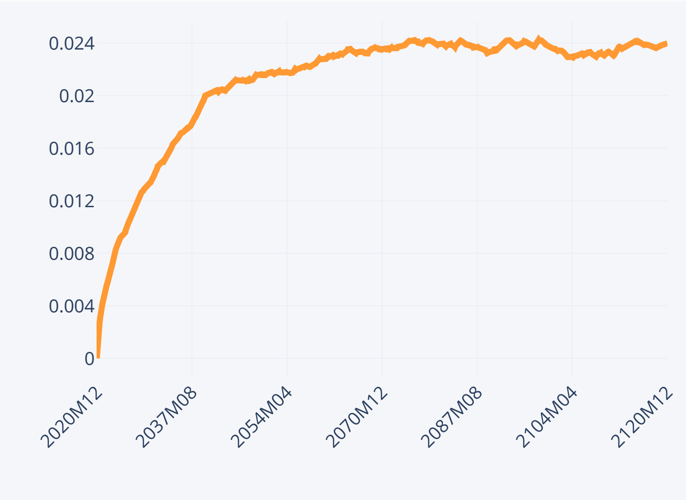


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

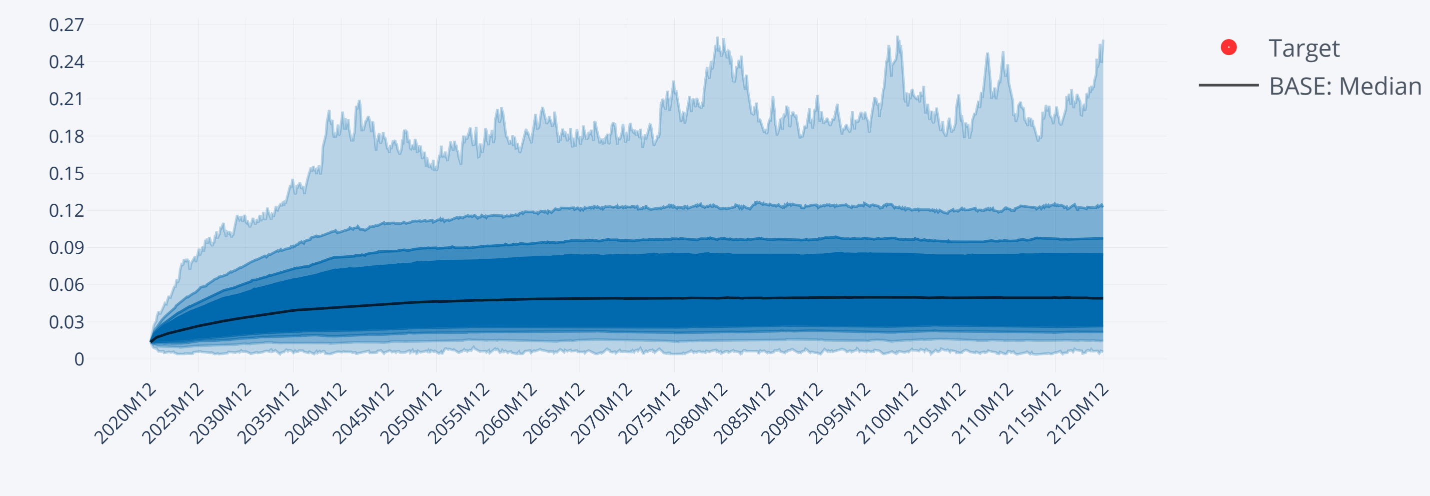
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0186	0.0497
std	0.0042	0.0217
min	0.0053	0.0045
1%	0.0101	0.0143
5%	0.0123	0.0202
10%	0.0135	0.0247
50%	0.0183	0.0466
90%	0.0241	0.0797
95%	0.0259	0.0905
99%	0.0296	0.1128
max	0.0362	0.1539

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 30 Year Yield - Spot

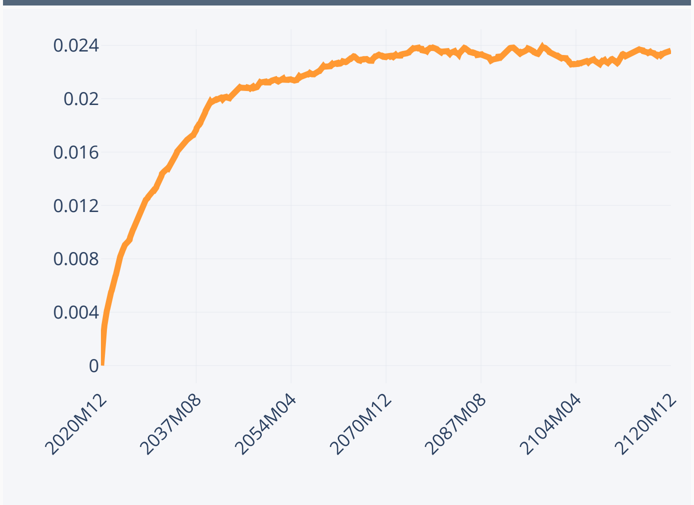


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0189	0.0496
std	0.0041	0.0214
min	0.0058	0.0051
1%	0.0106	0.0148
5%	0.0127	0.0206
10%	0.0139	0.0250
50%	0.0186	0.0466
90%	0.0243	0.0791
95%	0.0261	0.0898
99%	0.0297	0.1117
max	0.0362	0.1522

Cross Sectional Volatility Over Time : BASE



US Treasury 1 Month Yield - Coupon

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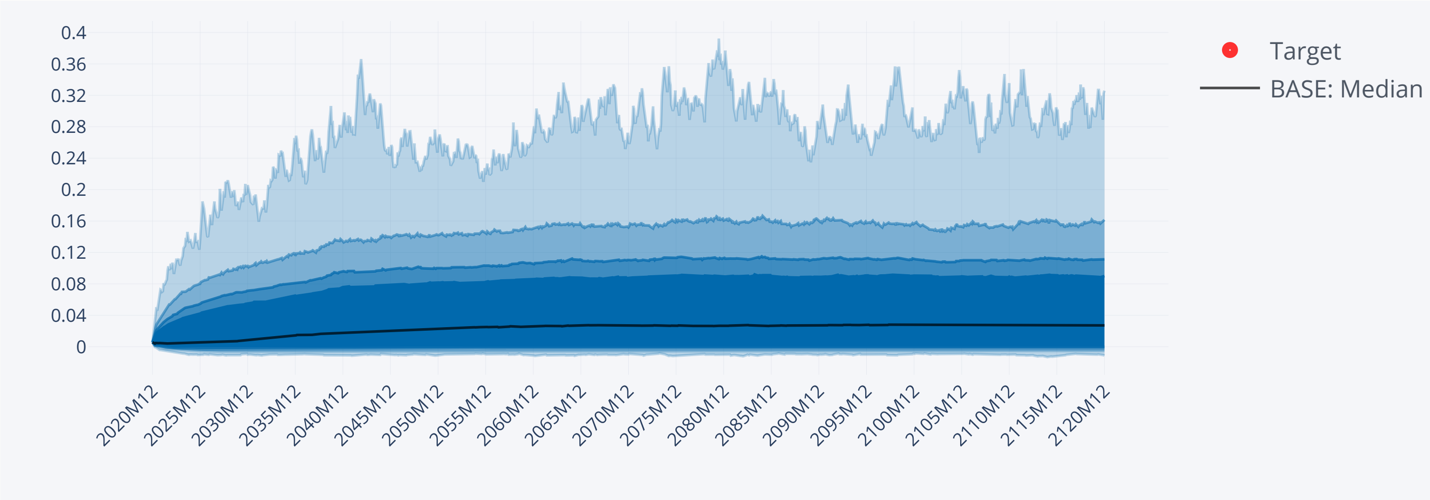
Validation Report

Simulated Data in Percentiles : US Treasury 1 Month Yield - Coupon

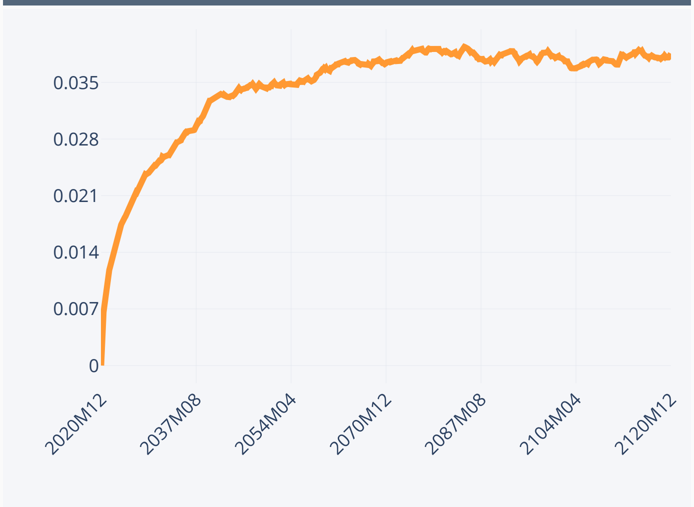


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

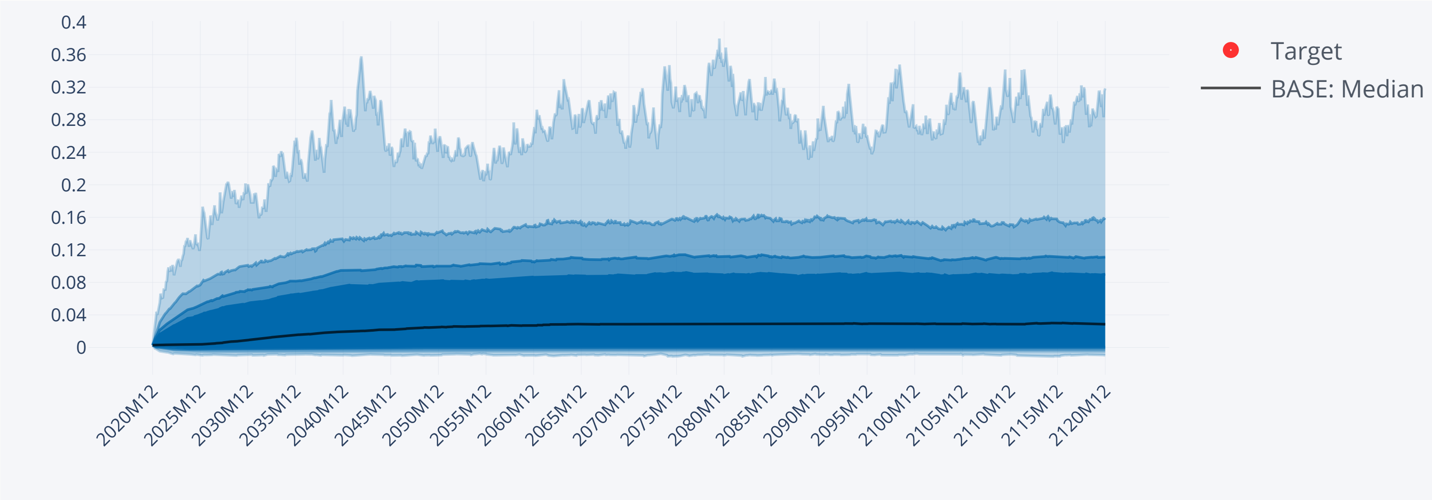
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0091	0.0327
std	0.0099	0.0348
min	-0.0044	-0.0100
1%	-0.0017	-0.0053
5%	-0.0003	-0.0024
10%	0.0006	-0.0006
50%	0.0045	0.0231
90%	0.0236	0.0813
95%	0.0295	0.1000
99%	0.0417	0.1420
max	0.0698	0.2639

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 3 Month Yield - Coupon

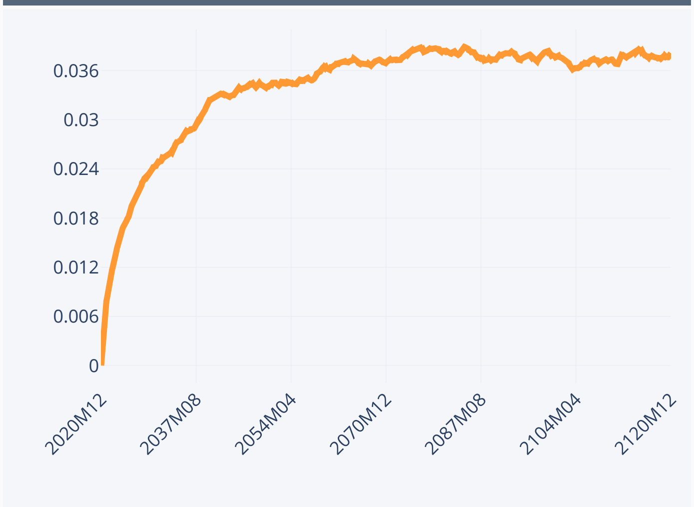


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0063	0.0334
std	0.0081	0.0344
min	-0.0049	-0.0091
1%	-0.0024	-0.0047
5%	-0.0010	-0.0020
10%	-0.0001	-0.0001
50%	0.0032	0.0246
90%	0.0179	0.0817
95%	0.0239	0.0999
99%	0.0349	0.1414
max	0.0608	0.2543

Cross Sectional Volatility Over Time : BASE



US Treasury 6 Month Yield - Coupon
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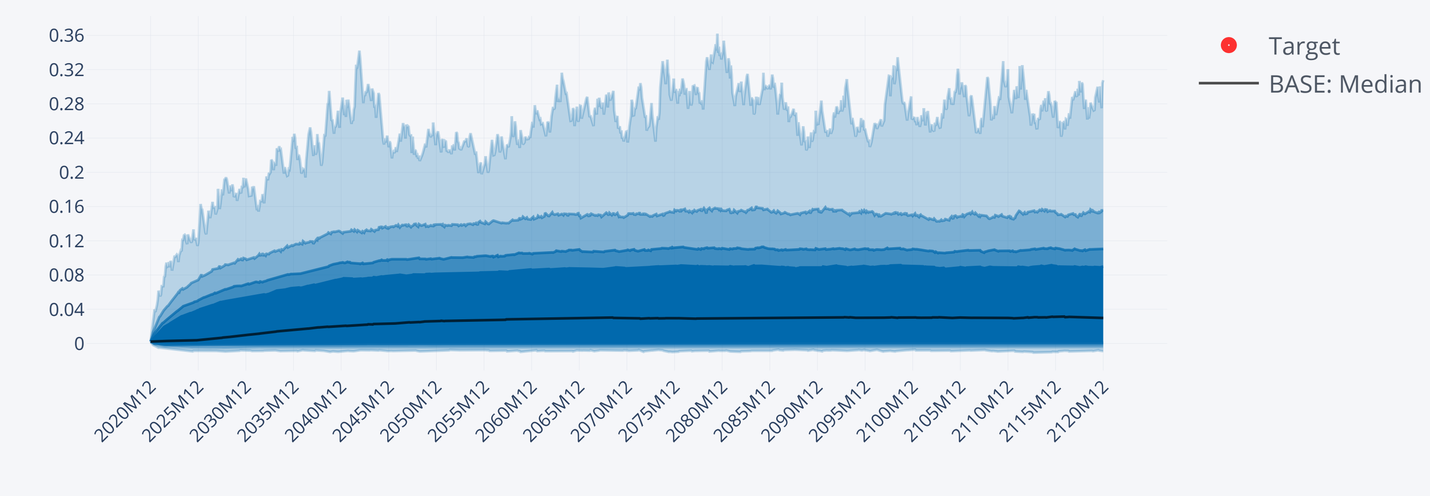
Simulated Data in Percentiles : US Treasury 6 Month Yield - Coupon

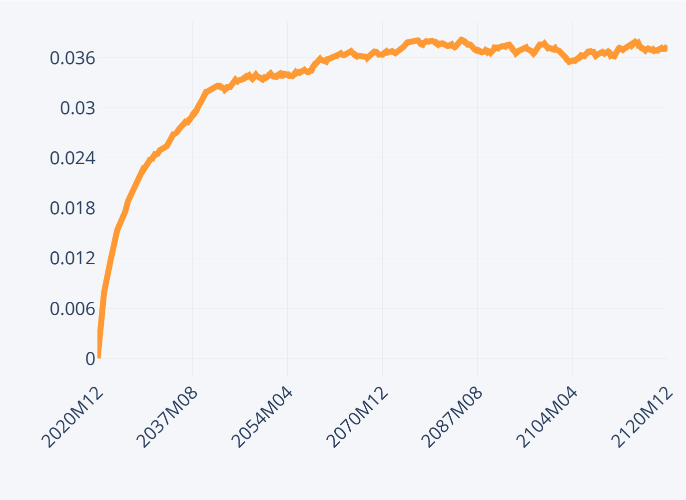


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

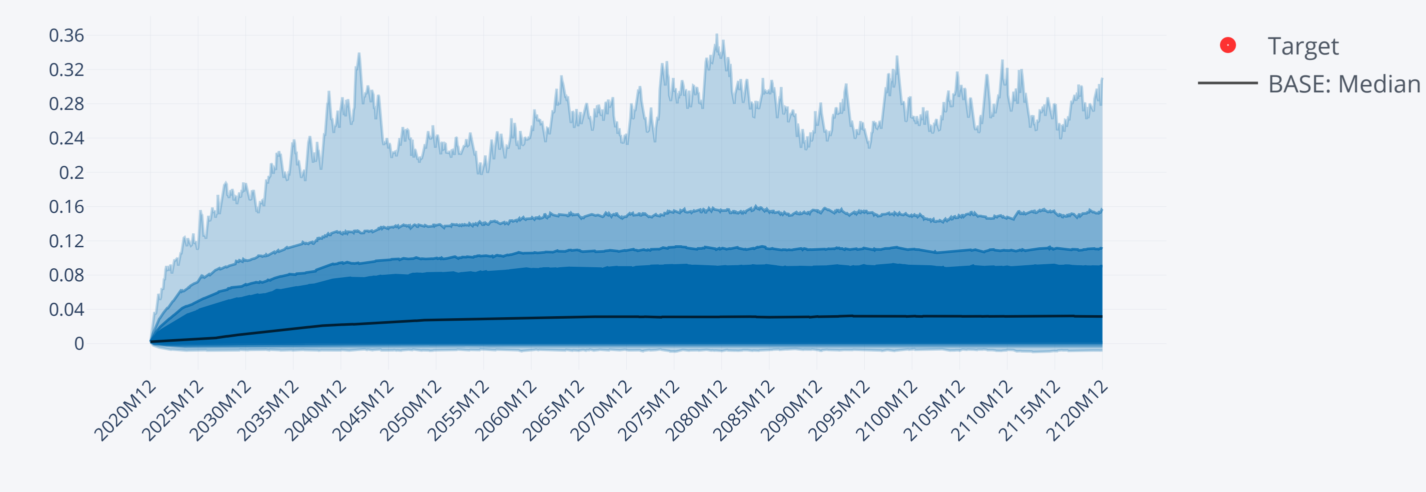
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0052	0.0340
std	0.0072	0.0339
min	-0.0050	-0.0084
1%	-0.0027	-0.0042
5%	-0.0013	-0.0016
10%	-0.0005	0.0003
50%	0.0027	0.0258
90%	0.0153	0.0815
95%	0.0211	0.0992
99%	0.0318	0.1390
max	0.0552	0.2433

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 1 Year Yield - Coupon

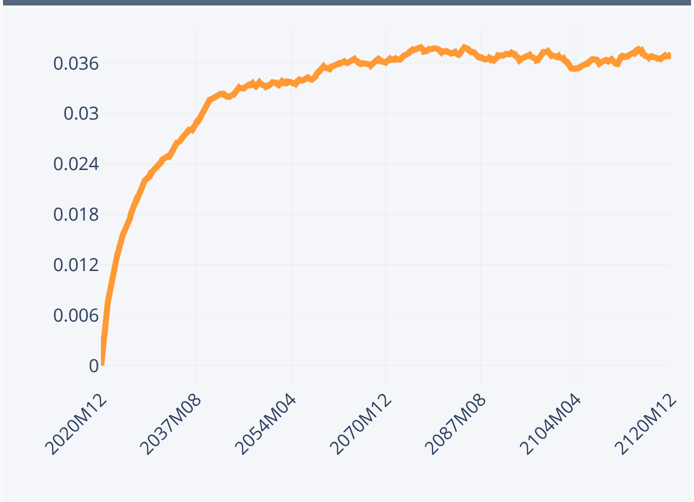


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0048	0.0352
std	0.0067	0.0336
min	-0.0048	-0.0079
1%	-0.0025	-0.0036
5%	-0.0013	-0.0010
10%	-0.0004	0.0008
50%	0.0026	0.0276
90%	0.0140	0.0823
95%	0.0193	0.0995
99%	0.0298	0.1380
max	0.0510	0.2395

Cross Sectional Volatility Over Time : BASE



US Treasury 2 Year Yield - Coupon

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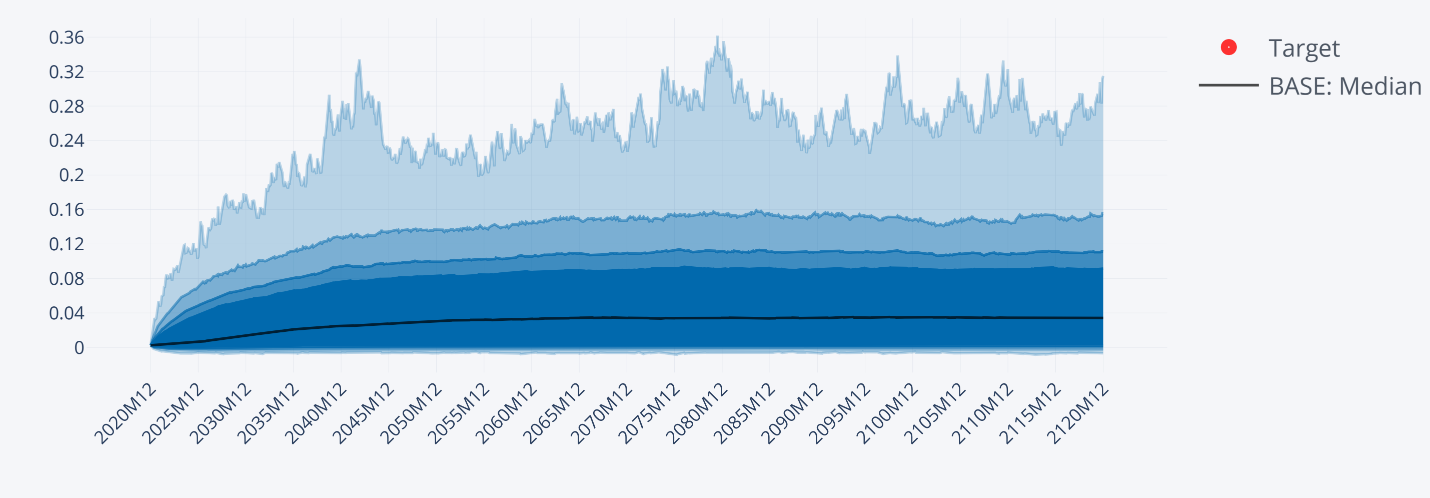
Simulated Data in Percentiles : US Treasury 2 Year Yield - Coupon

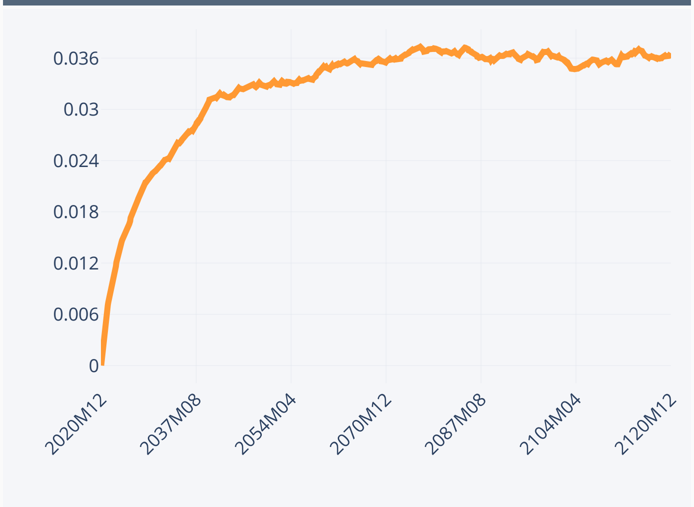


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

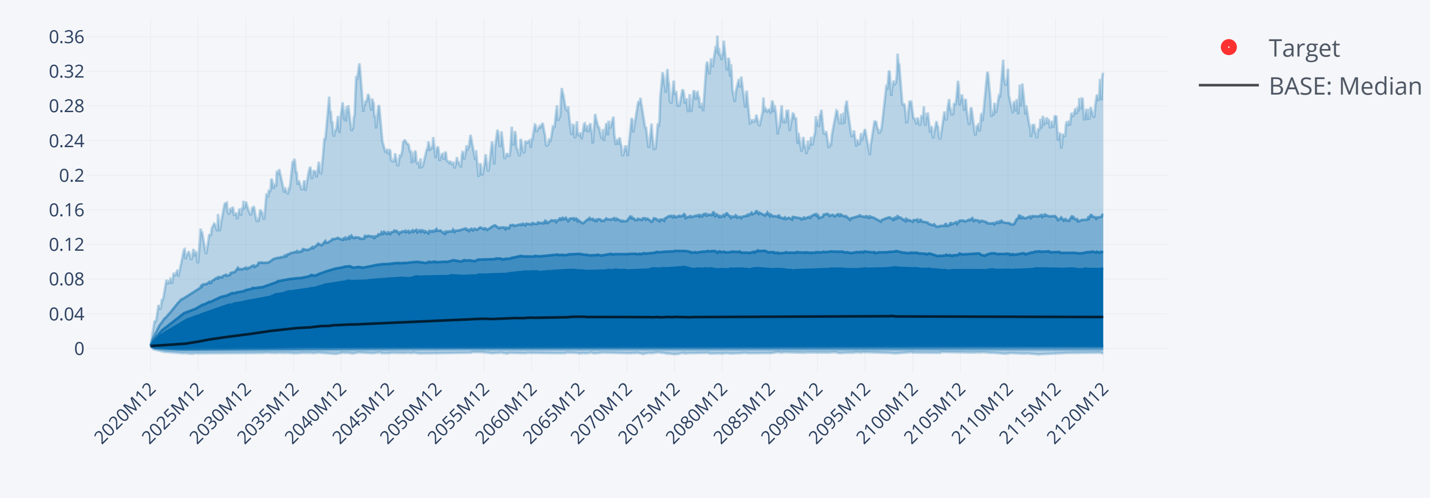
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0050	0.0371
std	0.0063	0.0330
min	-0.0041	-0.0067
1%	-0.0019	-0.0026
5%	-0.0007	-0.0000
10%	0.0000	0.0017
50%	0.0029	0.0304
90%	0.0138	0.0831
95%	0.0186	0.0994
99%	0.0283	0.1376
max	0.0473	0.2338

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 3 Year Yield - Coupon

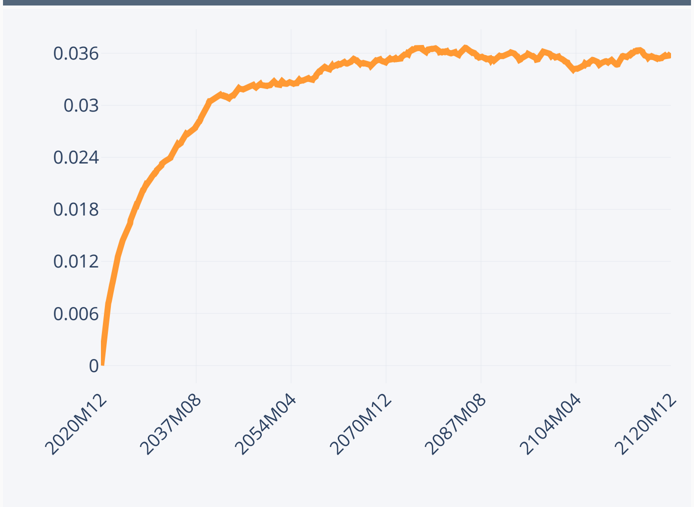


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

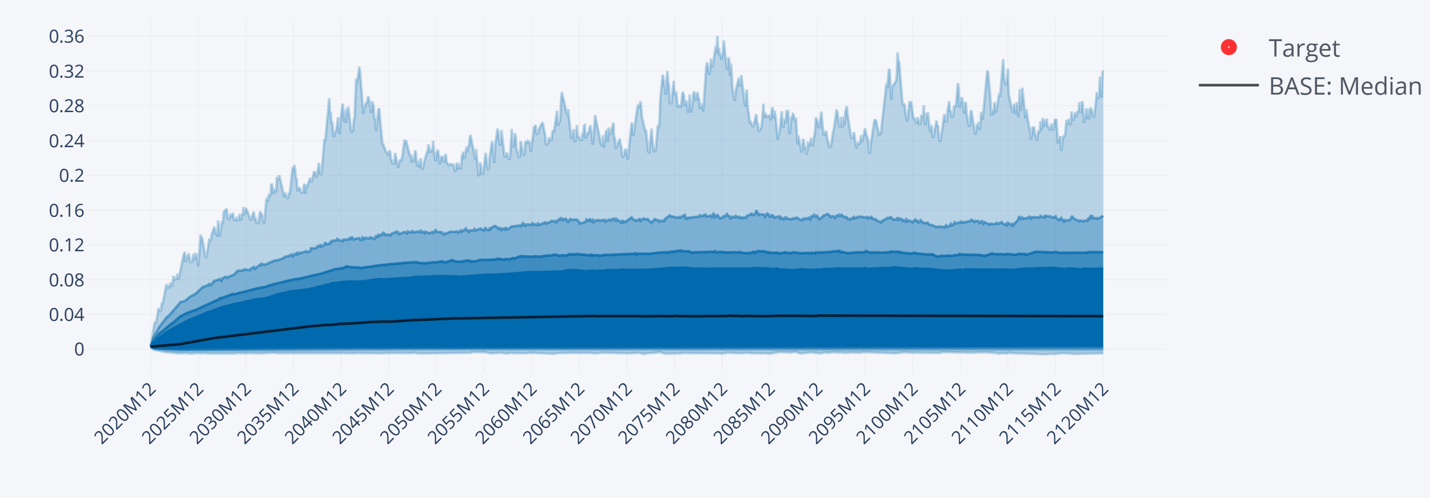
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0054	0.0387
std	0.0061	0.0325
min	-0.0033	-0.0057
1%	-0.0012	-0.0016
5%	-0.0001	0.0007
10%	0.0005	0.0024
50%	0.0032	0.0327
90%	0.0142	0.0837
95%	0.0185	0.0996
99%	0.0274	0.1377
max	0.0445	0.2291

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 4 Year Yield - Coupon

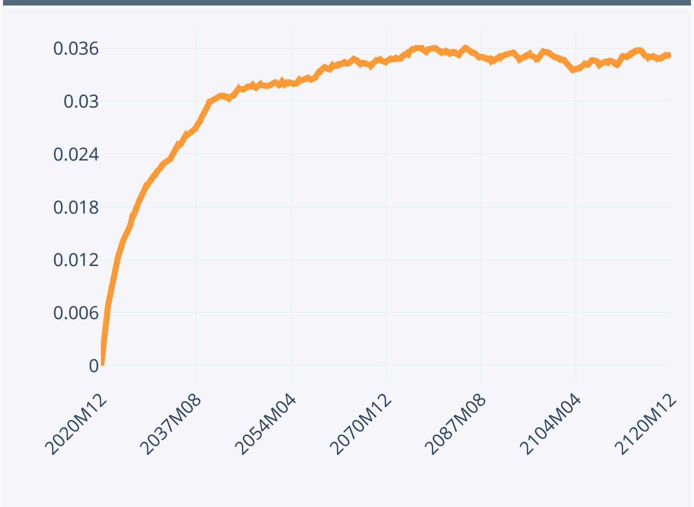


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0059	0.0402
std	0.0060	0.0320
min	-0.0026	-0.0047
1%	-0.0006	-0.0008
5%	0.0004	0.0014
10%	0.0010	0.0031
50%	0.0035	0.0346
90%	0.0146	0.0841
95%	0.0186	0.1000
99%	0.0269	0.1351
max	0.0430	0.2253

Cross Sectional Volatility Over Time : BASE



US Treasury 5 Year Yield - Coupon
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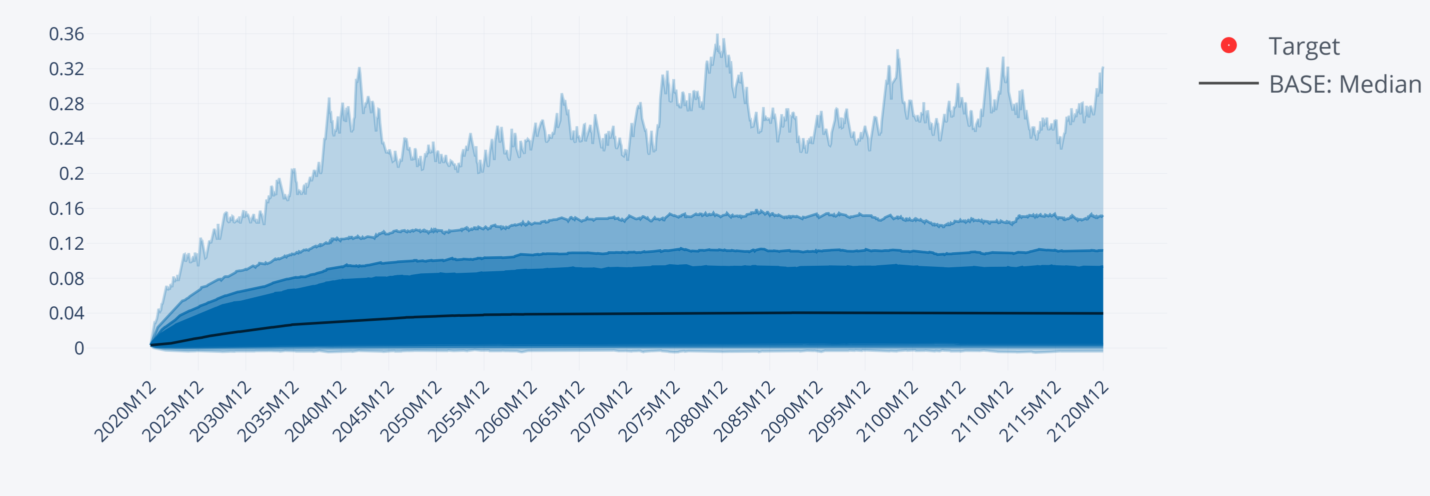
Simulated Data in Percentiles : US Treasury 5 Year Yield - Coupon

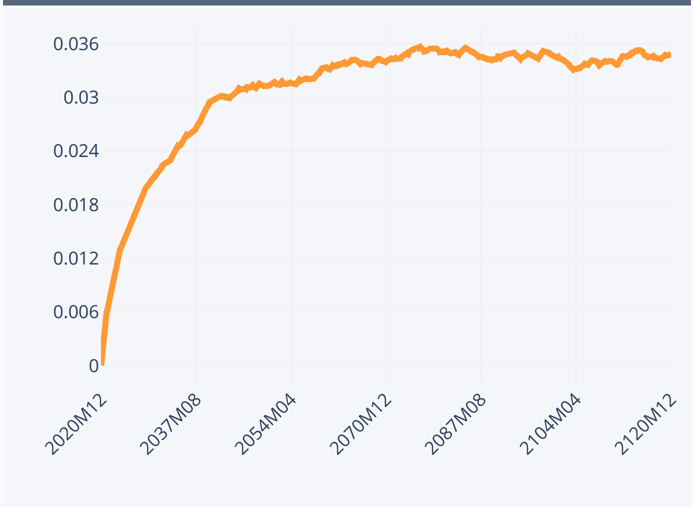


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

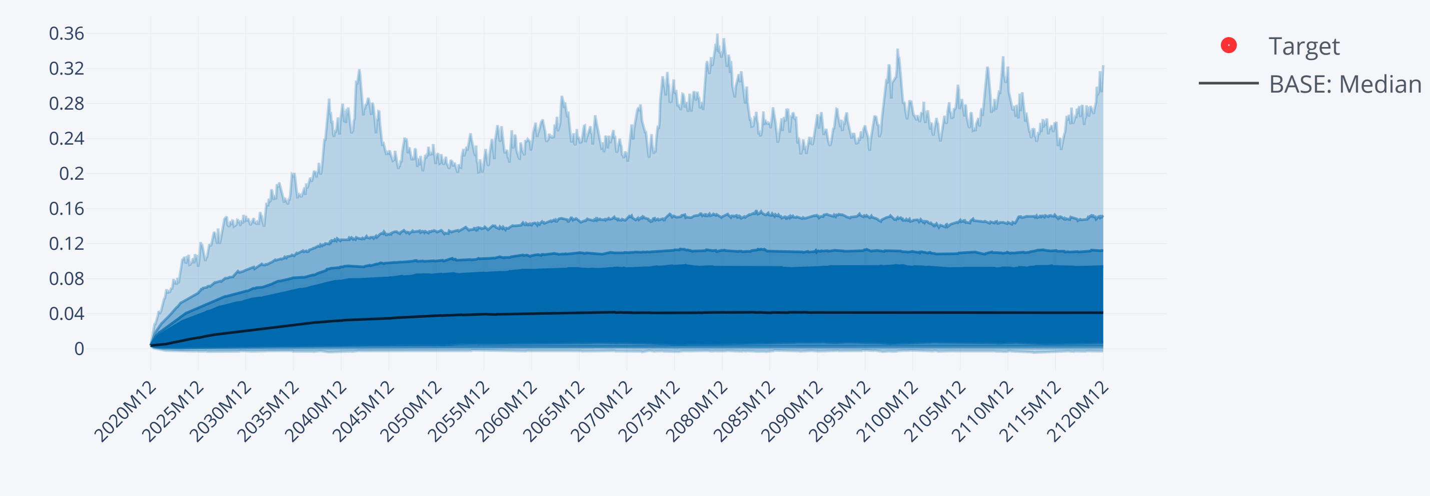
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0064	0.0415
std	0.0060	0.0315
min	-0.0019	-0.0039
1%	-0.0001	-0.0001
5%	0.0009	0.0020
10%	0.0015	0.0036
50%	0.0037	0.0364
90%	0.0152	0.0847
95%	0.0189	0.1003
99%	0.0264	0.1349
max	0.0420	0.2220

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 6 Year Yield - Coupon

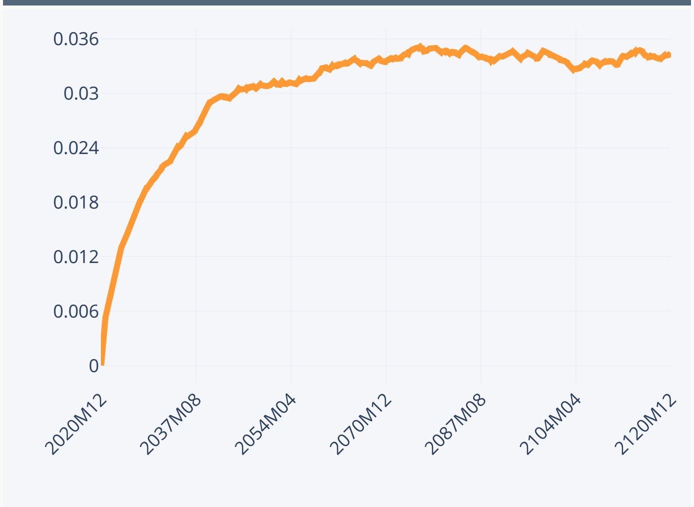


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

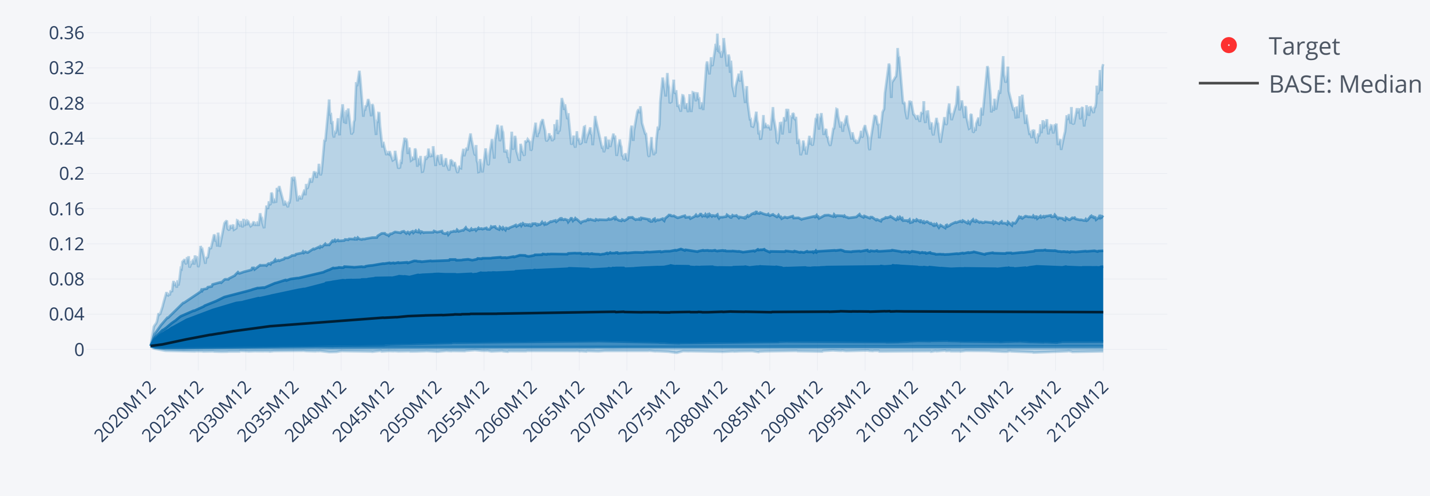
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0069	0.0427
std	0.0059	0.0311
min	-0.0013	-0.0031
1%	0.0004	0.0005
5%	0.0013	0.0026
10%	0.0019	0.0045
50%	0.0040	0.0377
90%	0.0157	0.0852
95%	0.0191	0.1004
99%	0.0261	0.1338
max	0.0411	0.2192

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 7 Year Yield - Coupon

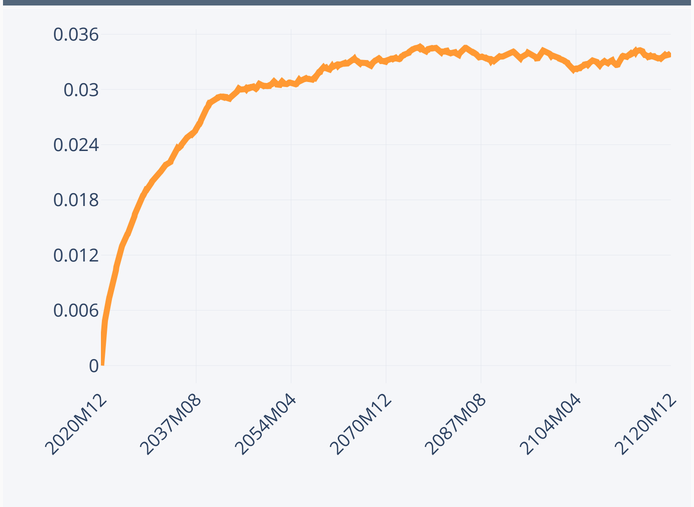


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0075	0.0437
std	0.0059	0.0306
min	-0.0008	-0.0024
1%	0.0008	0.0011
5%	0.0017	0.0030
10%	0.0022	0.0066
50%	0.0052	0.0389
90%	0.0162	0.0857
95%	0.0193	0.1003
99%	0.0262	0.1335
max	0.0403	0.2169

