Brussels, 27 May 2020

2020 ex-ante contribution period:
Information on the discretization of the non-binary risk indicators

In accordance with Step 2 of Annex I of Commission Delegated Regulation (EU) 2015/63, the discretization is performed as follows:

1. A discretization approach is applied to determine the optimal number of bins per risk indicator;
2. Institutions are assigned to the bins such that each bin contains approximately the same number of institutions according to the value taken by their risk indicator. In addition, the bins were composed in such a way to avoid that institutions with the same value for a certain raw risk indicator would be classified in different bins. If after Step 2 institutions with the same raw risk indicator had been initially classified in different bins, then all the institutions sharing this value of risk indicator were regrouped and were all assigned to the least risky bin containing this risk indicator's value. Institutions with the lowest values of the raw risk indicators are assigned to the first bin and institutions with the highest values are assigned to the last bin;
3. Entities in the same bucket are given a risk indicator equal to the value of the order of the bin, counting in progressive order (i.e. institutions in the first bin get a value of 1, those in the following bin get a two…)[1].

For each contribution period, the number of bins depends on the sample of institutions in scope (in terms of number of institutions and value of indicators).

Please note that the values in table below are based on the data submitted for the calculation of the 2020 ex-ante contributions. The below table is therefore under no circumstances to be considered as an indication or forecast for the values that may apply for the calculation of future contributions as those depend on the data submitted (on a yearly basis) by the institutions in scope.

[1] In the following Step 3 of Annex I of Commission Delegated Regulation (EU) 2015/63, the scores of the bin are rescaled to range from 1 to 1000, such that higher values correspond to lower riskiness:

- If the sign of the indicator is negative: (1000-1)*(bin the institution belongs to– minimum bin)/(maximum bin - minimum bin) +1;
- If the sign of the indicator is positive: 1001 – [(1000-1)*(bin the institution belongs to– minimum bin)/(maximum bin-minimum bin) +1].

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Bin	Risk pillar I - Leverage ratio			Risk pillar I - Common Equity Tier 1 Capital (CET1) ratio			Risk pillar I - Total Risk Exposure divided by Total Assets		
	no.	min.	max.	no.	min.	max.	no.	min.	max.
1	71	0,2200%	3,7600%	81	6,6281%	11,0062%	77	0,0740%	16,7415%
2	90	3,7700%	4,4657%	81	11,0080%	11,7464%	77	17,0875%	25,9938%
3	82	4,4900%	5,1500%	81	11,7689%	12,4193%	77	25,9956%	30,5158%
4	81	5,1700%	5,7500%	76	12,4224%	12,9989%	84	30,5231%	34,0523%
5	81	5,7600%	6,1800%	86	13,0105%	13,5239%	70	34,1236%	37,4457%
6	81	6,1900%	6,6100%	81	13,5285%	13,9589%	77	37,4866%	41,1369%
7	80	6,6200%	7,0000%	81	13,9710%	14,4141%	77	41,1739%	44,1965%
8	82	7,0100%	7,3500%	81	14,4147%	14,8666%	77	44,2179%	46,9729%
9	79	7,3600%	7,6300%	81	14,8667%	15,2904%	77	47,0102%	49,4475%
10	81	7,6400%	7,8850%	81	15,2982%	15,7960%	77	49,5054%	51,4944%
11	83	7,8900%	8,1600%	81	15,8047%	16,2639%	77	51,5145%	53,5098%
12	80	8,1700%	8,3800%	81	16,2658%	16,8760%	77	53,5293%	55,4422%
13	79	8,3900%	8,7100%	81	16,8815%	17,5294%	77	55,4640%	57,1273%
14	81	8,7200%	8,9900%	81	17,5308%	18,2346%	77	57,1275%	58,6647%
15	84	9,0000%	9,4500%	81	18,2423%	19,3543%	77	58,7919%	60,5155%
16	80	9,4600%	10,0400%	81	19,3591%	20,6661%	77	60,5261%	62,7269%
17	81	10,0500%	10,6400%	80	20,6699%	22,4685%	77	62,7513%	64,7283%
18	80	10,7200%	11,6900%	80	22,4726%	25,4745%	77	64,7566%	67,4370%
19	80	11,7000%	14,2300%	80	25,6669%	35,8296%	77	67,4480%	71,1277%
20	80	14,3300%	1003,1800%	80	36,3845%	1273,9978%	77	71,1838%	79,2532%
21							76	79,3418%	44346,2368%
g_{ij}	23,3116			22,2806			40,1084		
N	1.616			1.616			1.616		
Sigma (σ_g)	0,0608			0,0608			0,0608		
Mean ($\bar{x}$)	10,2254%			20,6508%			77,8685%		

- The table above presents statistics regarding the discretization (i.e. Step 2 of Annex I of Commission Delegated Regulation (EU) 2015/63) of the non-binary risk indicators (see Article 5 of Commission Delegated Regulation (EU) 2015/63).

- The statistics presented in this table correspond only to the discretization step performed calculating the ex-ante contributions at Euro Area Base (calculated in accordance with Articles 69 and 70 of Regulation (EU) No 806/2014 and Article 4 of Council Implementing Regulation (EU) 2015/81).

