

## Exhibit 1 – Transition/Default Rates

Form NRSRO – Annual Certification

July 2020



On July 2, 2019, Morningstar, Inc., the parent of Morningstar Credit Ratings, LLC (“MCR”), completed its acquisition of DBRS, Inc. (“DBRS”). At that time, each of DBRS and MCR was registered with the U.S. Securities and Exchange Commission (SEC) as a nationally recognized statistical rating organization (NRSRO). DBRS and MCR are in the process of integrating their credit rating services under the brand name DBRS Morningstar. On November 15, 2019, MCR filed an amendment to its Form NRSRO with the SEC withdrawing its NRSRO registration effective December 30, 2019. Also on that date, DBRS filed an amendment to its Form NRSRO with the SEC to identify MCR as a credit rating affiliate of DBRS, in which capacity MCR operates today. Credit ratings determined by MCR on financial institutions (e.g., banks), corporate issuers and asset-backed securities on, before or after December 30, 2019 (and not previously withdrawn) are now deemed issued by DBRS in accordance with DBRS’s Form NRSRO and, thereby, retain their status as NRSRO ratings.

This Exhibit includes the 2019 transition and default rates for the DBRS Group of Companies<sup>1</sup> for a 1-year, 3-year, and 10-year time period in each class of ratings for which DBRS was registered as an NRSRO through the most recent calendar year end. Following those transition and default rate tables are MCR’s transition and default rates for the same period.

While DBRS and MCR are in the process of integrating their credit rating services, subject to the analytical integration decisions announced by DBRS and MCR, DBRS (as well as the other DBRS Group of Companies) assigns and monitors credit ratings in accordance with the applicable DBRS policies, procedures and rating methodologies using DBRS’s rating scales, and MCR assigns and monitors credit ratings in accordance with the applicable MCR policies, procedures and rating methodologies using MCR’s rating scales.

Following the transition and default rates are: (1) descriptions of each symbol, number, or score in the rating scale used to denote a credit rating category and notches within a category for each class and subclass of credit ratings in the DBRS and MCR transition/default matrices, (2) an explanation of the conditions under which DBRS and MCR classify obligors, securities, or money market instruments as being in default, and (3) the uniform resource locator (URL) of DBRS’s and MCR’s corporate Internet websites where the respective credit rating histories required to be disclosed pursuant to 17 CFR 17g-7(b) are located.

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<sup>1</sup> The DBRS Group of Companies includes DBRS, Inc., DBRS Limited, DBRS Ratings Limited and DBRS Ratings GmbH.

DBRS

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019																Other Outcomes During 12/31/2018 - 12/31/2019						
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC	CCC (low)	CCC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0																							
AA (high)	1																							
AA	17																							
AA (low)	20																							
A (high)	24																							
A	25																							
A (low)	21																							
BBB (high)	14																							
BBB	7																							
BBB (low)	24																							
BB (high)	6																							
BB	10																							
BB (low)	5																							
B (high)	1																							
B	1																							
B (low)	2																							
CCC (high)	0																							
CCC	1																							
CCC (low)	0																							
CC (high)	0																							
CC	0																							
Total	179																							

DBRS

Credit Ratings as of 12/31/2016		Credit Ratings as of 12/31/2019																Other Outcomes During 12/31/2016-12/31/2019							
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0																								
AA (high)	0																								
AA	17																								
AA (low)	16		23.53%	70.59%	5.88%																				
A (high)	26			25.00%	62.50%																				
A	16				34.62%																				
A (low)	21					57.69%	7.69%																		
BBB (high)	15					43.75%	25.00%	12.50%																	
BBB	7					9.52%	33.33%	38.10%	26.67%	6.67%			6.67%												
BBB (low)	17								28.57%	57.14%	64.71%	11.76%													
BB (high)	4							5.88%		5.88%	75.00%	25.00%													
BB	3																								
BB (low)	4												100.00%	25.00%											
B (high)	1										50.00%														
B	1																								
B (low)	1																								
CCC (high)	1														100.00%										
CCC	3														100.00%	33.33%	33.33%		33.33%						
CCC (low)	0																								
CC (high)	0																								
CC	0																								
Total	153																								

DBRS		Credit Ratings as of 12/31/2009												Credit Ratings as of 12/31/2019												Other Outcomes During 12/31/2009 - 12/31/2019				
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)					
AAA	2			50.00%	33.33%		33.33%																	50.00%						
AA (high)	3																								33.33%					
AA	24		12.50%	41.67%	12.50%	16.67%	8.33%	4.17%																	12.50%					
AA (low)	12			33.33%	33.33%	16.67%	8.33%																		8.33%					
A (high)	19		15.79%			42.11%	5.26%	10.53%																5.26%	21.05%					
A	21					19.05%	14.29%	4.76%		4.76%														4.76%	52.38%					
A (low)	15					6.67%	26.67%	20.00%		6.67%															40.00%					
BBB (high)	12							16.67%	8.33%		8.33%														66.67%					
BBB	5						20.00%																	20.00%	60.00%					
BBB (low)	3							33.33%	33.33%																33.33%					
BB (high)	2										50.00%														50.00%					
BB	1													100.00%																
BB (low)	0																													
B (high)	3																								66.67%					
B	1												33.33%												100.00%					
B (low)	0																													
CCC (high)	0																													
CCC	5										20.00%														80.00%					
CCC (low)	0																													
CC (high)	0																													
CC	0																													
Total	128																													