Cross Sectional Volatility Over Time : BASE



US Treasury 8 Year Yield - Coupon

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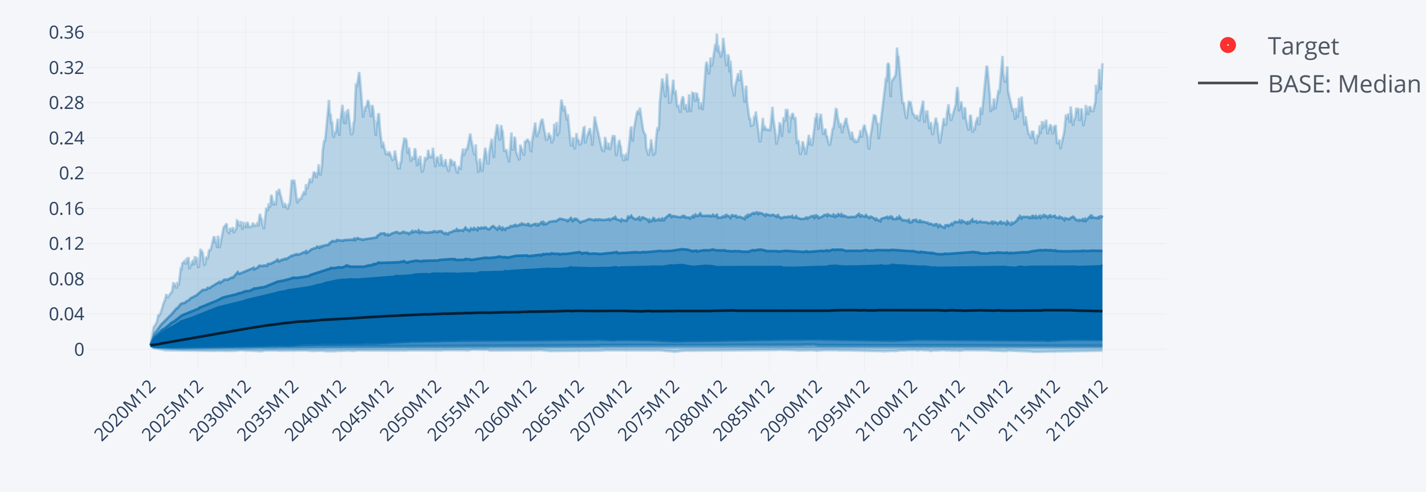
Simulated Data in Percentiles : US Treasury 8 Year Yield - Coupon

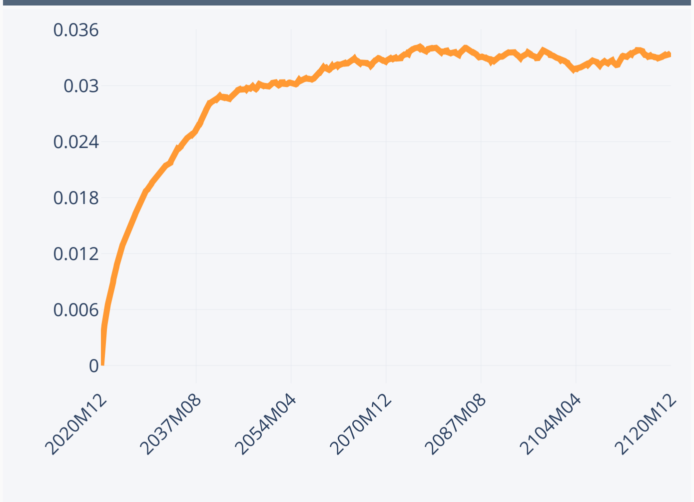


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

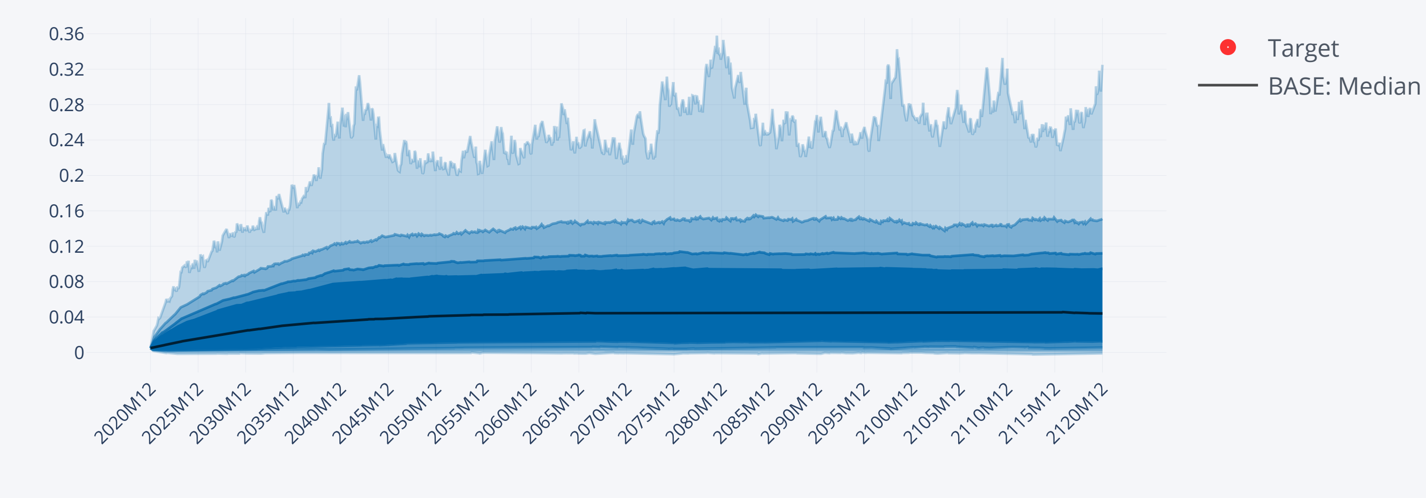
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0080	0.0447
std	0.0059	0.0302
min	-0.0004	-0.0018
1%	0.0012	0.0016
5%	0.0020	0.0035
10%	0.0026	0.0085
50%	0.0062	0.0400
90%	0.0166	0.0862
95%	0.0196	0.1004
99%	0.0262	0.1331
max	0.0396	0.2148

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 9 Year Yield - Coupon

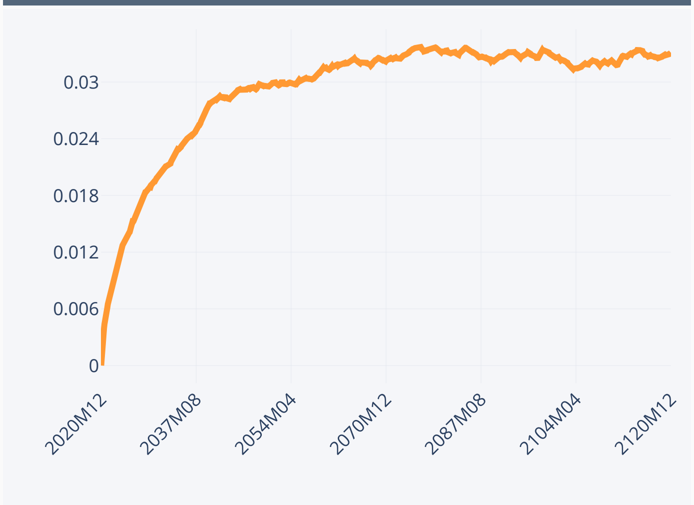


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

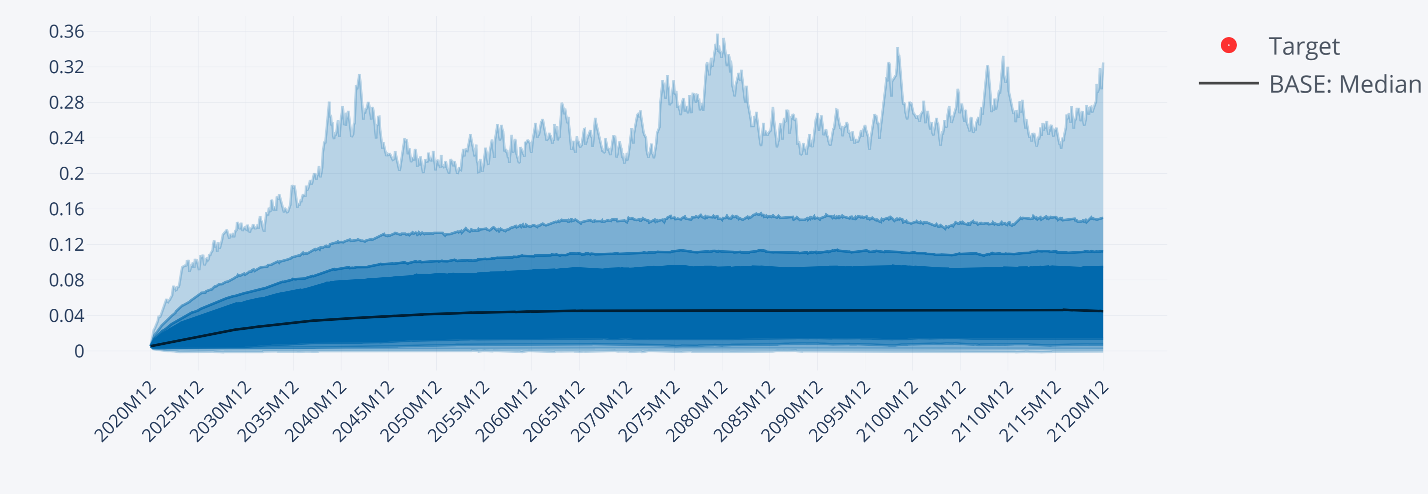
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0086	0.0455
std	0.0059	0.0298
min	0.0000	-0.0012
1%	0.0016	0.0021
5%	0.0024	0.0039
10%	0.0029	0.0102
50%	0.0072	0.0409
90%	0.0170	0.0866
95%	0.0199	0.1005
99%	0.0263	0.1329
max	0.0390	0.2130

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 10 Year Yield - Coupon

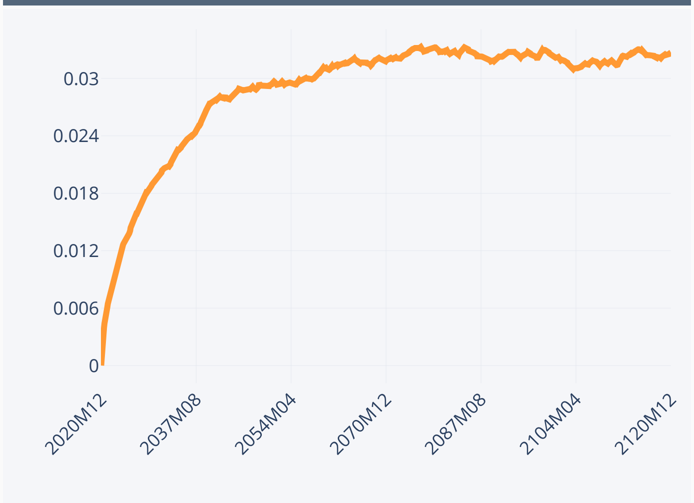


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

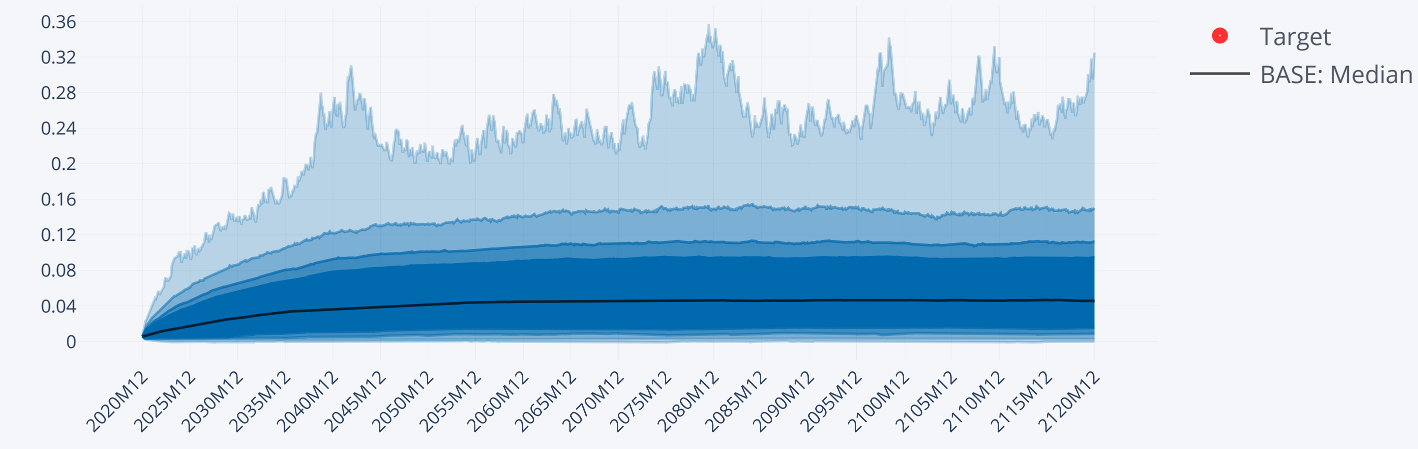
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0092	0.0462
std	0.0059	0.0295
min	0.0004	-0.0007
1%	0.0019	0.0024
5%	0.0027	0.0052
10%	0.0031	0.0116
50%	0.0080	0.0418
90%	0.0175	0.0867
95%	0.0202	0.1006
99%	0.0263	0.1329
max	0.0386	0.2114

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 11 Year Yield - Coupon

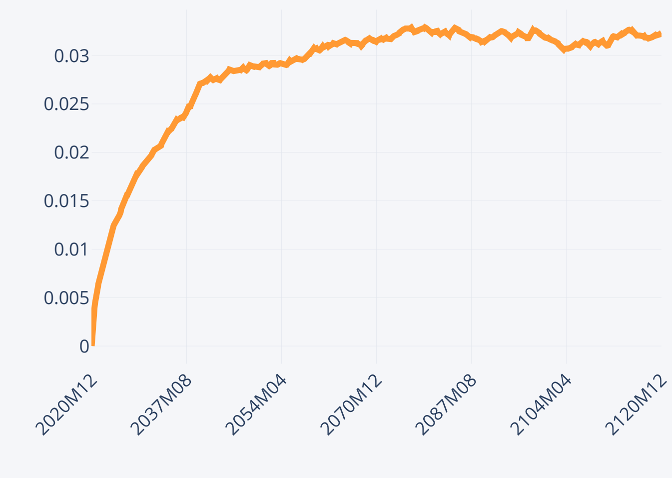


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

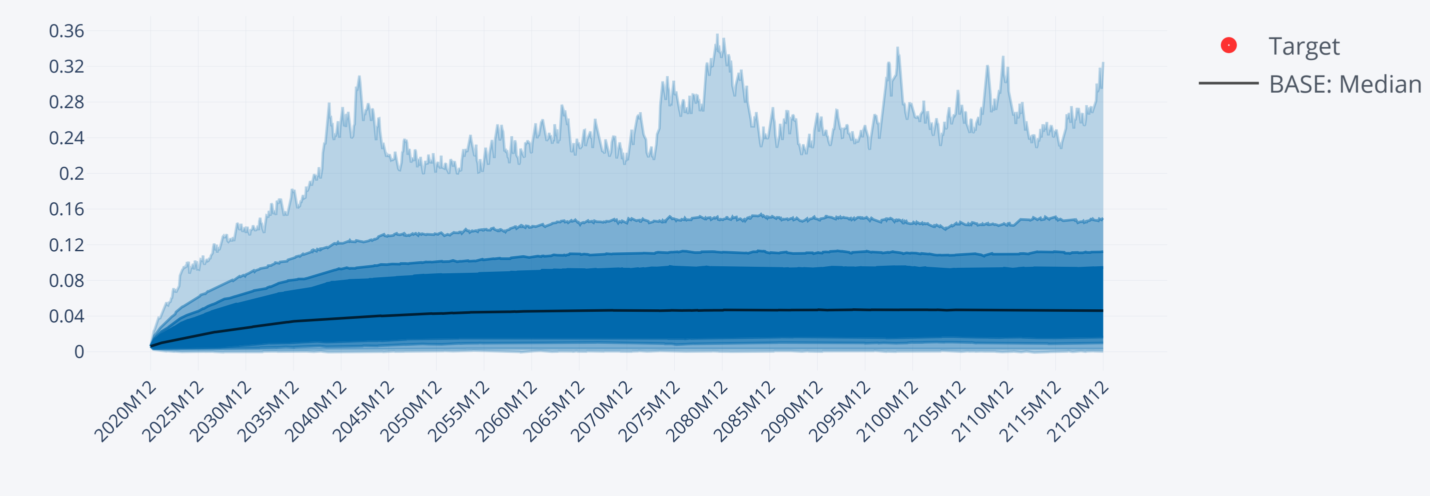
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0098	0.0468
std	0.0059	0.0291
min	0.0007	-0.0003
1%	0.0022	0.0028
5%	0.0029	0.0067
10%	0.0034	0.0130
50%	0.0088	0.0425
90%	0.0180	0.0866
95%	0.0206	0.1007
99%	0.0264	0.1325
max	0.0381	0.2101

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 12 Year Yield - Coupon

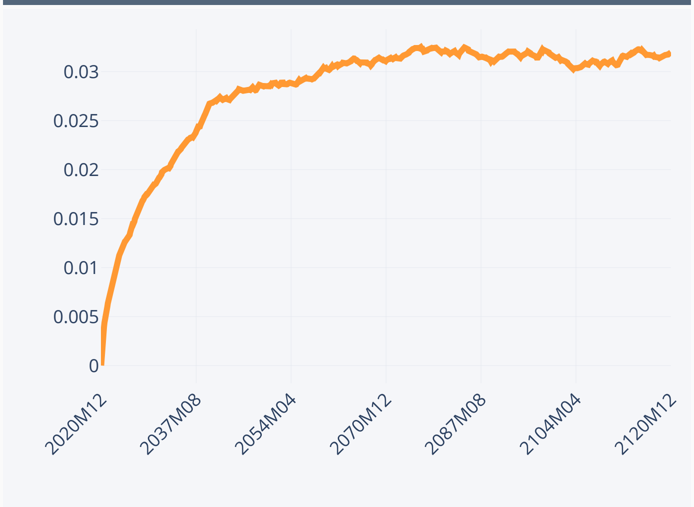


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

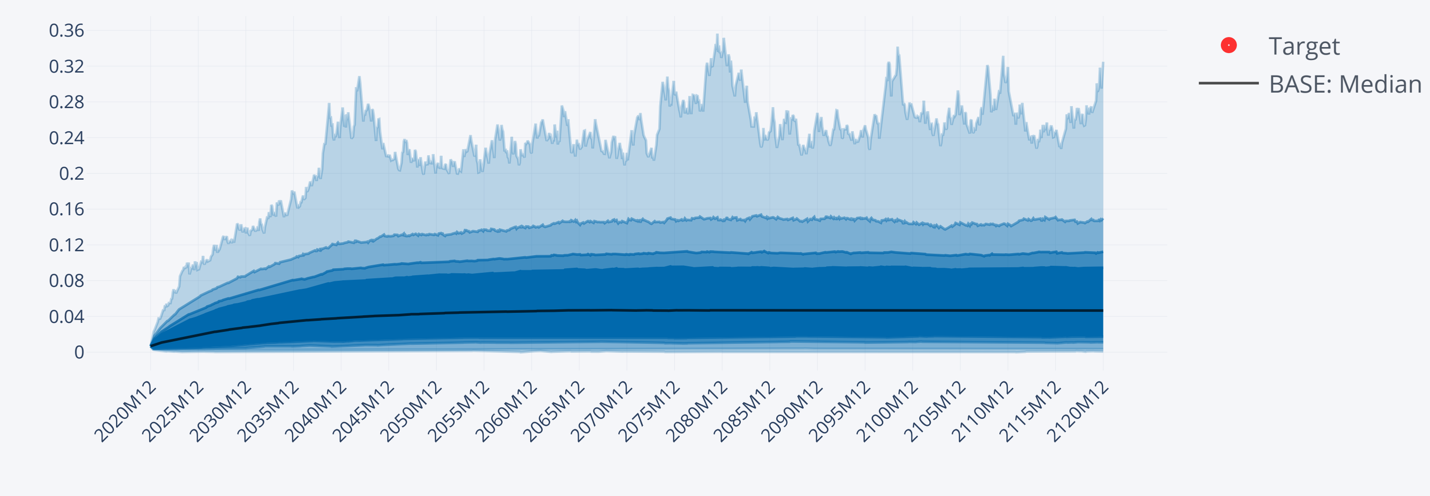
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0103	0.0474
std	0.0058	0.0288
min	0.0010	0.0002
1%	0.0025	0.0031
5%	0.0032	0.0080
10%	0.0036	0.0141
50%	0.0096	0.0431
90%	0.0184	0.0866
95%	0.0209	0.1004
99%	0.0265	0.1322
max	0.0378	0.2088

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 13 Year Yield - Coupon

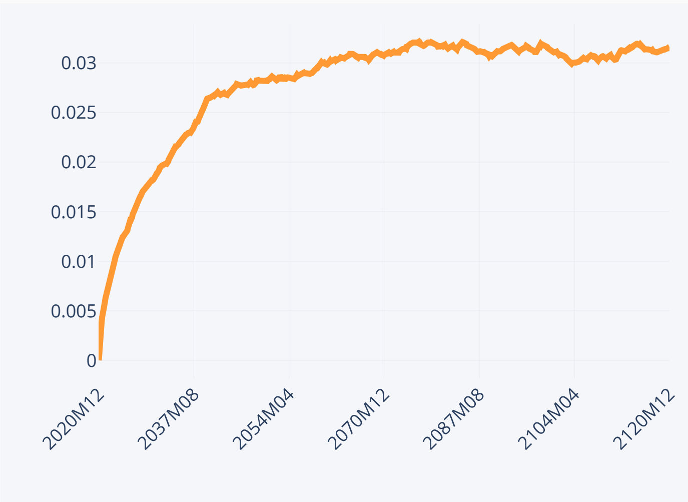


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

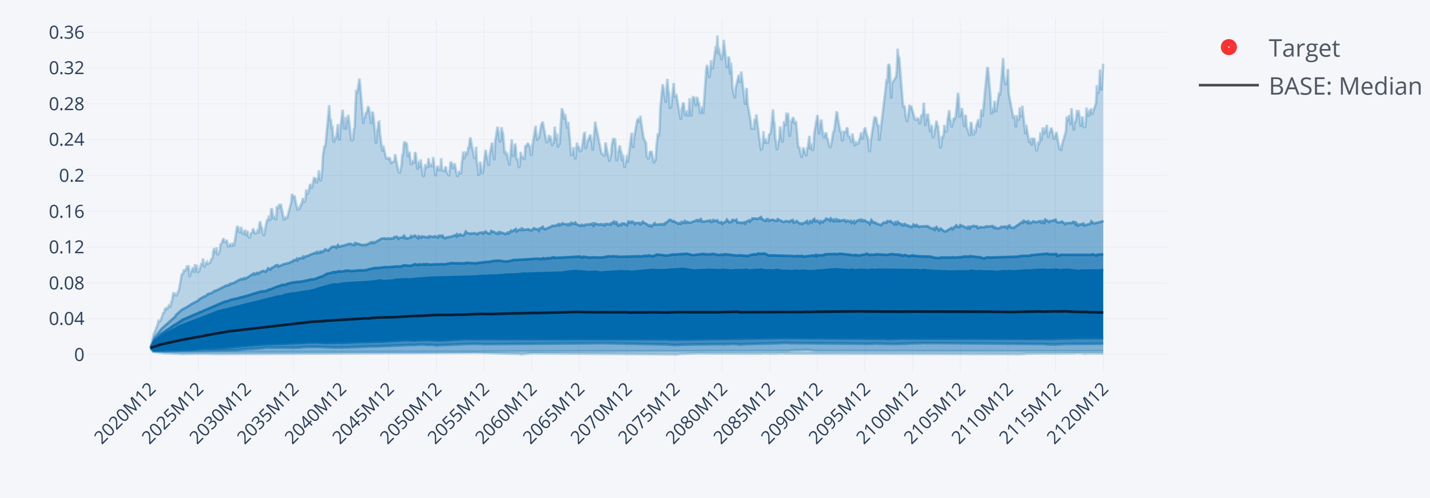
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0109	0.0479
std	0.0057	0.0284
min	0.0013	0.0005
1%	0.0027	0.0034
5%	0.0034	0.0091
10%	0.0038	0.0152
50%	0.0103	0.0437
90%	0.0188	0.0867
95%	0.0213	0.1005
99%	0.0267	0.1320
max	0.0375	0.2077

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 14 Year Yield - Coupon

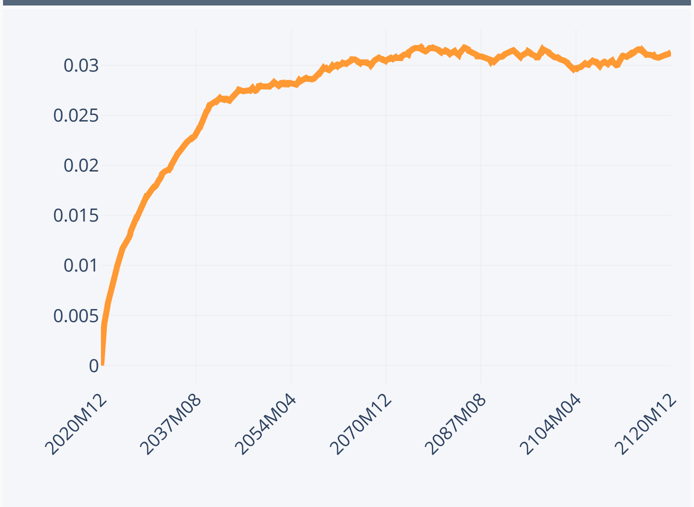


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

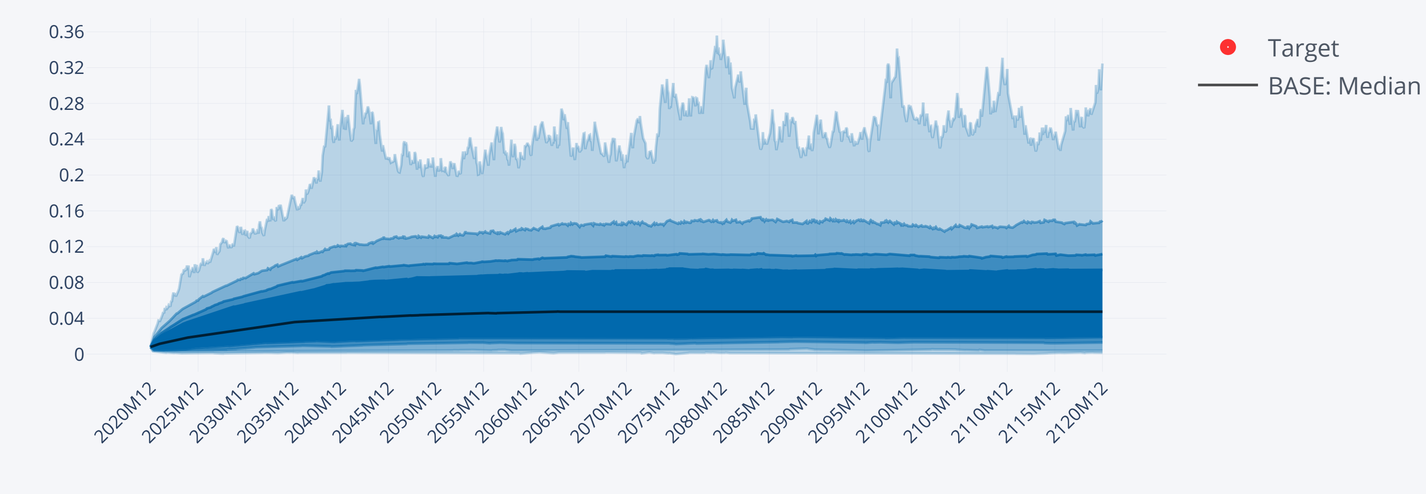
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0115	0.0483
std	0.0057	0.0281
min	0.0016	0.0009
1%	0.0030	0.0037
5%	0.0036	0.0103
10%	0.0040	0.0162
50%	0.0110	0.0441
90%	0.0191	0.0867
95%	0.0216	0.1004
99%	0.0269	0.1319
max	0.0373	0.2067

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 15 Year Yield - Coupon

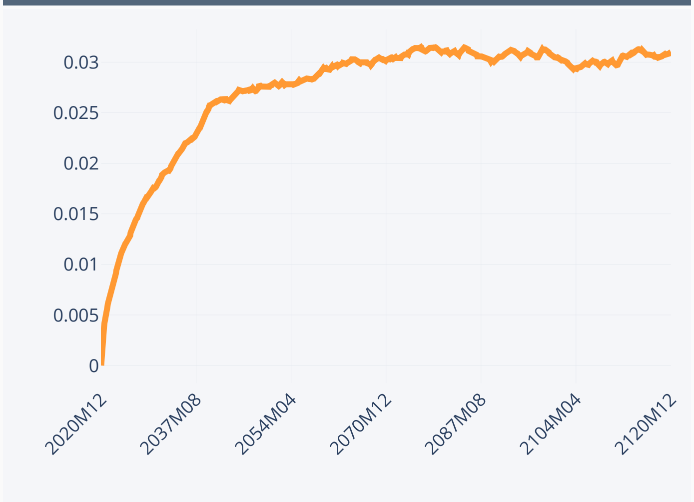


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0121	0.0486
std	0.0056	0.0278
min	0.0018	0.0012
1%	0.0032	0.0039
5%	0.0038	0.0112
10%	0.0049	0.0170
50%	0.0116	0.0445
90%	0.0196	0.0866
95%	0.0219	0.1002
99%	0.0272	0.1314
max	0.0371	0.2059

Cross Sectional Volatility Over Time : BASE



US Treasury 16 Year Yield - Coupon

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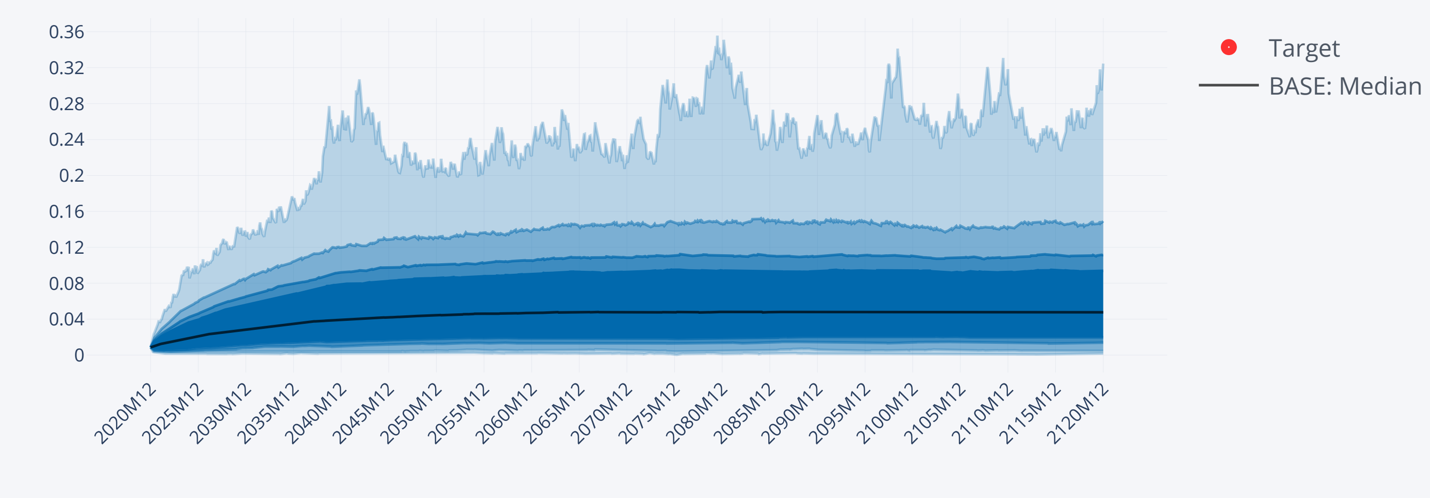
Validation Report

Simulated Data in Percentiles : US Treasury 16 Year Yield - Coupon

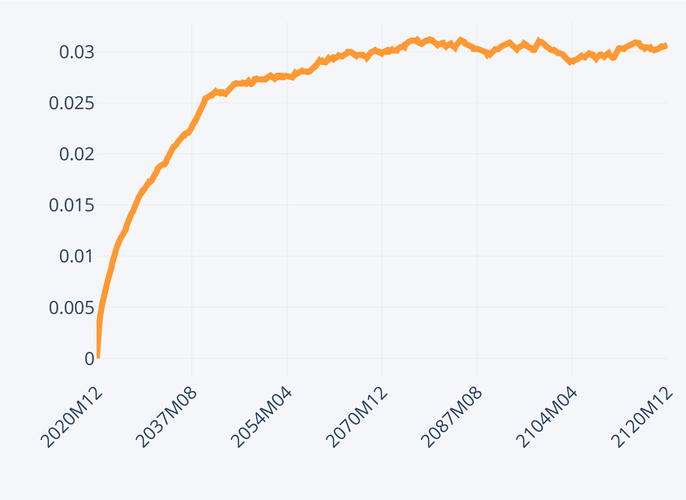


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0126	0.0489
std	0.0055	0.0275
min	0.0021	0.0015
1%	0.0034	0.0049
5%	0.0041	0.0121
10%	0.0058	0.0176
50%	0.0122	0.0448
90%	0.0199	0.0865
95%	0.0223	0.1002
99%	0.0274	0.1313
max	0.0369	0.2051

Cross Sectional Volatility Over Time : BASE



US Treasury 17 Year Yield - Coupon
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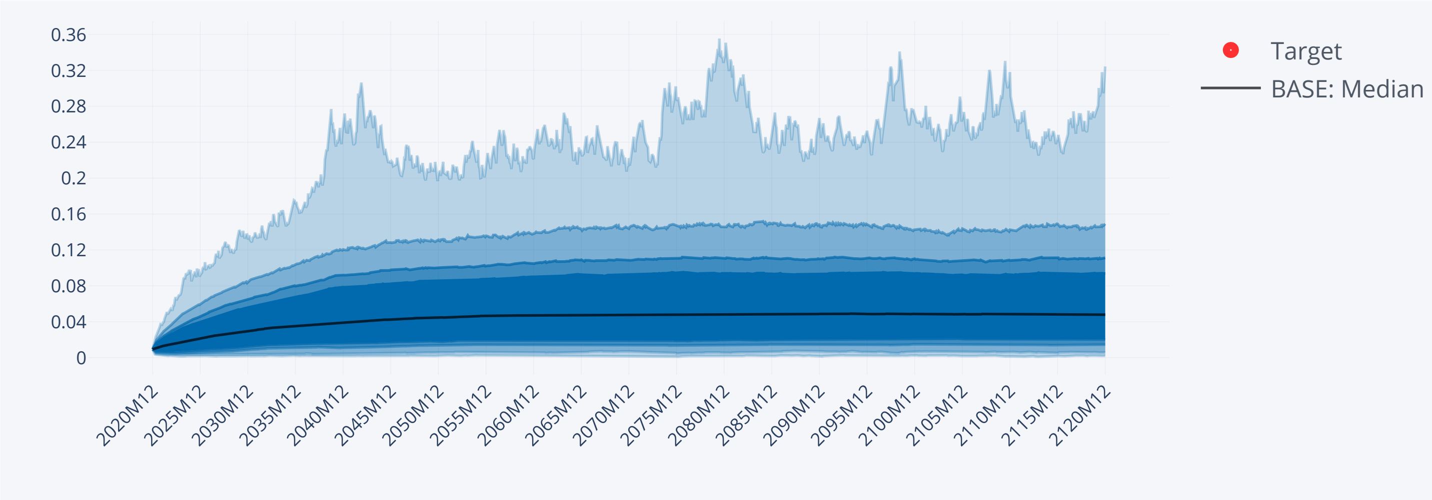
Mar 2020 - Higher Targets
Validation Report

Simulated Data in Percentiles : US Treasury 17 Year Yield - Coupon

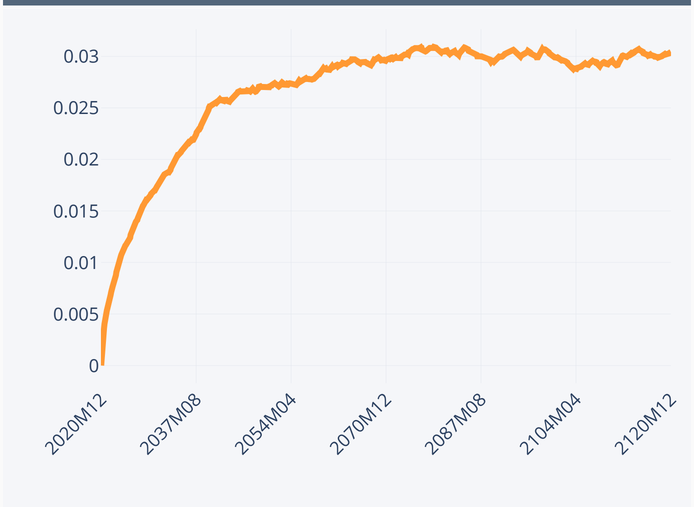


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0131	0.0492
std	0.0054	0.0272
min	0.0023	0.0018
1%	0.0036	0.0059
5%	0.0049	0.0129
10%	0.0065	0.0183
50%	0.0128	0.0450
90%	0.0203	0.0863
95%	0.0226	0.1000
99%	0.0276	0.1313
max	0.0368	0.2043

Cross Sectional Volatility Over Time : BASE



US Treasury 18 Year Yield - Coupon
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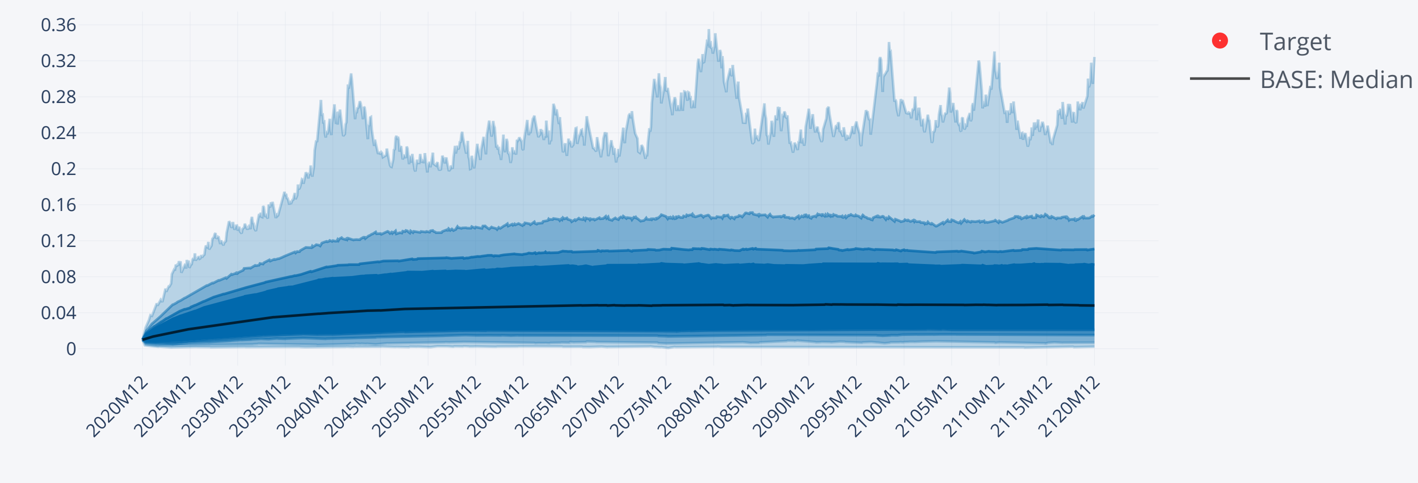
Validation Report

Simulated Data in Percentiles : US Treasury 18 Year Yield - Coupon

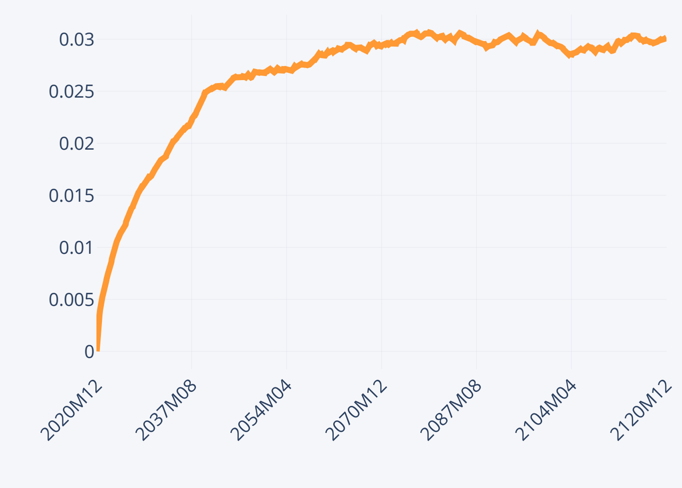


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

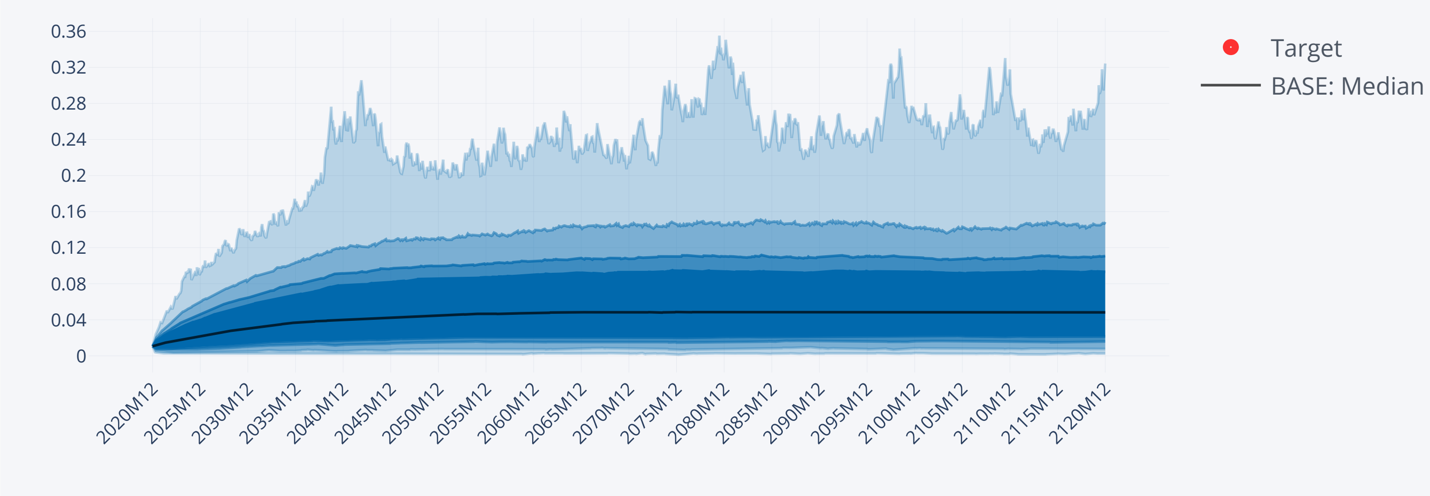
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0137	0.0494
std	0.0052	0.0270
min	0.0025	0.0020
1%	0.0038	0.0068
5%	0.0057	0.0137
10%	0.0073	0.0189
50%	0.0133	0.0452
90%	0.0206	0.0861
95%	0.0229	0.0997
99%	0.0278	0.1312
max	0.0366	0.2037

