



# Execution Report

Title: **Smart Systemic-Risk Scores**

Author: **Sylvain Benoit**

**Full reference:** Benoit, Sylvain (2018) "Smart Systemic-Risk Scores", Working paper (November 23, 2018).

The structure and contents of this execution report provided by **cascad** for the certification are similar to those recommended by the [AEA Data Editor](#).

## 1. DATA DESCRIPTION

The sample of systemic-risk indicators and categories used to support the findings of this study are public and manually collected from both several regulators' websites ([BIS](#) and [OFR](#)) and banks' websites. These raw data are available on the academic initiative [SIFI Watch](#).

## 2. CODE DESCRIPTION

For the purpose of this certification, we checked the results displayed in Tables 1 to 4 and Figures 1 to 11. Those results are computed using the following files:

### **MATLAB files:**

- main\_code.m
- call\_fct.m
- call\_fct\_3Dplots.m
- RiskContributions.m
- riskCostFunction.m
- MyScatterPlot.m
- SIFIs\_sample\_14-17.mat (the database in Matlab format with systemic-risk categories and indicators expressed in basis points)

All code is written in Matlab, and was run with Matlab 2019b, on a 2-core Intel-based laptop with Windows 10.

### 3. REPLICATION STEPS

The resources were provided by the researcher on the cascad's website and were run as per readme. We encountered no issue during the reproduction.

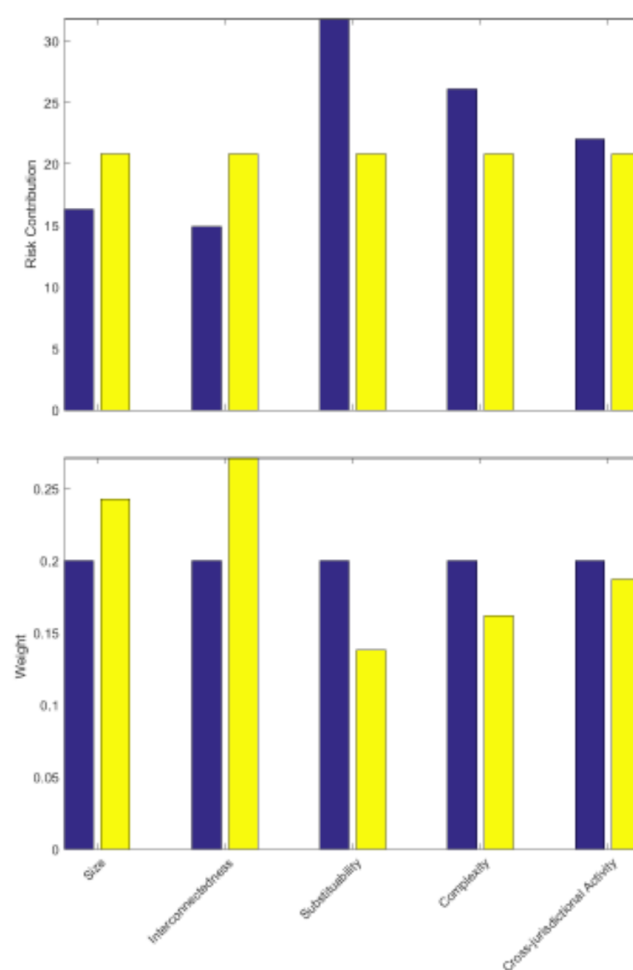
### 4. FINDINGS

We reproduced the researcher's results with perfect accuracy.

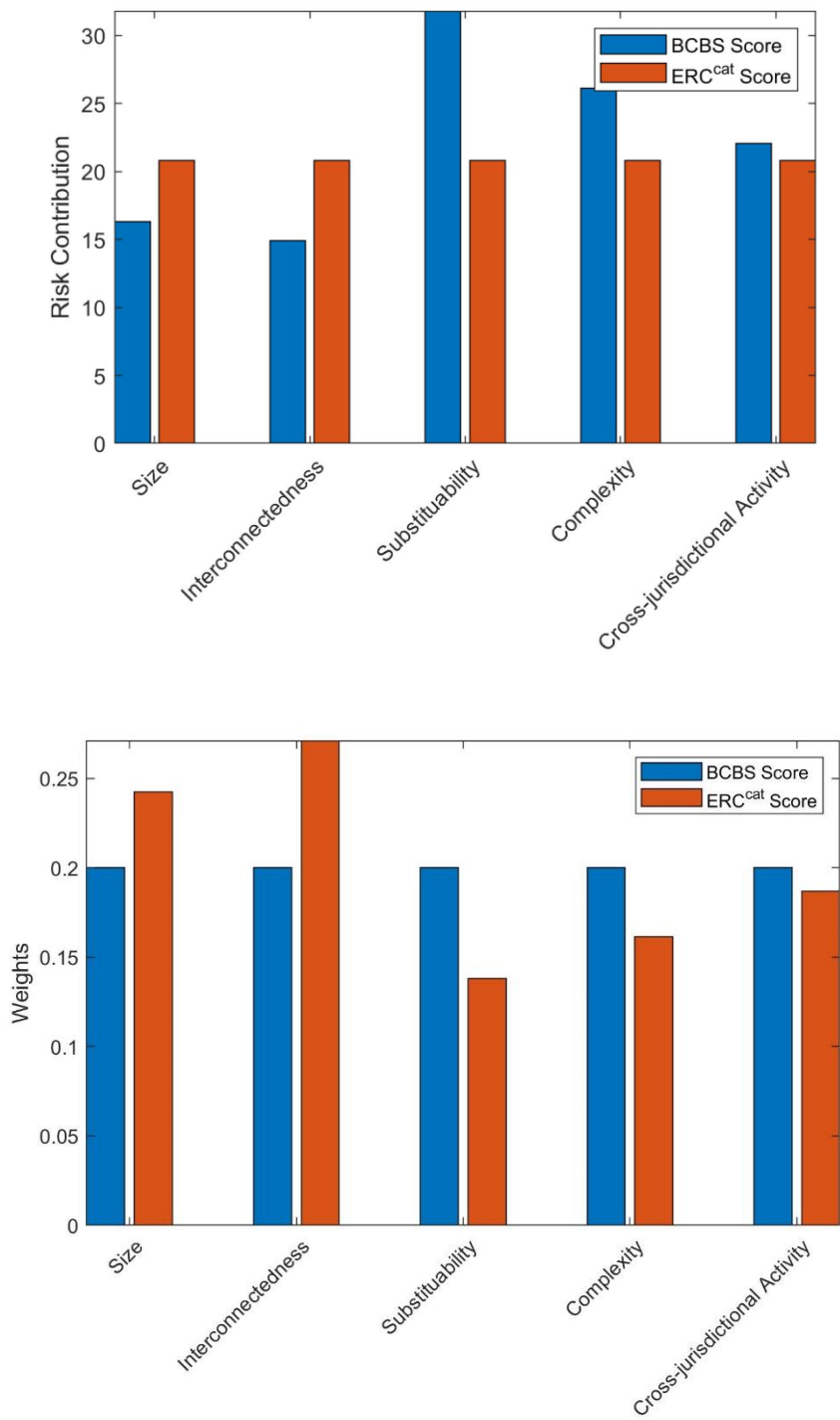
#### 4.1. FIGURE 2: RISK CONTRIBUTION AND WEIGHT FOR EACH SYSTEMIC-RISK CATEGORY (2017)

*This figure reports on top the risk contribution and on the bottom the weight of the five systemic-risk categories used in the uncapped BCBS Score (dark blue bars) and in the ERCcat Score (yellow bars) for the year 2017.*

Original:



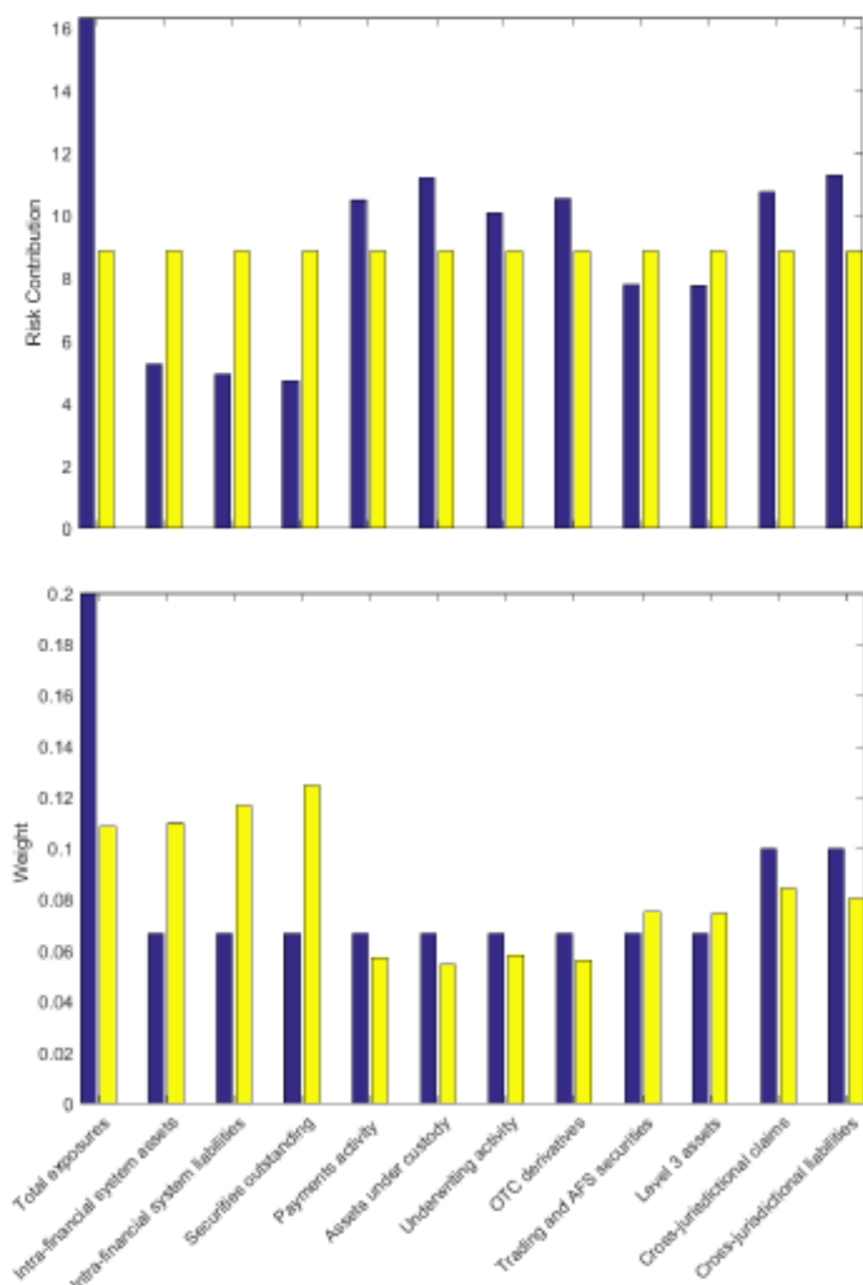
Reproduced:



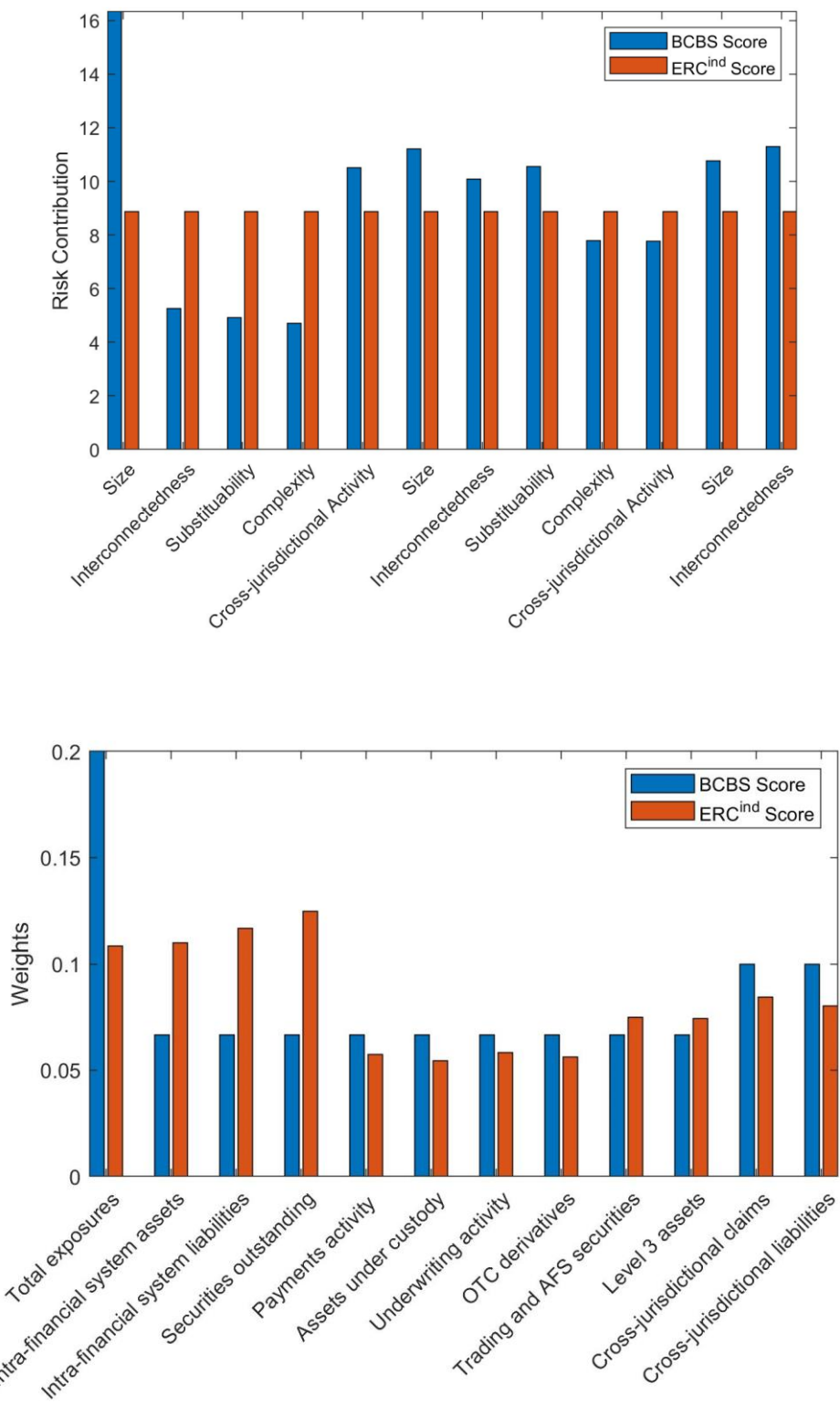
#### 4.2 FIGURE 3: RISK CONTRIBUTION AND WEIGHT FOR EACH SYSTEMIC-RISK INDICATOR (2017)

*This figure reports on top the risk contribution and on the bottom the weight of the twelve systemic risk indicators used in the uncapped BCBS Score (dark blue bars) and in the ERC<sub>ind</sub> Score (yellow bars) for the year 2017.*

Original:



Reproduced:

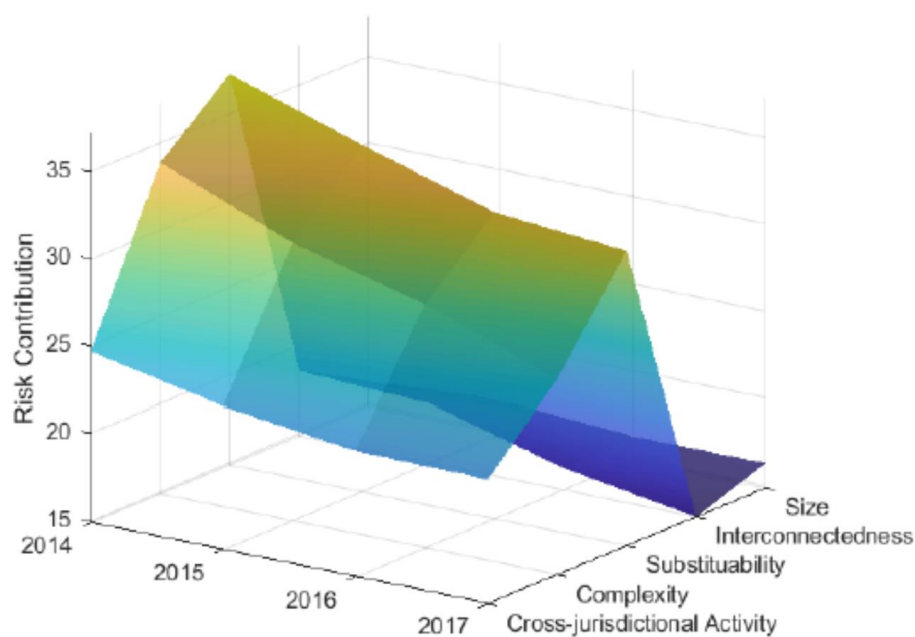


#### 4.3 FIGURE 4: EVOLUTION OVER TIME OF THE RISK CONTRIBUTION FOR EACH SYSTEMIC-RISK CATEGORY WITH BCBS WEIGHTS

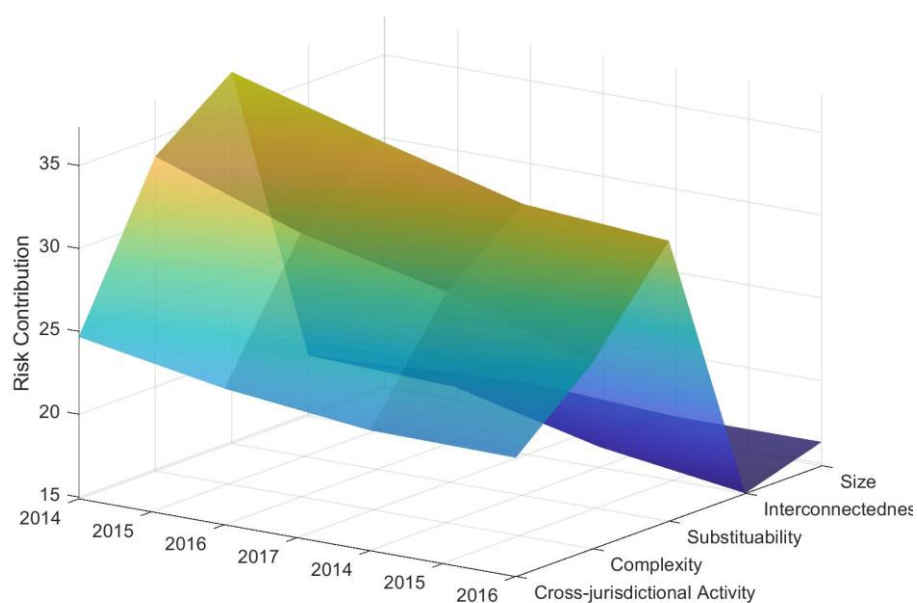
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*This figure reports the yearly evolution over time (from 2014 to 2017) of the risk contribution of the five systemic-risk categories with the current BCBS weights.*

Original:



Reproduced:

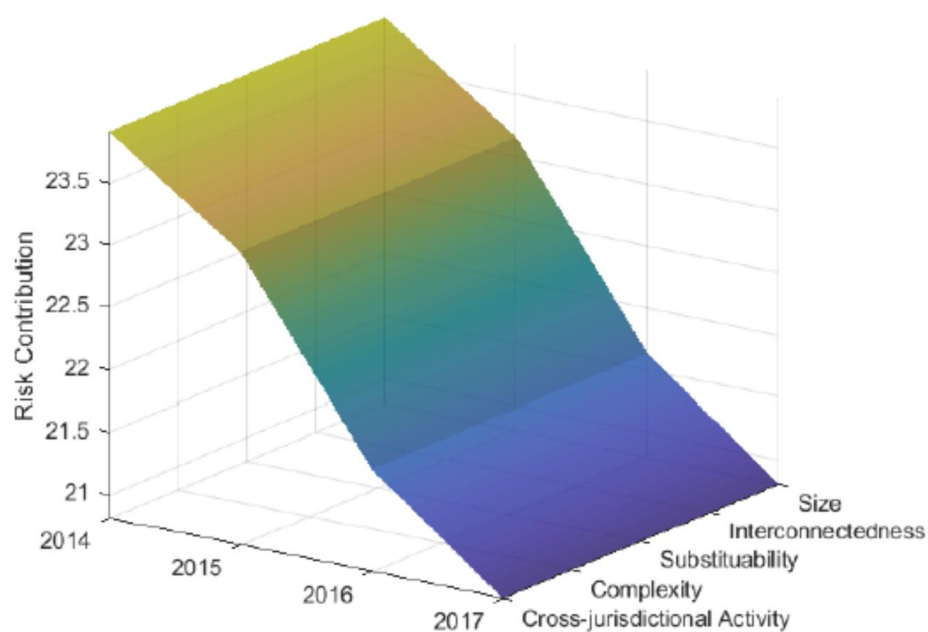


#### 4.4 FIGURE 5: EVOLUTION OVER TIME OF THE RISK CONTRIBUTION FOR EACH SYSTEMIC-RISK CATEGORY WITH ERC WEIGHTS

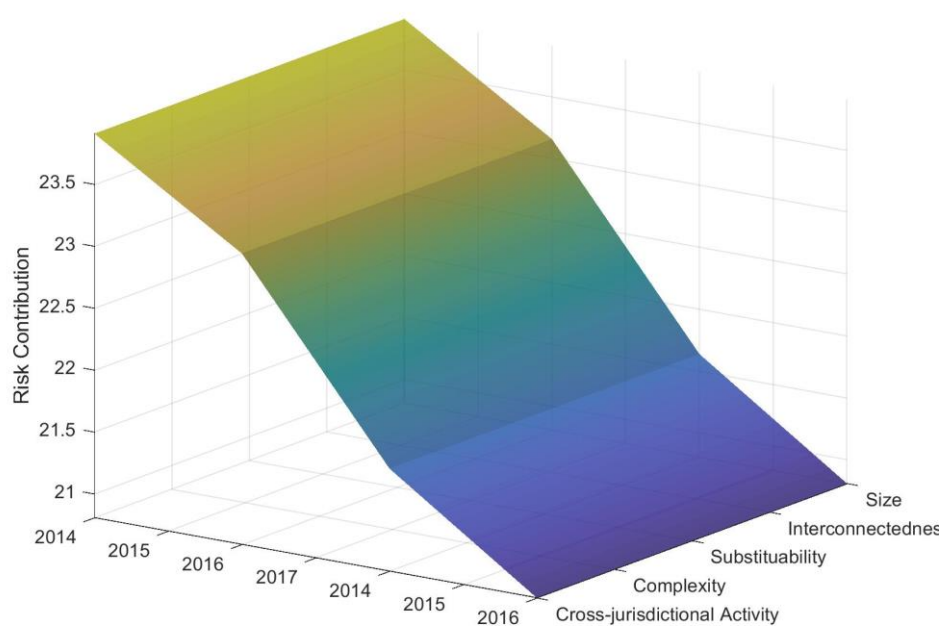
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*This figure reports the yearly evolution over time (from 2014 to 2017) of the risk contribution of the five systemic-risk categories when the ERC weights based on categories.*

Original:



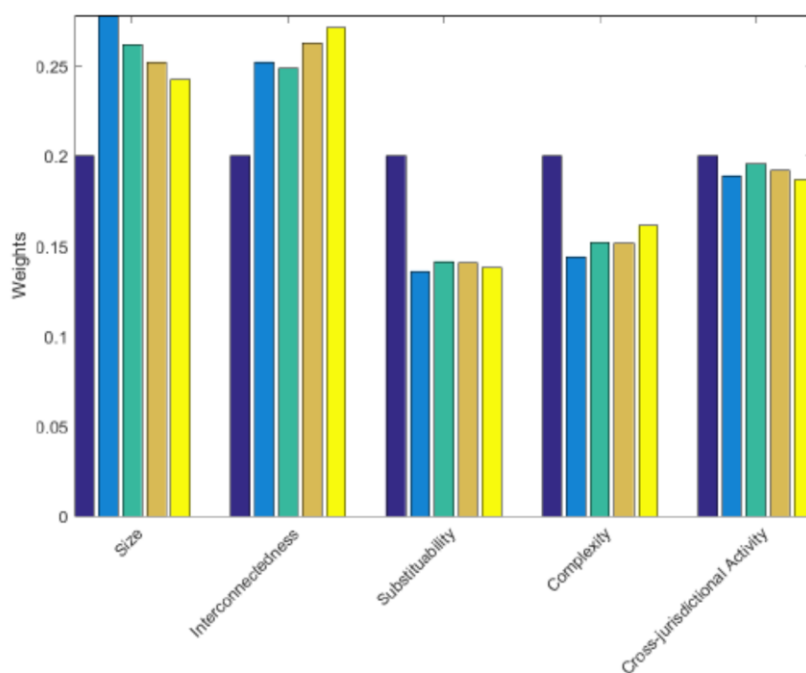
Reproduced:



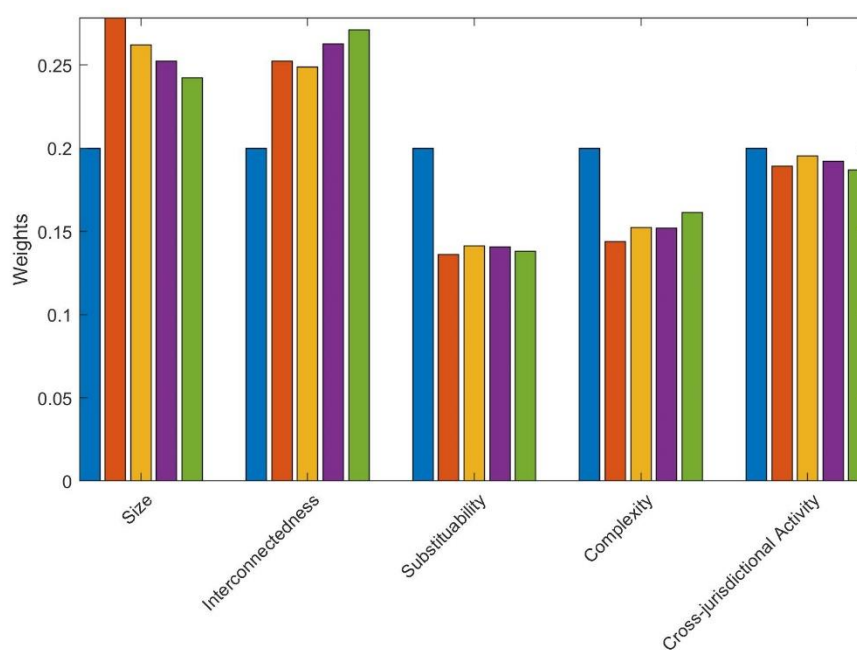
#### 4.5. FIGURE 6: EQUAL WEIGHTS VS. ERC WEIGHTS (CATEGORY)

*This figure reports the weights of each category used by the BCBS methodology (dark blue bars) to construct the systemic-risk score, and the ERC weights for the year 2014 (light blue bars), 2015 (green bars), 2016 (orange bars), and 2017 (yellow bars).*

Original:



Reproduced:

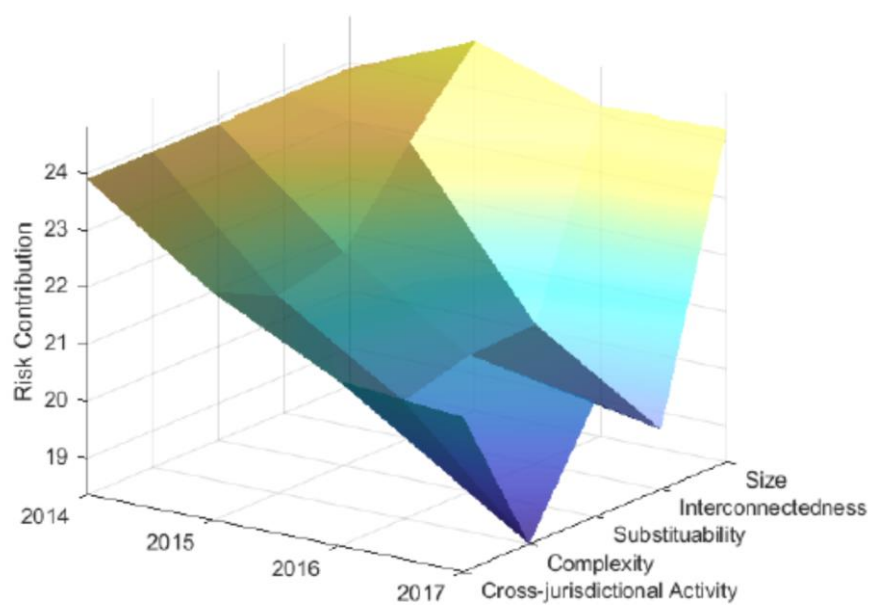




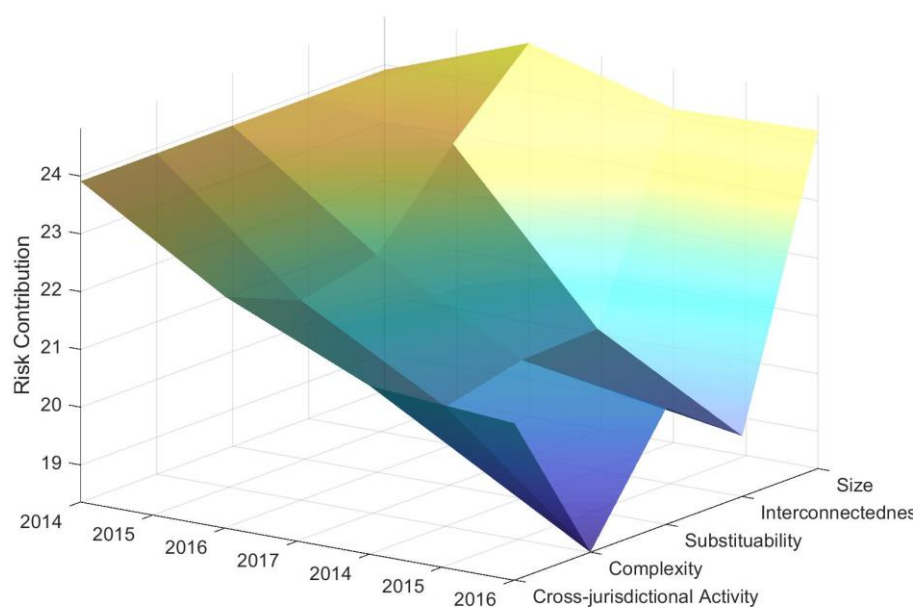
#### 4.6. FIGURE 7: EVOLUTION OVER TIME OF THE RISK CONTRIBUTION FOR EACH SYSTEMIC-RISK CATEGORY WITH CONSTANT ERC WEIGHTS

*This figure reports the yearly evolution over time (from 2014 to 2017) of the risk contribution of the five systemic-risk categories when the ERC weights based on categories remain constant over time. The ERC weights are set at the beginning of the period (2014).*

Original:



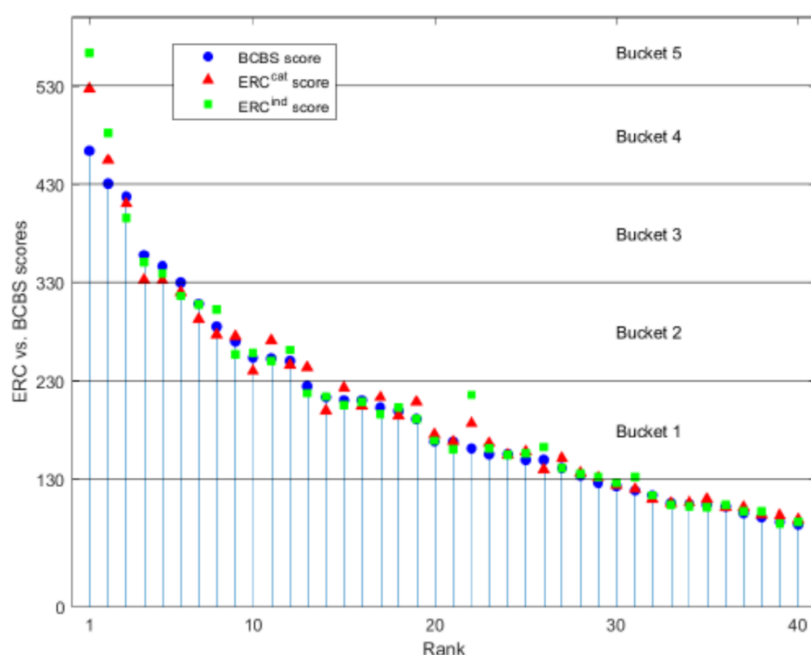
Reproduced:



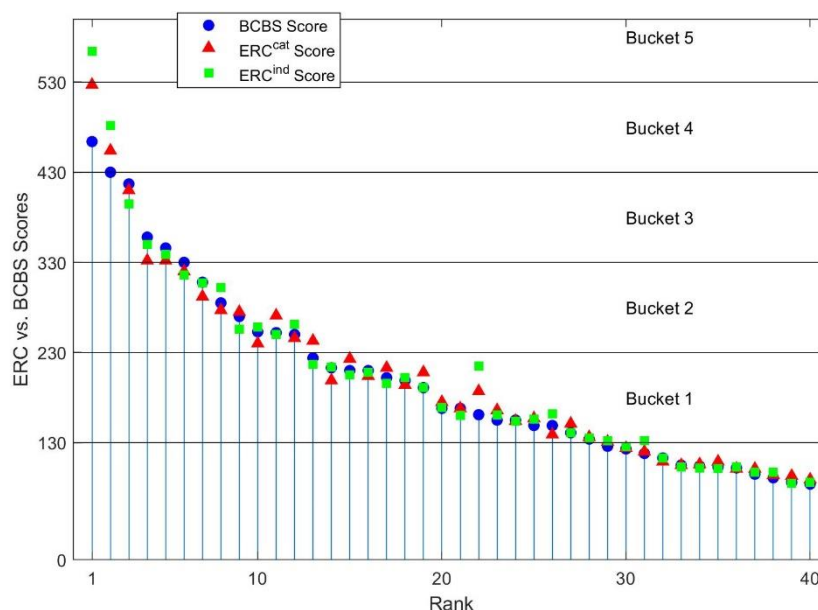
#### 4.7. FIGURE 8: SIFI RANKING BASED ON SMART SYSTEMIC-RISK (2016)

This figure displays the BCBS systemic-risk scores (blue circles) in descending order and the corresponding smart systemic-risk scores as of 2016 (red triangles for the equally-weighted risk contribution score based on categories and green square for the equally-weighted risk contribution score based on indicators). The horizontal lines denote the cut-off values used to allocate banks into systemic-risk buckets. Cut-off values are 130, 230, 330, 430, and 530.

