

Re-estimated index matrix at 99.5th percentile

Assumptions :

The assumptions underpinning the re-estimated matrix are identical (same group of banks, same models and portfolios; one year modelling horizon, 100% loss given default, 100% usage given default) to those underlying the original index but for the loss percentile, which has been increased from 99th to 99.5th.

Main findings :

The re-estimated matrix is attached. Comparing the new matrix with the original one, the main observations are as follows :

- 1- The benchmark capital increases from 2.5% to 3.45%, which is consistent with the models used and the distributions underlying these models.
- 2- On average, the sensitivity of the index to maturity at lower default probabilities (higher credit quality) is larger at 99th percentile than at 99.5th. In contrast, the index variation for sub-investment grade assets does not show tenor dependency.

These results confirm intuition. Credit risk capital numbers generally account for two distinct phenomena :

- default, whose influence on the numbers is independent of maturity (an asset either defaults within the models' time frame or does not).
- downgrade and re-pricing at horizon, the impact of which is driven by maturity.

For low quality assets, the re-pricing component is dominated by the default element, which explains the insensitivity of index moves, and indeed the index itself, to maturity.

For investment grade assets, moving to a higher percentile slightly tips the balance towards default (a greater proportion of assets in the portfolio will default), rendering the capital numbers relatively less maturity sensitive.

INDEX RELATIVE TO BBB 3 YEAR = 100

PD	Index 0.5 Yr	Index 1 Yr	Index 2 Yr	Index 3 Yr	Index 4 Yr	Index 5 Yr	Index 6 Yr	Index 7 Yr	Index 8 Yr	Index 9 Yr	Index 10 Yr
0.02%	7	9	13	17	21	25	29	33	37	40	44
0.03%	10	12	18	24	30	36	41	46	51	57	61
0.04%	14	16	25	32	39	46	53	59	66	73	79
0.05%	17	21	29	37	44	52	59	66	74	81	88
0.06%	19	25	33	42	50	58	66	73	81	89	97
0.08%	23	30	39	48	57	66	73	81	90	99	108
0.10%	28	36	46	56	67	76	85	94	103	112	122
0.14%	37	48	60	73	86	97	107	117	128	138	149
0.21%	49	62	80	100	117	132	147	160	174	186	197
0.33%	73	87	108	129	148	165	182	197	210	223	234
0.52%	101	119	145	169	191	211	230	247	261	273	284
0.78%	140	163	188	212	232	251	267	282	294	306	315
1.13%	179	205	227	247	266	281	296	309	319	329	337
1.64%	235	266	285	303	320	333	346	356	363	372	379
2.91%	356	394	404	413	422	431	437	442	444	451	454
5.79%	630	682	684	685	687	688	689	689	689	689	689
11.35%	1019	1094	1095	1097	1097	1099	1099	1099	1099	1099	1100
17.50%	1519	1611	1612	1612	1612	1612	1612	1612	1612	1612	1612

BBB 3 YEAR CAPITAL = 3.45%