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 19 Year Yield - Coupon

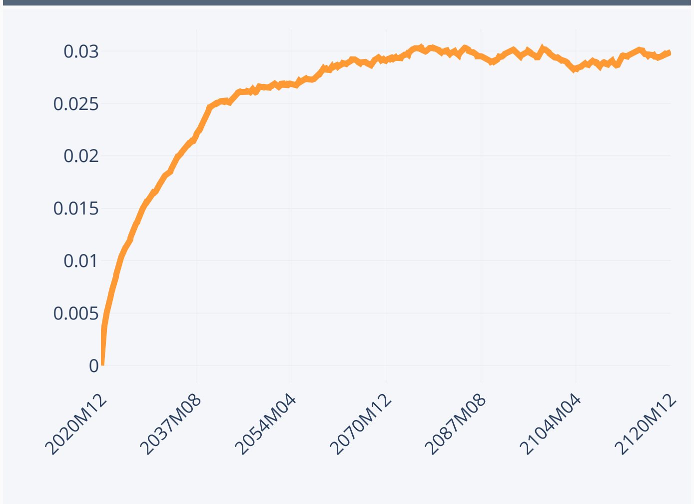


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

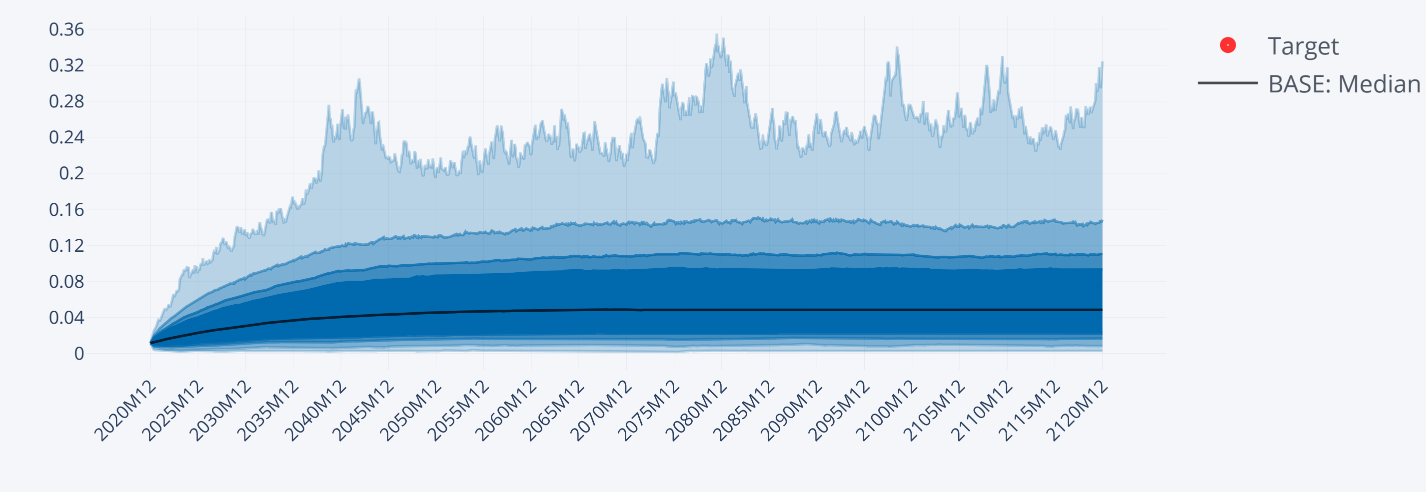
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0141	0.0496
std	0.0051	0.0267
min	0.0027	0.0023
1%	0.0039	0.0077
5%	0.0064	0.0143
10%	0.0079	0.0195
50%	0.0138	0.0454
90%	0.0209	0.0860
95%	0.0232	0.0995
99%	0.0280	0.1309
max	0.0365	0.2031

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 20 Year Yield - Coupon

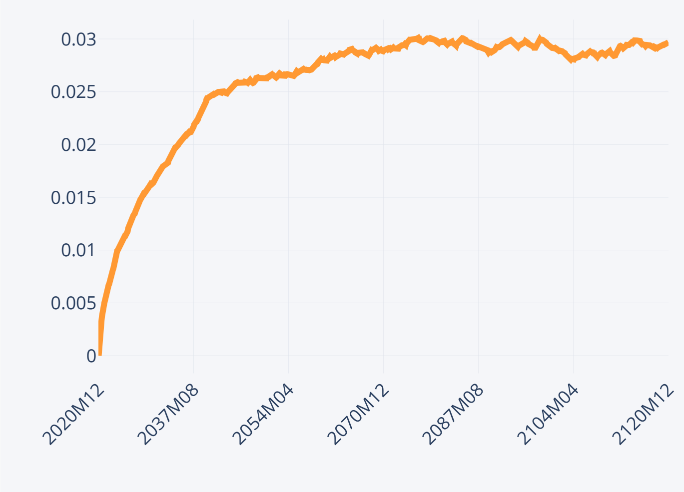


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0146	0.0498
std	0.0050	0.0265
min	0.0029	0.0025
1%	0.0046	0.0084
5%	0.0070	0.0149
10%	0.0085	0.0200
50%	0.0142	0.0456
90%	0.0213	0.0859
95%	0.0235	0.0993
99%	0.0281	0.1305
max	0.0364	0.2025

Cross Sectional Volatility Over Time : BASE



US Treasury 21 Year Yield - Coupon
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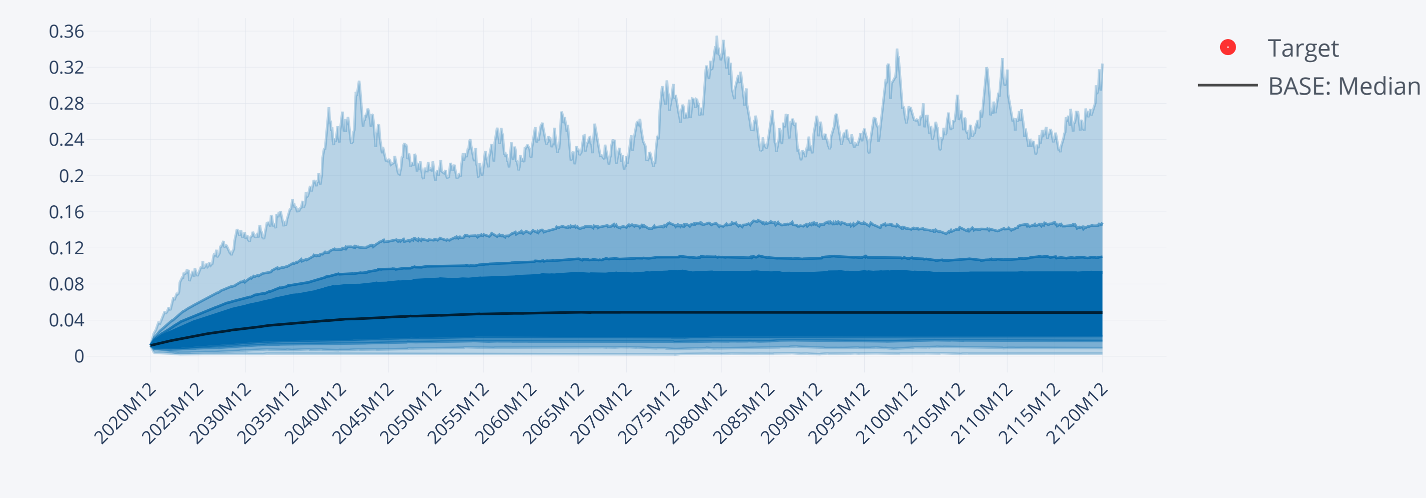
Validation Report

Simulated Data in Percentiles : US Treasury 21 Year Yield - Coupon

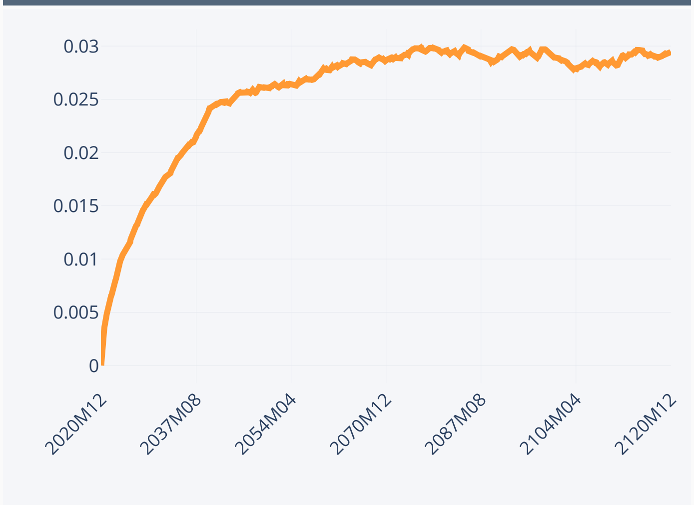


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

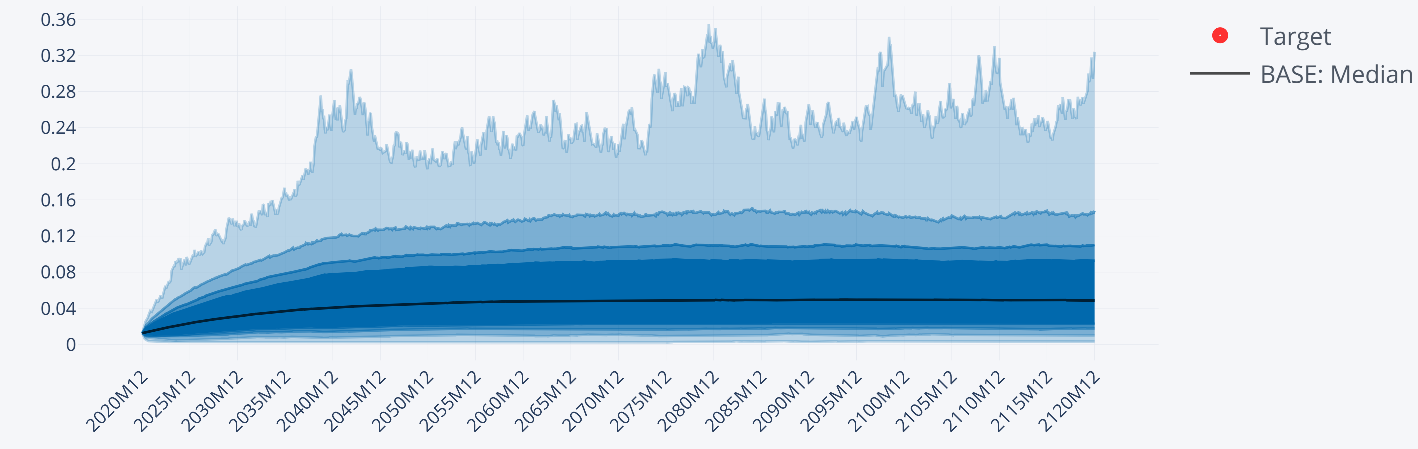
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0150	0.0499
std	0.0049	0.0263
min	0.0031	0.0027
1%	0.0053	0.0091
5%	0.0077	0.0154
10%	0.0091	0.0205
50%	0.0147	0.0457
90%	0.0216	0.0857
95%	0.0237	0.0990
99%	0.0282	0.1301
max	0.0363	0.2020

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 22 Year Yield - Coupon

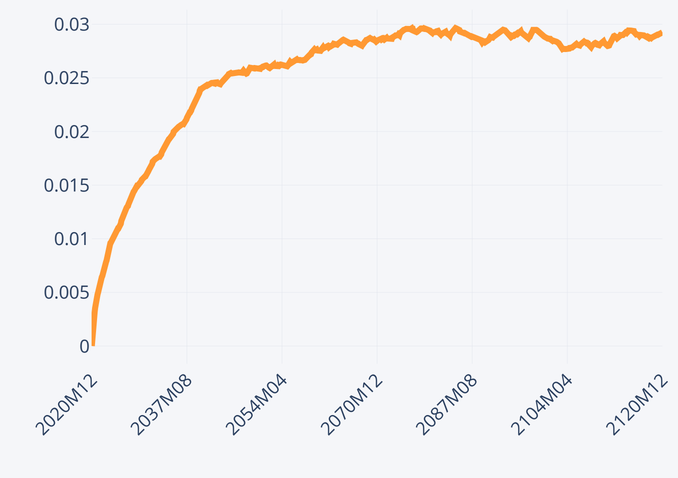


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0154	0.0500
std	0.0048	0.0261
min	0.0032	0.0029
1%	0.0060	0.0098
5%	0.0083	0.0160
10%	0.0097	0.0209
50%	0.0150	0.0457
90%	0.0218	0.0855
95%	0.0239	0.0988
99%	0.0283	0.1297
max	0.0363	0.2015

Cross Sectional Volatility Over Time : BASE



US Treasury 23 Year Yield - Coupon

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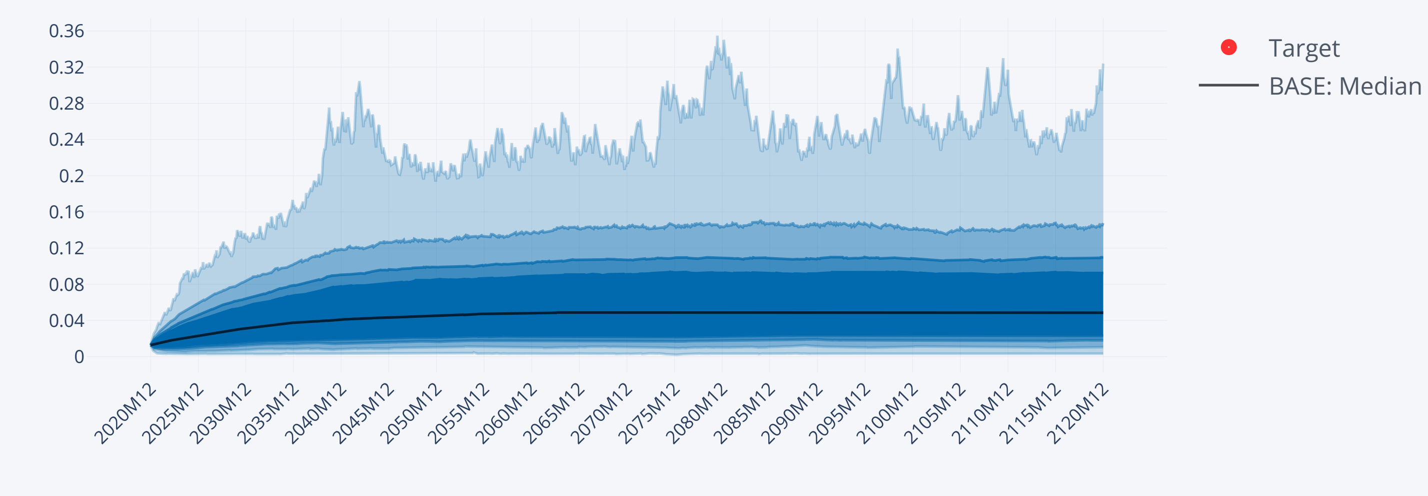
Validation Report

Simulated Data in Percentiles : US Treasury 23 Year Yield - Coupon



Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.

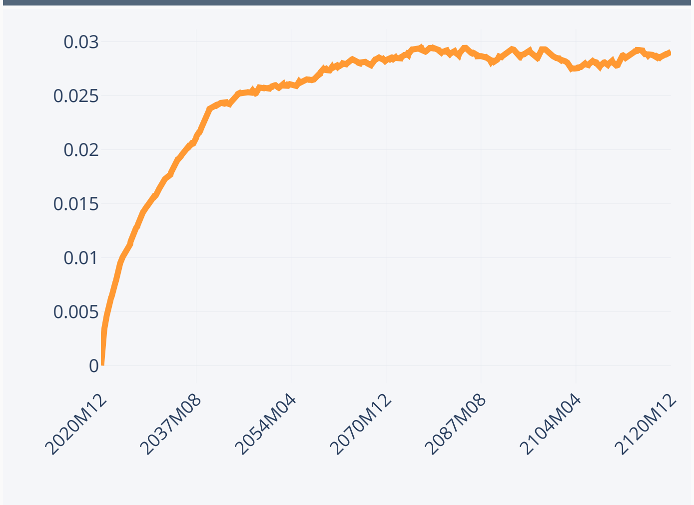
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max

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

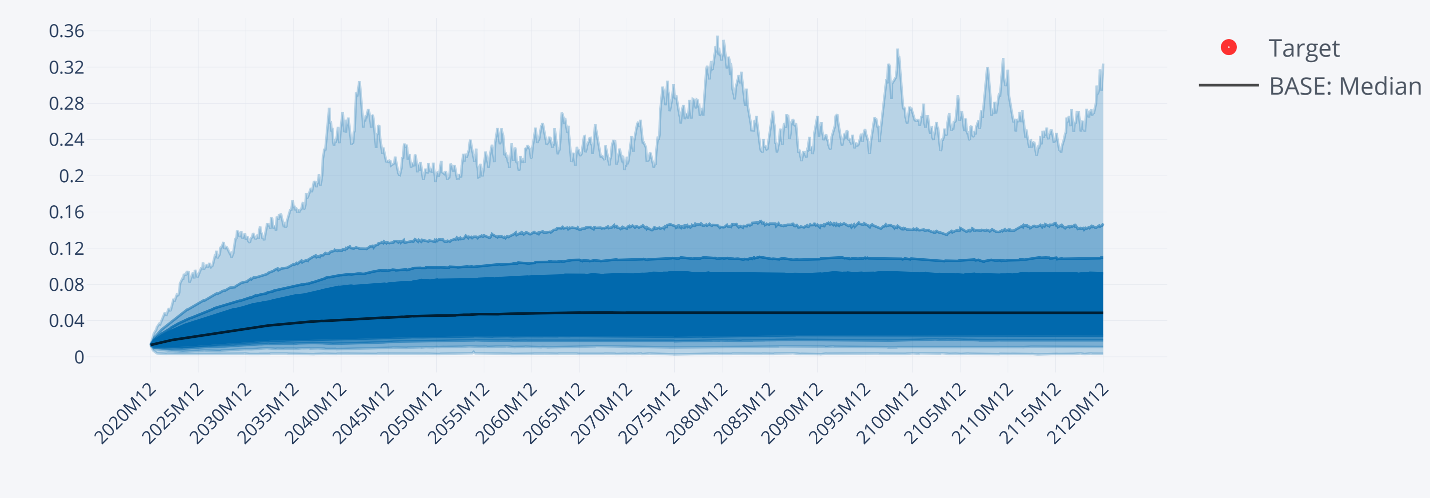
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0158	0.0501
std	0.0047	0.0259
min	0.0034	0.0031
1%	0.0066	0.0104
5%	0.0088	0.0164
10%	0.0102	0.0213
50%	0.0154	0.0458
90%	0.0221	0.0853
95%	0.0241	0.0985
99%	0.0285	0.1293
max	0.0362	0.2011

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 24 Year Yield - Coupon

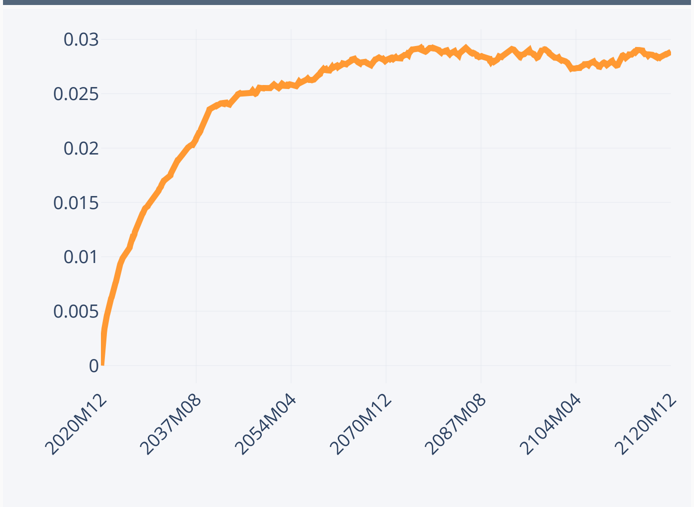


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

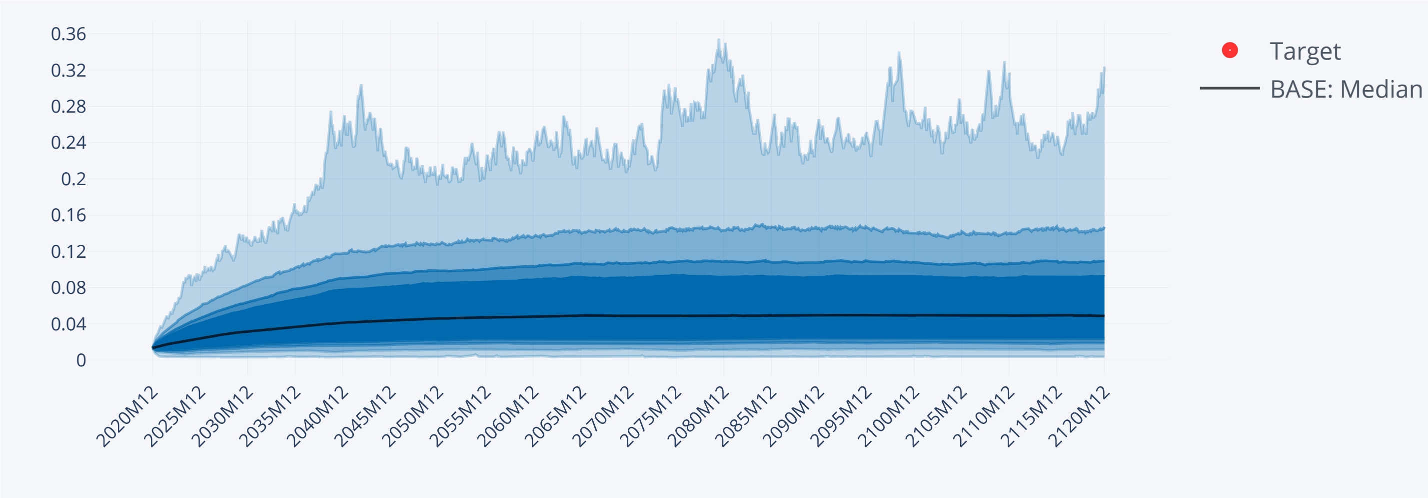
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0162	0.0502
std	0.0046	0.0257
min	0.0035	0.0032
1%	0.0072	0.0109
5%	0.0093	0.0169
10%	0.0106	0.0217
50%	0.0158	0.0459
90%	0.0223	0.0851
95%	0.0243	0.0983
99%	0.0286	0.1291
max	0.0361	0.2007

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 25 Year Yield - Coupon

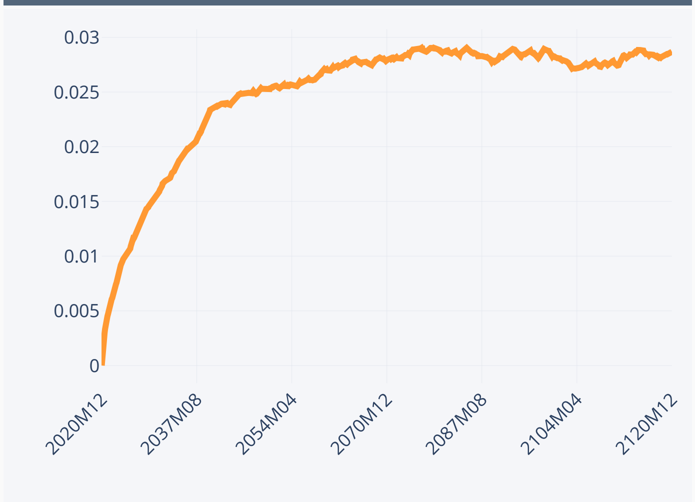


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

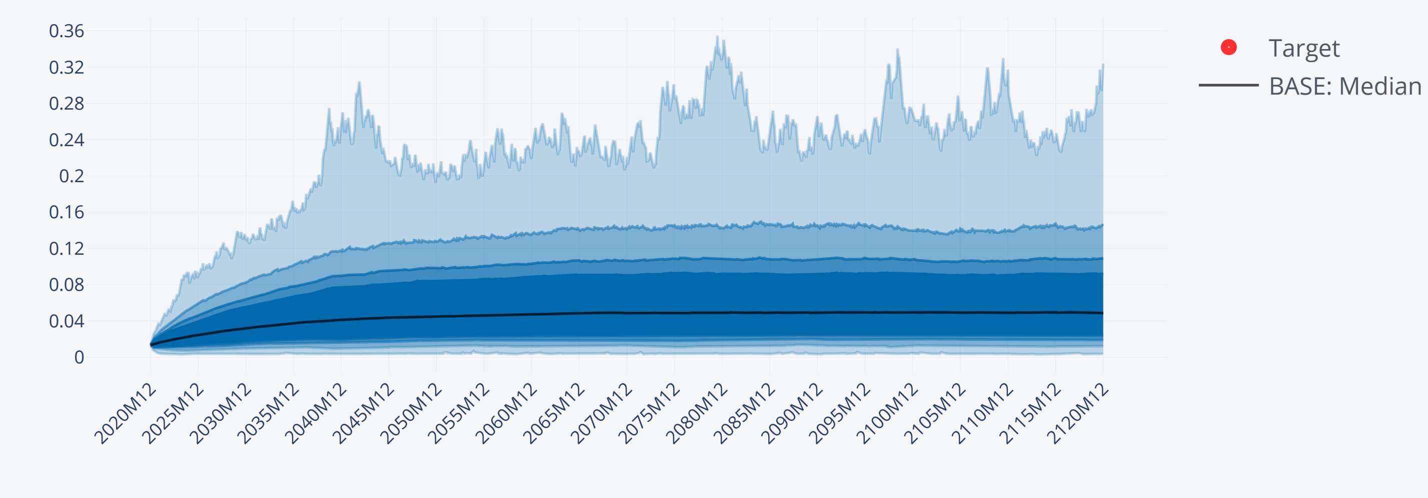
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0165	0.0502
std	0.0045	0.0255
min	0.0037	0.0034
1%	0.0077	0.0114
5%	0.0098	0.0172
10%	0.0111	0.0220
50%	0.0161	0.0459
90%	0.0225	0.0850
95%	0.0245	0.0981
99%	0.0287	0.1287
max	0.0360	0.2003

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 26 Year Yield - Coupon

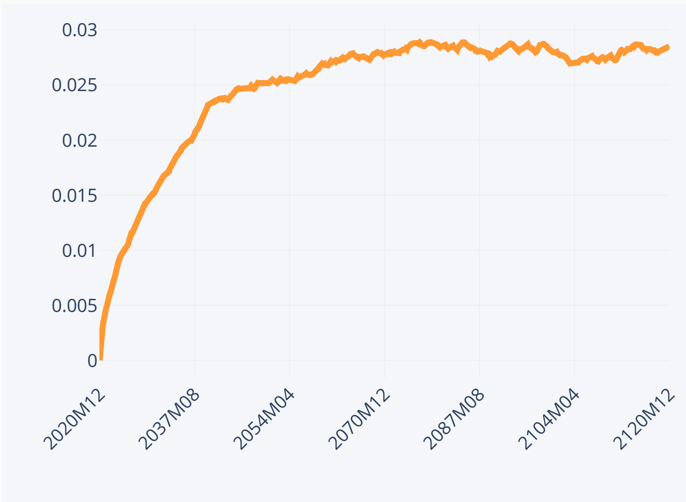


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

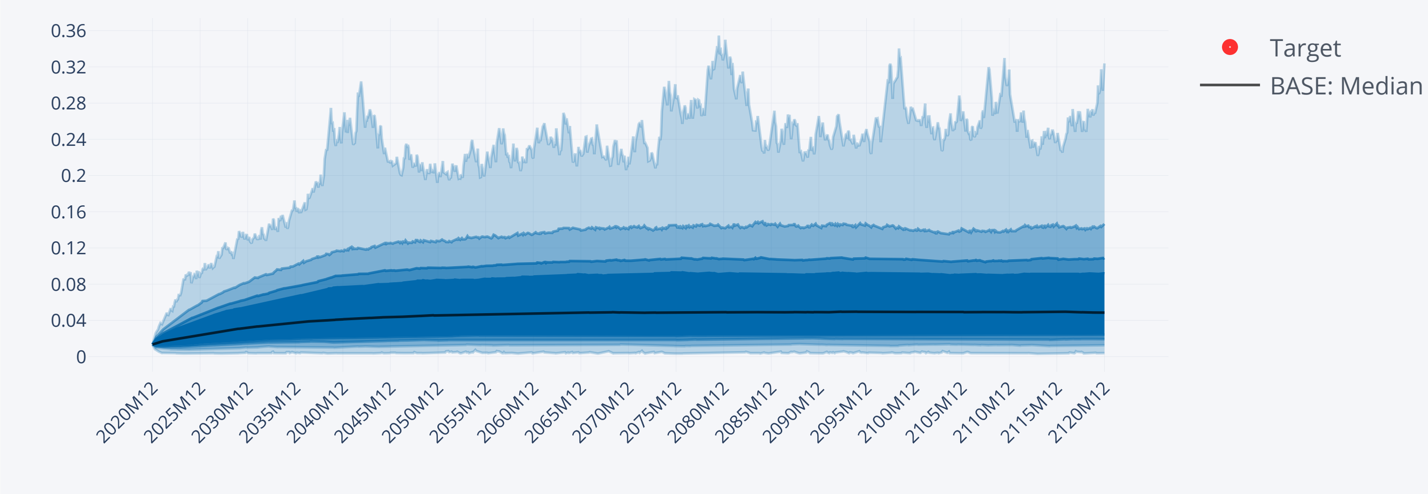
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0168	0.0502
std	0.0044	0.0253
min	0.0038	0.0036
1%	0.0082	0.0119
5%	0.0102	0.0176
10%	0.0115	0.0223
50%	0.0164	0.0459
90%	0.0227	0.0847
95%	0.0247	0.0979
99%	0.0288	0.1283
max	0.0360	0.1999

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 27 Year Yield - Coupon

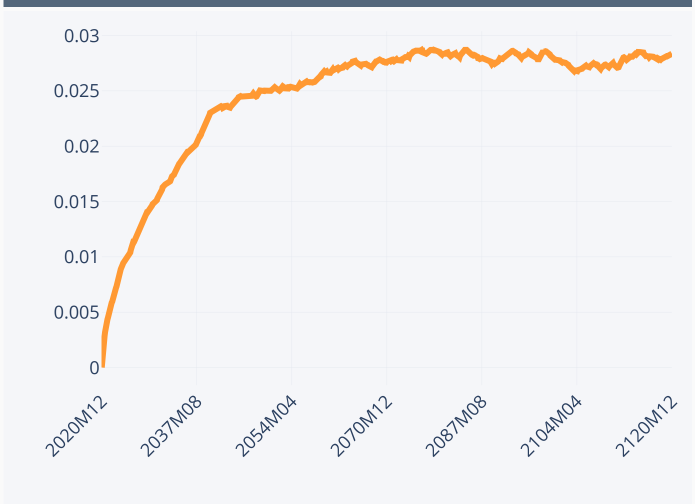


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

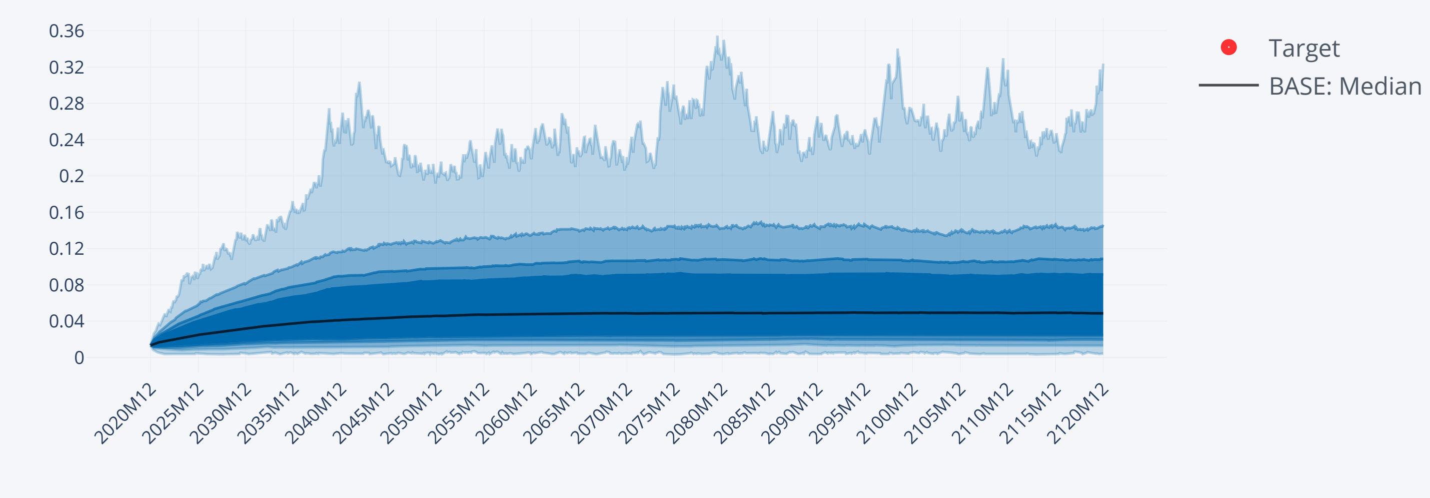
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0171	0.0503
std	0.0043	0.0251
min	0.0040	0.0037
1%	0.0086	0.0124
5%	0.0107	0.0179
10%	0.0119	0.0225
50%	0.0167	0.0459
90%	0.0229	0.0845
95%	0.0248	0.0977
99%	0.0289	0.1280
max	0.0359	0.1996

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 28 Year Yield - Coupon

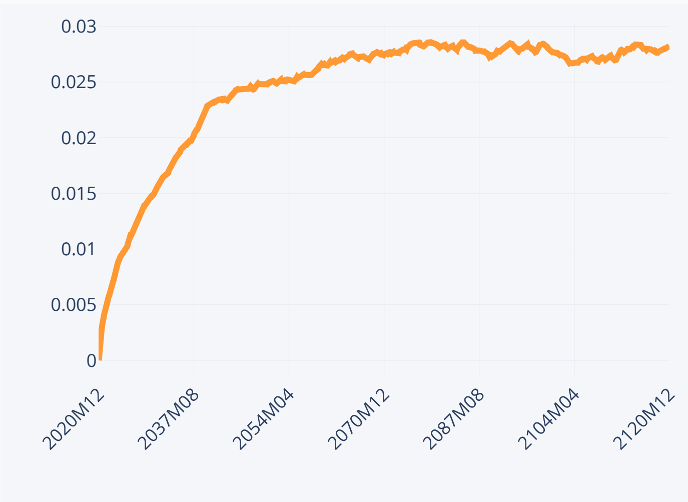


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0173	0.0503
std	0.0043	0.0250
min	0.0045	0.0038
1%	0.0091	0.0128
5%	0.0111	0.0183
10%	0.0122	0.0228
50%	0.0170	0.0459
90%	0.0230	0.0844
95%	0.0250	0.0975
99%	0.0290	0.1278
max	0.0358	0.1993

Cross Sectional Volatility Over Time : BASE



US Treasury 29 Year Yield - Coupon
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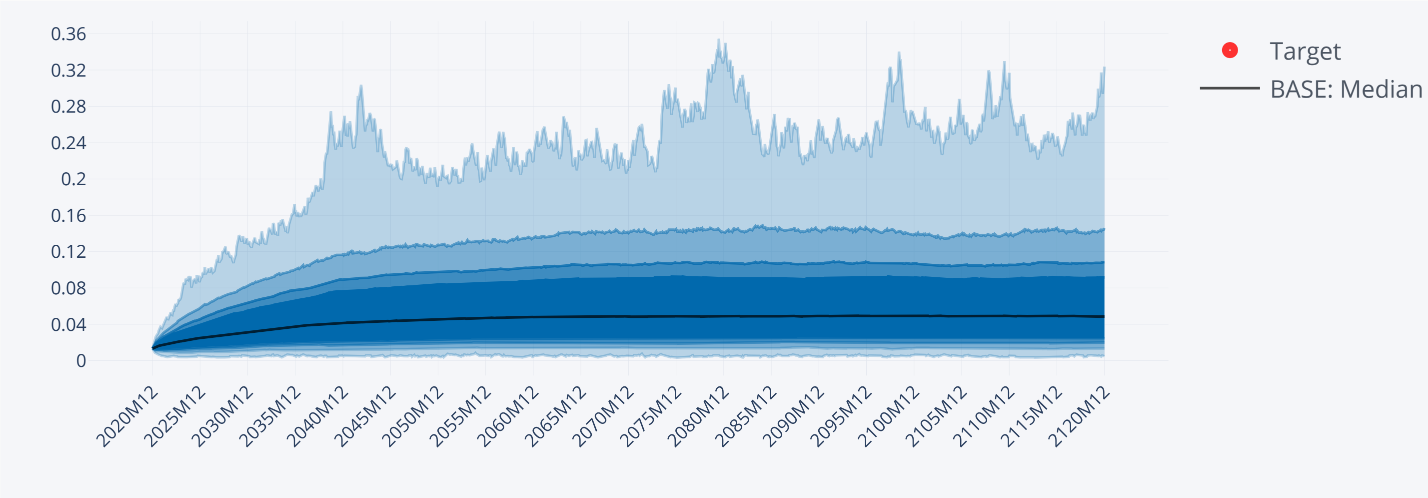
Simulated Data in Percentiles : US Treasury 29 Year Yield - Coupon

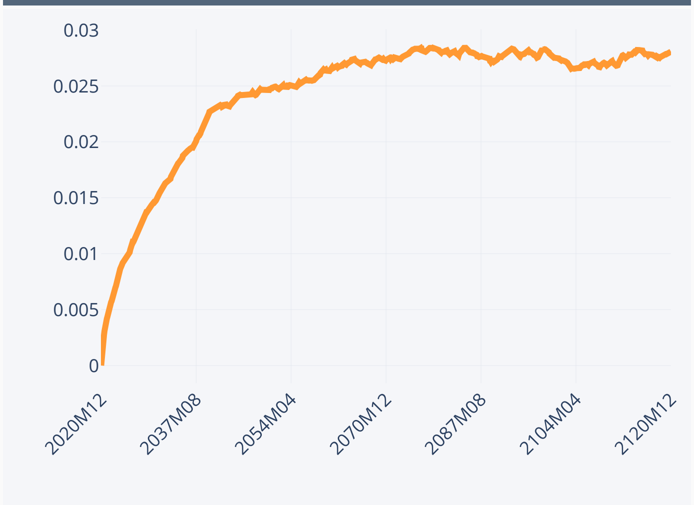


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

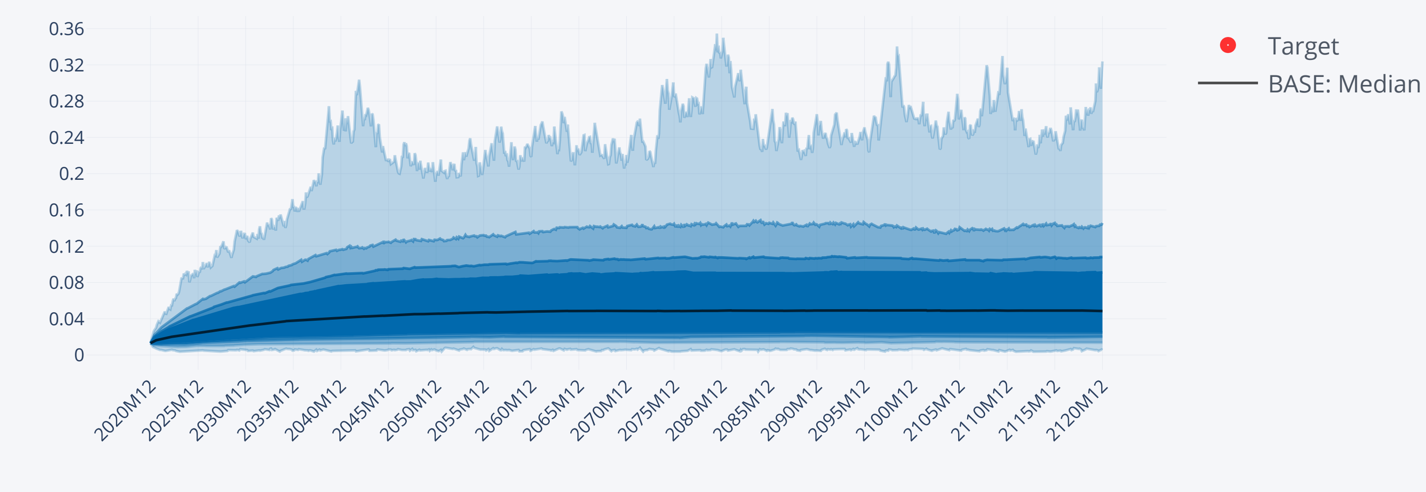
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0176	0.0503
std	0.0042	0.0248
min	0.0051	0.0043
1%	0.0095	0.0132
5%	0.0114	0.0186
10%	0.0126	0.0230
50%	0.0172	0.0459
90%	0.0232	0.0841
95%	0.0251	0.0972
99%	0.0290	0.1276
max	0.0358	0.1990

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : US Treasury 30 Year Yield - Coupon

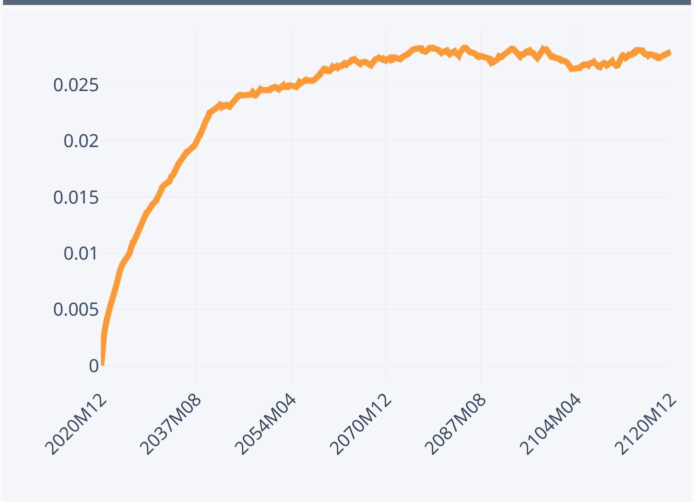


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

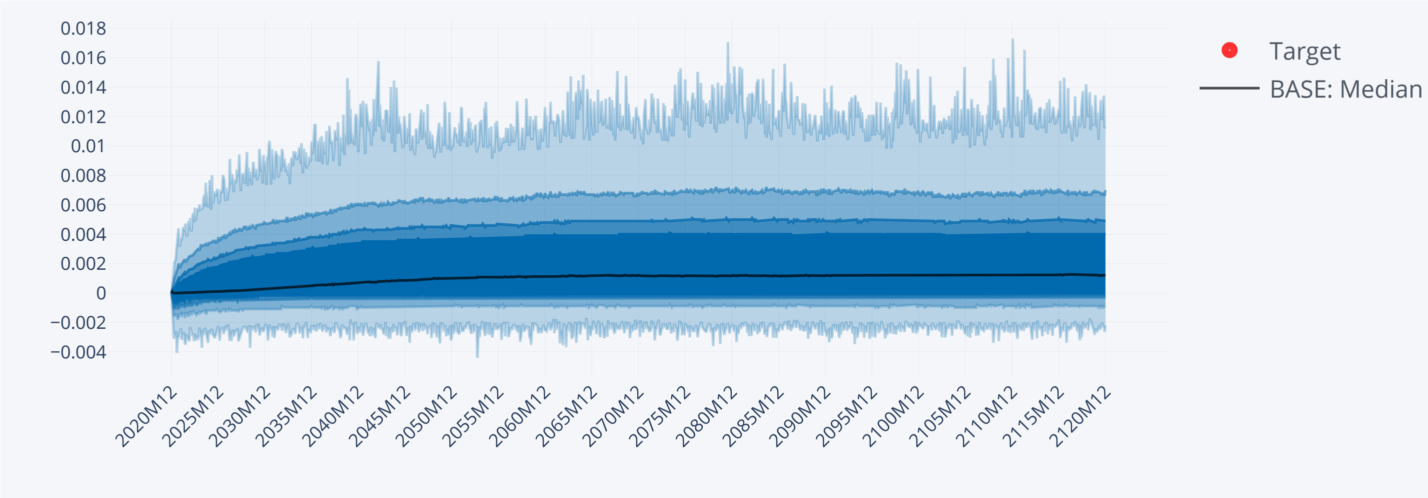
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0178	0.0503
std	0.0041	0.0247
min	0.0056	0.0049
1%	0.0099	0.0135
5%	0.0118	0.0189
10%	0.0129	0.0233
50%	0.0174	0.0458
90%	0.0233	0.0840
95%	0.0252	0.0969
99%	0.0291	0.1273
max	0.0358	0.1988