Original:



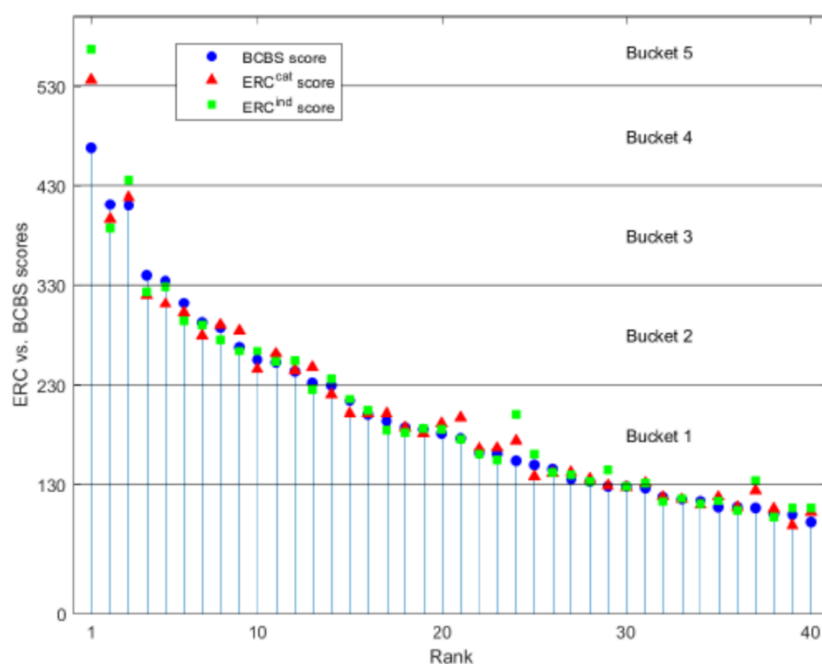
Reproduced:



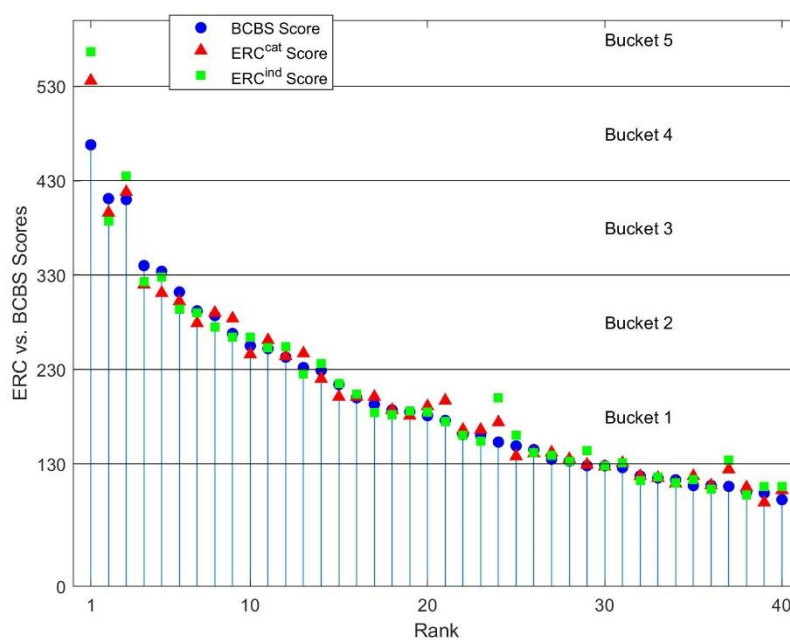
#### 4.8. FIGURE 9: SIFI RANKING BASED ON SMART SYSTEMIC-RISK (2017)

This figure displays the BCBS systemic-risk scores (blue circles) in descending order and the corresponding smart systemic-risk scores as of 2016 (red triangles for the equally-weighted risk contribution score based on categories and green square for the equally-weighted risk contribution score based on indicators). The horizontal lines denote the cut-off values used to allocate banks into systemic-risk buckets. Cut-off values are 130, 230, 330, 430, and 530.

Original:



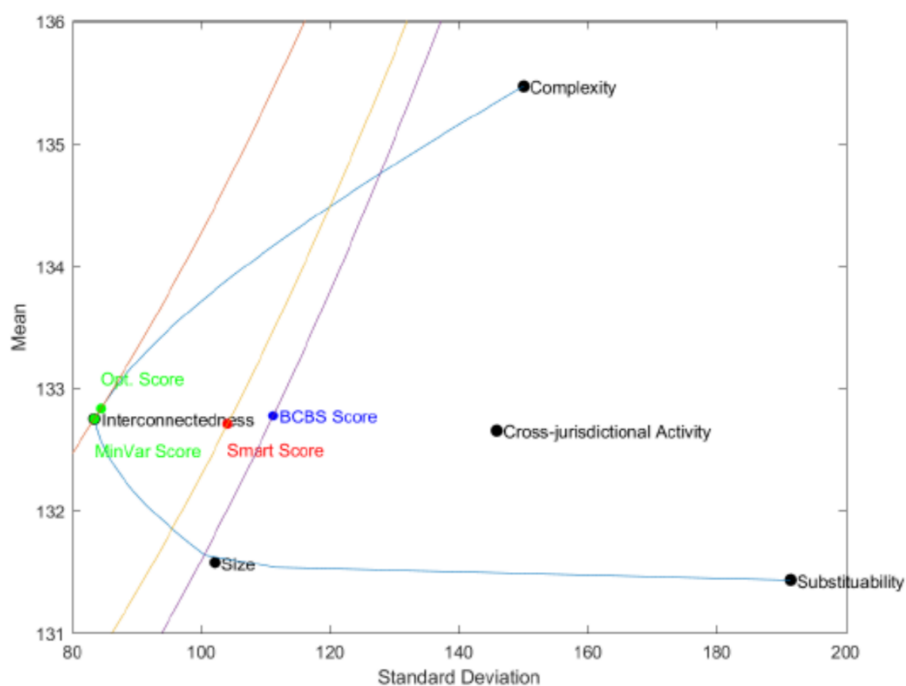
Reproduced:



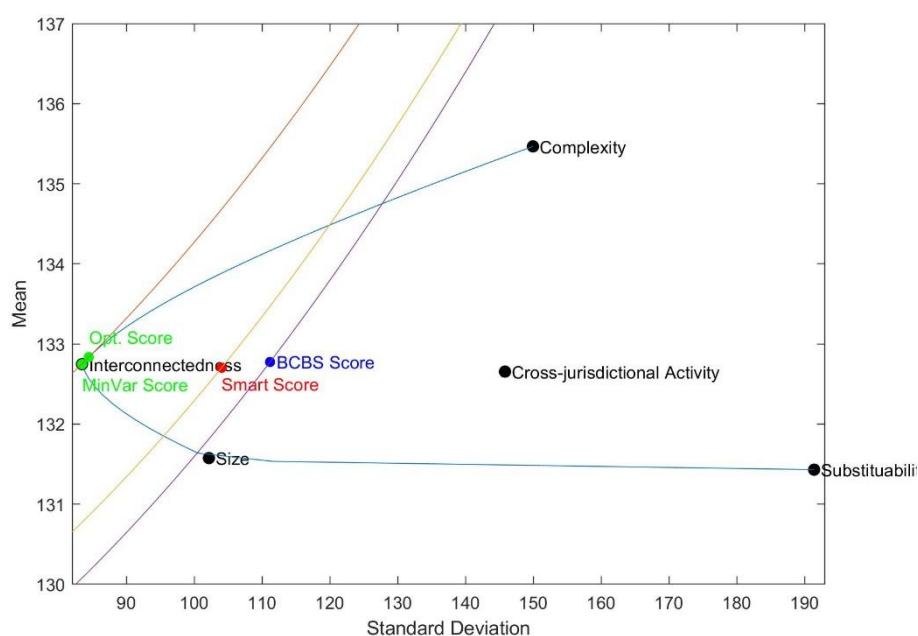
#### 4.9. FIGURE 10: MEAN-VARIANCE REPRESENTATION OF SYSTEMIC-RISK SCORES BASED ON CATEGORIES (2017)