- The summary statistics (i.e. g_{ij}, N, Sigma (σ_g), Mean ($\bar{x}$)) are defined in the Step 2 of Annex I of Commission Delegated Regulation (EU) 2015/63.

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Bin	Risk pillar II - Liquidity Coverage ratio (LCR)			Risk pillar III - Share of Interbank Loans and Deposits in the EU			Risk pillar IV - Trading Activities divided by Total Assets		
	no.	min.	max.	no.	min.	max.	no.	min.	max.
1	81	0,0000%	115,0143%	90	€ -	€ 80.600.853,00	1259	0,00000%	0,0000%
2	81	115,1900%	123,4900%	90	€ 81.328.725,00	€ 123.785.811,00	0	-	-
3	81	123,5700%	128,5900%	90	€ 124.518.723,00	€ 161.827.247,00	0	-	-
4	81	128,6000%	132,5800%	90	€ 161.872.818,00	€ 196.087.002,00	0	-	-
5	81	132,6000%	138,2800%	90	€ 196.169.739,00	€ 236.077.537,00	0	-	-
6	81	138,4500%	143,2782%	90	€ 236.247.057,00	€ 277.715.694,00	0	-	-
7	81	143,4200%	149,9200%	90	€ 278.744.864,00	€ 333.391.176,00	0	-	-
8	81	149,9700%	155,1600%	90	€ 333.790.343,56	€ 403.131.968,74	0	-	-
9	81	155,2213%	162,3200%	90	€ 403.761.596,00	€ 516.085.115,11	0	-	-
10	81	162,3800%	169,8000%	90	€ 517.557.181,00	€ 645.308.864,00	0	-	-
11	80	170,0000%	177,8900%	90	€ 646.047.608,00	€ 819.636.763,53	0	-	-
12	82	177,9700%	187,3900%	90	€ 820.157.208,00	€ 1.157.820.811,00	0	-	-
13	81	187,4711%	199,3600%	90	€ 1.165.840.493,00	€ 1.973.548.598,00	0	-	-
14	81	199,6600%	216,5900%	90	€ 1.981.169.000,00	€ 3.302.410.243,11	0	-	-
15	81	216,8100%	235,6800%	89	€ 3.305.594.962,00	€ 6.175.655.046,00	0	-	-
16	81	235,7600%	268,9900%	89	€ 6.187.772.389,00	€ 10.687.338.453,00	0	-	-
17	80	269,0300%	318,2700%	89	€ 10.705.566.274,00	€ 41.571.649.868,00	50	0,00000019%	0,01168%
18	80	319,0000%	409,3200%	89	€ 45.606.263.000,00	€ 651.933.203.280,00	77	0,01179%	0,14127%
19	80	410,2400%	605,0000%				77	0,14157%	0,63886%
20	80	610,2300%	99999999,9900%				77	0,66746%	1,51384%
21							76	1,53299%	1738,93455%
gij	23,1227			6,6708			39,7065		
N	1.616			1.616			1.616		
Sigma (σg)	0,0608			0,0608			0,0608		
Mean ($\bar{x}$)	186315,6520%			€ 15.571.468.599,73			1,4554%		

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- The summary statistics (i.e. g_{ij}, N, Sigma (σ_g), Mean ($\bar{x}$)) are defined in the Step 2 of Annex I of Commission Delegated Regulation (EU) 2015/63.

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Bin	Risk pillar IV - Trading Activities divided by CET1			Risk pillar IV - Trading Activities divided by Total Risk Exposure			Risk pillar IV - Off-balance sheet nominal amount divided by Total Assets		
	no.	min.	max.	no.	min.	max.	no.	min.	max.
1	1259	0,00000%	0,00000%	1259	0,0000000%	0,0000000%	77	0,0000%	0,0185%
2	0	-	-	0	-	-	77	0,0283%	2,0415%
3	0	-	-	0	-	-	77	2,0894%	4,8501%
4	0	-	-	0	-	-	77	4,9087%	7,5499%
5	0	-	-	0	-	-	77	7,5600%	9,4577%
6	0	-	-	0	-	-	77	9,4785%	11,0854%
7	0	-	-	0	-	-	77	11,0962%	12,5438%
8	0	-	-	0	-	-	77	12,5536%	13,8054%
9	0	-	-	0	-	-	77	13,8532%	15,0876%
10	0	-	-	0	-	-	77	15,0973%	15,9518%
11	0	-	-	0	-	-	77	15,9690%	17,0134%
12	0	-	-	0	-	-	77	17,0204%	17,7046%
13	0	-	-	0	-	-	77	17,7124%	18,5257%
14	0	-	-	0	-	-	84	18,5327%	19,6402%
15	0	-	-	0	-	-	70	19,6450%	20,3860%
16	37	0,00000134%	0,0502%	37	0,0000002%	0,0079%	77	20,3867%	21,4416%
17	84	0,0618%	1,7032%	80	0,0084%	0,2418%	77	21,4461%	22,8147%
18	76	1,7473%	8,1763%	80	0,2716%	1,4269%	77	22,8332%	24,3166%
19	80	8,2761%	23,2269%	80	1,4326%	3,8890%	77	24,3861%	28,0038%
20	80	23,6291%	1429,1720%	80	3,8915%	248,6995%	77	28,1095%	37,2619%
21							76	37,4340%	15686,3792%
gij	25,5917			22,1168			39,9637		
N	1.616			1.616			1.616		
Sigma (σg)	0,0608			0,0608			0,0608		
Mean ($\bar{x}$)	5,3257%			0,9457%			27,4711%		

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- The summary statistics (i.e. g_{ij}, N, Sigma (σ_g), Mean ($\bar{x}$)) are defined in the Step 2 of Annex I of Commission Delegated Regulation (EU) 2015/63.