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Money Market Price

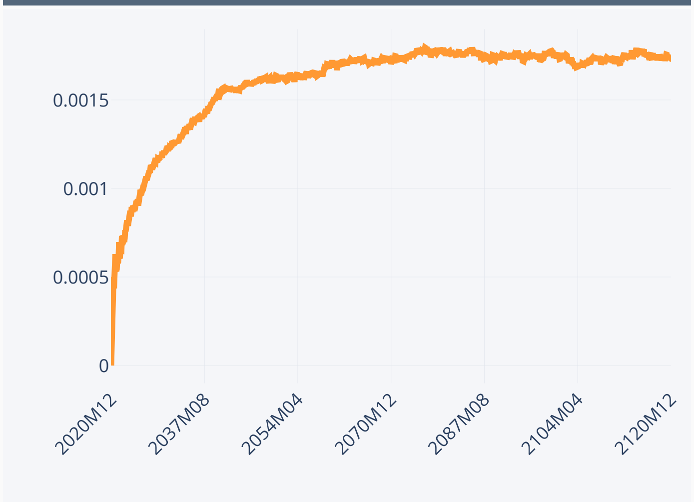


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

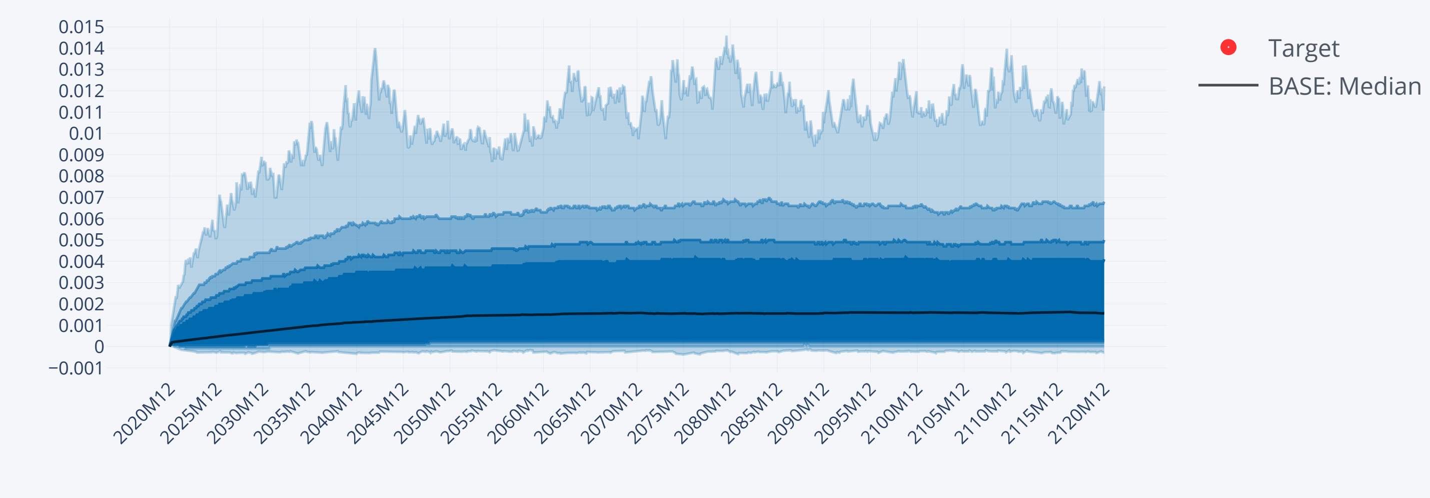
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0000	0.0014
std	0.0005	0.0016
min	-0.0024	-0.0031
1%	-0.0014	-0.0010
5%	-0.0008	-0.0003
10%	-0.0005	-0.0002
50%	0.0000	0.0010
90%	0.0007	0.0036
95%	0.0011	0.0046
99%	0.0019	0.0063
max	0.0038	0.0101

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Money Market Income

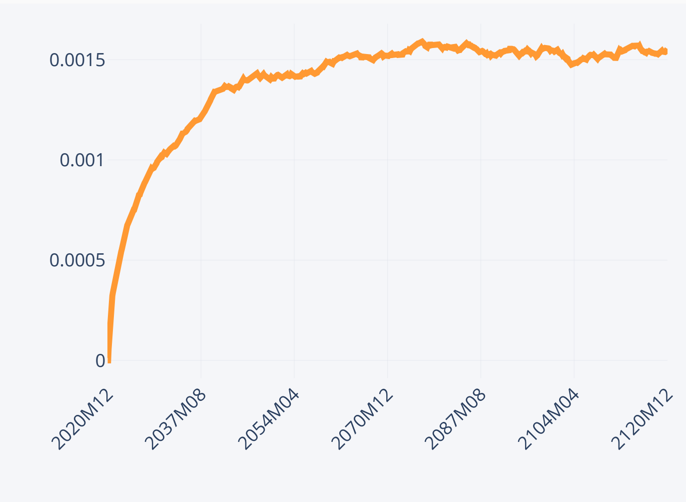


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

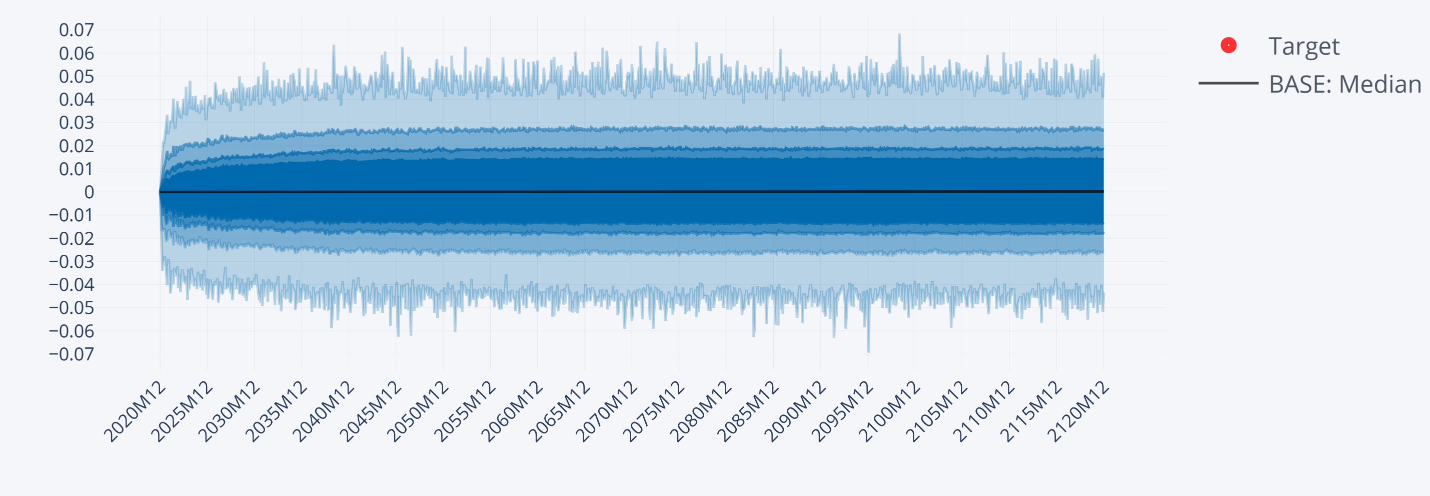
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0004	0.0017
std	0.0003	0.0014
min	-0.0001	-0.0002
1%	-0.0000	0.0000
5%	0.0001	0.0002
10%	0.0001	0.0003
50%	0.0002	0.0014
90%	0.0009	0.0037
95%	0.0011	0.0045
99%	0.0016	0.0060
max	0.0028	0.0098

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Short Govt Bonds Price

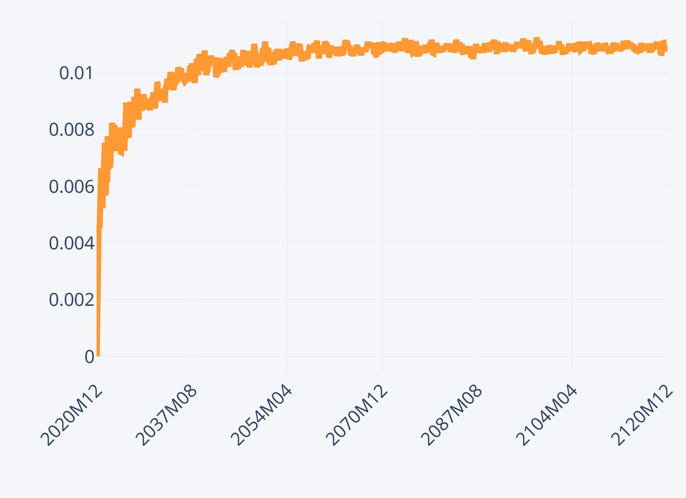


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

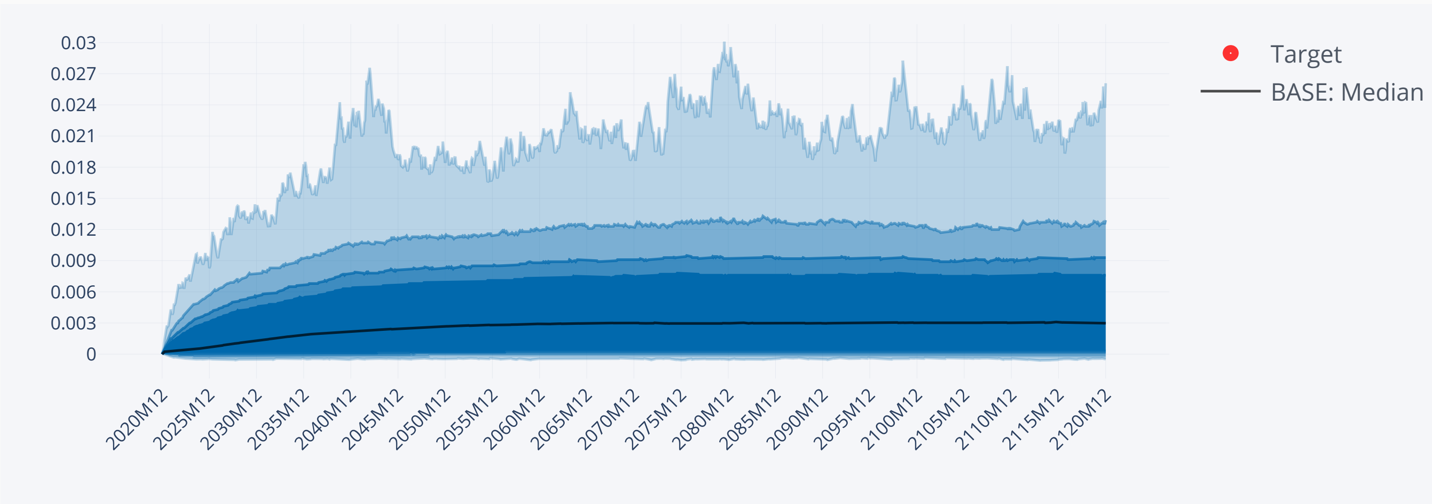
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0004	0.0003
std	0.0052	0.0108
min	-0.0371	-0.0516
1%	-0.0163	-0.0261
5%	-0.0100	-0.0175
10%	-0.0064	-0.0135
50%	-0.0001	0.0002
90%	0.0047	0.0142
95%	0.0079	0.0188
99%	0.0147	0.0277
max	0.0278	0.0432

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Short Govt Bonds Income

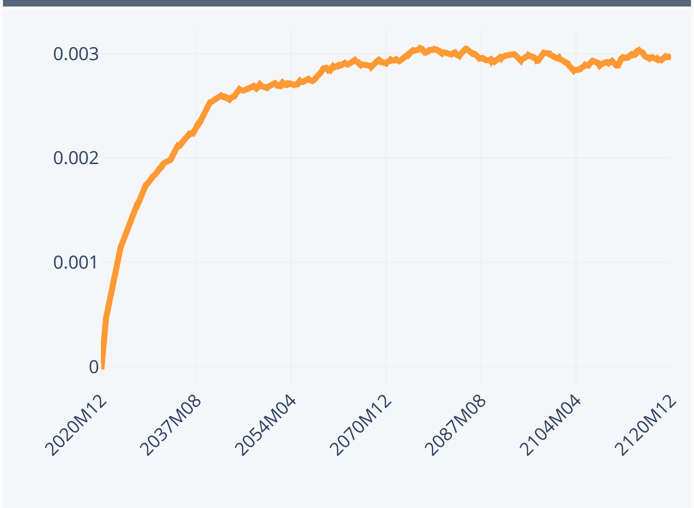


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

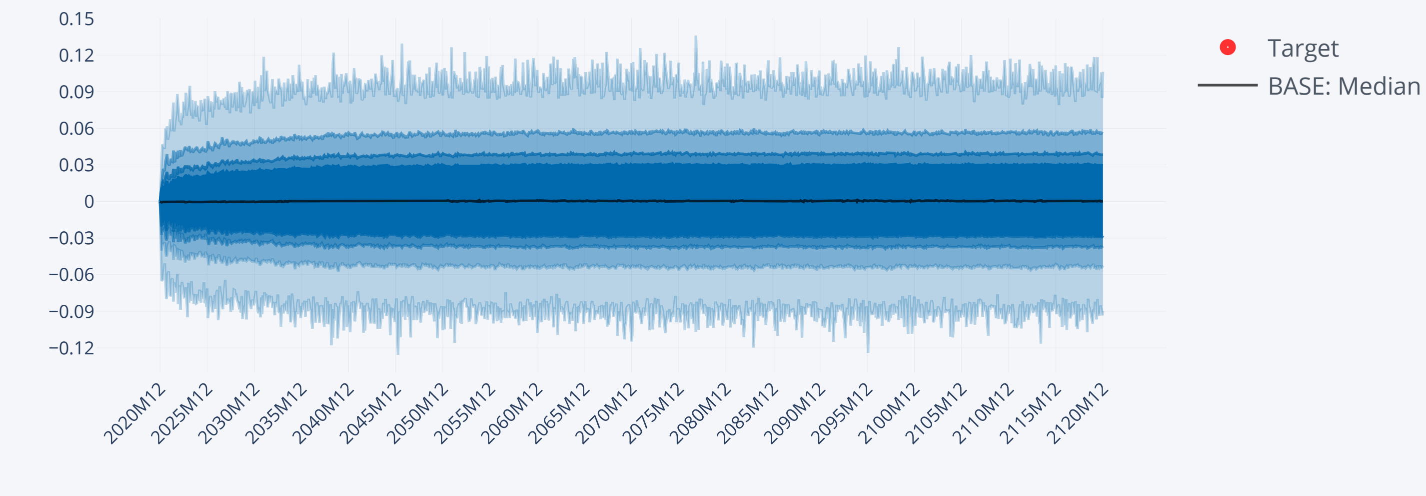
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0005	0.0032
std	0.0005	0.0027
min	-0.0003	-0.0005
1%	-0.0001	-0.0002
5%	-0.0000	0.0000
10%	0.0000	0.0002
50%	0.0003	0.0027
90%	0.0012	0.0070
95%	0.0015	0.0083
99%	0.0023	0.0114
max	0.0041	0.0184

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Int Govt Bonds Price

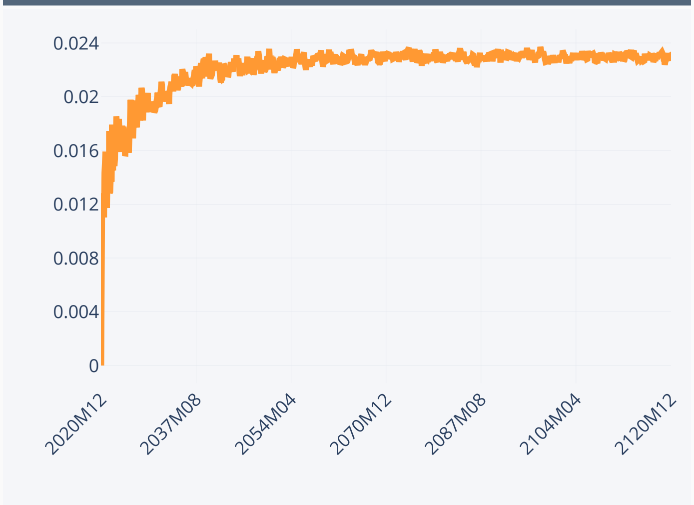


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

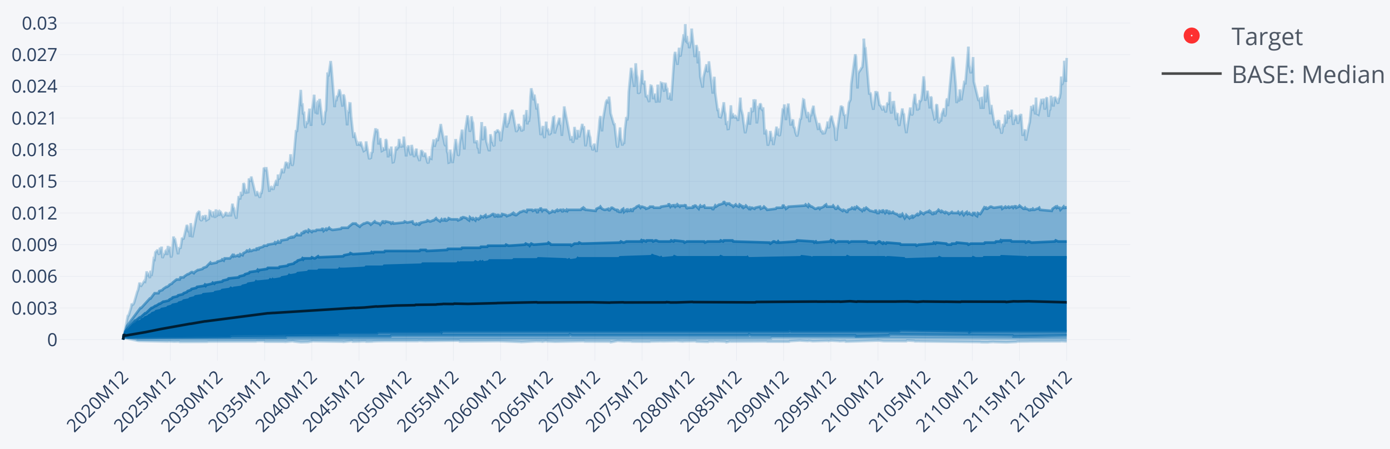
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0011	0.0006
std	0.0117	0.0229
min	-0.0679	-0.1056
1%	-0.0327	-0.0536
5%	-0.0216	-0.0369
10%	-0.0158	-0.0283
50%	-0.0004	0.0004
90%	0.0123	0.0298
95%	0.0179	0.0394
99%	0.0296	0.0569
max	0.0591	0.0871

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Int Govt Bonds Income

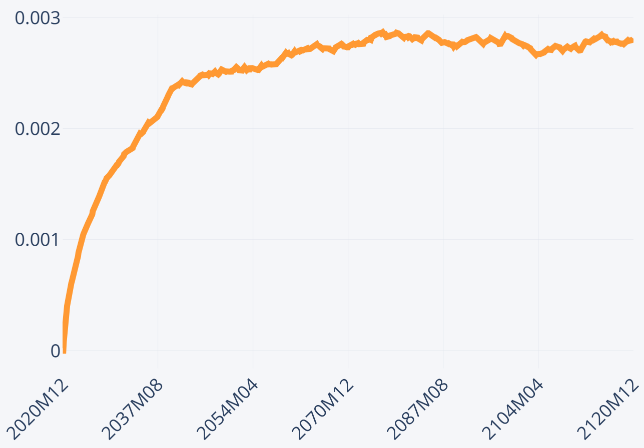


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

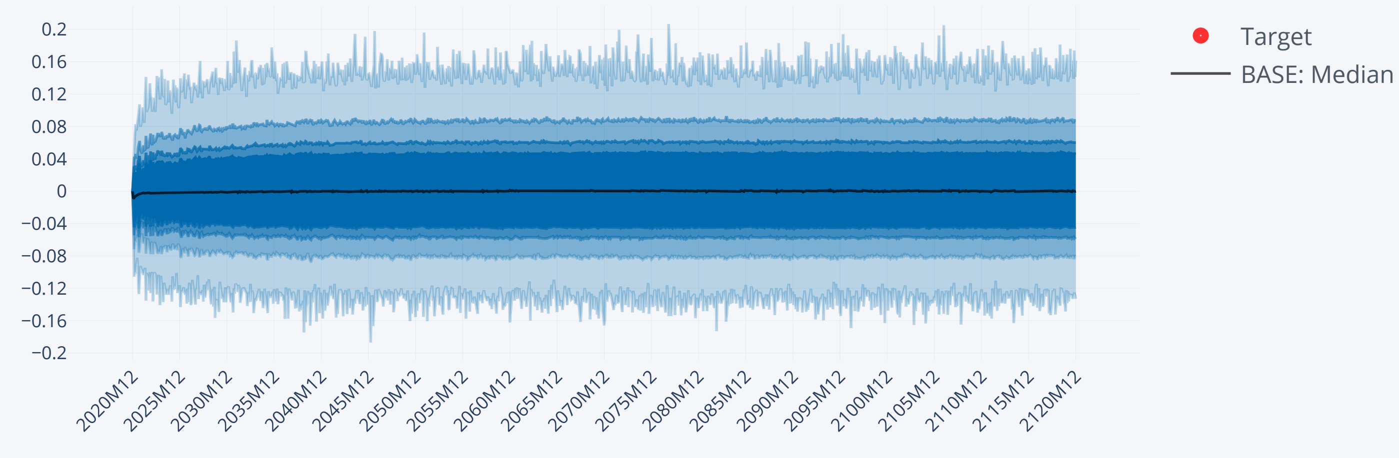
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0006	0.0037
std	0.0005	0.0025
min	-0.0000	-0.0002
1%	0.0001	0.0001
5%	0.0001	0.0003
10%	0.0002	0.0006
50%	0.0005	0.0032
90%	0.0013	0.0071
95%	0.0016	0.0083
99%	0.0021	0.0112
max	0.0033	0.0174

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Long Govt Bonds Price

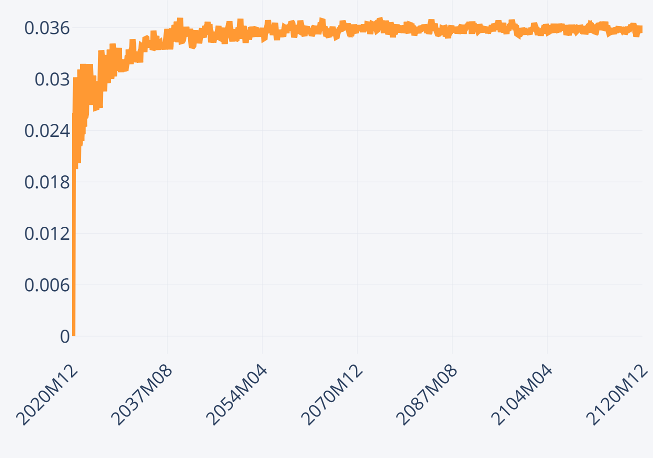


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0033	0.0008
std	0.0202	0.0359
min	-0.0959	-0.1554
1%	-0.0523	-0.0820
5%	-0.0374	-0.0568
10%	-0.0281	-0.0440
50%	-0.0032	0.0004
90%	0.0217	0.0472
95%	0.0301	0.0621
99%	0.0465	0.0871
max	0.0959	0.1440

Cross Sectional Volatility Over Time : BASE



Long Govt Bonds Income
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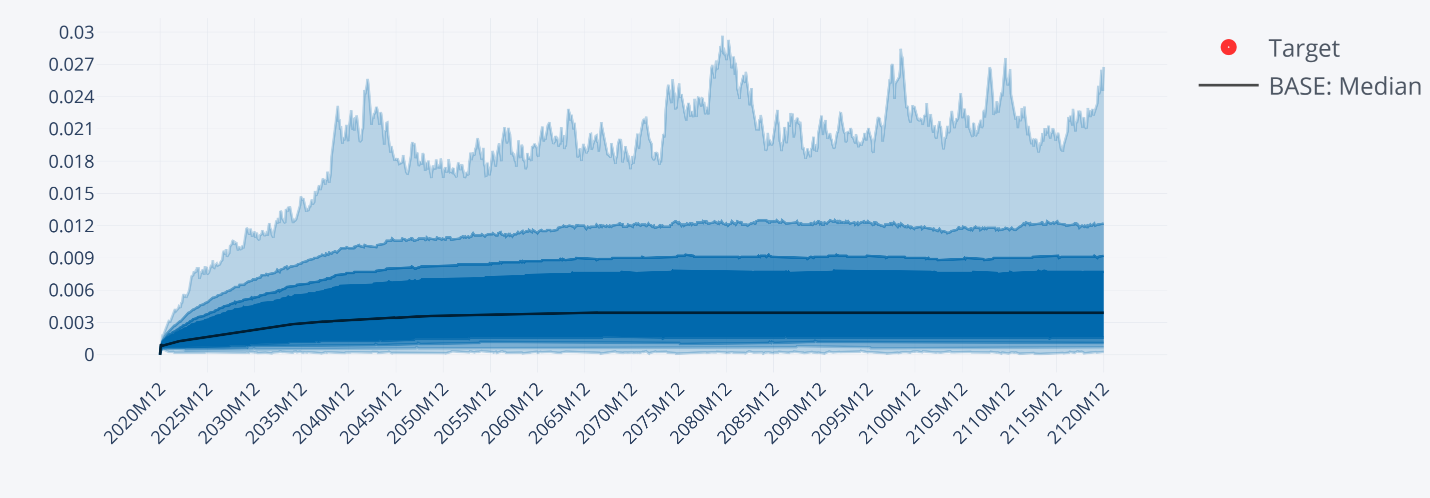
Validation Report

Simulated Data in Percentiles : Long Govt Bonds Income

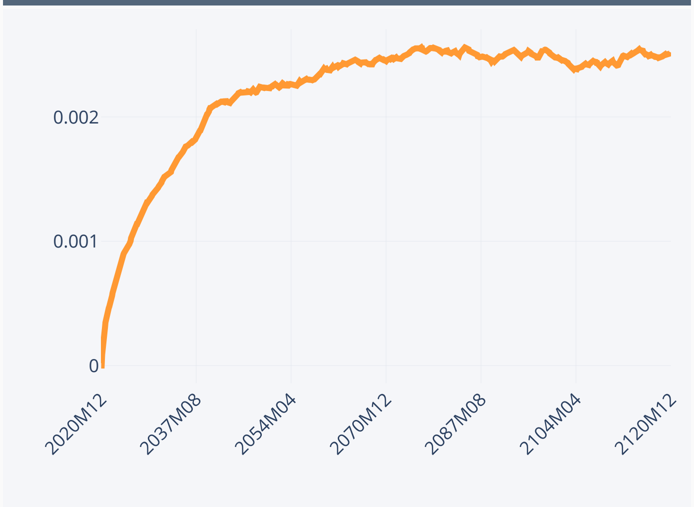


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

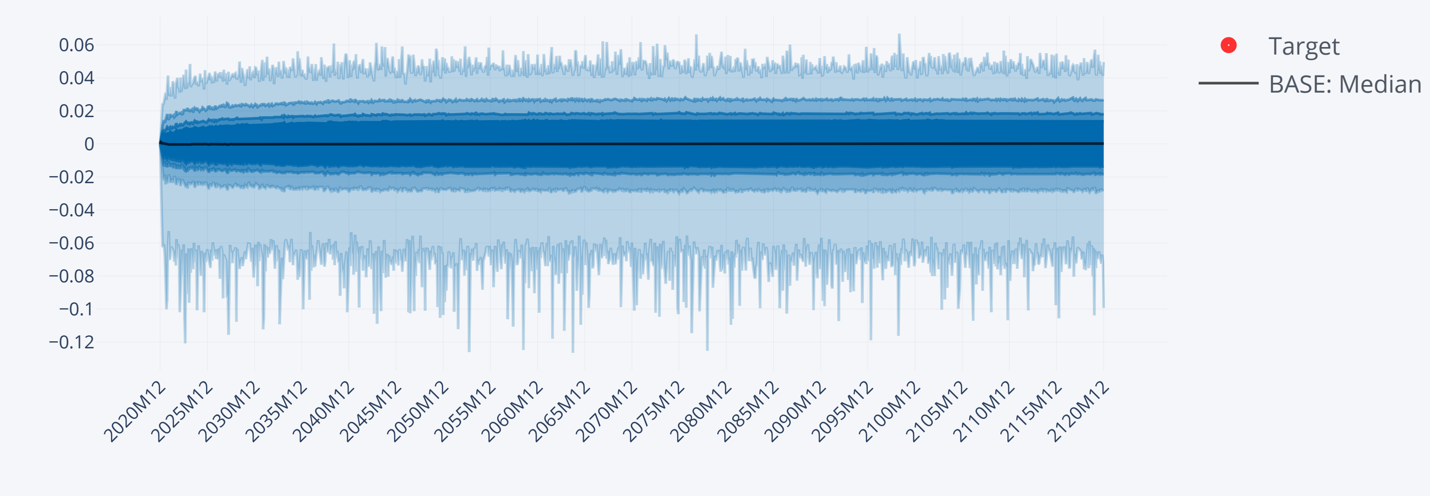
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0011	0.0040
std	0.0004	0.0022
min	0.0003	0.0002
1%	0.0005	0.0007
5%	0.0006	0.0010
10%	0.0007	0.0015
50%	0.0010	0.0037
90%	0.0017	0.0071
95%	0.0019	0.0082
99%	0.0023	0.0108
max	0.0031	0.0164

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Short Inv Corp Bonds Price

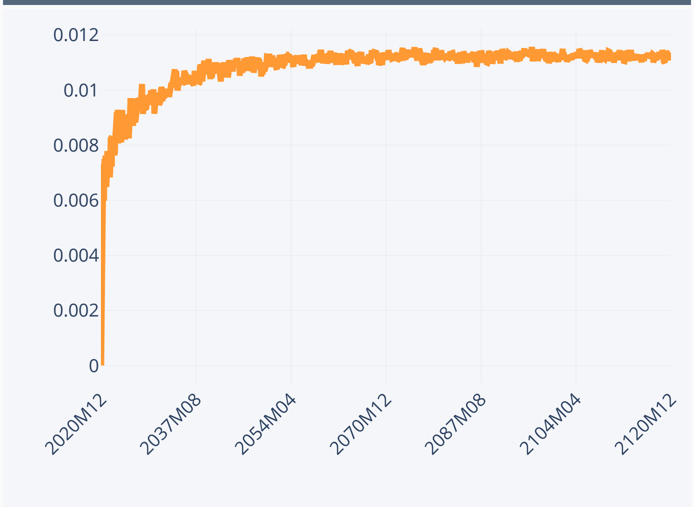


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

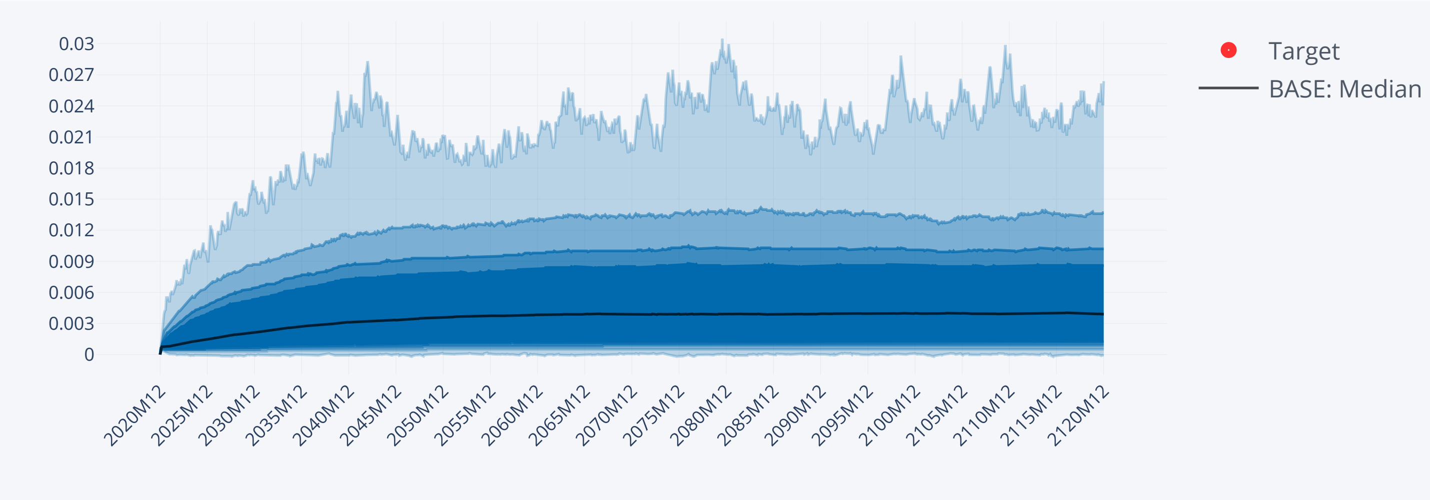
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0007	0.0000
std	0.0070	0.0112
min	-0.0703	-0.1036
1%	-0.0200	-0.0276
5%	-0.0118	-0.0180
10%	-0.0080	-0.0135
50%	-0.0003	0.0001
90%	0.0065	0.0138
95%	0.0096	0.0185
99%	0.0168	0.0273
max	0.0290	0.0444

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Short Inv Corp Bonds Income

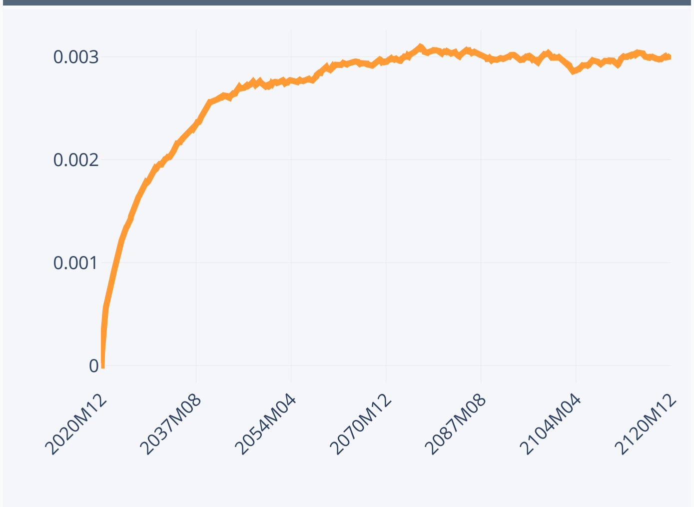


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

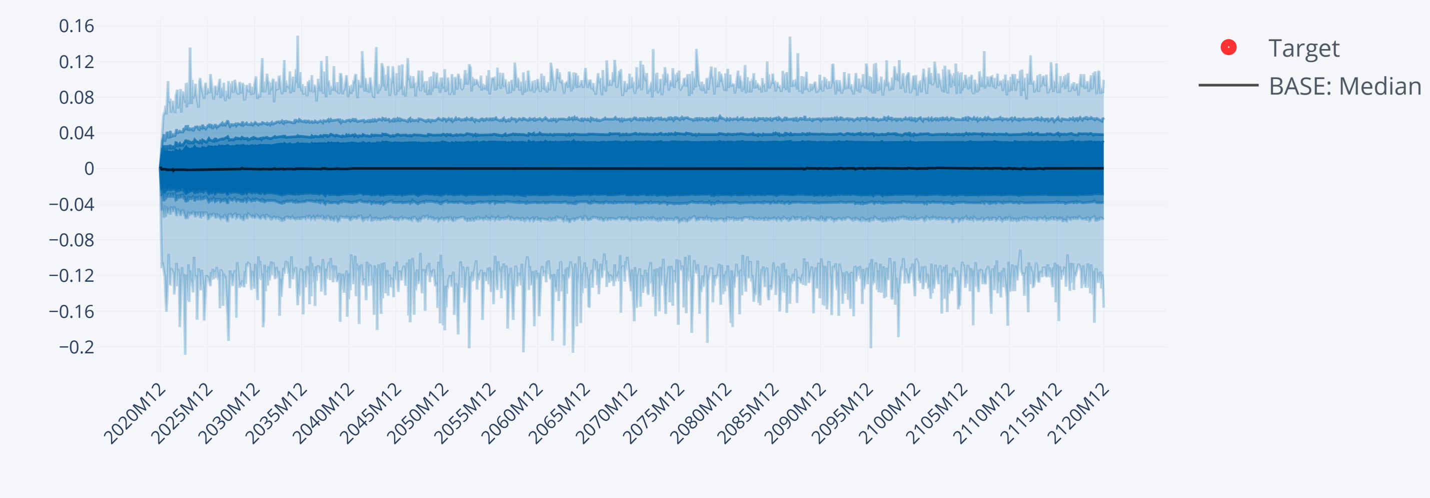
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0010	0.0041
std	0.0006	0.0027
min	0.0000	0.0001
1%	0.0003	0.0005
5%	0.0004	0.0008
10%	0.0005	0.0010
50%	0.0008	0.0036
90%	0.0019	0.0079
95%	0.0023	0.0093
99%	0.0031	0.0124
max	0.0050	0.0211

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Int Inv Corp Bonds Price

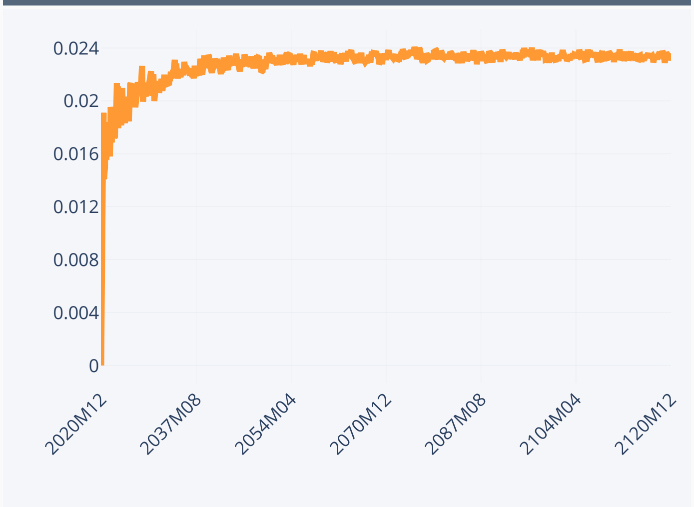


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

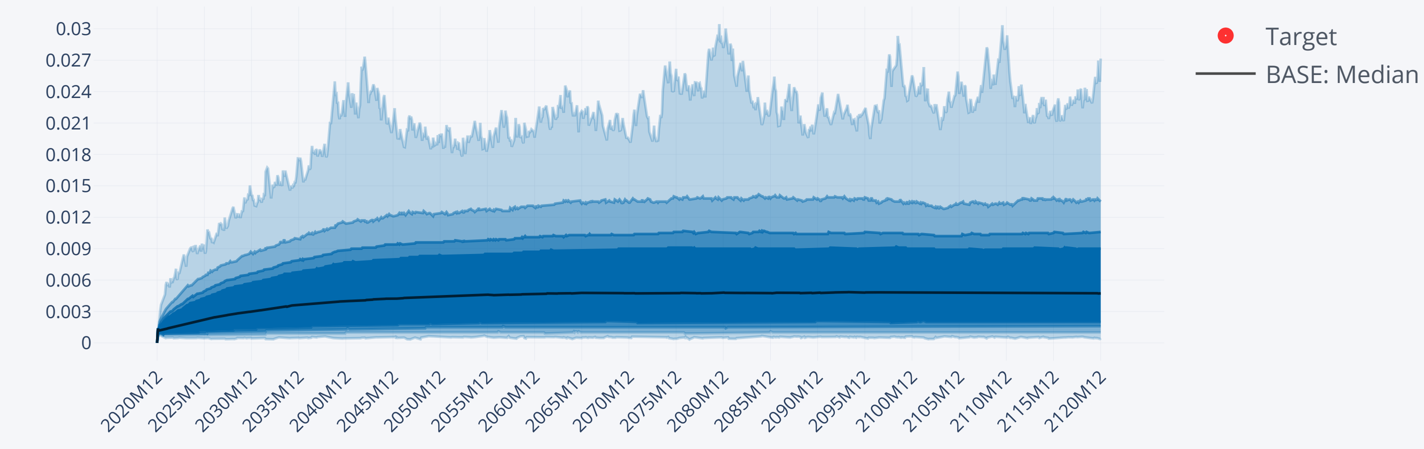
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0018	-0.0000
std	0.0162	0.0234
min	-0.1294	-0.1755
1%	-0.0444	-0.0565
5%	-0.0273	-0.0378
10%	-0.0209	-0.0290
50%	-0.0014	0.0001
90%	0.0171	0.0298
95%	0.0235	0.0386
99%	0.0375	0.0560
max	0.0748	0.0912

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Int Inv Corp Bonds Income

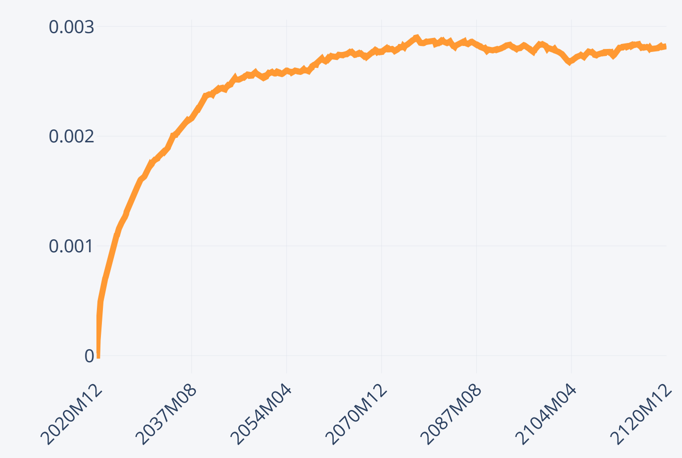


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

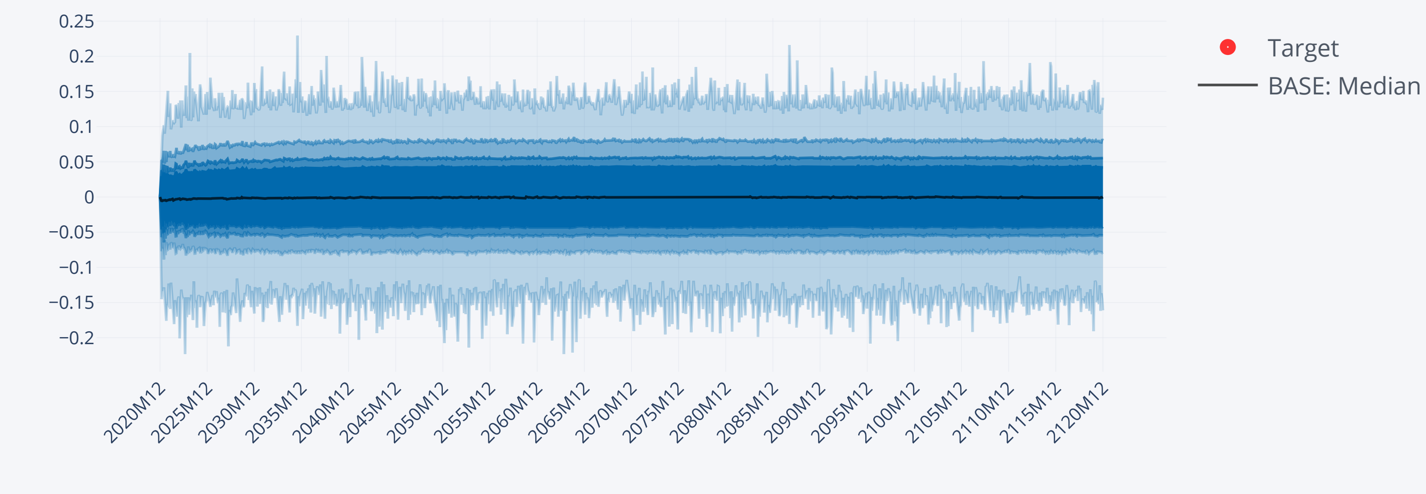
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0015	0.0048
std	0.0006	0.0026
min	0.0005	0.0006
1%	0.0007	0.0010
5%	0.0008	0.0014
10%	0.0009	0.0018
50%	0.0014	0.0044
90%	0.0023	0.0083
95%	0.0026	0.0096
99%	0.0033	0.0124
max	0.0058	0.0198