*This figure displays the cross-sectional mean and standard deviation of the 4 systemic-risk scores (optimal, minimum-variance, uncapped BCBS, and smart based on categories) and of the 5 systemic-risk categories for the year 2017. Utility curves are also reported.*

Original:



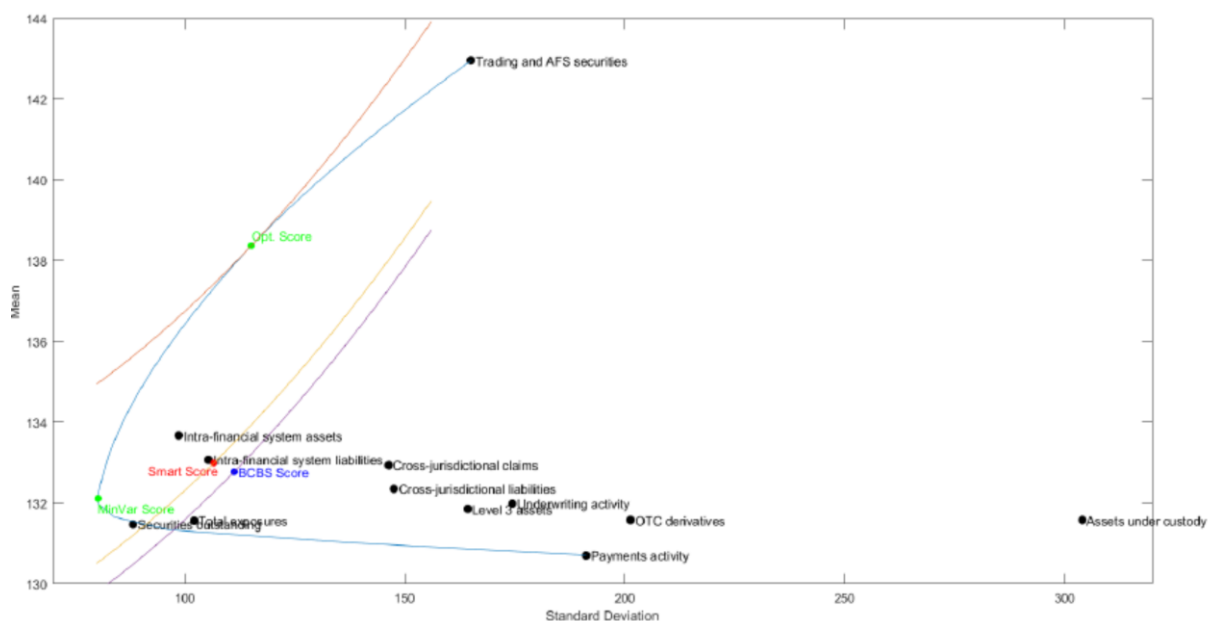
Reproduced:



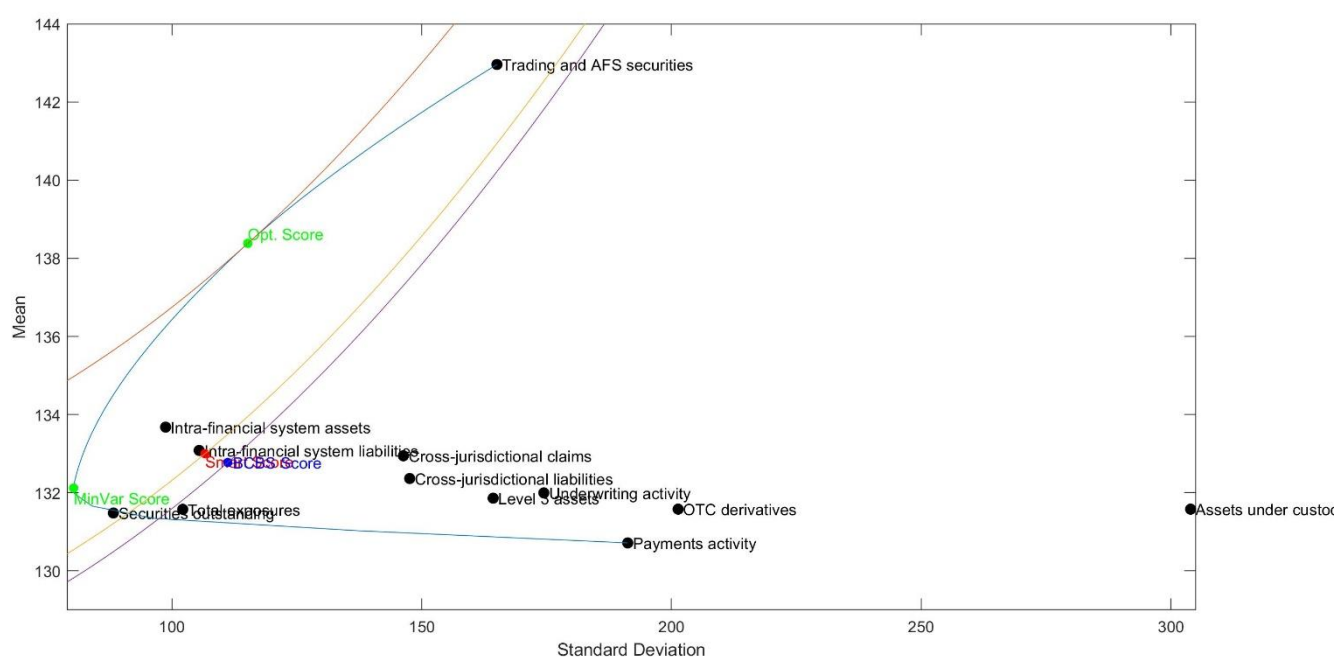
#### 4.10. FIGURE 11: MEAN-VARIANCE REPRESENTATION OF SYSTEMIC-RISK SCORES BASED ON INDICATORS (2017)

*This figure displays the cross-sectional mean and standard deviation of the 4 systemic-risk scores (optimal, minimum-variance, uncapped BCBS, and smart based on indicators) and of the 12 systemic-risk indicators for the year 2017. Utility curves are also reported.*

Original:



Reproduced:



#### 4.11. TABLE 1: SUMMARY STATISTICS (2016)

*This table reports summary statistics expressed in basis points (except for skewness) on the 12 systemic risk indicators in Panel A, on the five systemic-risk categories plus the substitutability category capped at 5% in Panel B, and on the four systemic-risk scores (BCBS Scores uncapped and capped and the two smart systemic-risk scores) in Panel C.*

Original:

Panel A: Systemic-risk indicators						
	Mean	Median	Std Dev.	Skewness	Minimum	Maximum
1. Total exposures	131	94	103	1.5	32	463
2a. Intra-financial system assets	134	109	100	0.9	12	451
2b. Intra-financial system liabilities	133	104	102	0.8	2	415
2c. Securities outstanding	131	113	91	1.2	10	425
3a. Payments activity	130	60	210	3.5	0	1,160
3b. Assets under custody	130	39	313	3.9	0	1,686
3c. Underwriting activity	131	56	180	1.9	0	730
4a. OTC derivatives	131	37	206	1.8	0	798
4b. Trading and AFS securities	131	67	157	2.2	1	839
4c. Level 3 assets	132	43	177	1.6	0	680
5a. Cross-jurisdictional claims	130	71	150	1.8	0	766
5b. Cross-jurisdictional liabilities	131	84	145	1.6	0	705
Panel B: Systemic-risk categories						
	Mean	Median	Std Dev.	Skewness	Minimum	Maximum
1. Size	131	94	103	1.5	32	463
2. Interconnectedness	133	106	87	0.9	13	401
3. Substitutability	131	59	197	3.0	2	1,091
3. Substitutability (cap=5%)	113	59	131	1.7	2	500
4. Complexity	131	60	159	1.7	1	709
5. Cross-jurisdictional activity	131	81	146	1.7	0	735
Panel C: Systemic-risk scores						
	Mean	Median	Std Dev.	Skewness	Minimum	Maximum
BCBS score (uncapped)	131	88	116	1.6	19	582
BCBS score	128	88	107	1.3	19	464
ERC <sup>cat</sup> score	131	93	108	1.4	23	527
ERC <sup>ind</sup> score	132	91	112	1.6	21	563