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Bin	Risk pillar IV - Off-balance sheet nominal amount divided by CET1			Risk pillar IV - Off-balance sheet nominal amount divided by Total Risk Exposure			Risk pillar IV - Derivatives exposure divided by Total Assets		
	no.	min.	max.	no.	min.	max.	no.	min.	max.
1	86	0,0000%	1,0521%	86	0,00000000%	0,38678%	386	0,000000%	0,000000%
2	85	1,2557%	38,7412%	85	0,45229%	7,8674%	0	-	-
3	85	38,8189%	74,5153%	85	7,9646%	14,6100%	0	-	-
4	85	74,9701%	106,8663%	85	14,6209%	19,8184%	0	-	-
5	85	106,9124%	125,4873%	85	19,8521%	22,8544%	0	-	-
6	85	126,0427%	141,6468%	85	22,9085%	24,7253%	76	0,00000011%	0,0051%
7	85	142,1395%	157,0776%	85	24,7305%	26,7625%	77	0,0054%	0,0168%
8	85	157,1918%	167,9409%	85	26,7734%	28,6048%	77	0,0171%	0,0359%
9	85	168,1281%	184,9986%	85	28,6462%	30,2233%	77	0,0360%	0,0599%
10	85	185,0180%	201,2209%	85	30,2393%	31,7168%	77	0,0609%	0,0943%
11	85	201,5560%	215,2086%	85	31,7206%	33,1377%	77	0,0955%	0,1386%
12	85	216,0985%	230,9901%	85	33,1581%	34,7913%	77	0,1392%	0,1938%
13	85	231,0328%	244,3742%	85	34,7970%	37,1204%	77	0,1946%	0,2733%
14	85	244,4005%	266,1321%	85	37,1526%	39,7342%	77	0,2749%	0,3979%
15	85	267,2007%	293,3075%	85	39,7375%	43,0887%	77	0,4000%	0,5854%
16	85	293,3270%	336,3539%	85	43,1793%	49,8847%	77	0,5885%	0,8146%
17	85	336,4244%	409,5512%	85	50,2850%	60,4017%	77	0,8171%	1,1274%
18	85	412,6479%	574,5894%	85	60,4274%	87,4607%	85	1,1293%	1,6993%
19	85	578,0112%	7740,6441%	85	88,3984%	935,6433%	69	1,7105%	2,6846%
20							77	2,7106%	6,0391%
21							76	6,2693%	1800,7481%
gij	12,0728			9,7639			39,2999		
N	1.616			1.616			1.616		
Sigma (σg)	0,0608			0,0608			0,0608		
Mean ($\bar{x}$)	237,3148%			38,1913%			2,2461%		

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Bin	Risk pillar IV - Derivatives exposure divided by CET1			Risk pillar IV - Derivatives exposure divided by Total Risk Exposure		
	no.	min.	max.	no.	min.	max.
1	386	0,000000%	0,000000%	386	0,000000%	0,000000%
2	0	-	-	0	-	-
3	0	-	-	0	-	-
4	0	-	-	0	-	-
5	19	0,00000173%	0,0043%	19	0,00000032%	0,0007%
6	81	0,0046%	0,0925%	81	0,0008%	0,0160%
7	81	0,0940%	0,2561%	81	0,0162%	0,0466%
8	81	0,2618%	0,5645%	81	0,0478%	0,0909%
9	81	0,5715%	0,8739%	81	0,0915%	0,1454%
10	81	0,8751%	1,3828%	81	0,1457%	0,2223%
11	81	1,3836%	1,8897%	81	0,2252%	0,3149%
12	81	1,9019%	2,9450%	81	0,3163%	0,4808%
13	81	2,9774%	4,4252%	81	0,4812%	0,7581%
14	81	4,4390%	6,5984%	81	0,7615%	1,0816%
15	81	6,6516%	9,5776%	81	1,0867%	1,5868%
16	81	9,5986%	13,7101%	82	1,5958%	2,3550%
17	80	13,7292%	22,5967%	79	2,3707%	3,9599%
18	83	22,6700%	38,3561%	80	3,9682%	6,5040%
19	77	38,7215%	97,6142%	80	6,5401%	18,0740%
20	80	100,1275%	2368,2324%	80	18,7286%	1017,2875%
21						
gij	15,8619			24,6193		
N	1.616			1.616		
Sigma (σg)	0,0608			0,0608		
Mean ($\bar{x}$)	20,9025%			4,3030%		

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