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Long Inv Corp Bonds Price

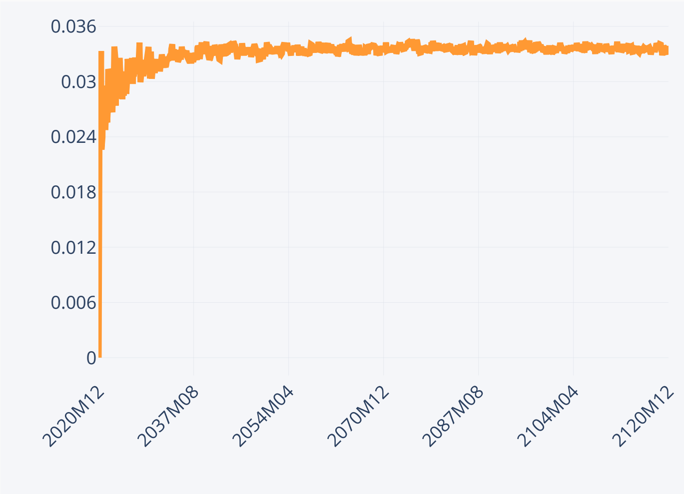


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

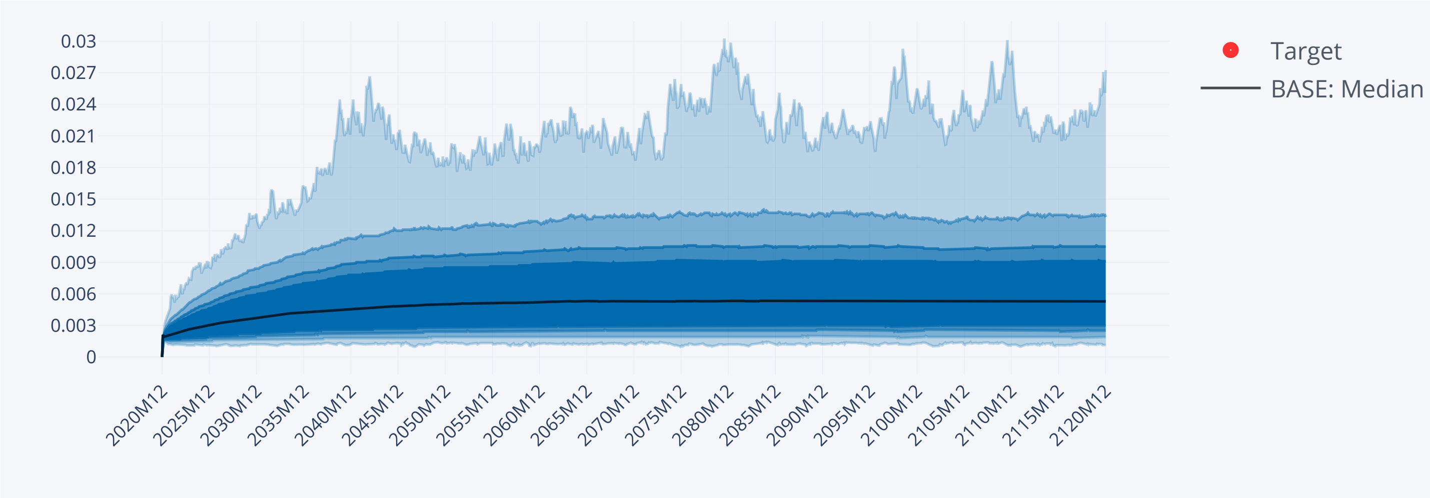
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0039	-0.0002
std	0.0253	0.0337
min	-0.1485	-0.1945
1%	-0.0666	-0.0789
5%	-0.0442	-0.0546
10%	-0.0348	-0.0423
50%	-0.0037	-0.0005
90%	0.0275	0.0434
95%	0.0376	0.0556
99%	0.0567	0.0800
max	0.1275	0.1389

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Long Inv Corp Bonds Income

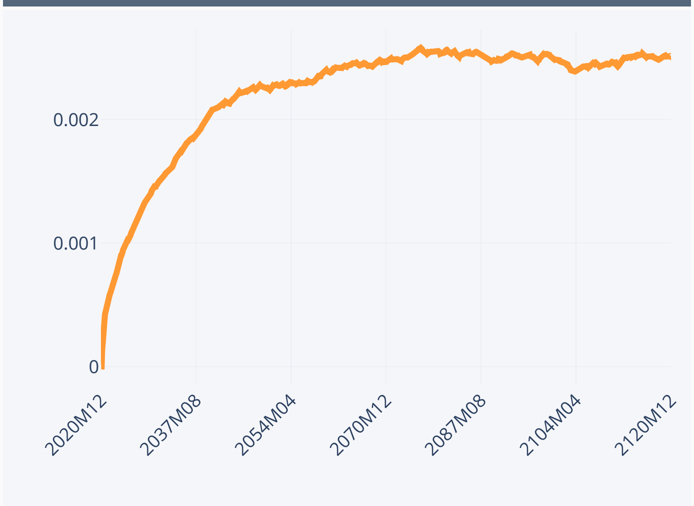


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

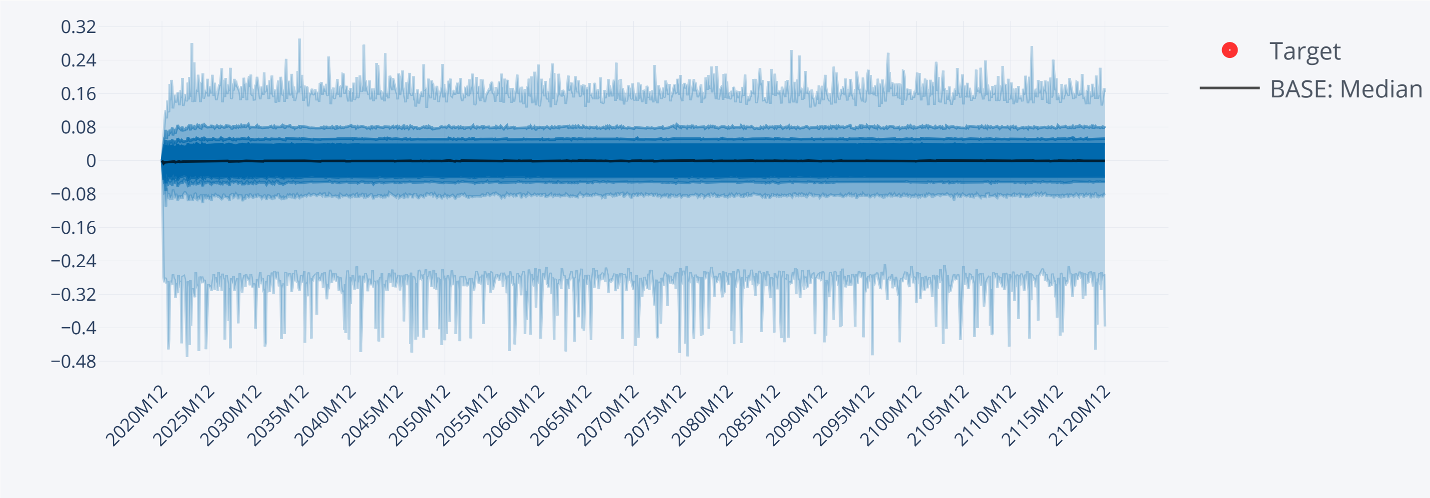
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0022	0.0054
std	0.0005	0.0023
min	0.0011	0.0013
1%	0.0014	0.0019
5%	0.0016	0.0023
10%	0.0017	0.0028
50%	0.0022	0.0050
90%	0.0029	0.0085
95%	0.0032	0.0096
99%	0.0037	0.0121
max	0.0060	0.0186

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : High Yield Corp Bonds Price

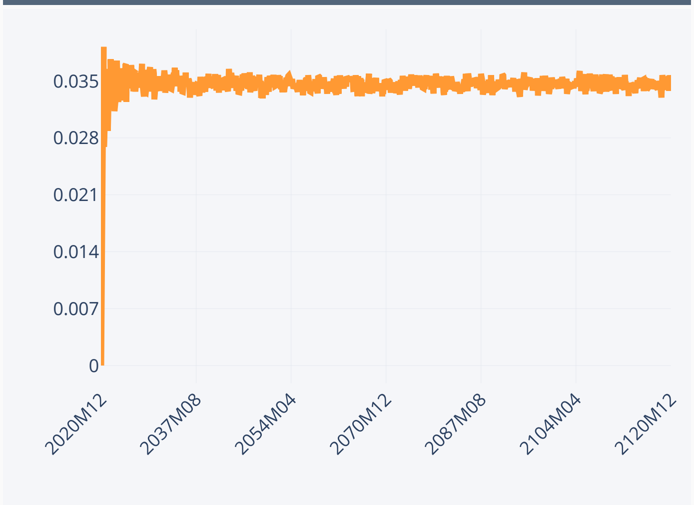


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0040	-0.0013
std	0.0334	0.0348
min	-0.2920	-0.4299
1%	-0.0832	-0.0812
5%	-0.0509	-0.0520
10%	-0.0388	-0.0396
50%	-0.0030	-0.0011
90%	0.0326	0.0385
95%	0.0446	0.0521
99%	0.0702	0.0782
max	0.1926	0.1555

Cross Sectional Volatility Over Time : BASE



High Yield Corp Bonds Income

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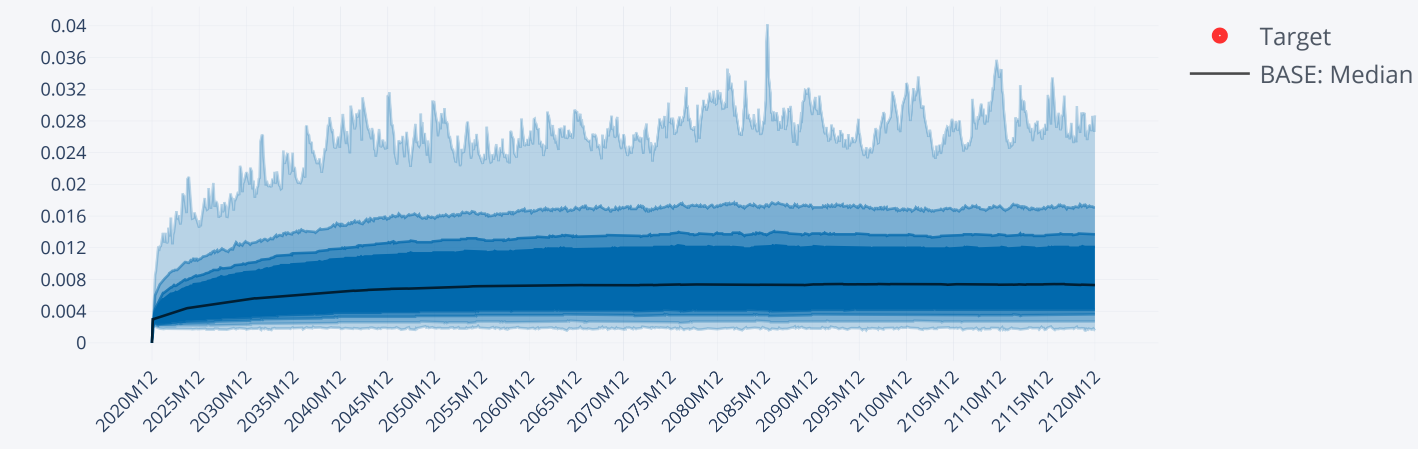
Validation Report

Simulated Data in Percentiles : High Yield Corp Bonds Income

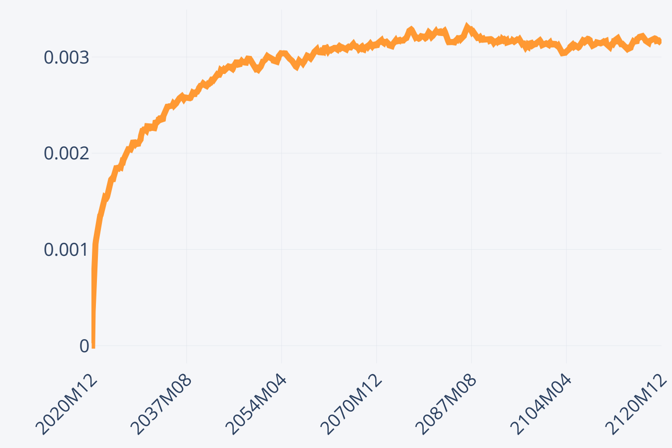


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

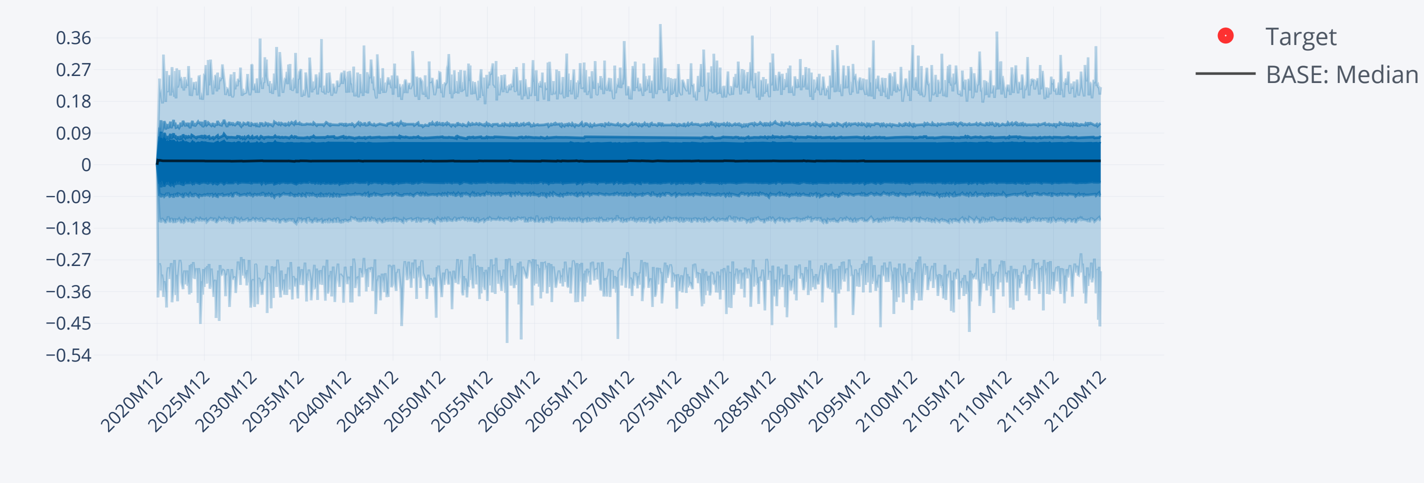
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0037	0.0074
std	0.0012	0.0030
min	0.0018	0.0018
1%	0.0021	0.0026
5%	0.0023	0.0033
10%	0.0024	0.0039
50%	0.0034	0.0070
90%	0.0053	0.0114
95%	0.0060	0.0128
99%	0.0077	0.0157
max	0.0126	0.0295

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Small Cap Price

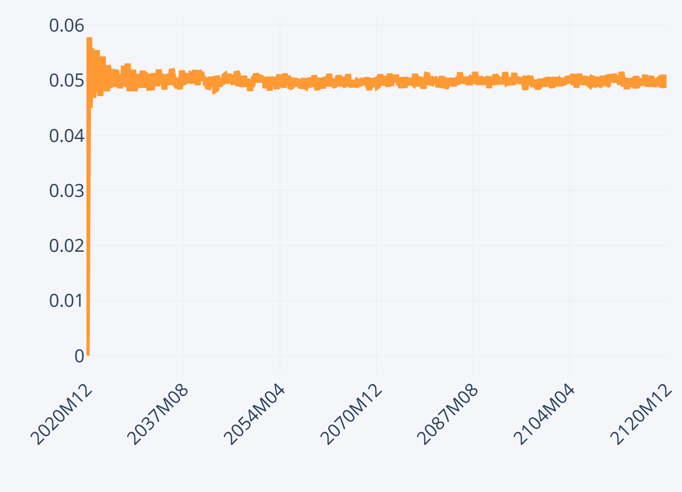


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

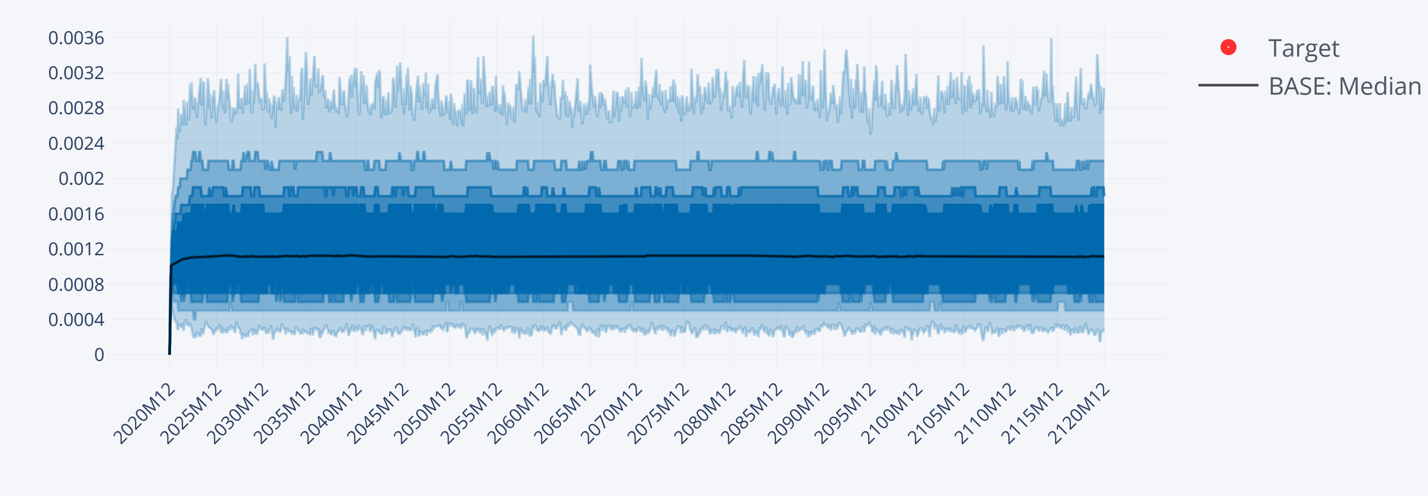
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0073	0.0065
std	0.0494	0.0507
min	-0.4051	-0.3303
1%	-0.1553	-0.1587
5%	-0.0803	-0.0856
10%	-0.0484	-0.0514
50%	0.0111	0.0107
90%	0.0624	0.0615
95%	0.0770	0.0790
99%	0.1103	0.1133
max	0.2660	0.2608

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Small Cap Income

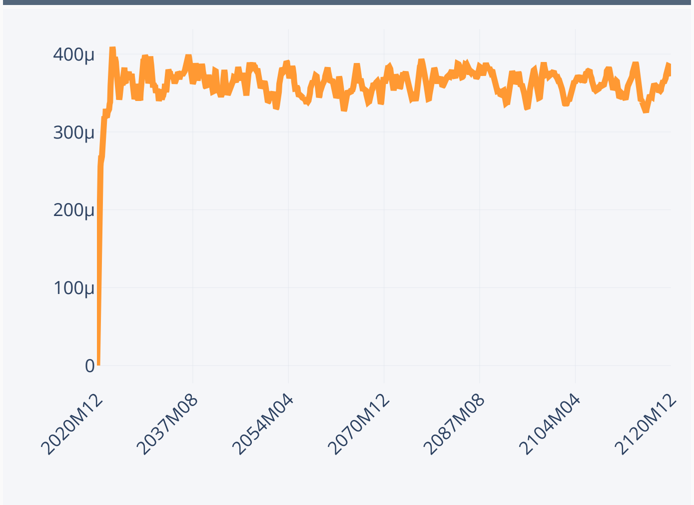


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

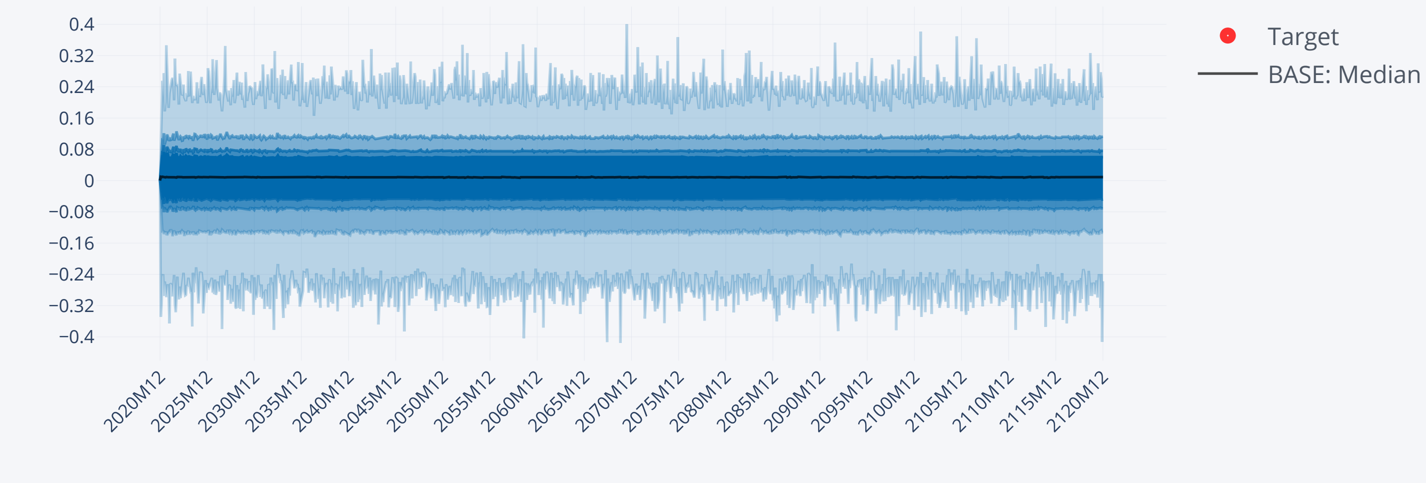
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0011	0.0012
std	0.0003	0.0003
min	0.0003	0.0004
1%	0.0005	0.0005
5%	0.0007	0.0007
10%	0.0007	0.0008
50%	0.0011	0.0011
90%	0.0015	0.0016
95%	0.0016	0.0018
99%	0.0019	0.0021
max	0.0026	0.0027

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Mid Cap Price

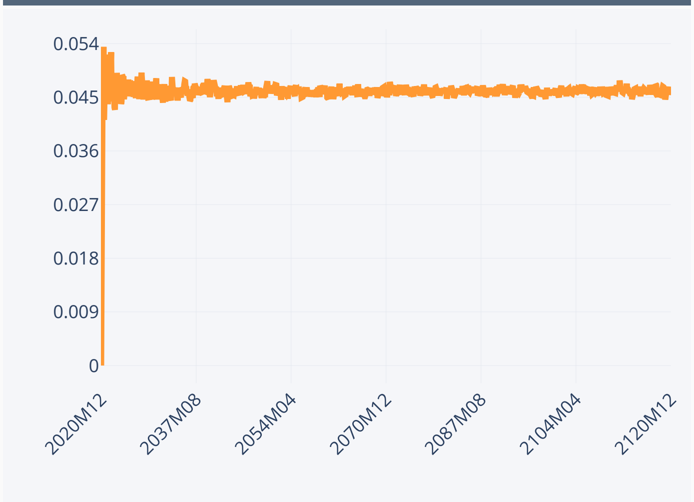


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

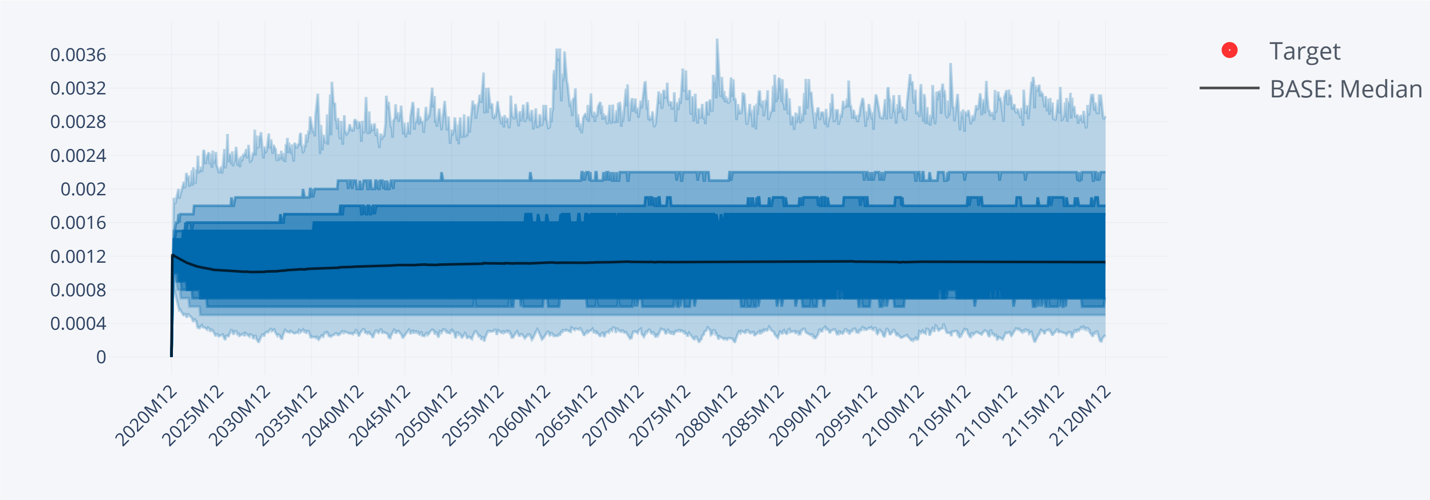
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0062	0.0063
std	0.0445	0.0464
min	-0.3656	-0.2821
1%	-0.1300	-0.1334
5%	-0.0693	-0.0717
10%	-0.0464	-0.0491
50%	0.0086	0.0085
90%	0.0577	0.0593
95%	0.0718	0.0755
99%	0.1046	0.1111
max	0.2235	0.2031

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Mid Cap Income

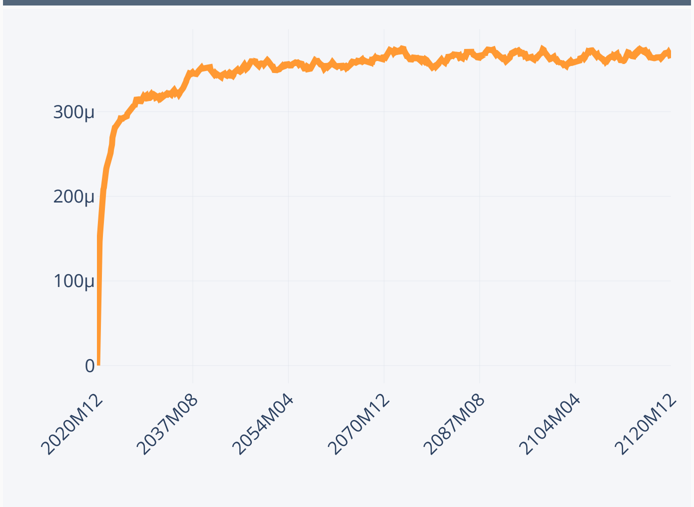


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

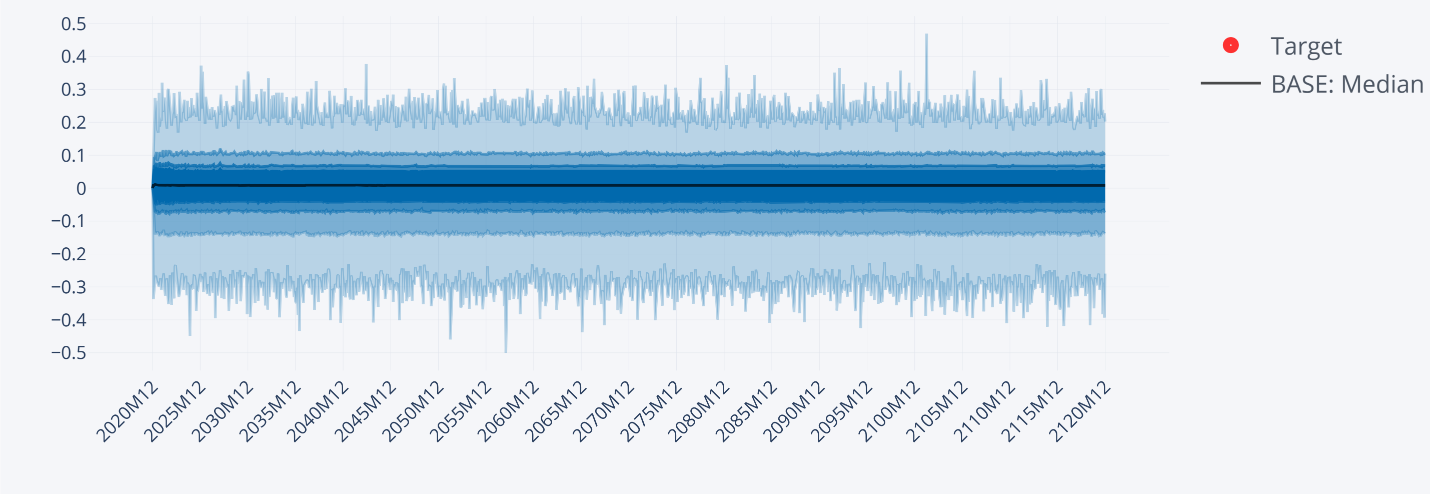
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0012	0.0011
std	0.0002	0.0004
min	0.0005	0.0003
1%	0.0007	0.0005
5%	0.0009	0.0006
10%	0.0009	0.0007
50%	0.0012	0.0011
90%	0.0014	0.0016
95%	0.0015	0.0018
99%	0.0017	0.0021
max	0.0020	0.0027

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Large Cap Price

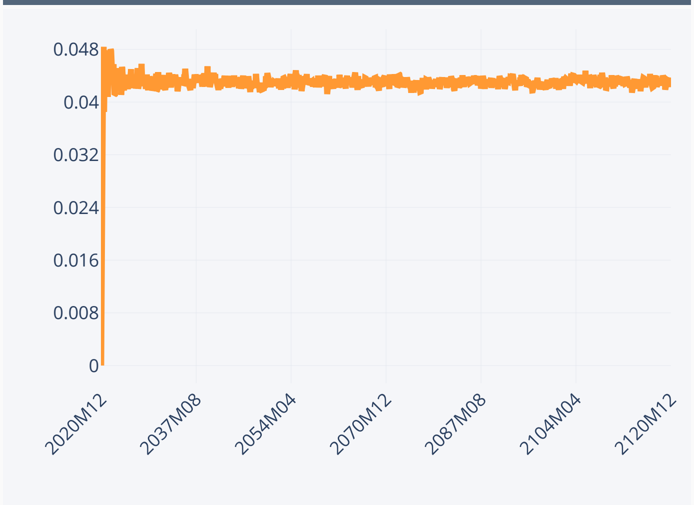


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

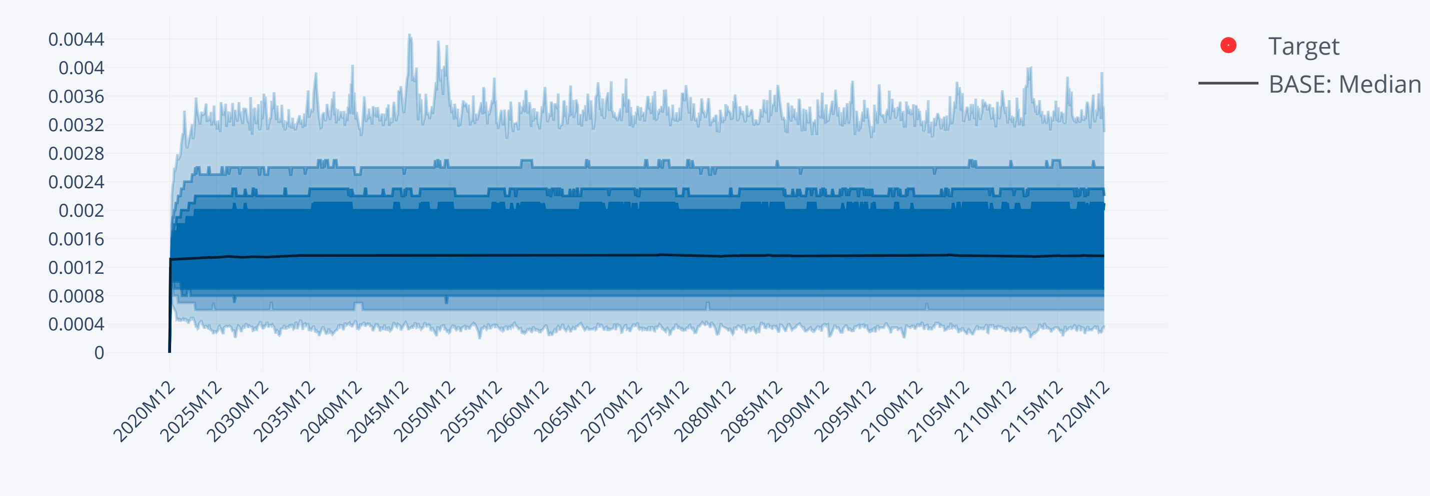
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0066	0.0056
std	0.0444	0.0433
min	-0.2855	-0.3309
1%	-0.1356	-0.1392
5%	-0.0689	-0.0696
10%	-0.0419	-0.0414
50%	0.0089	0.0086
90%	0.0566	0.0514
95%	0.0711	0.0676
99%	0.1060	0.1028
max	0.3205	0.2220

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Large Cap Income

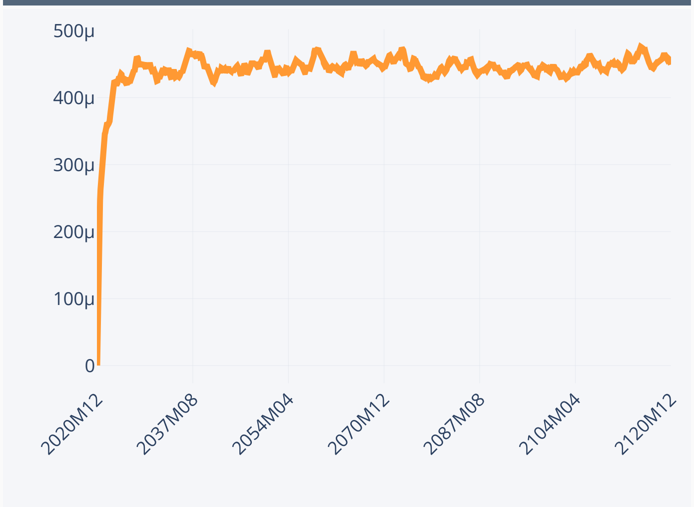


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

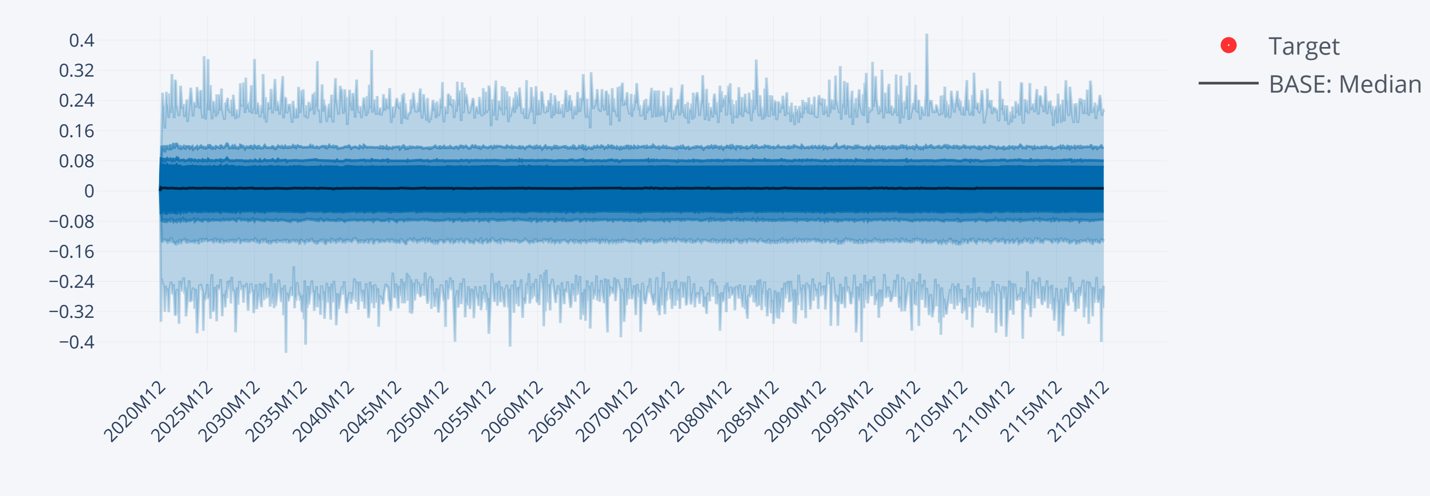
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0013	0.0014
std	0.0003	0.0005
min	0.0004	0.0003
1%	0.0007	0.0006
5%	0.0009	0.0008
10%	0.0010	0.0009
50%	0.0013	0.0014
90%	0.0018	0.0021
95%	0.0019	0.0023
99%	0.0022	0.0026
max	0.0028	0.0035

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : International Diversified Equity Price

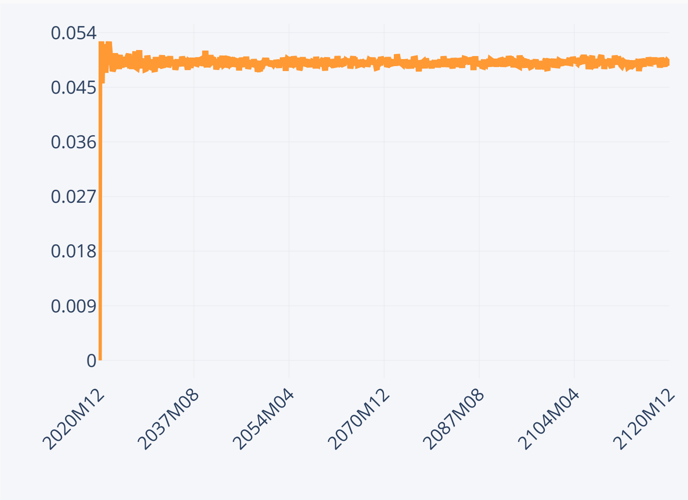


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

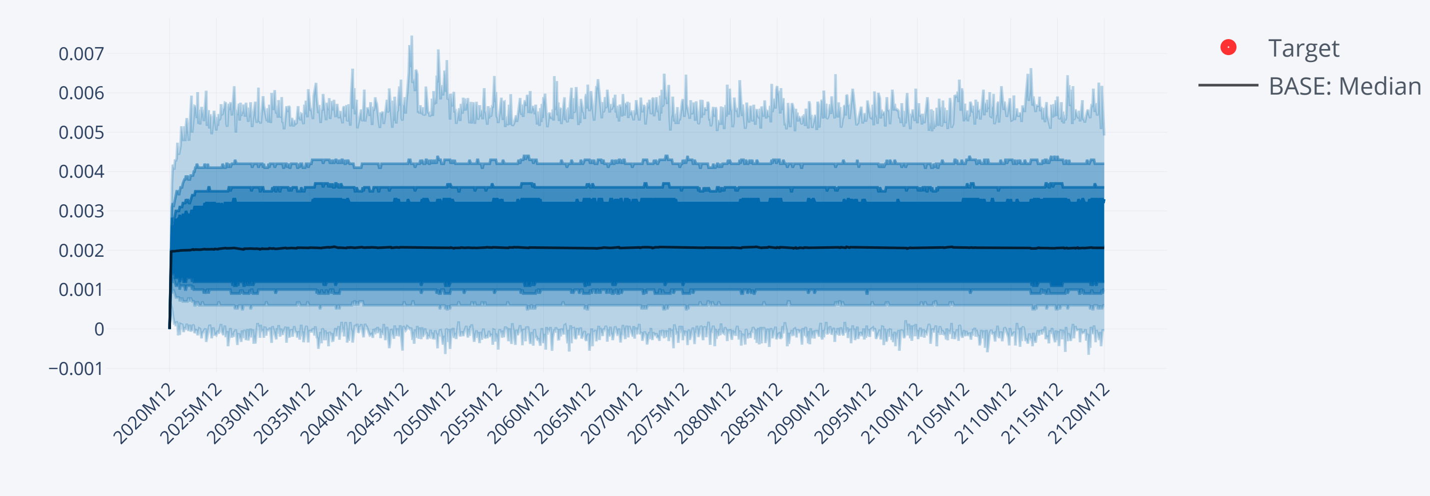
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0063	0.0047
std	0.0500	0.0494
min	-0.2607	-0.2915
1%	-0.1317	-0.1360
5%	-0.0784	-0.0779
10%	-0.0550	-0.0553
50%	0.0084	0.0072
90%	0.0659	0.0634
95%	0.0827	0.0812
99%	0.1181	0.1163
max	0.2585	0.2022

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : International Diversified Equity Income

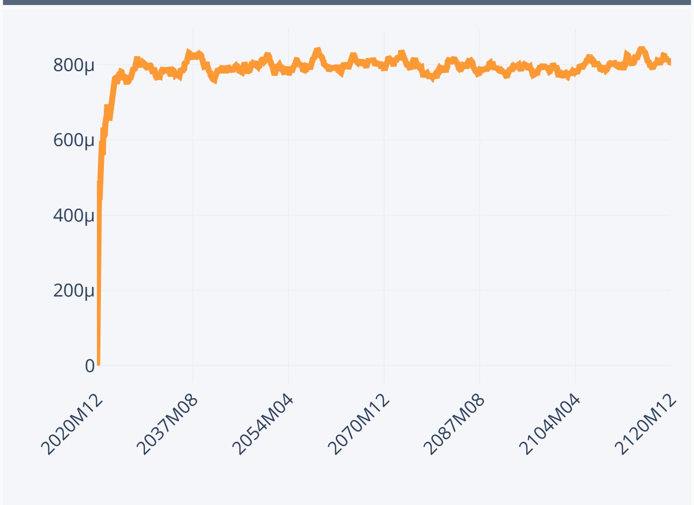


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

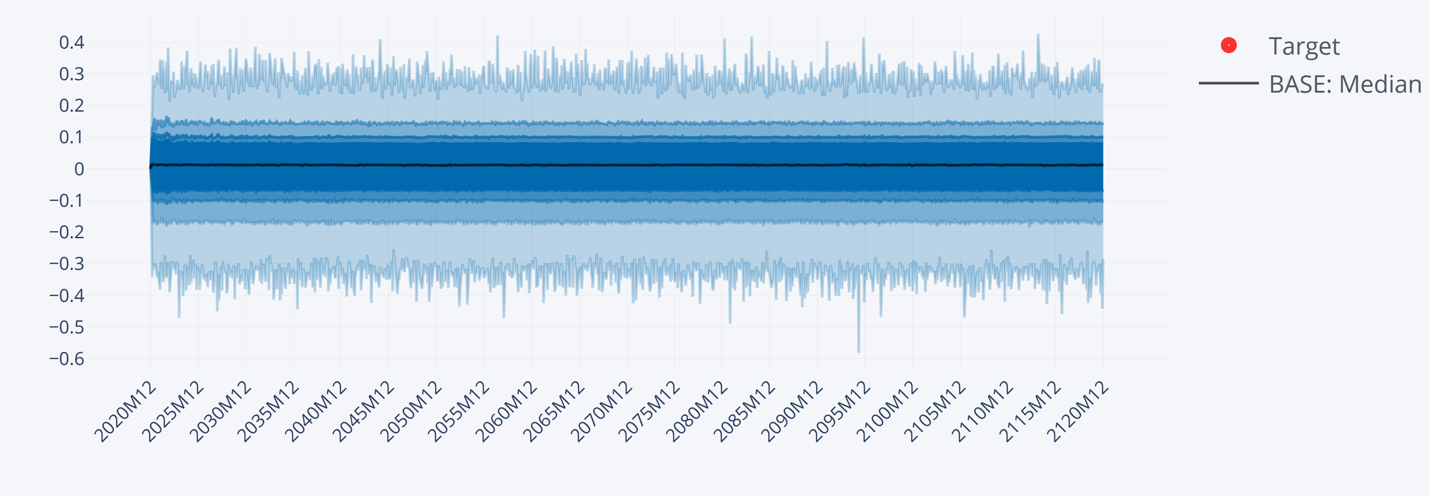
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0020	0.0021
std	0.0006	0.0008
min	0.0001	-0.0005
1%	0.0008	0.0005
5%	0.0012	0.0009
10%	0.0013	0.0012
50%	0.0020	0.0021
90%	0.0028	0.0033
95%	0.0030	0.0037
99%	0.0034	0.0043
max	0.0044	0.0053