Reproduced:

'Total exposures'	131	94	103	1.5000	32	463
'Intra-financial system assets'	134	109	100	0.9000	12	451
'Intra-financial system liabilities'	133	104	102	0.8000	2	415
'Securities outstanding'	131	113	91	1.2000	10	425
'Payments activity '	130	60	210	3.5000	0	1160
'Assets under custody'	130	39	313	3.9000	0	1686
'Underwriting activity'	131	56	180	1.9000	0	730
'OTC derivatives'	131	37	206	1.8000	0	798
'Trading and AFS securities'	131	67	157	2.2000	1	839
'Level 3 assets'	132	43	177	1.6000	0	680
'Cross-jurisdictional claims'	130	71	150	1.8000	0	766
'Cross-jurisdictional liabilities'	131	84	145	1.6000	0	705

'Size'	131	94	103	1.5000	32	463
'Interconnectedness'	133	106	87	0.9000	13	401
'Substituability'	131	59	197	3	2	1091
'Complexity'	131	60	159	1.7000	1	709
'Cross-jurisdictional Activity'	131	81	146	1.7000	0	735

'BCBS Score (uncapped)'	131	88	116	1.6000	19	582
'BCBS Score'	128	88	107	1.3000	19	464
'ERC^{cat} Score'	131	93	108	1.4000	23	527
'ERC^{ind} Score'	132	91	112	1.6000	21	563



#### 4.12. TABLE 2: SUMMARY STATISTICS (2017)

*This table reports summary statistics expressed in basis points (except for skewness) on the 12 systemic risk indicators in Panel A, on the five systemic-risk categories plus the substitutability category capped at 5% in Panel B, and on the four systemic-risk scores (BCBS Scores uncapped and capped and the two smart systemic-risk scores) in Panel C.*

Original:

Panel A: Systemic-risk indicators						
	Mean	Median	Std Dev.	Skewness	Minimum	Maximum
1. Total exposures	132	94	102	1.6	32	466
2a. Intra-financial system assets	134	105	99	0.8	15	393
2b. Intra-financial system liabilities	133	104	105	0.8	1	430
2c. Securities outstanding	131	111	88	1.3	11	426
3a. Payments activity	131	66	191	3.3	0	1,199
3b. Assets under custody	132	43	304	3.9	0	1,650
3c. Underwriting activity	132	58	174	2.0	0	774
4a. OTC derivatives	132	41	201	1.8	0	797
4b. Trading and AFS securities	143	69	165	2.2	2	859
4c. Level 3 assets	132	59	164	1.6	0	770
5a. Cross-jurisdictional claims	133	84	146	1.7	0	754
5b. Cross-jurisdictional liabilities	132	81	148	1.8	0	771
Panel B: Systemic-risk categories						
	Mean	Median	Std Dev.	Skewness	Minimum	Maximum
1. Size	132	94	102	1.6	32	466
2. Interconnectedness	133	109	83	0.9	23	411
3. Substitutability	131	63	191	3.0	2	1,103
3. Substitutability (cap=5%)	115	63	132	1.8	2	500
4. Complexity	135	61	150	1.5	5	654
5. Cross-jurisdictional activity	133	86	146	1.8	0	763
Panel C: Systemic-risk scores						
	Mean	Median	Std Dev.	Skewness	Minimum	Maximum
BCBS score (uncapped)	133	99	111	1.6	19	588
BCBS score	130	99	103	1.3	19	467
ERC <sup>cat</sup> score	133	103	104	1.4	21	536
ERC <sup>ind</sup> score	133	104	107	1.5	18	567



Reproduced:

'Total exposures'	132	94	102	1.6000	32	466
'Intra-financial system assets'	134	105	99	0.8000	15	393
'Intra-financial system liabilities'	133	104	105	0.8000	1	430
'Securities outstanding'	131	111	88	1.3000	11	426
'Payments activity '	131	66	191	3.3000	0	1199
'Assets under custody'	132	43	304	3.9000	0	1650
'Underwriting activity'	132	58	174	2	0	774
'OTC derivatives'	132	41	201	1.8000	0	797
'Trading and AFS securities'	143	69	165	2.2000	2	859
'Level 3 assets'	132	59	164	1.6000	0	770
'Cross-jurisdictional claims'	133	84	146	1.7000	0	754
'Cross-jurisdictional liabilities'	132	81	148	1.8000	0	771

'Size'	132	94	102	1.6000	32	466
'Interconnectedness'	133	109	83	0.9000	23	411
'Substituability'	131	63	191	3	2	1103
'Complexity'	135	61	150	1.5000	5	654
'Cross-jurisdictional Activity'	133	86	146	1.8000	0	763

'BCBS Score (uncapped)'	133	99	111	1.6000	19	588
'BCBS Score'	130	99	103	1.3000	19	467
'ERC^{cat} Score'	133	103	104	1.4000	21	536
'ERC^{ind} Score'	133	104	107	1.5000	18	567

#### 4.11. TABLE 3: LIST OF SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTIONS (2016)

This table reports the risk-bucket number with its respective Financial Stability Board (FSB) cut-off scores (Column 1), the additional capital requirement expressed as a percentage of risk-weighted assets (Column 2), the identity of the systemically important banks as identified by the FSB in descending order (Column 3), by the smart systemic-risk scores based on categories in descending order (Column 4), and based on indicators in descending order (Column 5) as of November 2016. The systemic-risk scores of all banks are reported in parentheses. A \* indicates that the substitutability category of the bank is capped at 5%, and the systemic-risk score without this cap is also reported in parentheses. A • indicates banks identified as SIFIs by supervisory judgement. The reported cut-off values are provided by the BCBS.

Original:

Bucket	Additional Capital	BCBS Score (30)	ERC <sup>cost</sup> Score (29)	ERC <sup>ind</sup> Score(30)
5 [530-629]	3.5%	Empty	Empty	JP Morgan Chase (564)
4 [430-529]	2.5%	JP Morgan Chase* (464/583) Citigroup* (430/495)	JP Morgan Chase (527) Citigroup (454)	Citigroup (482)
3 [330-429]	2.0%	HSBC (417) Deutsche Bank (358) Bank of America (346) BNP Paribas (330)	HSBC (410) Deutsche Bank (332) Bank of America (332)	HSBC (395) Deutsche Bank (350) Bank of America (339)
2 [230-329]	1.5%	Barclays (308) Credit Suisse (285) Mitsubishi UFJ FG (270) Goldman Sachs (253) ICBC (252) Wells Fargo (250)	BNP Paribas (320); Barclays (292) Credit Suisse (277); Mitsubishi UFJ FG (275) ICBC (271) Wells Fargo (246) Bank of China (243) Goldman Sachs (240)	BNP Paribas (316); Barclays (307) Credit Suisse (302) Wells Fargo (261) Goldman Sachs (258) Mitsubishi UFJ FG (256) ICBC (250)
1 [130-229]	1.0%	Bank of China (224) Morgan Stanley (213) China Construction Bank (210) Société Générale (210) Santander (202) UBS (199) Agricultural Bank of China (191) Groupe Crédit Agricole (168) Mizuho FG (168) Bank of New York Mellon* (161/227) Royal Bank of Scotland (155) Sumitomo Mitsui FG (155) Unicredit Group (149) State Street* (149/172) ING Bank (141) Standard Chartered (134) Groupe BPCE• (126) Nordea• (123)	China Construction Bank (223) Santander (213) Agricultural Bank of China (208) Société Générale (204) Morgan Stanley (199) UBS (194) Bank of New York Mellon (187) Groupe Crédit Agricole (175) Mizuho FG (168) Sumitomo Mitsui FG (166) Unicredit Group (157) Royal Bank of Scotland (154) ING Bank (151) State Street (139) Standard Chartered (136) Groupe BPCE (131)	Bank of China (217) Bank of New York Mellon (215) Morgan Stanley (214) Société Générale (208) China Construction Bank (205) UBS (202) Santander (196) Agricultural Bank of China (191) Groupe Crédit Agricole (169) State Street (162) Sumitomo Mitsui FG (161) Mizuho FG (160) Unicredit Group (156) Royal Bank of Scotland (154) ING Bank (141) Standard Chartered (135) Groupe BPCE (132) Industrial Bank (132)

Reproduced:

BCBS Score			ERCcat Score			ERCind Score		
JP Morgan Chase	464	583	JP Morgan Chase	527	JP Morgan Chase	564		
Citigroup	430	495	Citigroup	454	Citigroup	482		
HSBC	417	417	HSBC	410	HSBC	395		
Deutsche Bank	358	358	Deutsche Bank	332	Deutsche Bank	350		
Bank of America	346	346	Bank of America	332	Bank of America	339		
BNP Paribas	330	330	BNP Paribas	320	BNP Paribas	316		
Barclays	308	308	Barclays	292	Barclays	307		
Credit Suisse	285	285	Credit Suisse	277	Credit Suisse	302		
Mitsubishi UFJ FG	270	270	Mitsubishi UFJ FG	275	Wells Fargo	261		
Goldman Sachs	253	253	Industrial and Commercial Bank of China	271	Goldman Sachs	258		
Industrial and Commercial Bank of China	252	252	Wells Fargo	246	Mitsubishi UFJ FG	256		
Wells Fargo	250	250	Bank of China	243	Industrial and Commercial Bank of China	250		
Bank of China	224	224	Goldman Sachs	240	Bank of China	217		
Morgan Stanley	213	213	China Construction Bank	223	Bank of New York Mellon	215		
China Construction Bank	210	210	Santander	213	Morgan Stanley	214		
Société Générale	210	210	Agricultural Bank of China	208	Société Générale	208		
Santander	202	202	Société Générale	204	China Construction Bank	205		
UBS	199	199	Morgan Stanley	199	UBS	202		
Agricultural Bank of China	191	191	UBS	194	Santander	196		
Groupe Crédit Agricole	168	168	Bank of New York Mellon	187	Agricultural Bank of China	191		
Mizuho FG	168	168	Groupe Crédit Agricole	175	Groupe Crédit Agricole	169		
Bank of New York Mellon	161	227	Mizuho FG	168	State Street	162		
Sumitomo Mitsui FG	155	155	Sumitomo Mitsui FG	166	Sumitomo Mitsui FG	161		
Royal Bank of Scotland	155	155	Unicredit	157	Mizuho FG	160		
Unicredit	149	149	Royal Bank of Scotland	154	Unicredit	156		
State Street	149	172	ING Bank	151	Royal Bank of Scotland	154		
ING Bank	141	141	State Street	139	ING Bank	141		
Standard Chartered	134	134	Standard Chartered	136	Standard Chartered	135		
Groupe BPCE	126	126	Groupe BPCE	131	Industrial Bank	132		
Nordea	123	123	Nordea	124	Groupe BPCE	132		

#### 4.14. TABLE 4: LIST OF SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTIONS (2017)

This table reports the risk-bucket number with its respective Financial Stability Board (FSB) cut-off scores (Column 1), the additional capital requirement expressed as a percentage of risk-weighted assets (Column 2), the identity of the systemically important banks as identified by the FSB in descending order (Column 3), by the smart systemic-risk scores based on categories in descending order (Column 4), and based on indicators in descending order (Column 5) as of November 2016. The systemic-risk scores of all banks are reported in parentheses. A \* indicates that the substitutability category of the bank is capped at 5%, and the systemic-risk score without this cap is also reported in parentheses. A • indicates banks identified as SIFIs by supervisory judgement. The reported cut-off values are provided by the BCBS.

Original:

Bucket	Additional Capital	BCBS Score (30)	ERC <sup>cat</sup> Score (29)	ERC <sup>ind</sup> Score(31)
5 [530-629]	3.5%	Empty	JP Morgan Chase (536)	JP Morgan Chase (567)
4 [430-529]	2.5%	JP Morgan Chase* (468/588)		Citigroup (435)
3 [330-429]	2.0%	HSBC (411) Citigroup* (410/452) Bank of America (340) Deutsche Bank (334)	Citigroup (418) HSBC (396)	HSBC (387)
2 [230-329]	1.5%	BNP Paribas (312) Barclays (292) Mitsubishi UFJ FG (287) ICBC (268) Goldman Sachs (255) China Construction Bank (252) Wells Fargo (243) Bank of China (232)	Bank of America (320); Deutsche Bank (311) BNP Paribas (302); Mitsubishi UFJ FG (290) ICBC (284) Barclays (279) China Construction Bank (261) Bank of China (247) Goldman Sachs (246) Wells Fargo (244)	Deutsche Bank (328); Bank of America (323) BNP Paribas (294); Barclays (290) Mitsubishi UFJ FG (275) ICBC (264) Goldman Sachs (264) Wells Fargo (254) China Construction Bank (253) Credit Suisse (236)
1 [130-229]	1.0%	Credit Suisse (229) Morgan Stanley (214) Société Générale (200) Santander (193) Mizuho FG (187) UBS (185) Sumitomo Mitsui FG (181) Agricultural Bank of China (176) Groupe Crédit Agricole (161) ING Bank (160) Bank of New York Mellon* (153/215) State Street* (149/171) Royal Bank of Canada (145) Unicredit Group (135) Standard Chartered (133) Royal Bank of Scotland• (128) Norden• (115)	Credit Suisse (220) Morgan Stanley (201) Société Générale (201) Santander (201) Agricultural Bank of China (197) Sumitomo Mitsui FG (191) Mizuho FG (187) UBS (181) Bank of New York Mellon (174) Groupe Crédit Agricole (166) ING Bank (166) Unicredit Group (142) Royal Bank of Canada (141) State Street (138) Standard Chartered (135) Groupe BPCE (131)	Bank of China (225); Morgan Stanley (215) Société Générale (204) Bank of New York Mellon (200) UBS (186) Sumitomo Mitsui FG (185) Santander (184) Mizuho FG (182) Agricultural Bank of China (175) Groupe Crédit Agricole (160) State Street (160) ING Bank (154) Industrial Bank (144) Royal Bank of Canada (142) Unicredit Group (139) China Minsheng Bank (134) Standard Chartered (133) Groupe BPCE (131)

Reproduced:

BCBS Score			ERCcat Score			ERCind Score		
JP Morgan Chase	468	588	JP Morgan Chase		536	JP Morgan Chase	567	
HSBC	411	411	Citigroup		418	Citigroup	435	
Citigroup	410	452	HSBC		396	HSBC	387	
Bank of America	340	340	Bank of America		320	Deutsche Bank	328	
Deutsche Bank	334	334	Deutsche Bank		311	Bank of America	323	
BNP Paribas	312	312	BNP Paribas		302	BNP Paribas	294	
Barclays	292	292	Mitsubishi UFJ FG		290	Barclays	290	
Mitsubishi UFJ FG	287	287	Industrial and Commercial Bank of China		284	Mitsubishi UFJ FG	275	
Industrial and Commercial Bank of China	268	268	Barclays		279	Industrial and Commercial Bank of China	264	
Goldman Sachs	255	255	China Construction Bank		261	Goldman Sachs	264	
China Construction Bank	252	252	Bank of China		247	Wells Fargo	254	
Wells Fargo	243	243	Goldman Sachs		246	China Construction Bank	253	
Bank of China	232	232	Wells Fargo		244	Credit Suisse	236	
Credit Suisse	229	229	Credit Suisse		220	Bank of China	225	
Morgan Stanley	214	214	Société Générale		201	Morgan Stanley	215	
Société Générale	200	200	Santander		201	Société Générale	204	
Santander	193	193	Morgan Stanley		201	Bank of New York Mellon	200	
Mizuho FG	187	187	Agricultural Bank of China		197	UBS	186	
UBS	185	185	Sumitomo Mitsui FG		191	Sumitomo Mitsui FG	185	
Sumitomo Mitsui FG	181	181	Mizuho FG		187	Santander	184	
Agricultural Bank of China	176	176	UBS		181	Mizuho FG	182	
Groupe Crédit Agricole	161	161	Bank of New York Mellon		174	Agricultural Bank of China	175	
ING Bank	160	160	Groupe Crédit Agricole		166	Groupe Crédit Agricole	160	
Bank of New York Mellon	153	215	ING Bank		166	State Street	160	
State Street	149	171	Unicredit		142	ING Bank	154	
Royal Bank of Canada	145	145	Royal Bank of Canada		141	Industrial Bank	144	
Unicredit	135	135	State Street		138	Royal Bank of Canada	142	
Standard Chartered	133	133	Standard Chartered		135	Unicredit	139	
Industrial Bank	128	128	Groupe BPCE		131	China Minsheng Bank	134	
Royal Bank of Scotland	128	128	Industrial Bank		129	Standard Chartered	133	
Groupe BPCE	126	126	Royal Bank of Scotland		127	Groupe BPCE	131	
Toronto Dominion Canada Trust	117	117	China Minsheng Bank		124	Royal Bank of Scotland	128	
Nordea	115	115	Toronto Dominion Canada Trust		117	Nordea	116	