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Aggressive US Equity Price

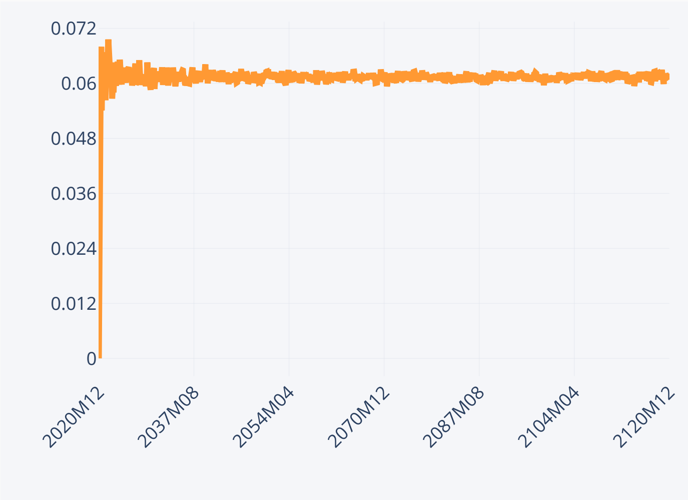


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

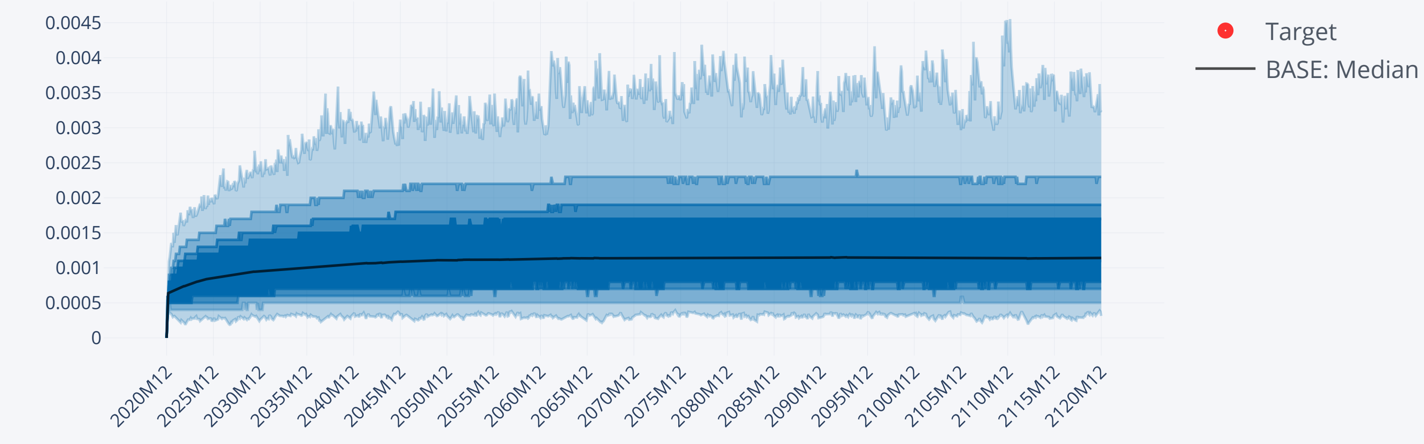
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0082	0.0079
std	0.0622	0.0620
min	-0.3814	-0.3065
1%	-0.1676	-0.1678
5%	-0.0990	-0.1017
10%	-0.0688	-0.0694
50%	0.0116	0.0116
90%	0.0826	0.0800
95%	0.1019	0.1019
99%	0.1415	0.1447
max	0.3451	0.2762

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Aggressive US Equity Income

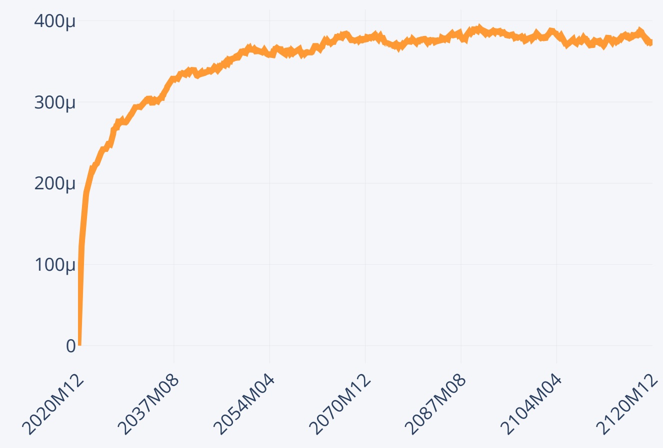


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

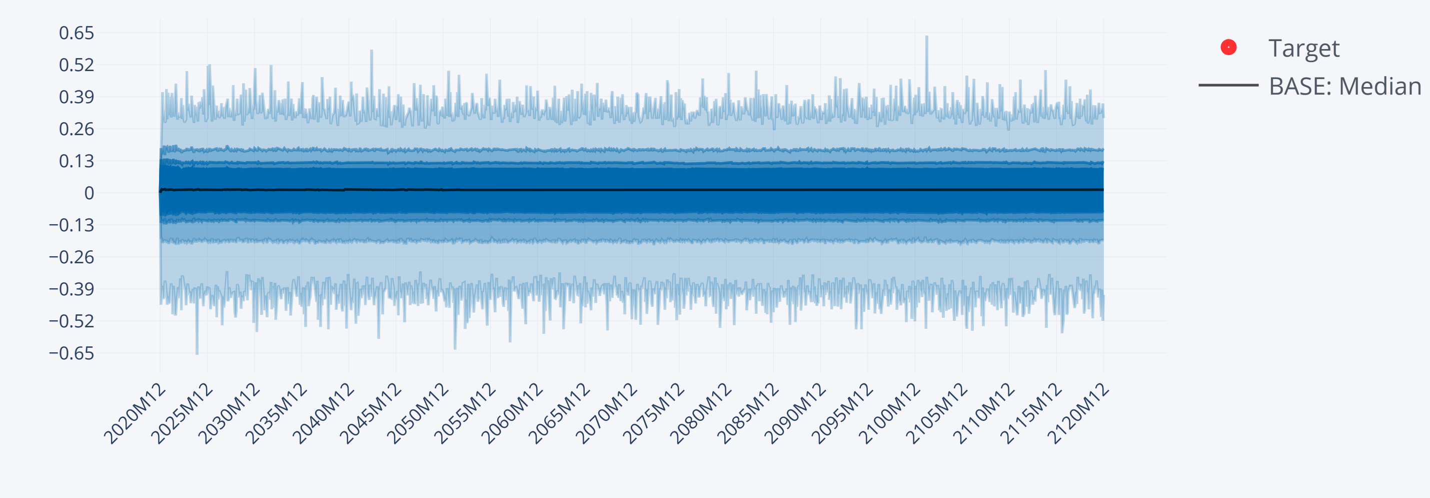
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0007	0.0012
std	0.0002	0.0004
min	0.0003	0.0003
1%	0.0004	0.0005
5%	0.0005	0.0006
10%	0.0005	0.0007
50%	0.0007	0.0011
90%	0.0009	0.0016
95%	0.0010	0.0018
99%	0.0012	0.0022
max	0.0016	0.0031

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Aggressive Foreign Equity Price

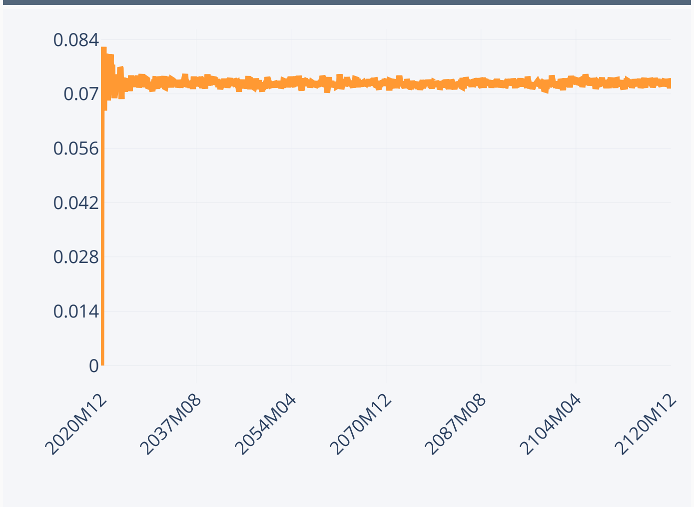


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

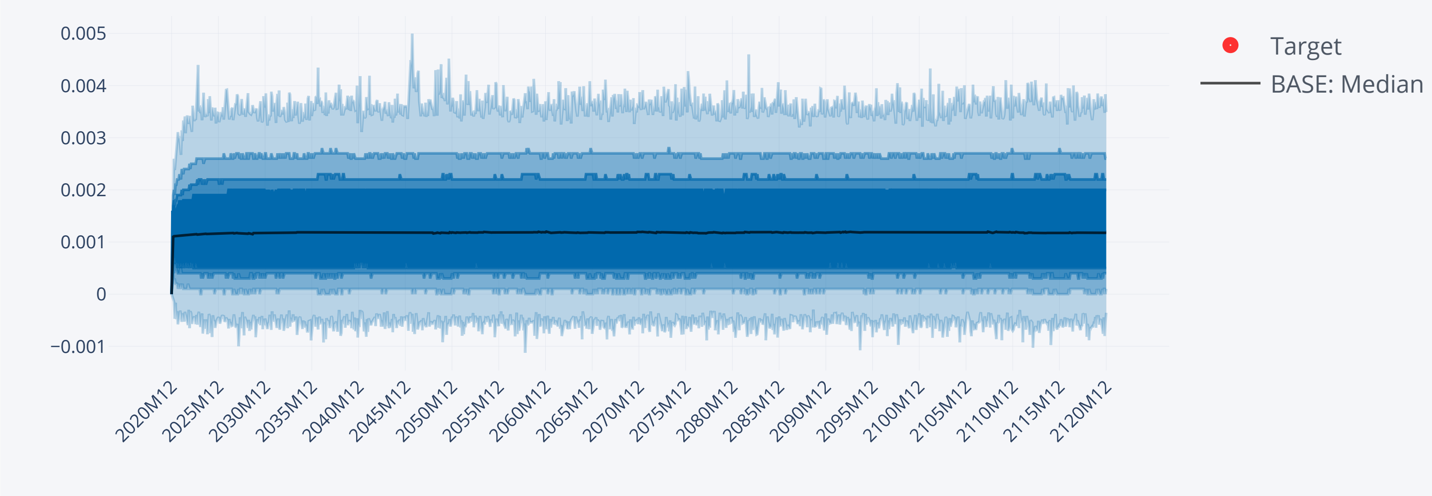
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0113	0.0080
std	0.0767	0.0728
min	-0.4431	-0.4064
1%	-0.1915	-0.2014
5%	-0.1167	-0.1143
10%	-0.0832	-0.0794
50%	0.0135	0.0110
90%	0.1043	0.0943
95%	0.1317	0.1223
99%	0.1836	0.1714
max	0.3429	0.3078

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Aggressive Foreign Equity Income

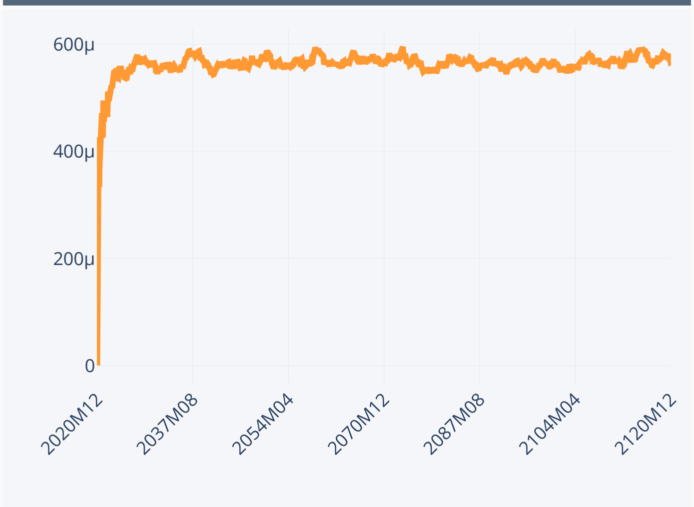


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

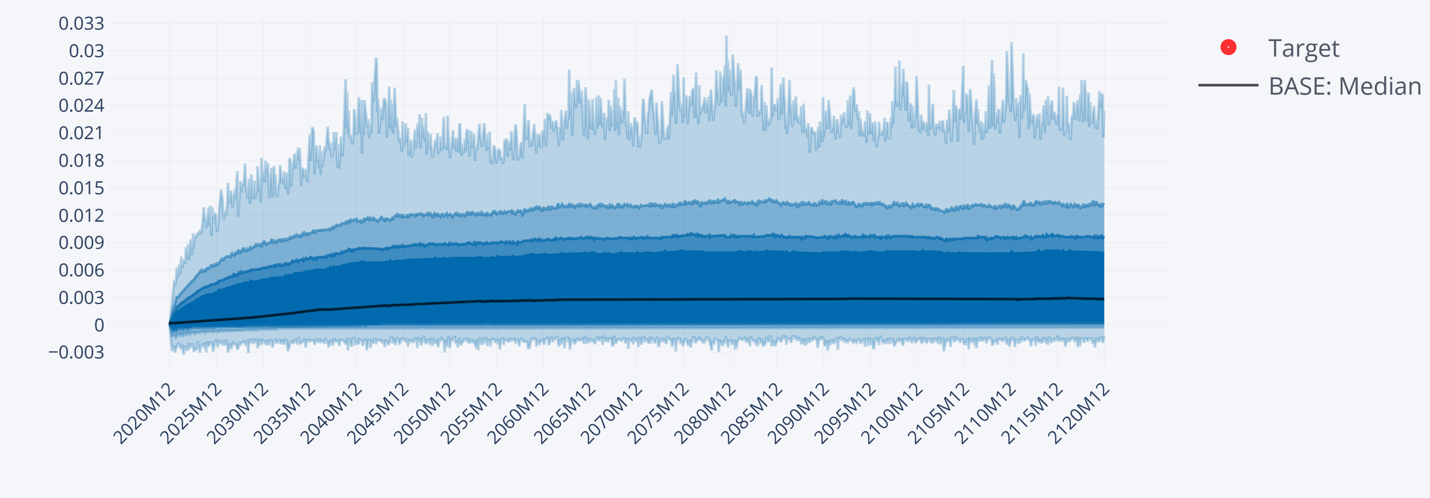
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0011	0.0012
std	0.0004	0.0006
min	-0.0004	-0.0004
1%	0.0002	0.0001
5%	0.0005	0.0004
10%	0.0006	0.0005
50%	0.0011	0.0012
90%	0.0017	0.0020
95%	0.0019	0.0022
99%	0.0022	0.0027
max	0.0027	0.0036

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Money Market Total Return

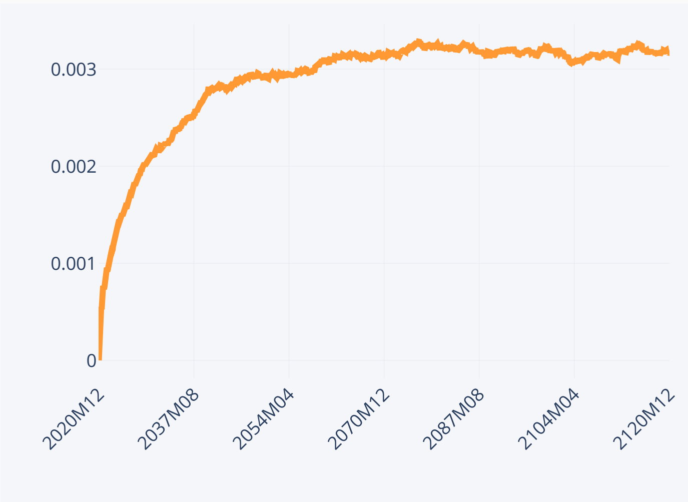


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0004	0.0031
std	0.0008	0.0029
min	-0.0021	-0.0025
1%	-0.0010	-0.0003
5%	-0.0004	0.0000
10%	-0.0002	0.0002
50%	0.0002	0.0024
90%	0.0015	0.0073
95%	0.0020	0.0088
99%	0.0031	0.0121
max	0.0066	0.0183

Cross Sectional Volatility Over Time : BASE



Money Market Cumulative Return
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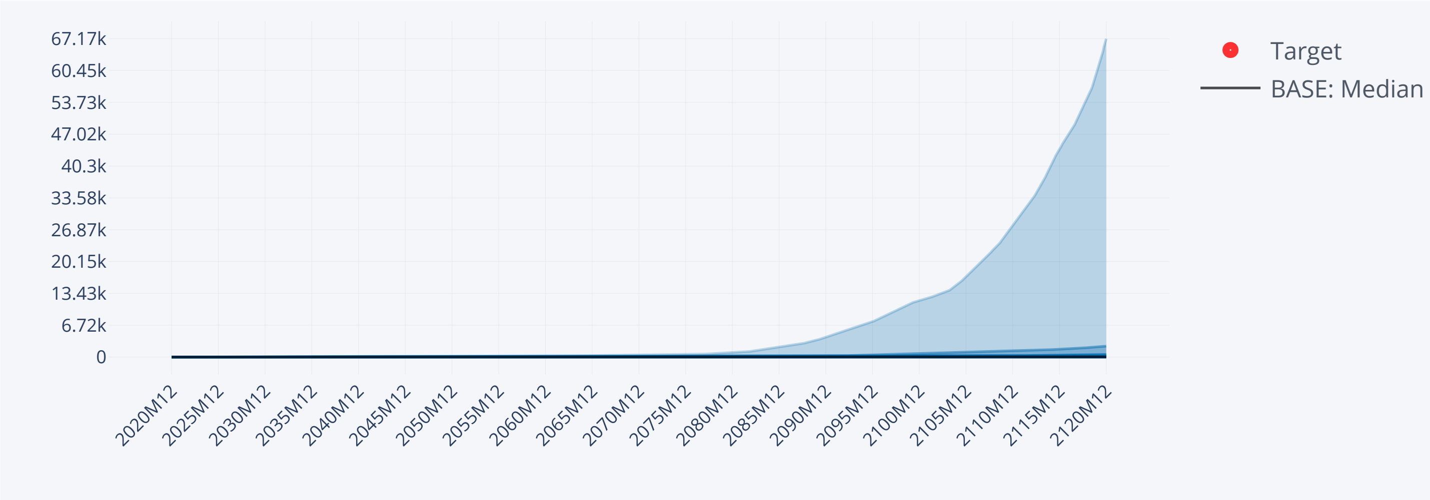
Simulated Data in Percentiles : Money Market Cumulative Return

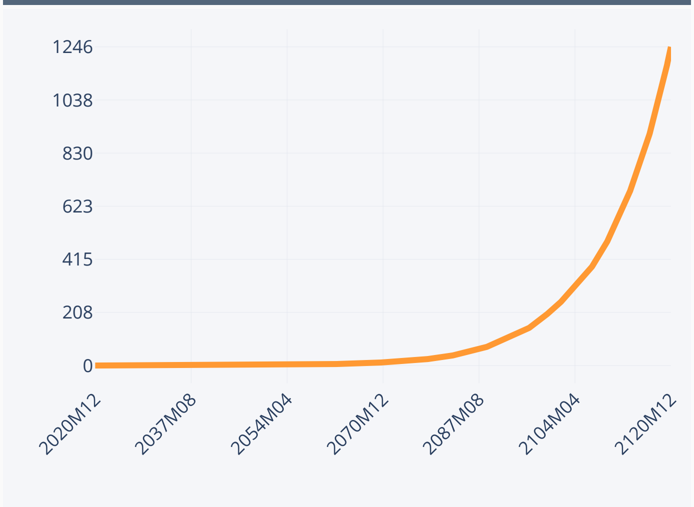


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

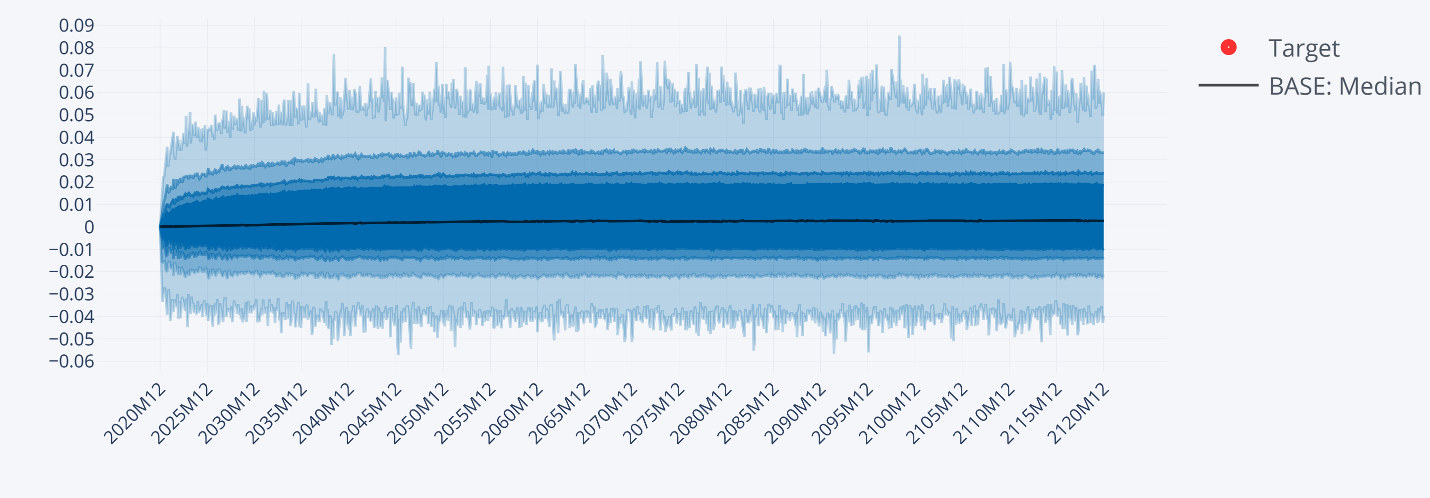
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0032	1.4973
std	0.0022	1.8549
min	-0.0010	-0.0484
1%	0.0003	0.0690
5%	0.0010	0.1689
10%	0.0014	0.2501
50%	0.0027	0.9517
90%	0.0059	3.2417
95%	0.0077	4.6058
99%	0.0114	8.5975
max	0.0208	56.4971

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Short Govt Bonds Total Return

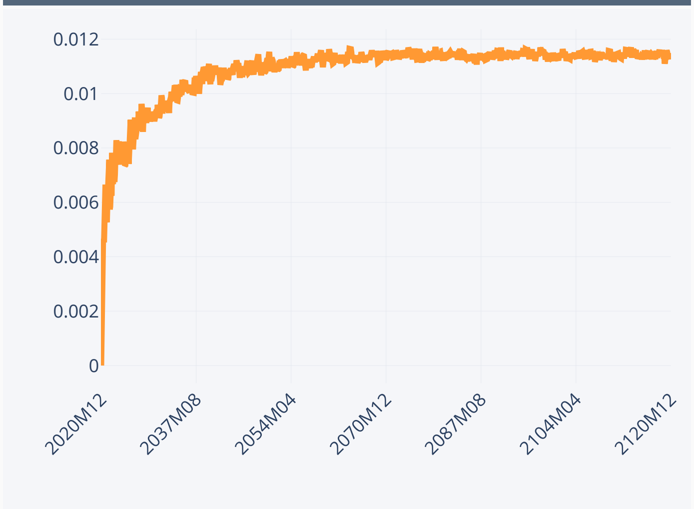


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

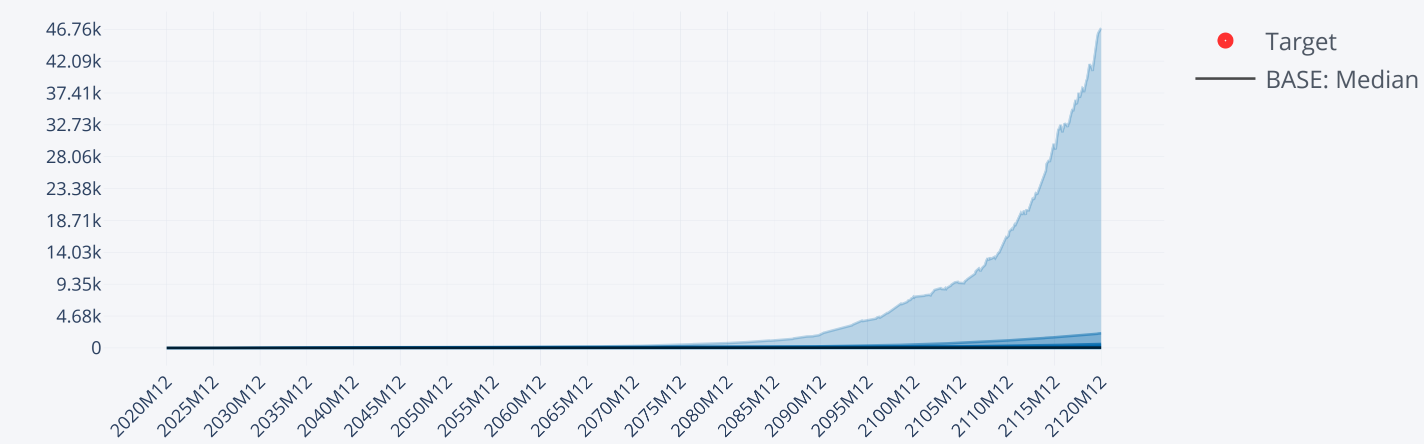
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0001	0.0035
std	0.0053	0.0112
min	-0.0346	-0.0431
1%	-0.0153	-0.0228
5%	-0.0092	-0.0141
10%	-0.0057	-0.0101
50%	0.0001	0.0022
90%	0.0055	0.0184
95%	0.0088	0.0237
99%	0.0158	0.0331
max	0.0296	0.0563

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Short Govt Bonds Cumulative Return

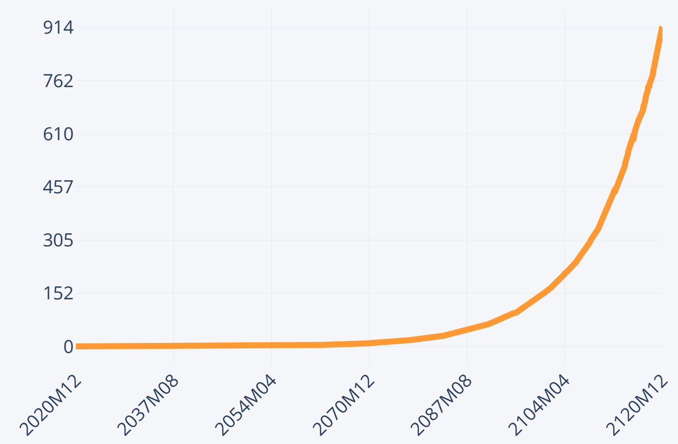


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

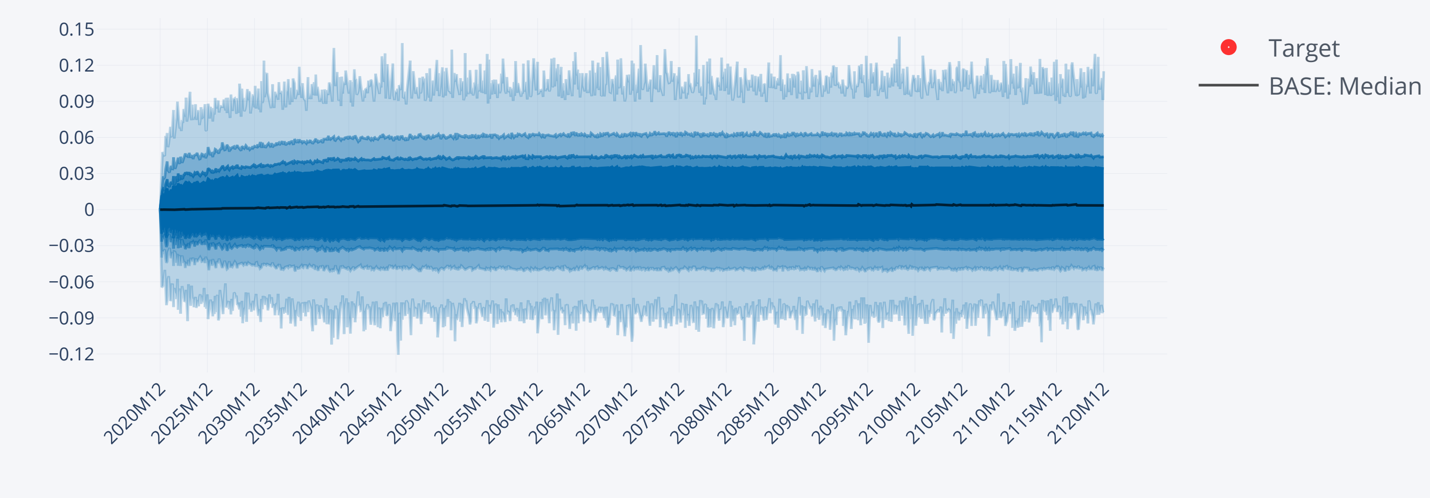
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0032	1.3557
std	0.0146	1.2873
min	-0.0909	-0.0118
1%	-0.0531	0.1171
5%	-0.0344	0.2302
10%	-0.0247	0.3285
50%	0.0030	1.0085
90%	0.0087	2.7161
95%	0.0103	3.6280
99%	0.0127	6.1634
max	0.0174	31.0280

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Int Govt Bonds Total Return

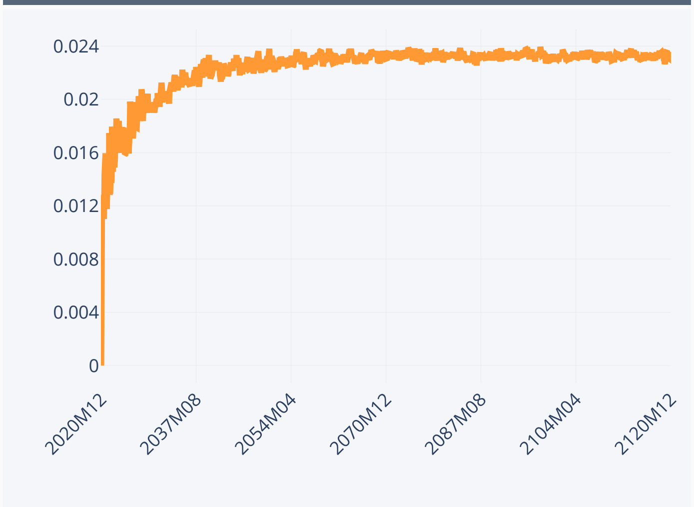


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

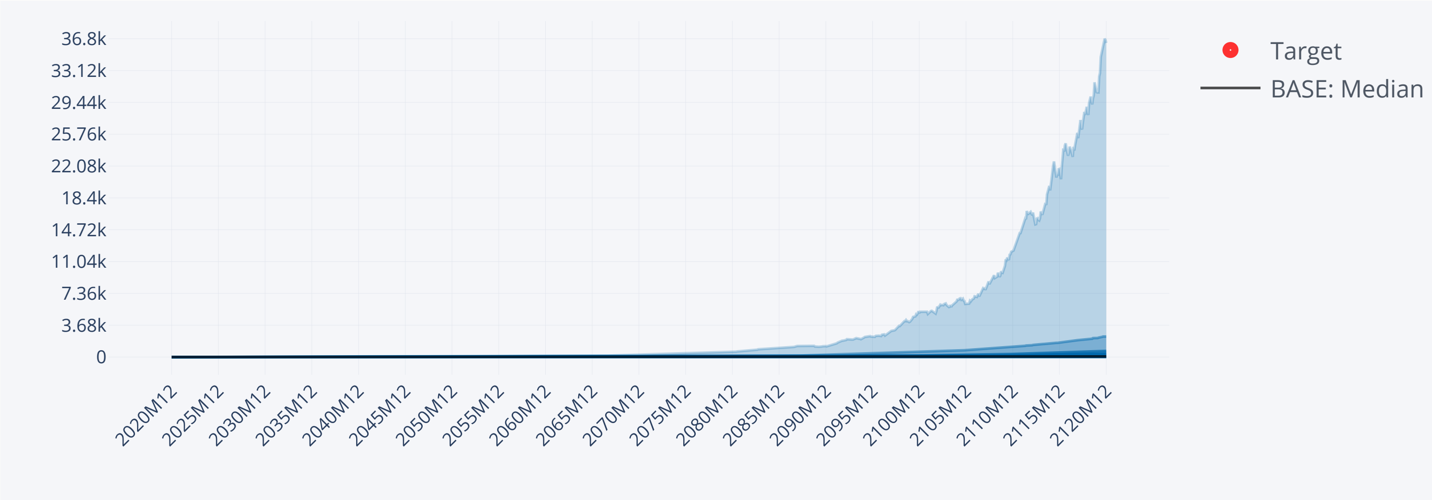
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0005	0.0043
std	0.0118	0.0231
min	-0.0658	-0.0978
1%	-0.0319	-0.0499
5%	-0.0206	-0.0327
10%	-0.0149	-0.0244
50%	-0.0001	0.0032
90%	0.0133	0.0344
95%	0.0189	0.0442
99%	0.0309	0.0624
max	0.0610	0.0934

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Int Govt Bonds Cumulative Return

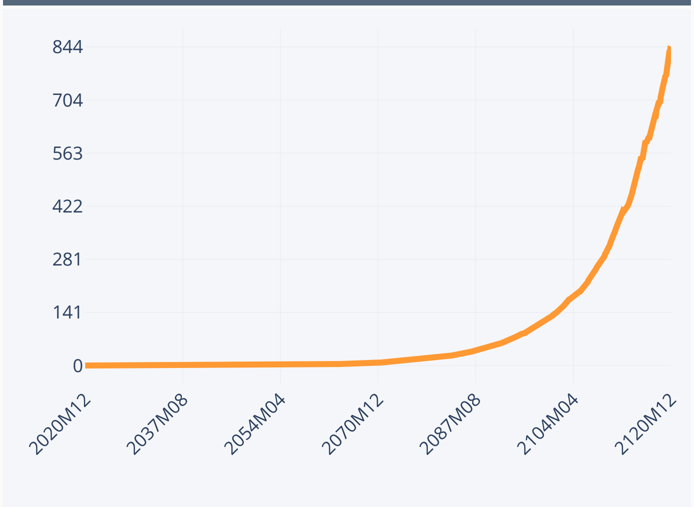


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

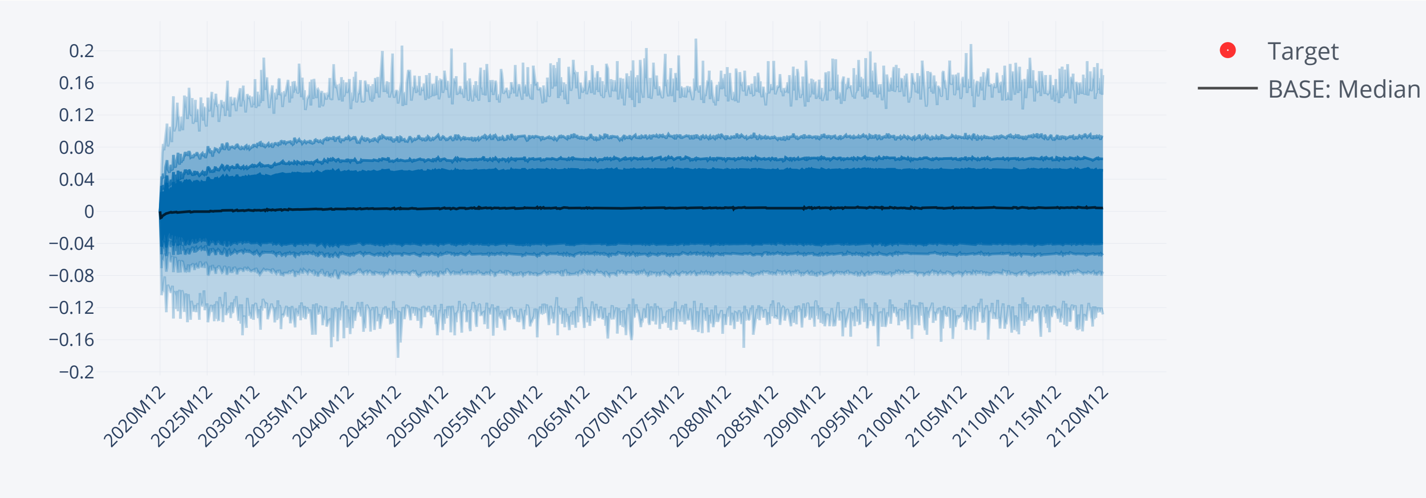
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0152	1.3390
std	0.0376	0.9541
min	-0.1971	-0.0376
1%	-0.1259	0.1982
5%	-0.0886	0.3659
10%	-0.0701	0.4853
50%	-0.0049	1.1170
90%	0.0218	2.4338
95%	0.0253	3.0420
99%	0.0307	4.7280
max	0.0418	17.3069

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Long Govt Bonds Total Return

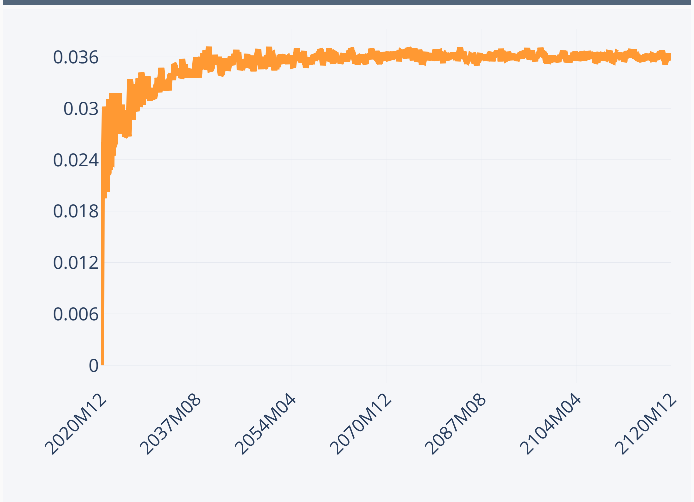


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

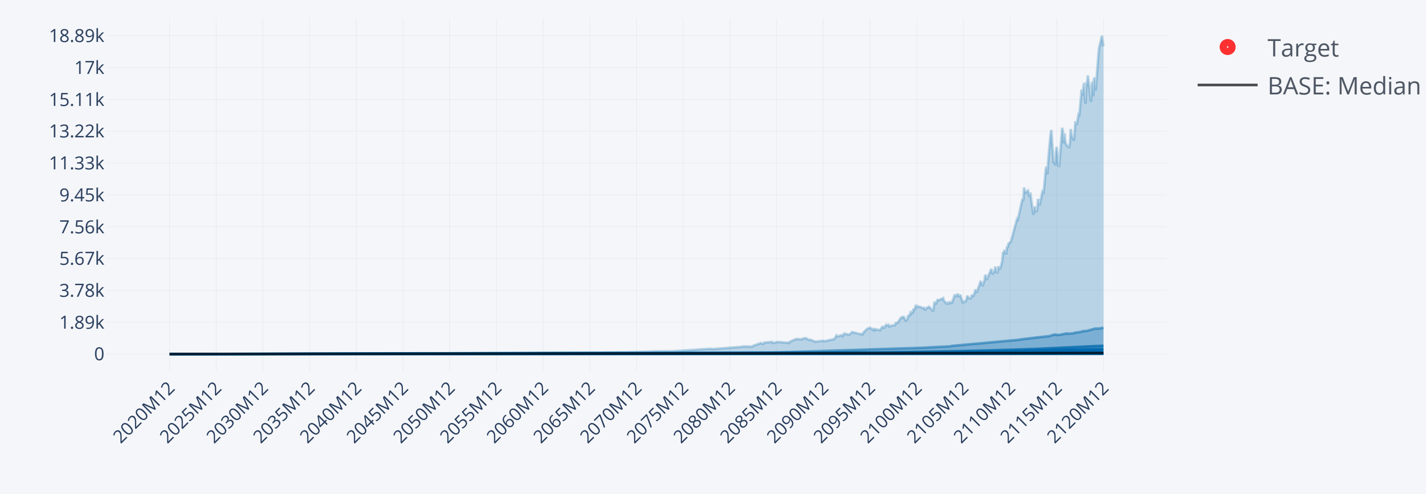
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0022	0.0048
std	0.0202	0.0361
min	-0.0949	-0.1478
1%	-0.0511	-0.0782
5%	-0.0362	-0.0525
10%	-0.0269	-0.0401
50%	-0.0021	0.0042
90%	0.0229	0.0517
95%	0.0313	0.0664
99%	0.0482	0.0932
max	0.0980	0.1477

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Long Govt Bonds Cumulative Return

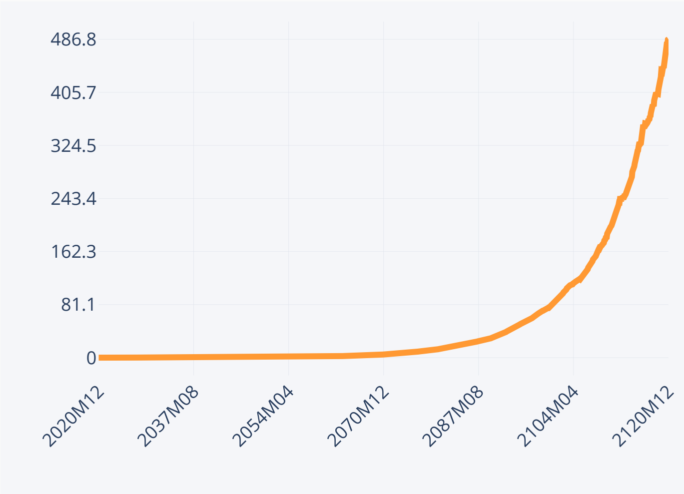


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

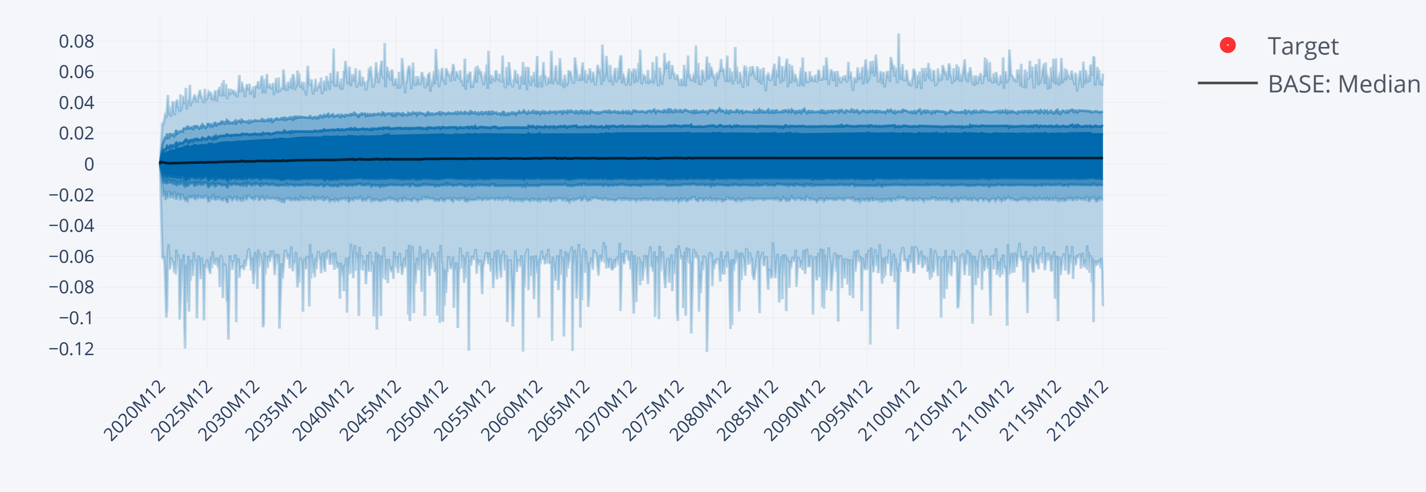
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0554	0.9310
std	0.0684	0.6333
min	-0.3102	-0.3073
1%	-0.2282	0.0166
5%	-0.1749	0.1924
10%	-0.1479	0.2969
50%	-0.0502	0.8216
90%	0.0272	1.6829
95%	0.0442	2.0502
99%	0.0745	3.0485
max	0.1494	9.0570

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Short Inv Corp Bonds Total Return

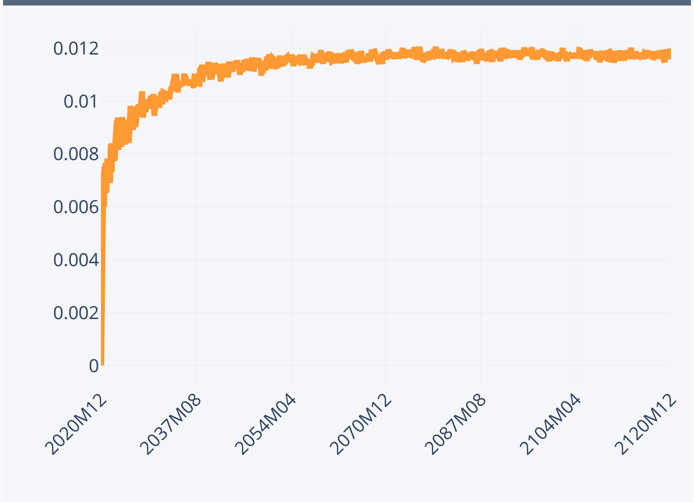


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

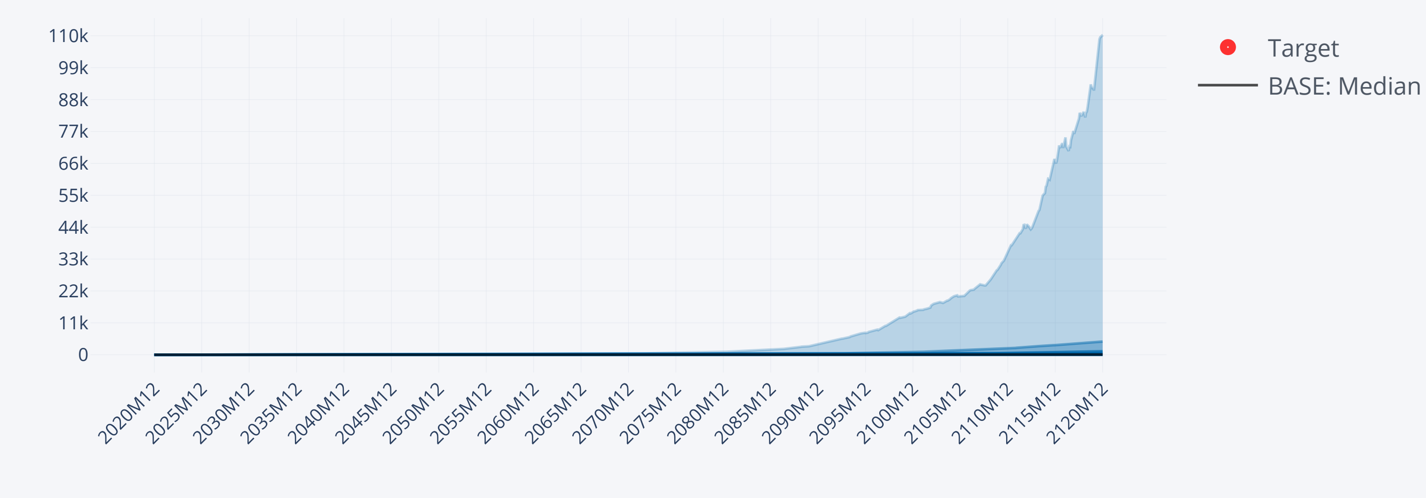
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0003	0.0041
std	0.0071	0.0116
min	-0.0685	-0.1023
1%	-0.0184	-0.0232
5%	-0.0105	-0.0137
10%	-0.0068	-0.0094
50%	0.0005	0.0034
90%	0.0077	0.0190
95%	0.0111	0.0241
99%	0.0190	0.0334
max	0.0317	0.0562

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Short Inv Corp Bonds Cumulative Return

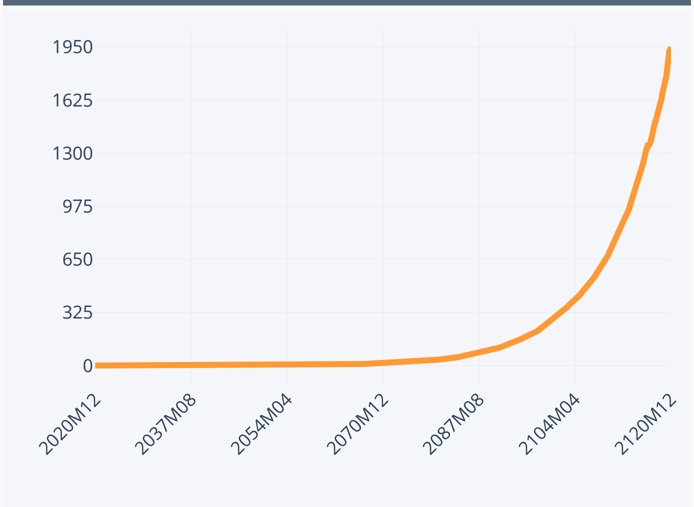


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

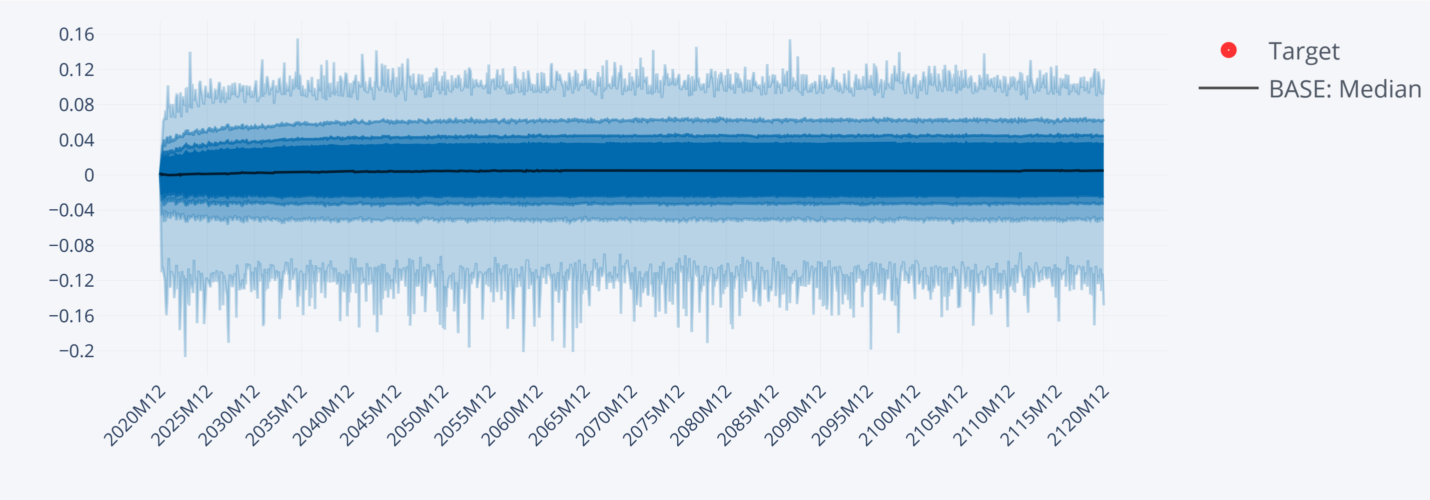
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0027	1.8857
std	0.0184	1.5863
min	-0.1174	0.1758
1%	-0.0569	0.3443
5%	-0.0347	0.4910
10%	-0.0238	0.6136
50%	0.0087	1.4711
90%	0.0200	3.5841
95%	0.0219	4.6962
99%	0.0253	7.8134
max	0.0323	39.1380

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Int Inv Corp Bonds Total Return

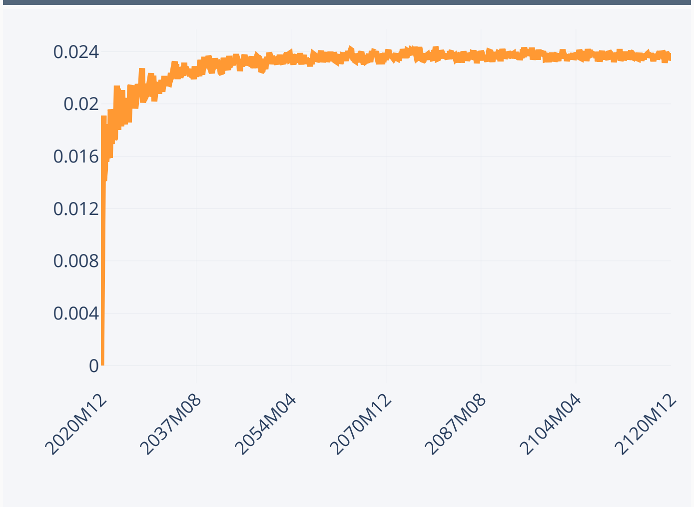


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

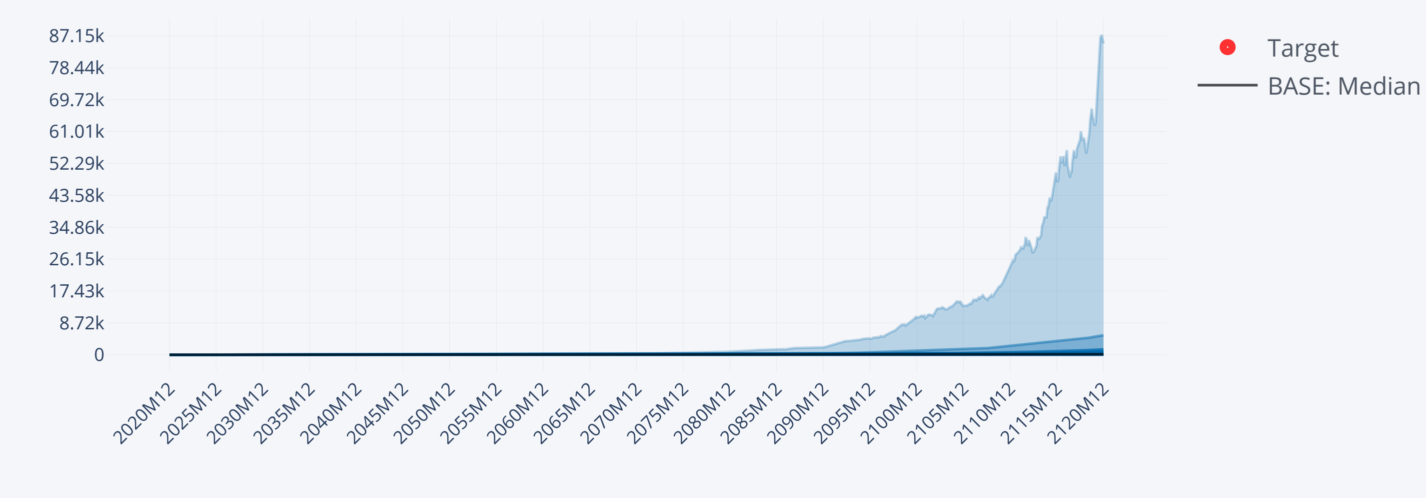
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0003	0.0048
std	0.0162	0.0236
min	-0.1266	-0.1738
1%	-0.0427	-0.0516
5%	-0.0256	-0.0326
10%	-0.0193	-0.0240
50%	-0.0001	0.0044
90%	0.0188	0.0349
95%	0.0253	0.0445
99%	0.0396	0.0616
max	0.0770	0.0960

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Int Inv Corp Bonds Cumulative Return

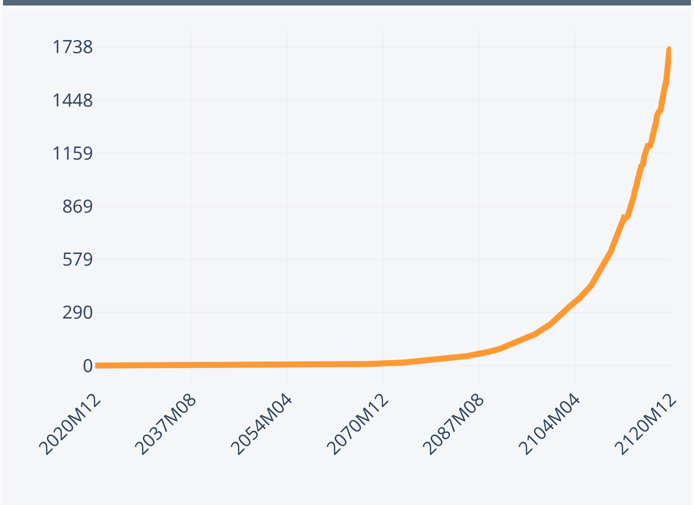


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

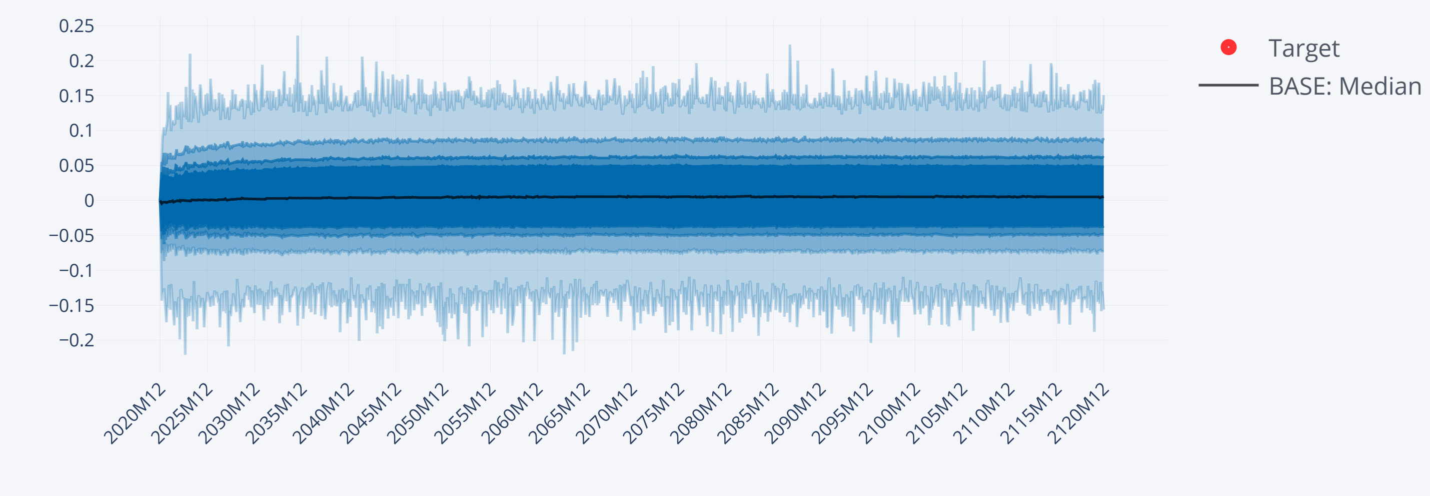
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0100	1.8432
std	0.0467	1.1848
min	-0.2619	0.0348
1%	-0.1459	0.3861
5%	-0.0984	0.6215
10%	-0.0745	0.7762
50%	-0.0006	1.5780
90%	0.0426	3.1898
95%	0.0490	3.9536
99%	0.0580	5.9913
max	0.0727	22.1573

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Long Inv Corp Bonds Total Return

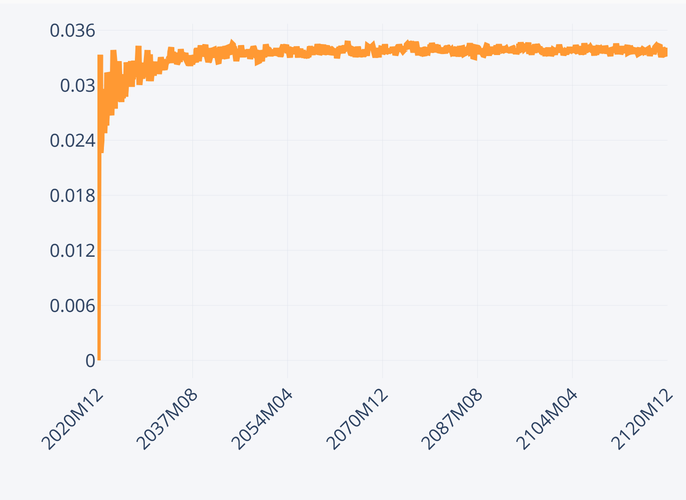


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

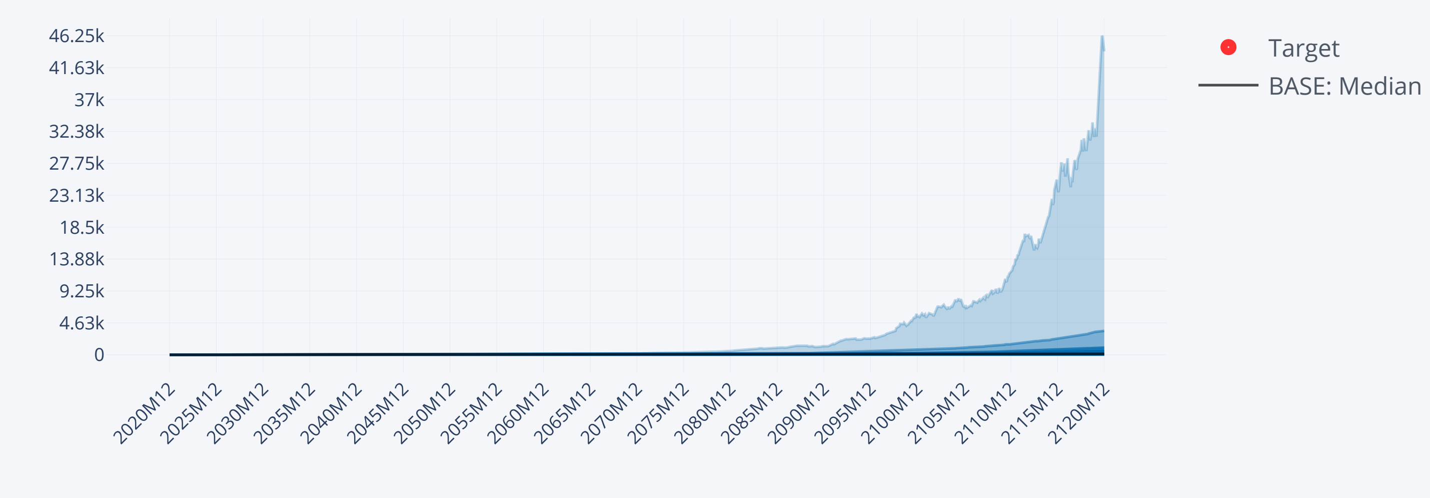
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0017	0.0052
std	0.0254	0.0338
min	-0.1452	-0.1920
1%	-0.0637	-0.0744
5%	-0.0418	-0.0494
10%	-0.0326	-0.0370
50%	-0.0015	0.0046
90%	0.0300	0.0490
95%	0.0401	0.0615
99%	0.0592	0.0864
max	0.1305	0.1440

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Long Inv Corp Bonds Cumulative Return

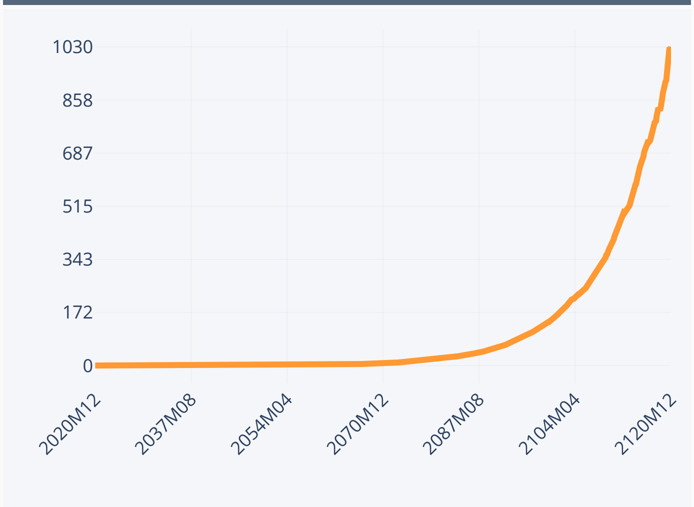


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

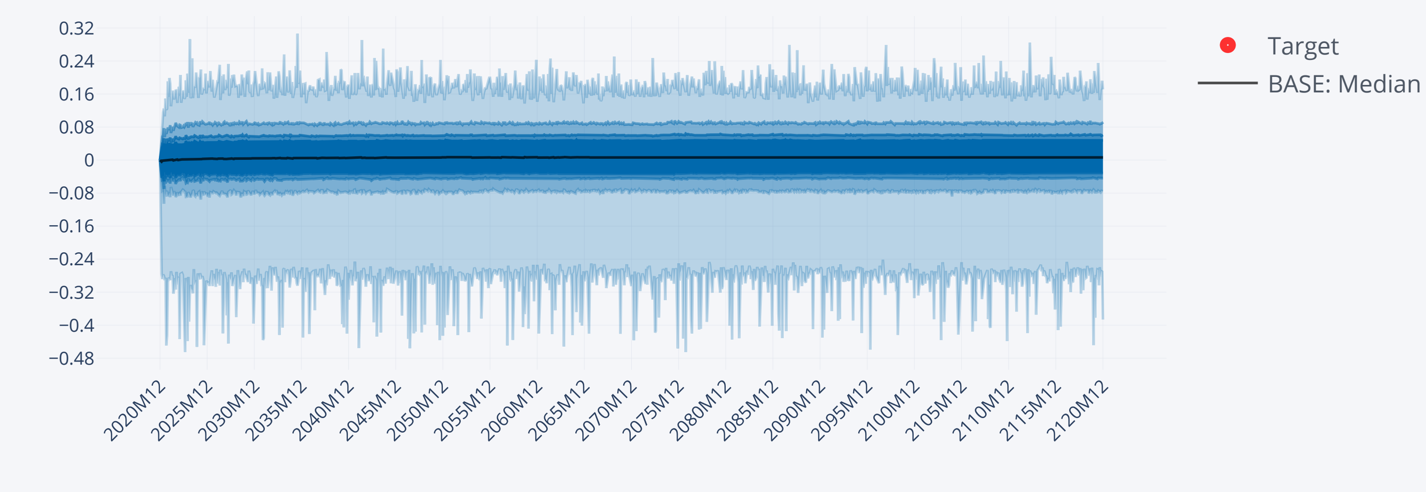
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0405	1.4218
std	0.0766	0.8294
min	-0.4041	-0.1352
1%	-0.2387	0.2379
5%	-0.1745	0.4773
10%	-0.1418	0.6065
50%	-0.0346	1.2592
90%	0.0560	2.4004
95%	0.0736	2.9204
99%	0.1060	4.2934
max	0.1936	13.2970

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : High Yield Corp Bonds Total Return

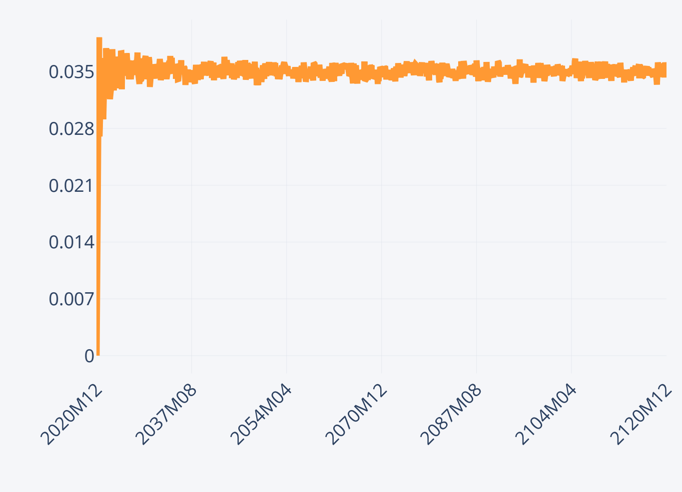


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0004	0.0061
std	0.0336	0.0352
min	-0.2882	-0.4255
1%	-0.0785	-0.0739
5%	-0.0472	-0.0448
10%	-0.0352	-0.0326
50%	0.0003	0.0061
90%	0.0370	0.0471
95%	0.0494	0.0608
99%	0.0761	0.0883
max	0.1989	0.1606

Cross Sectional Volatility Over Time : BASE



High Yield Corp Bonds Cumulative Return
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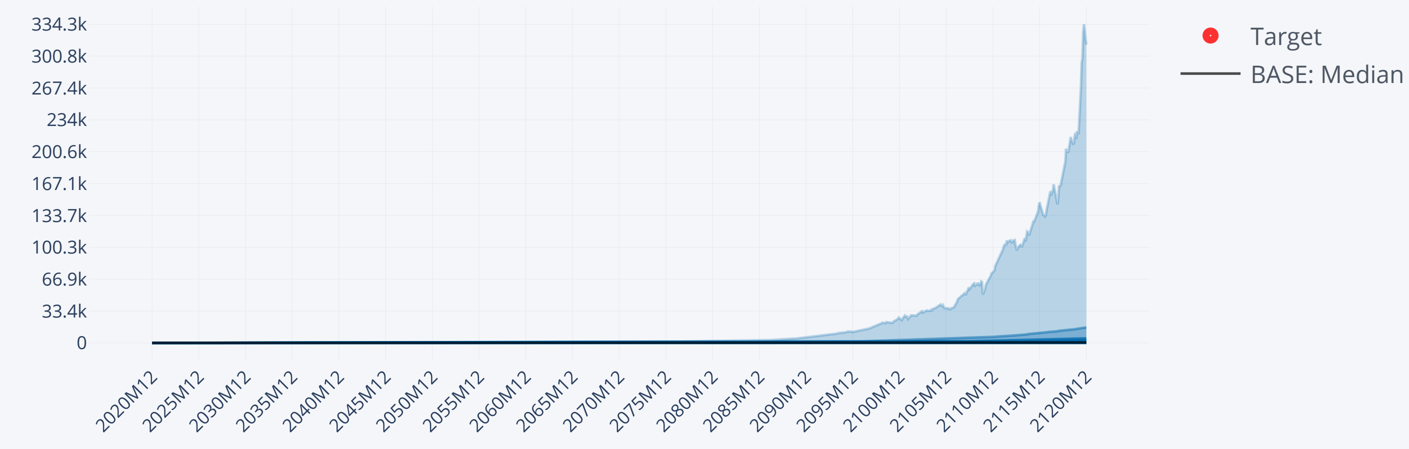
Validation Report

Simulated Data in Percentiles : High Yield Corp Bonds Cumulative Return

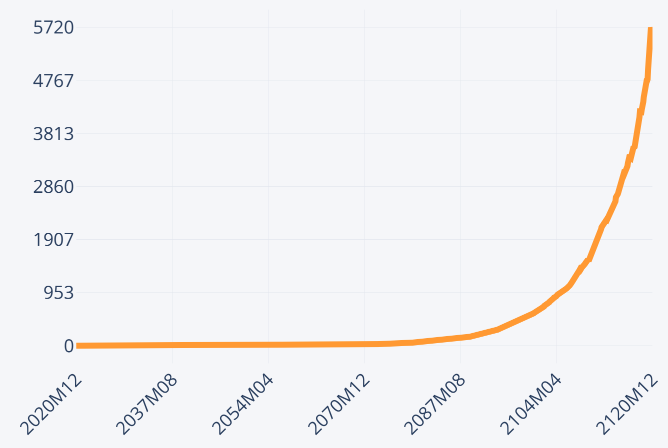


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

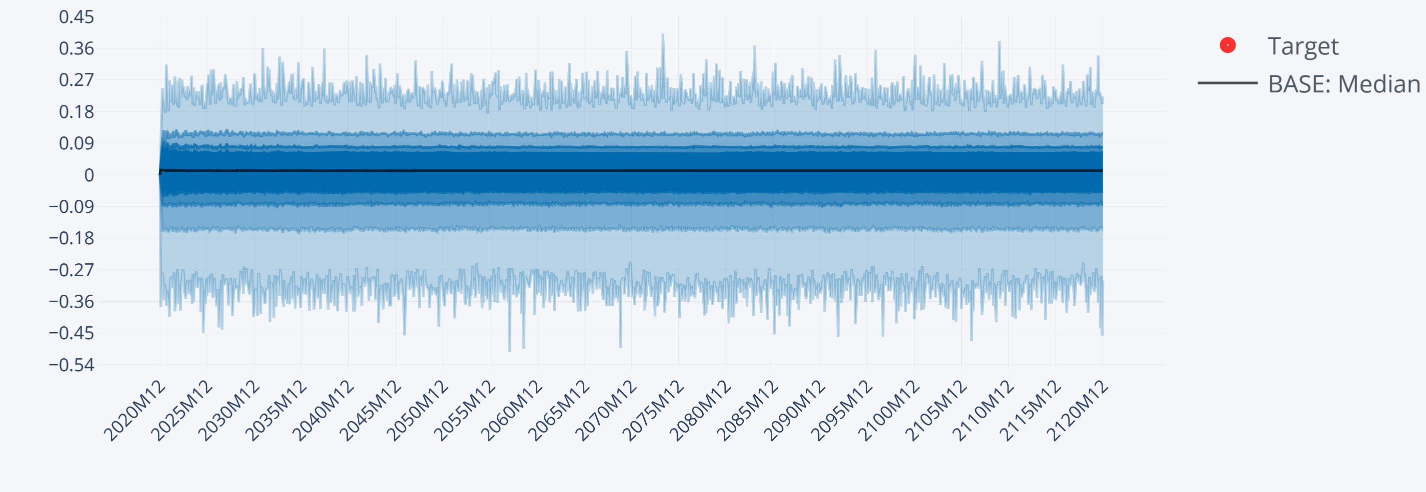
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	-0.0370	2.9604
std	0.0769	1.9301
min	-0.4930	-0.0131
1%	-0.2612	0.6139
5%	-0.1874	1.0013
10%	-0.1439	1.2211
50%	-0.0231	2.4947
90%	0.0497	5.2019
95%	0.0624	6.4753
99%	0.0782	9.8713
max	0.0958	32.1988

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Small Cap Total Return

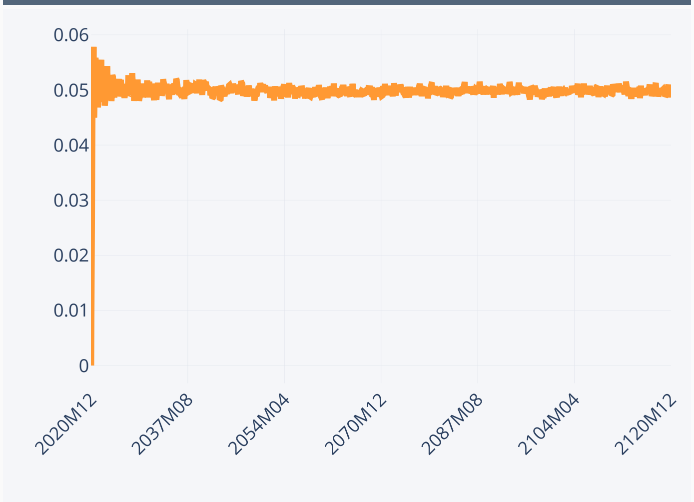


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

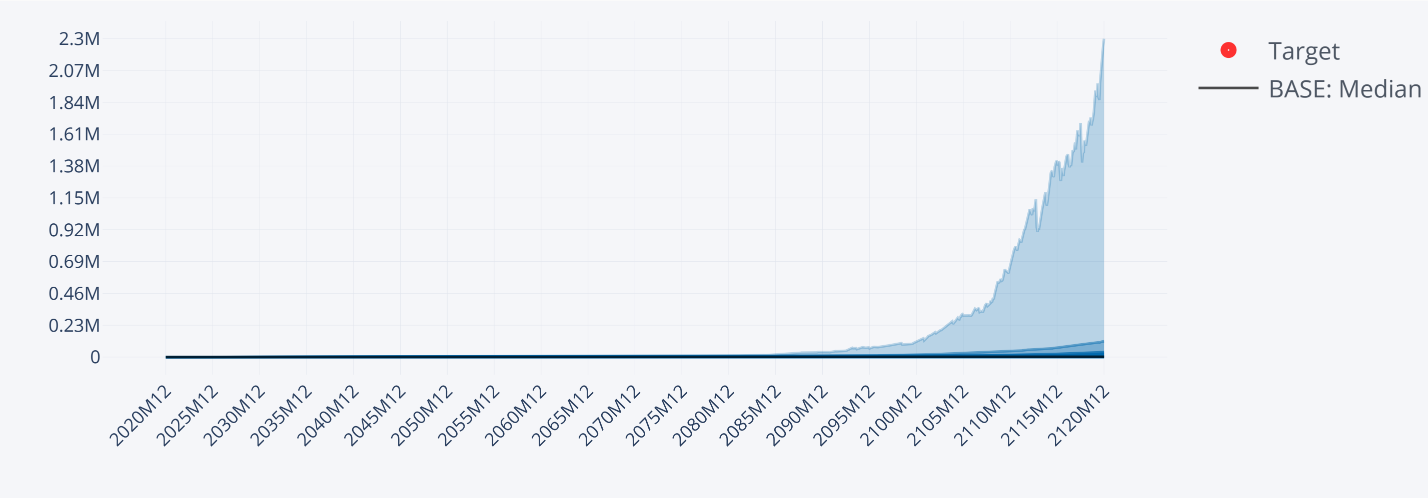
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0084	0.0077
std	0.0494	0.0507
min	-0.4037	-0.3286
1%	-0.1543	-0.1574
5%	-0.0790	-0.0842
10%	-0.0473	-0.0502
50%	0.0122	0.0118
90%	0.0636	0.0627
95%	0.0782	0.0802
99%	0.1117	0.1149
max	0.2679	0.2625

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Small Cap Cumulative Return

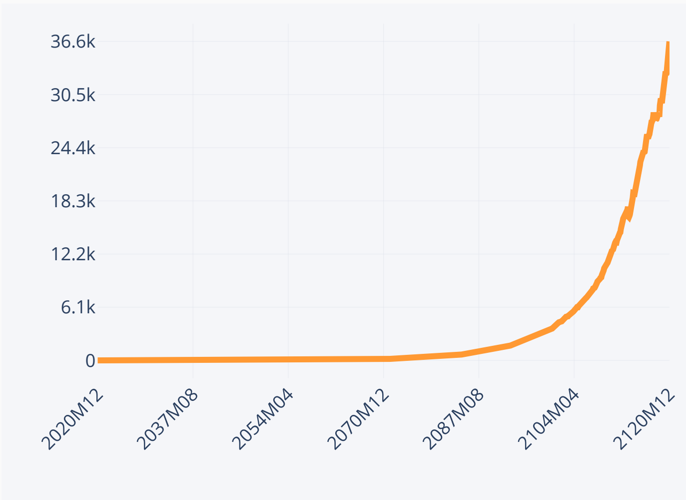


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

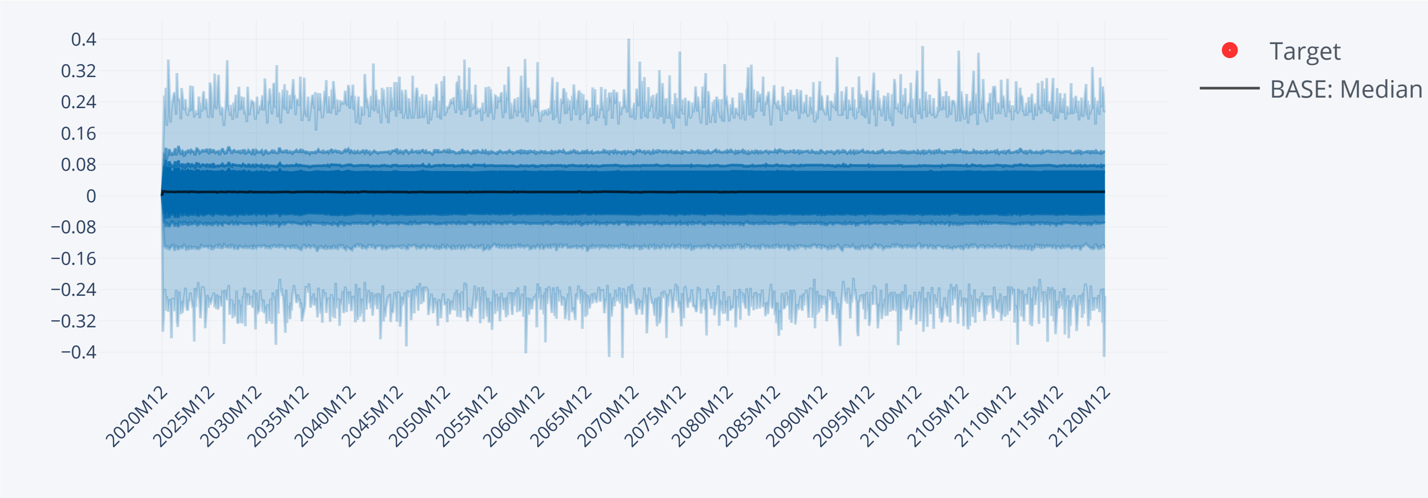
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.1002	13.9421
std	0.1895	15.2631
min	-0.5459	-0.9319
1%	-0.3366	-0.2754
5%	-0.2112	0.6657
10%	-0.1502	1.6251
50%	0.1047	9.2211
90%	0.3381	31.4803
95%	0.4076	42.4142
99%	0.5425	75.1605
max	0.8386	182.6253

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Mid Cap Total Return

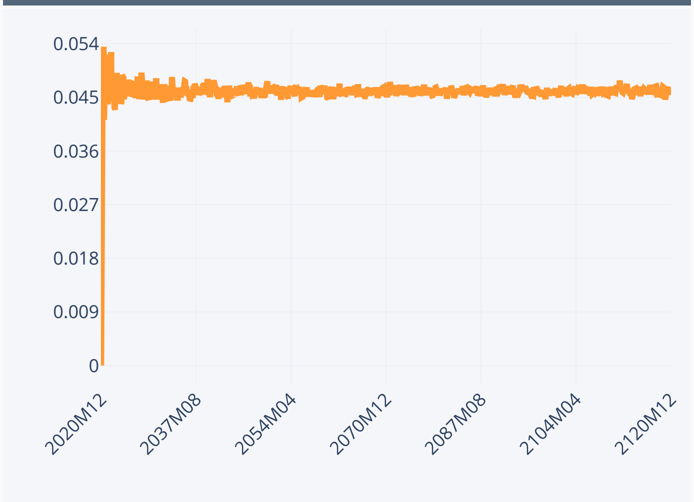


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

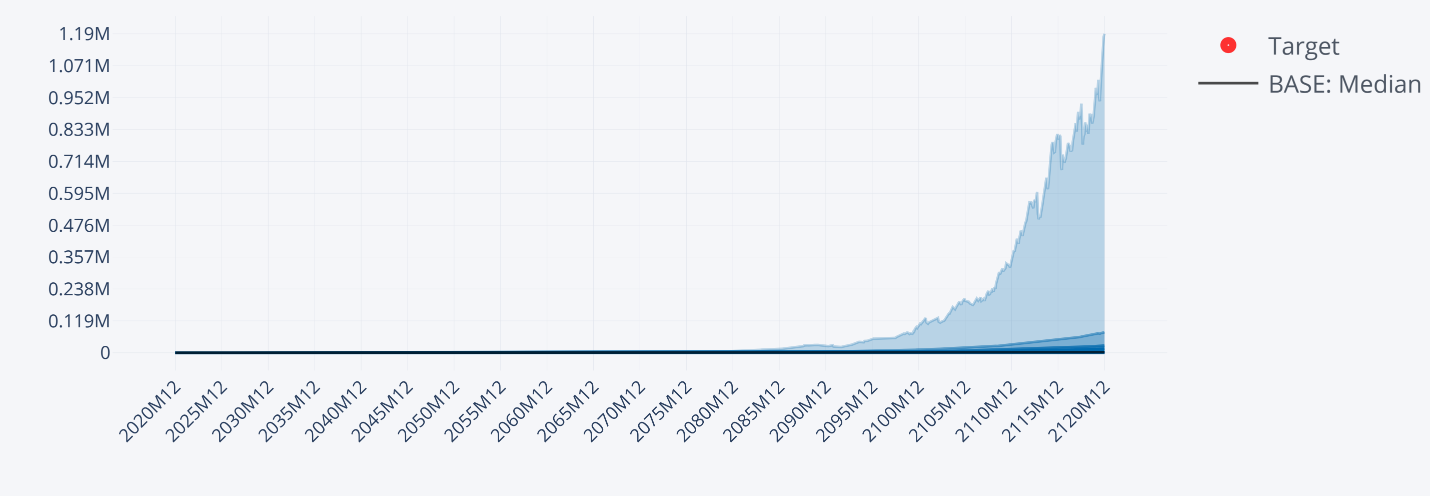
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0074	0.0074
std	0.0445	0.0464
min	-0.3644	-0.2802
1%	-0.1292	-0.1320
5%	-0.0681	-0.0705
10%	-0.0452	-0.0480
50%	0.0098	0.0097
90%	0.0590	0.0607
95%	0.0730	0.0769
99%	0.1058	0.1120
max	0.2252	0.2044

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Mid Cap Cumulative Return

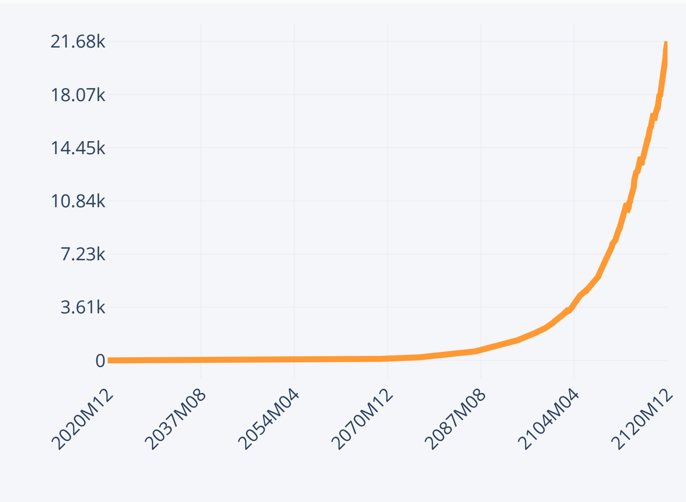


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

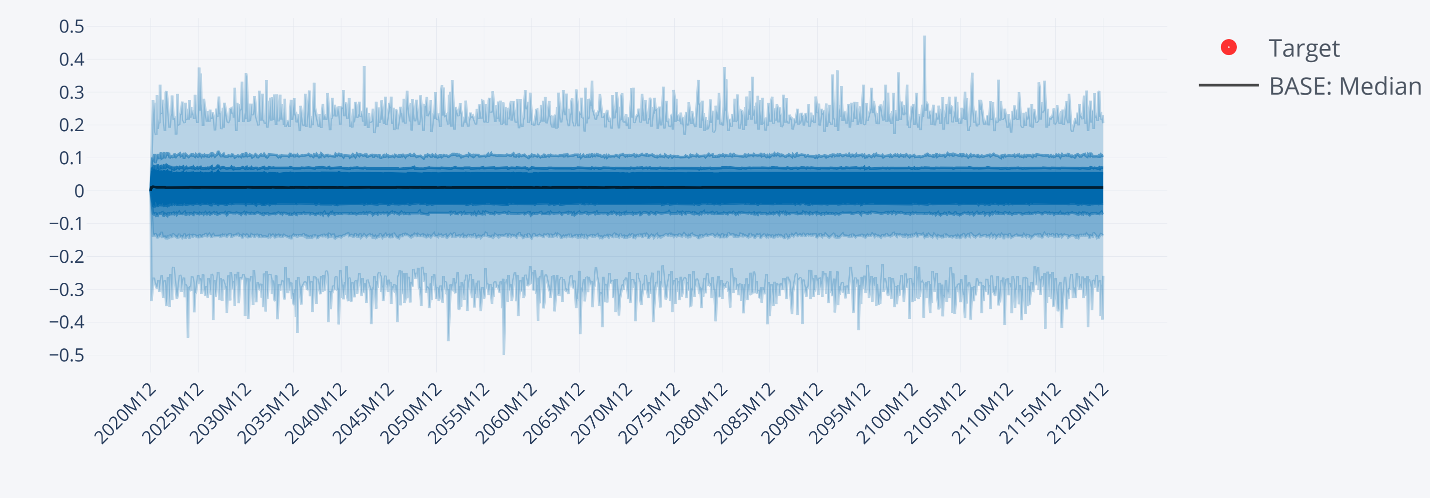
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0956	12.8594
std	0.1734	13.0559
min	-0.4735	-0.9109
1%	-0.2919	-0.0301
5%	-0.1832	1.0789
10%	-0.1254	2.0078
50%	0.0934	9.0076
90%	0.3166	28.4069
95%	0.3832	37.9848
99%	0.5191	63.2068
max	0.8825	167.3021

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Large Cap Total Return

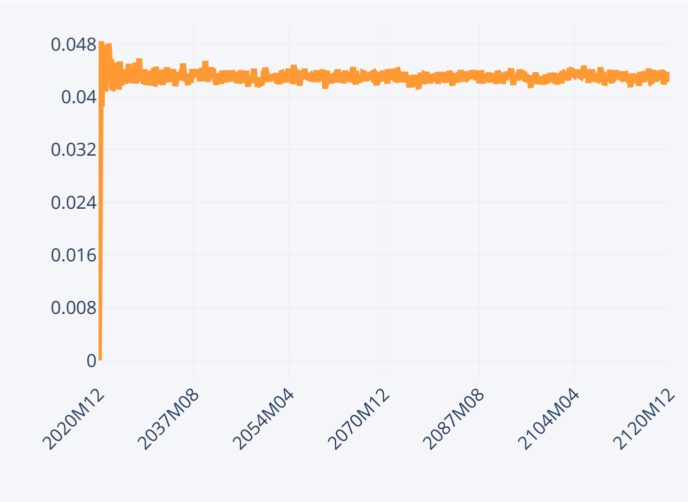


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

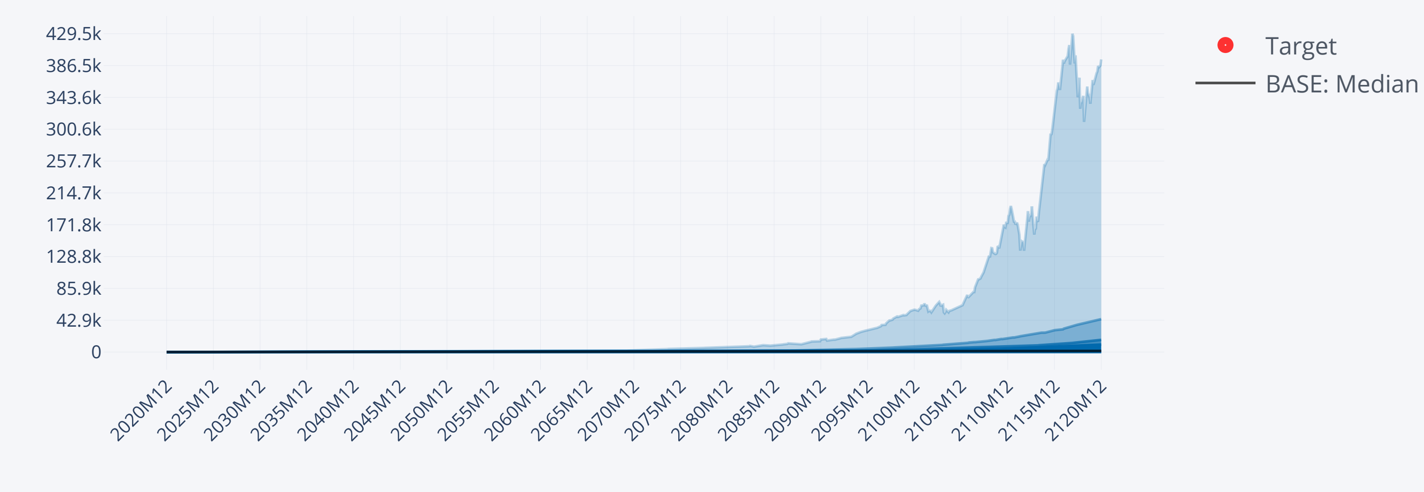
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0079	0.0070
std	0.0444	0.0433
min	-0.2837	-0.3288
1%	-0.1345	-0.1376
5%	-0.0678	-0.0681
10%	-0.0406	-0.0399
50%	0.0102	0.0100
90%	0.0579	0.0530
95%	0.0725	0.0691
99%	0.1074	0.1041
max	0.3228	0.2239

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Large Cap Cumulative Return

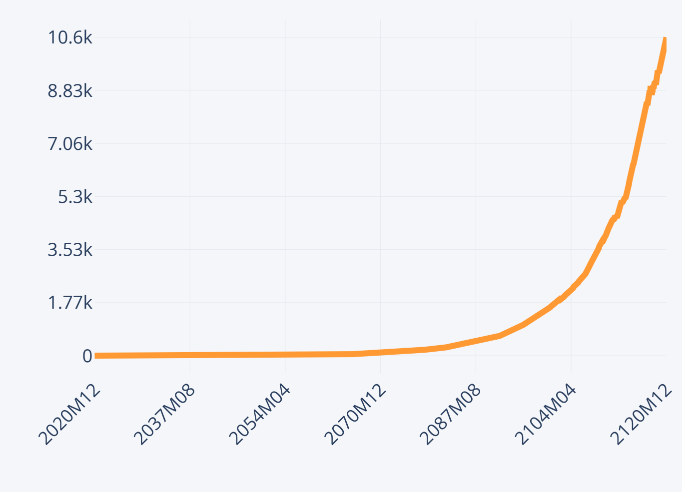


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

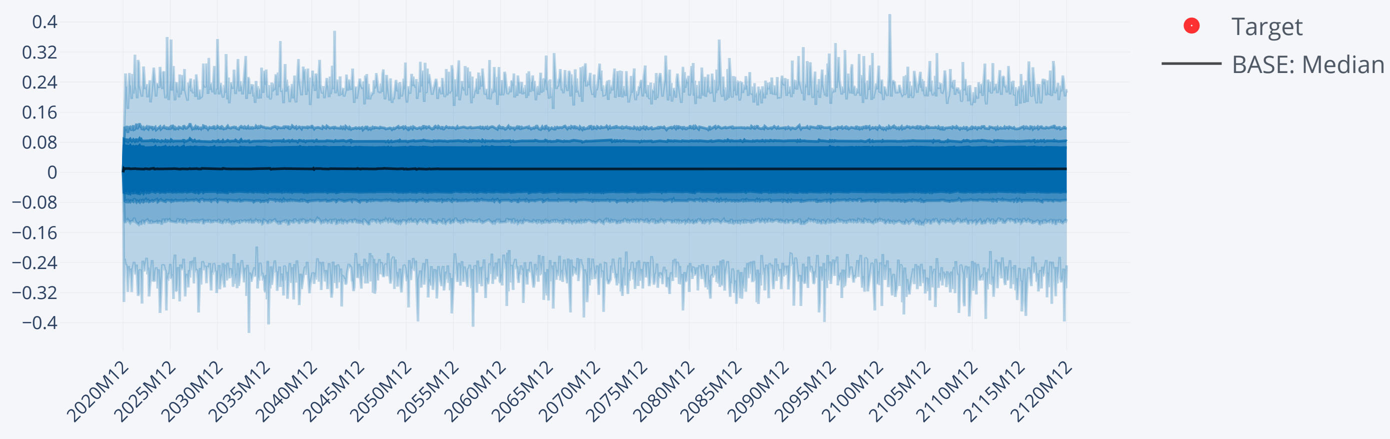
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0943	11.2532
std	0.1627	10.6085
min	-0.5068	-0.8309
1%	-0.2958	-0.0633
5%	-0.1796	1.0279
10%	-0.1180	1.9331
50%	0.0996	8.2779
90%	0.2953	24.0783
95%	0.3561	31.5261
99%	0.4698	49.5594
max	0.8170	119.0667

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : International Diversified Equity Total Return

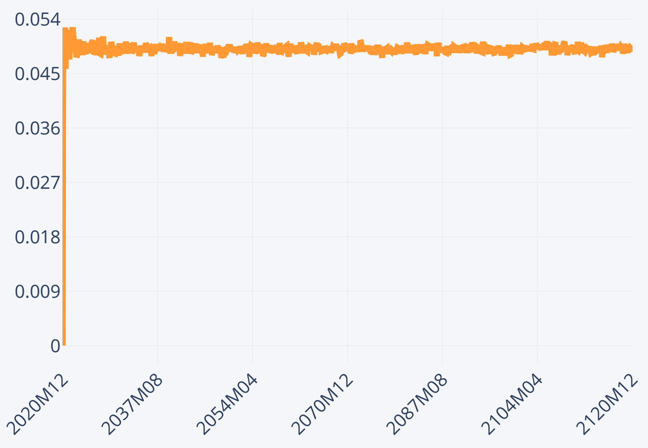


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

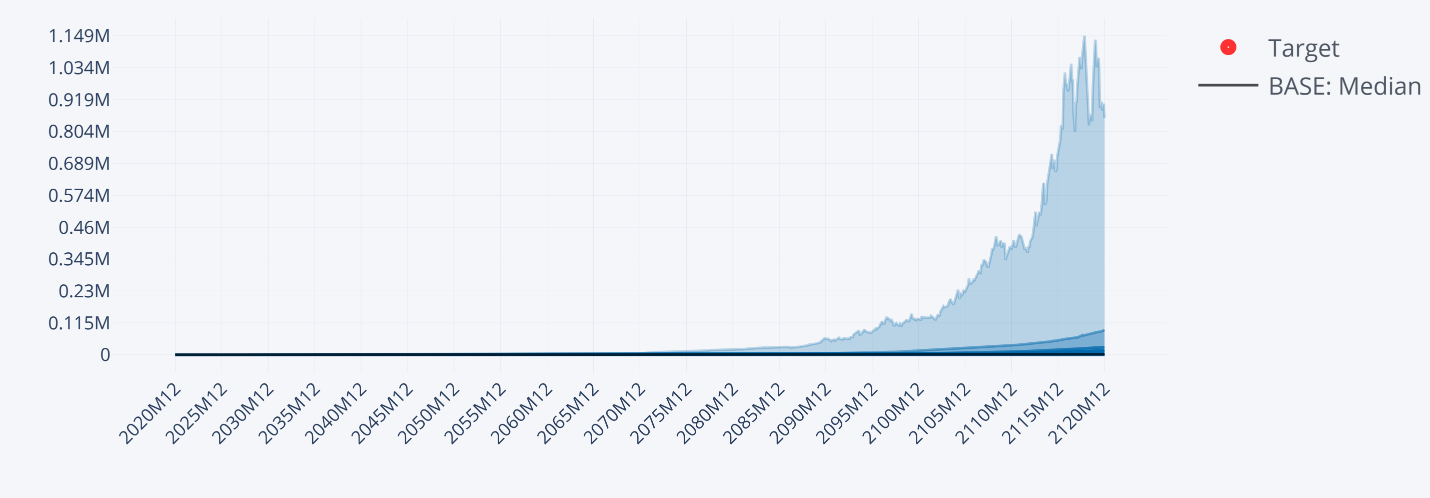
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0083	0.0069
std	0.0501	0.0494
min	-0.2587	-0.2881
1%	-0.1294	-0.1339
5%	-0.0768	-0.0758
10%	-0.0530	-0.0531
50%	0.0103	0.0093
90%	0.0682	0.0653
95%	0.0849	0.0830
99%	0.1205	0.1187
max	0.2616	0.2057

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : International Diversified Equity Cumulative Return

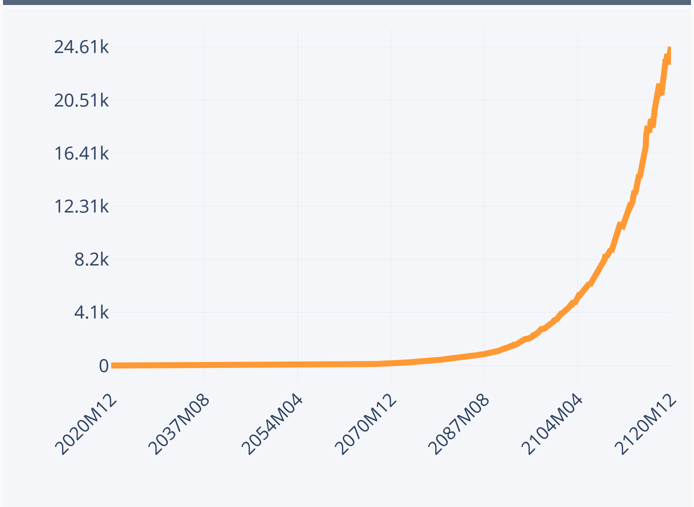


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

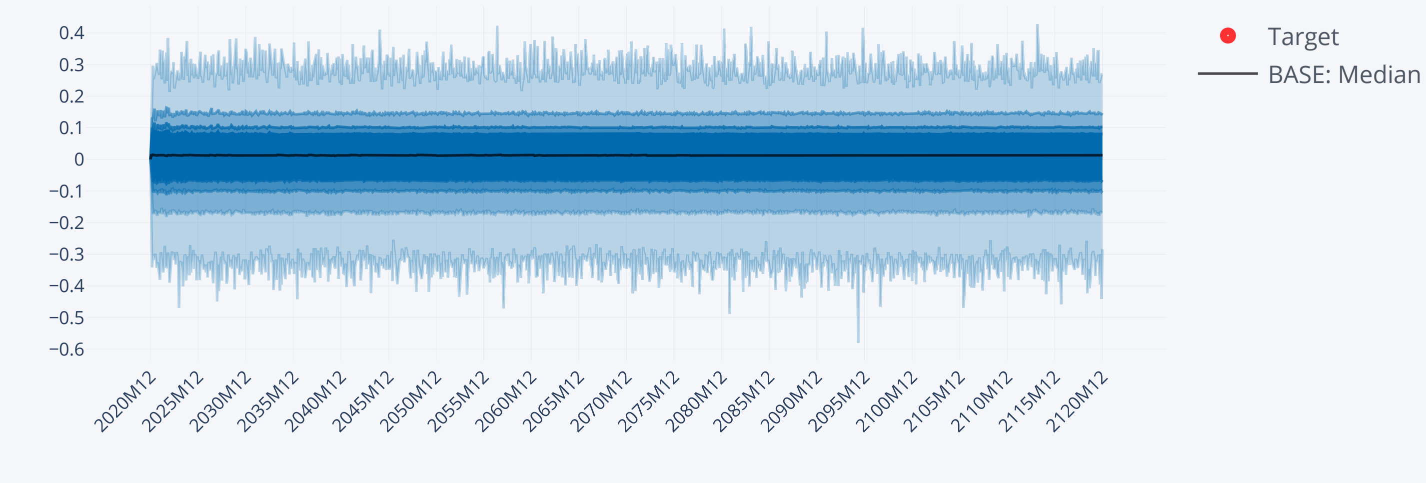
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0983	13.3775
std	0.1920	15.6230
min	-0.4832	-0.9129
1%	-0.3084	-0.0191
5%	-0.2021	0.9579
10%	-0.1431	1.8445
50%	0.0906	8.8405
90%	0.3479	29.7815
95%	0.4300	40.6670
99%	0.5785	71.8245
max	0.9584	399.3961

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Aggressive US Equity Total Return

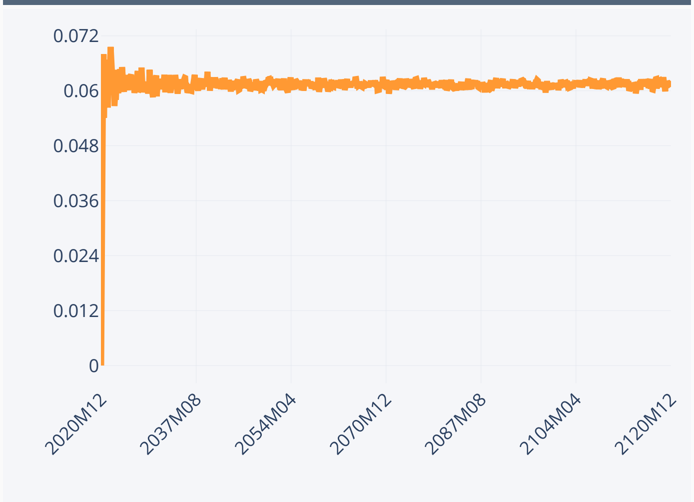


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0089	0.0090
std	0.0622	0.0620
min	-0.3805	-0.3053
1%	-0.1668	-0.1666
5%	-0.0982	-0.1004
10%	-0.0681	-0.0683
50%	0.0123	0.0127
90%	0.0834	0.0812
95%	0.1027	0.1033
99%	0.1422	0.1461
max	0.3467	0.2774

Cross Sectional Volatility Over Time : BASE



Aggressive US Equity Cumulative Return

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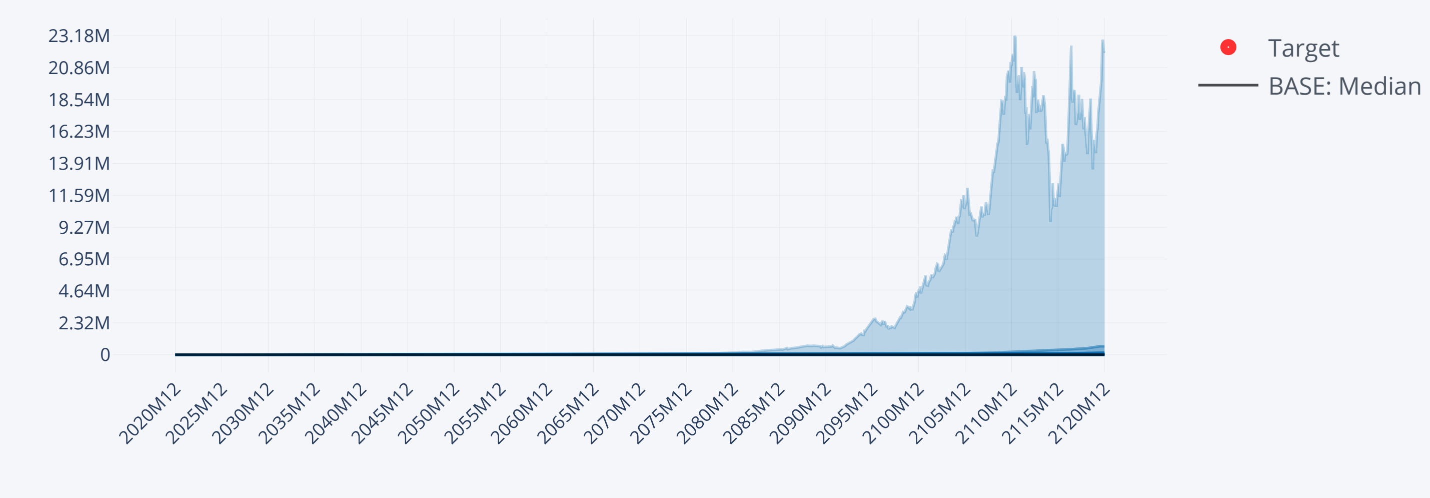
Mar 2020 - Higher Targets

Validation Report

Simulated Data in Percentiles : Aggressive US Equity Cumulative Return



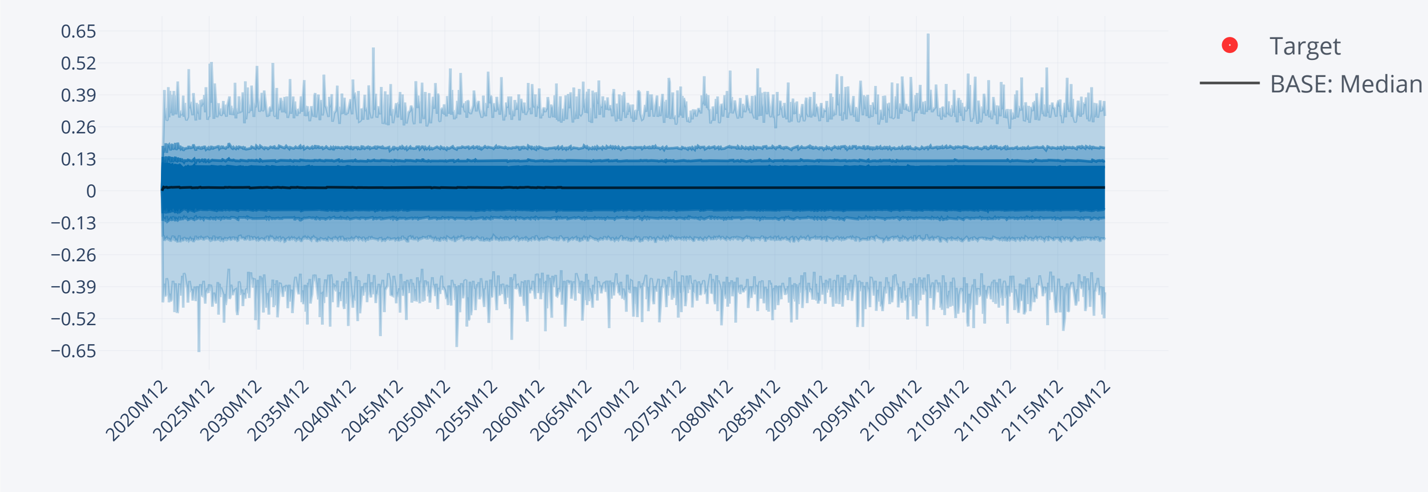
Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.1185	22.7657
std	0.2337	33.3815
min	-0.5775	-0.9356
1%	-0.3674	-0.3744
5%	-0.2425	0.5880
10%	-0.1786	1.5393
50%	0.1078	11.7434
90%	0.4252	55.4966
95%	0.5238	79.3352
99%	0.7064	162.9511
max	1.2402	539.3215

Cross Sectional Volatility Over Time : BASE

Simulated Data in Percentiles : Aggressive Foreign Equity Total Return

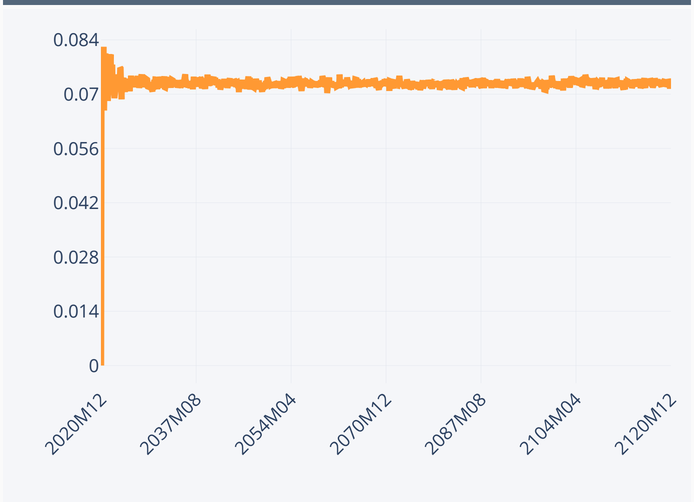


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

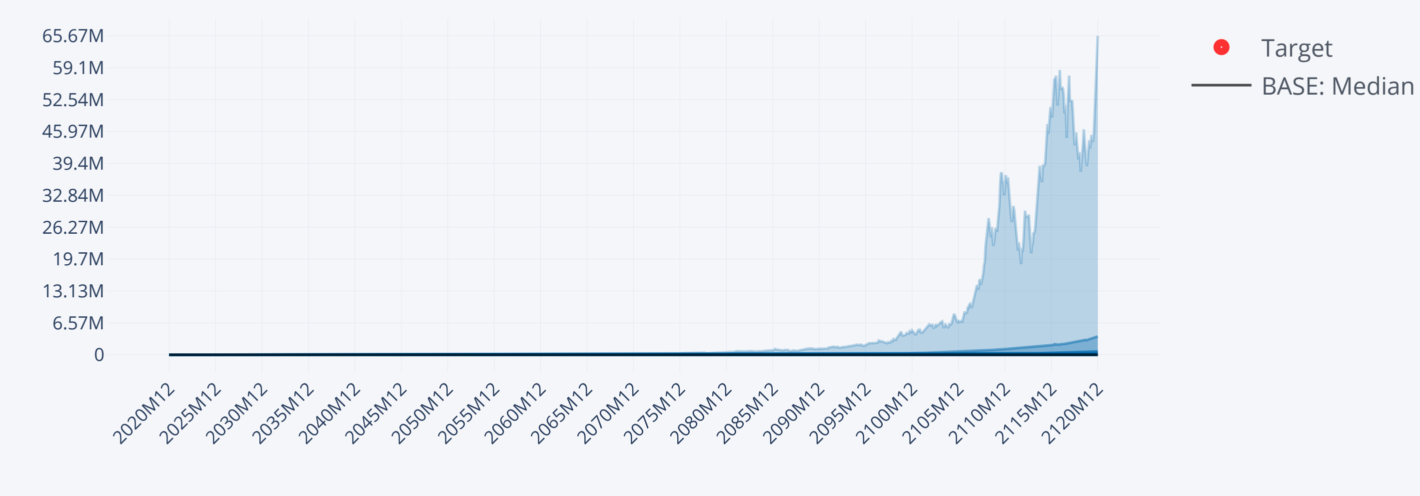
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.0124	0.0092
std	0.0767	0.0728
min	-0.4423	-0.4043
1%	-0.1911	-0.1999
5%	-0.1158	-0.1126
10%	-0.0820	-0.0781
50%	0.0146	0.0122
90%	0.1057	0.0954
95%	0.1329	0.1235
99%	0.1848	0.1723
max	0.3448	0.3088

Cross Sectional Volatility Over Time : BASE



Simulated Data in Percentiles : Aggressive Foreign Equity Cumulative Return

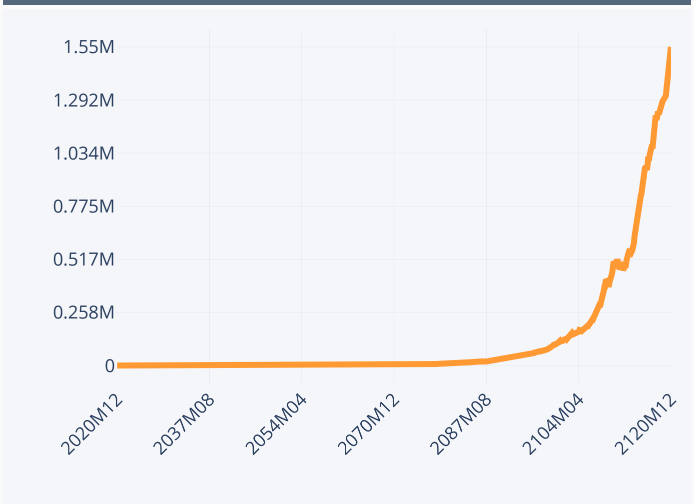


Simulated Data: There are 1200 Time Periods. Percentiles, Mean and Median are calculated across 10000 PATHS.
Percentiles Plotted : Min, 1%, 5%, 10%, 50%, 90%, 95%, 99%, Max
The distributions shown are across the paths for a given time period.

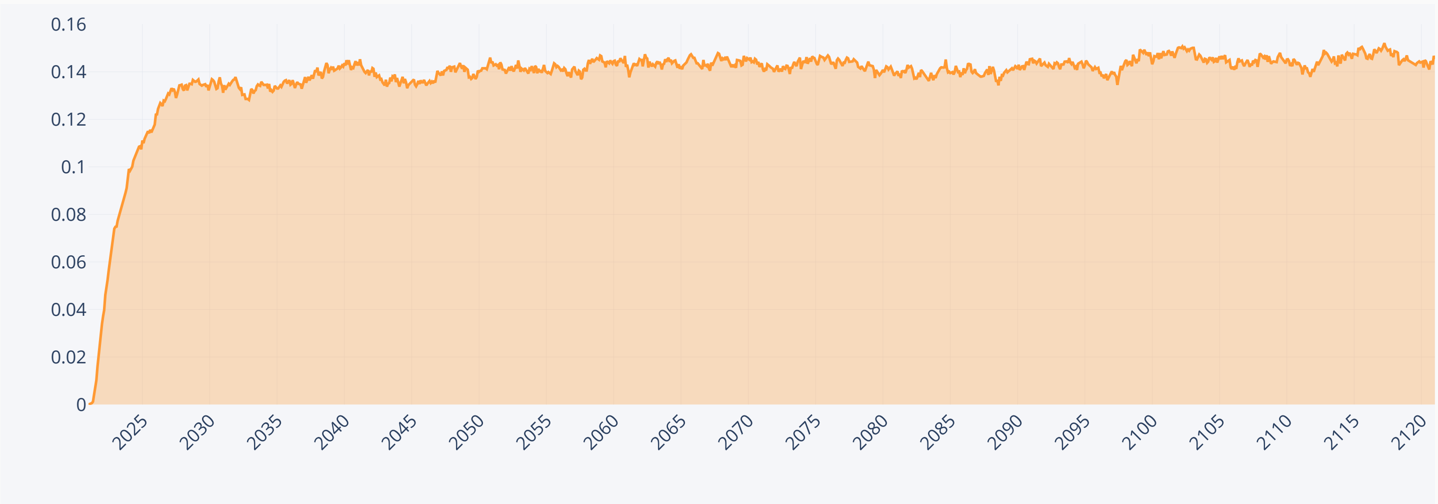
Simulation Summary

	BASE: 2021M12	BASE: 2050M12
mean	0.1436	39.4546
std	0.3015	78.6936
min	-0.6873	-0.9879
1%	-0.4632	-0.5206
5%	-0.3079	0.3233
10%	-0.2199	1.4352
50%	0.1211	15.2823
90%	0.5403	96.2266
95%	0.6794	155.6093
99%	0.9390	360.0688
max	1.6141	1648.9958

Cross Sectional Volatility Over Time : BASE

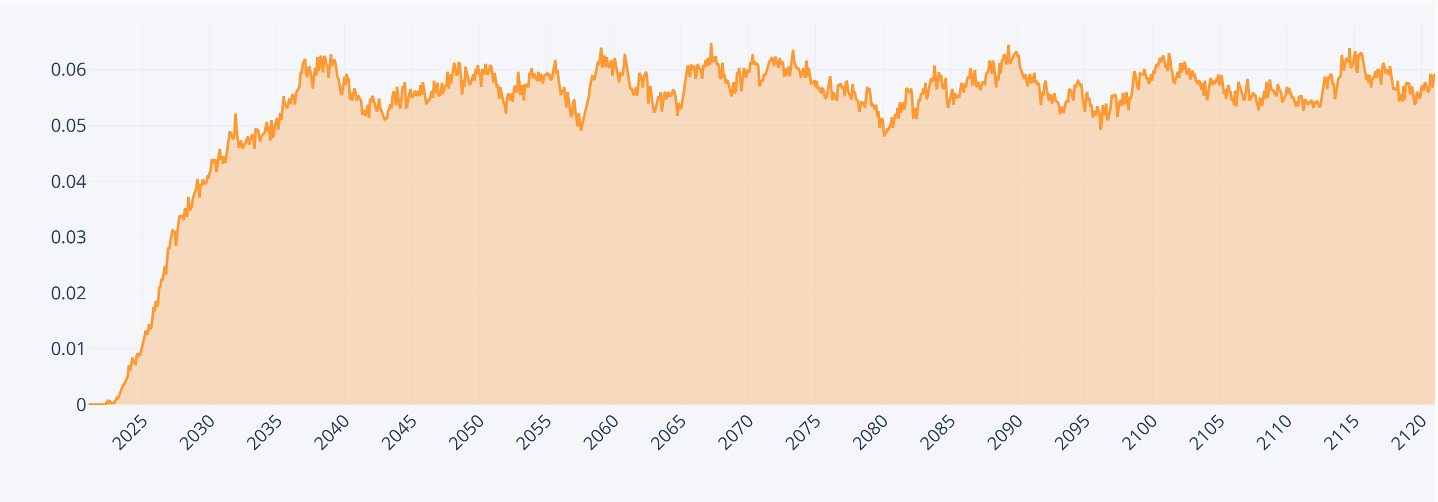


Term Structure Inversion Probability



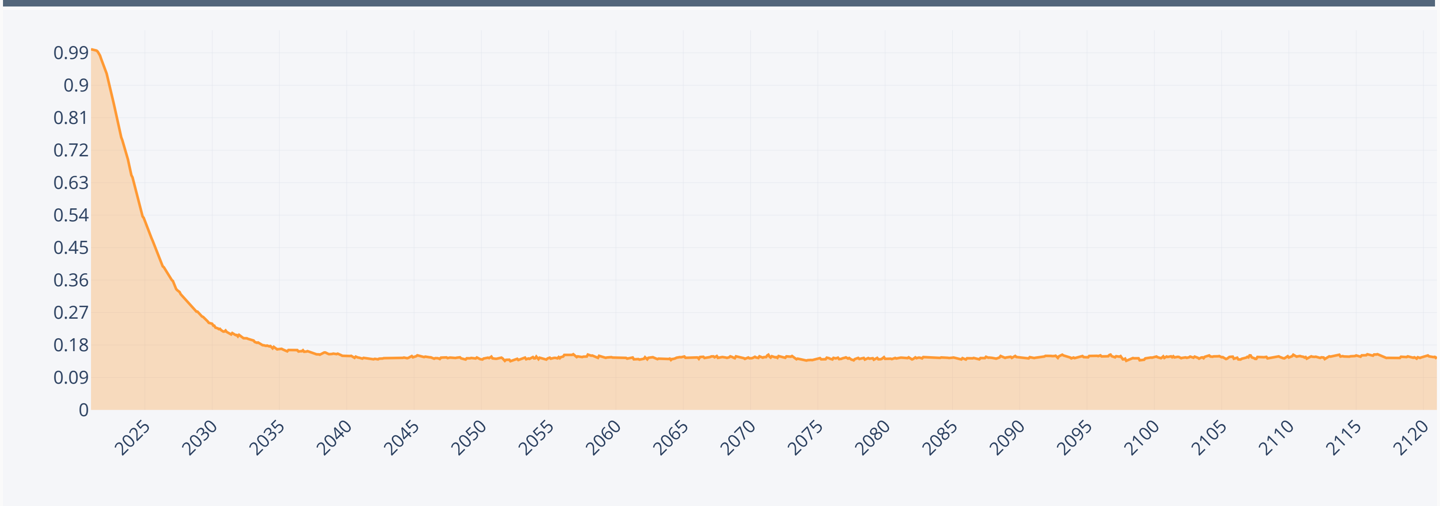
Probability that 1 Year yield is higher than 20 Year Yield.

Term Structure Hump Probability



Probability that 1 Year Yield is higher than both 1 month and 20 Year Yield.

Term Structure Bowl Probability



Probability that 1 Year Yield is lower than than both 1 month and 20 Year Yield.

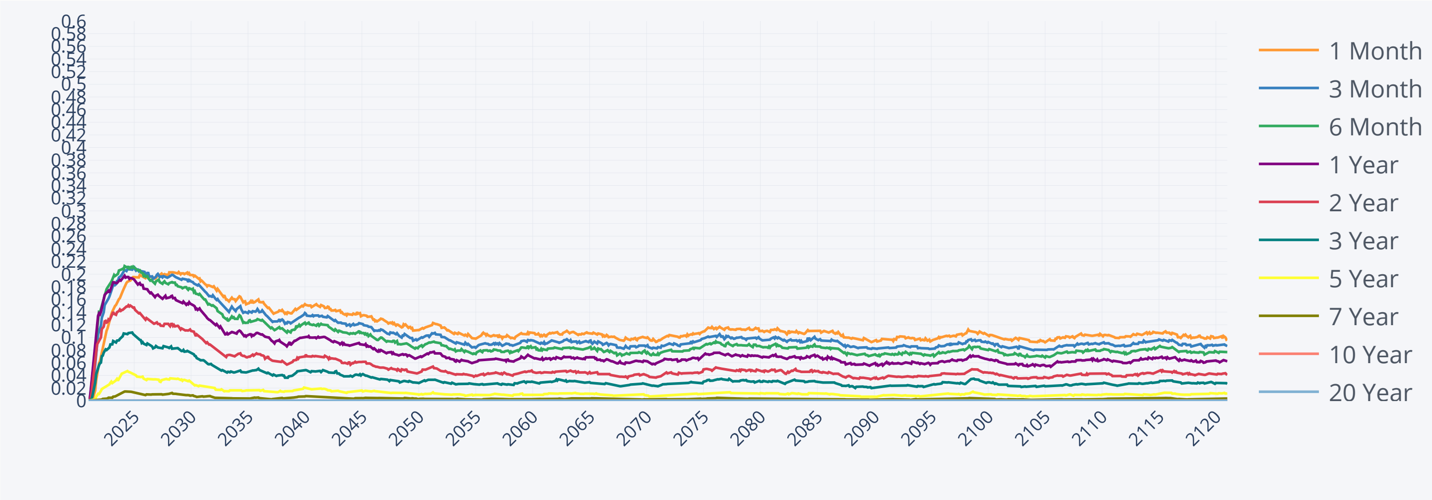
Correlation Matrix of Total Return in the 1st Simulation Year

	Aggressive Foreign Equity	Aggressive US Equity	High Yield Corp Bonds	Int Govt Bonds	Int Inv Corp Bonds	International Diversified Equity	Large Cap	Long Govt Bonds	Long Inv Corp Bonds	Mid Cap	Money Market	Short Govt Bonds	Short Inv Corp Bonds	Small Cap
Aggressive Foreign Equity	1.00	0.60	0.39	0.04	0.27	0.75	0.76	0.00	0.27	0.72	-0.13	0.05	0.22	0.70
Aggressive US Equity	0.60	1.00	0.51	0.02	0.34	0.60	0.82	-0.02	0.34	0.80	-0.12	0.04	0.27	0.82
High Yield Corp Bonds	0.39	0.51	1.00	0.45	0.89	0.42	0.52	0.39	0.84	0.52	-0.33	0.46	0.86	0.49
Int Govt Bonds	0.04	0.02	0.45	1.00	0.80	0.03	0.04	0.94	0.79	0.04	-0.50	0.97	0.78	0.04
Int Inv Corp Bonds	0.27	0.34	0.89	0.80	1.00	0.29	0.35	0.73	0.96	0.36	-0.48	0.79	0.97	0.34
International Diversified Equity	0.75	0.60	0.42	0.03	0.29	1.00	0.78	-0.00	0.29	0.71	-0.13	0.05	0.23	0.70
Large Cap	0.76	0.82	0.52	0.04	0.35	0.78	1.00	-0.00	0.36	0.90	-0.13	0.05	0.29	0.90
Long Govt Bonds	0.00	-0.02	0.39	0.94	0.73	-0.00	-0.00	1.00	0.80	-0.00	-0.43	0.84	0.66	0.01
Long Inv Corp Bonds	0.27	0.34	0.84	0.79	0.96	0.29	0.36	0.80	1.00	0.36	-0.45	0.73	0.88	0.35
Mid Cap	0.72	0.80	0.52	0.04	0.36	0.71	0.90	-0.00	0.36	1.00	-0.12	0.06	0.29	0.93
Money Market	-0.13	-0.12	-0.33	-0.50	-0.48	-0.13	-0.13	-0.43	-0.45	-0.12	1.00	-0.48	-0.46	-0.12
Short Govt Bonds	0.05	0.04	0.46	0.97	0.79	0.05	0.05	0.84	0.73	0.06	-0.48	1.00	0.81	0.06
Short Inv Corp Bonds	0.22	0.27	0.86	0.78	0.97	0.23	0.29	0.66	0.88	0.29	-0.46	0.81	1.00	0.27
Small Cap	0.70	0.82	0.49	0.04	0.34	0.70	0.90	0.01	0.35	0.93	-0.12	0.06	0.27	1.00

Correlation Matrix of Total Return in the 30th Simulation Year

	Aggressive Foreign Equity	Aggressive US Equity	High Yield Corp Bonds	Int Govt Bonds	Int Inv Corp Bonds	International Diversified Equity	Large Cap	Long Govt Bonds	Long Inv Corp Bonds	Mid Cap	Money Market	Short Govt Bonds	Short Inv Corp Bonds	Small Cap
Aggressive Foreign Equity	1.00	0.65	0.24	-0.08	0.09	0.57	0.79	-0.10	0.10	0.70	0.01	-0.05	0.05	0.69
Aggressive US Equity	0.65	1.00	0.29	-0.12	0.10	0.63	0.82	-0.14	0.12	0.82	0.01	-0.08	0.04	0.82
High Yield Corp Bonds	0.24	0.29	1.00	0.53	0.81	0.24	0.31	0.50	0.80	0.31	0.24	0.52	0.71	0.28
Int Govt Bonds	-0.08	-0.12	0.53	1.00	0.91	-0.09	-0.10	0.97	0.88	-0.11	0.36	0.93	0.87	-0.11
Int Inv Corp Bonds	0.09	0.10	0.81	0.91	1.00	0.09	0.12	0.87	0.98	0.12	0.36	0.86	0.93	0.10
International Diversified Equity	0.57	0.63	0.24	-0.09	0.09	1.00	0.76	-0.11	0.10	0.68	0.01	-0.05	0.05	0.67
Large Cap	0.79	0.82	0.31	-0.10	0.12	0.76	1.00	-0.13	0.13	0.89	0.01	-0.06	0.06	0.88
Long Govt Bonds	-0.10	-0.14	0.50	0.97	0.87	-0.11	-0.13	1.00	0.89	-0.14	0.23	0.84	0.78	-0.13
Long Inv Corp Bonds	0.10	0.12	0.80	0.88	0.98	0.10	0.13	0.89	1.00	0.13	0.24	0.78	0.85	0.11
Mid Cap	0.70	0.82	0.31	-0.11	0.12	0.68	0.89	-0.14	0.13	1.00	0.01	-0.06	0.06	0.92
Money Market	0.01	0.01	0.24	0.36	0.36	0.01	0.01	0.23	0.24	0.01	1.00	0.66	0.66	0.01
Short Govt Bonds	-0.05	-0.08	0.52	0.93	0.86	-0.05	-0.06	0.84	0.78	-0.06	0.66	1.00	0.95	-0.07
Short Inv Corp Bonds	0.05	0.04	0.71	0.87	0.93	0.05	0.06	0.78	0.85	0.06	0.66	0.95	1.00	0.05
Small Cap	0.69	0.82	0.28	-0.11	0.10	0.67	0.88	-0.13	0.11	0.92	0.01	-0.07	0.05	1.00

Negative Yields Probability



The above plot shows percent of negative yields across the scenarios for each time period.

Negative Probability Summary

	2021-12-31T00:00:00	2030-12-31T00:00:00	2040-12-31T00:00:00	2050-12-31T00:00:00
1 Month	0.0626	0.1887	0.1526	0.1165
3 Month	0.1118	0.1769	0.1334	0.1039
6 Month	0.1397	0.1625	0.1184	0.0918
1 Year	0.1365	0.1387	0.0987	0.0765
2 Year	0.0970	0.0974	0.0704	0.0517
3 Year	0.0592	0.0643	0.0459	0.0327
5 Year	0.0118	0.0231	0.0186	0.0110
7 Year	0.0017	0.0070	0.0058	0.0026
10 Year	0.0000	0.0004	0.0002	0.0002
20 Year	0.0000	0.0000	0.0000	0.0000
30 Year	0.0000	0.0000	0.0000	0.0000