DBRS

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019														Other Outcomes During 12/31/2018 - 12/31/2019									
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0																								
AA (high)	0																								
AA	2			100.00%																					
AA (low)	4			25.00%	75.00%																				
A (high)	5					100.00%																			
A	7					14.29%	85.71%																		
A (low)	2							100.00%																	
BBB (high)	1							100.00%																	
BBB	1								100.00%																
BBB (low)	0																								
BB (high)	0																								
BB	0																								
BB (low)	0																								
B (high)	0																								
B	0																								
B (low)	0																								
CCC (high)	0																								
CCC	0																								
CCC (low)	0																								
CC (high)	0																								
CC	0																								
Total	22																								

DBRS		Credit Ratings as of 12/31/2016										Credit Ratings as of 12/31/2019										Other Outcomes During 12/31/2016 - 12/31/2019			
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0																								
AA (high)	0																								
AA	2																								
AA (low)	4																								
A (high)	4																								
A	5																								
A (low)	2																								
BBB (high)	1																								
BBB	2																								
BBB (low)	0																								
BB (high)	0																								
BB	0																								
BB (low)	0																								
B (high)	0																								
B	0																								
B (low)	0																								
CCC (high)	0																								
CCC	0																								
CCC (low)	0																								
CC (high)	0																								
CC	0																								
Total	20																								

Insurance Companies - 10-Year Transition and Default Rates (December 31, 2009 through December 31, 2019)

DBRS

Credit Ratings as of 12/31/2009		Credit Ratings as of 12/31/2019															Other Outcomes During 12/31/2009 –12/31/2019							
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0																							
AA (high)	0																							
AA	2			50.00%	50.00%																			
AA (low)	2					100.00%																		
A (high)	1						100.00%																	
A	1						100.00%																	
A (low)	1																							
BBB (high)	1									100.00%														
BBB	1									100.00%														
BBB (low)	1																							
BB (high)	0																							100.00%
BB	0																							
BB (low)	0																							
B (high)	0																							
B	0																							
B (low)	0																							
CCC (high)	0																							
CCC	0																							
CCC (low)	0																							
CC (high)	0																							
CC	0																							
total	10																							

Corporate Issuers - 1-Year Transition and Default Rates (December 31, 2018 through December 31, 2019)

DBRS

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019															Other Outcomes During 12/31/2018 - 12/31/2019								
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0																								
AA (high)	0																								
AA	3			100.00%																					
AA (low)	7			14.29%	85.71%																				
A (high)	12					100.00%																			
A	28						78.57%	3.57%																	
A (low)	47						4.26%	89.36%	6.38%																17.86%
BBB (high)	32							3.13%	81.25%	6.25%	3.13%														3.13%
BBB	48								12.50%	79.17%	2.08%														2.08%
BBB (low)	48									16.67%	75.00%														6.25%
BB (high)	6									16.67%	50.00%	33.33%													
BB	6												66.67%												33.33%
BB (low)	3												33.33%	33.33%											33.33%
BB (high)	7														85.71%										14.29%
B	13															61.54%	7.69%							7.69%	23.08%
B (low)	3															33.33%	33.33%							33.33%	
CCC (high)	4																	25.00%							75.00%
CCC	0																								
CCC (low)	0																								
CC (high)	0																								
CC	0																								
Total	267																								



DBRS		Credit Ratings as of 12/31/2016										Credit Ratings as of 12/31/2019										Other Outcomes During 12/31/2016 - 12/31/2019			
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0																								
AA (high)	0																								
AA	4																								
AA (low)	4			50.00%	50.00%																				
A (high)	10			25.00%	75.00%																				
A	28					100.00%																			
A (low)	40					7.14%	60.71%	3.57%																	
BBB (high)	37						10.00%	80.00%	7.50%																
BBB	48						2.70%	8.11%	59.46%	13.51%	5.41%														
BBB (low)	43								18.75%	52.08%	8.33%														
BB (high)	4									25.58%	51.16%	2.33%													25.00%
BB	8									25.00%	25.00%	25.00%	50.00%												2.50%
BB (low)	3										12.50%														2.70%
B (high)	5										33.33%														6.25%
B	6																								14.58%
B (low)	3																								2.33%
CCC (high)	1																								18.60%
CCC	0																								25.00%
CCC (low)	0																								37.50%
CC (high)	0																								66.67%
CC	0																								60.00%
Total	244																								16.67%
																									33.33%
																									100.00%
																									100.00%
								</																	

DBRS

Credit Rating	Number of Ratings Outstanding	Credit Ratings as of 12/31/2019																			Other Outcomes During 12/31/2009			
		AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off
AAA	1																						100.00%	
AA (high)	3			33.33%	33.33%		33.33%																	
AA	6			33.33%	33.33%																			
AA (low)	6			33.33%	16.67%		16.67%																	
A (high)	15					33.33%	13.33%																	
A	30					33.33%	33.33%		6.67%	3.33%														
A (low)	54						7.41%	37.04%	11.11%	5.56%														
BBB (high)	40							7.50%	10.00%	15.00%		2.50%												
BBB	38								18.42%	10.53%														
BBB (low)	20								15.00%	25.00%														
BB (high)	7									28.57%		14.29%												
BB	4																							
BB (low)	2																							
B (high)	0																							
B	1																							
B (low)	2																							
CCC (high)	0																							
CCC	0																							
CCC (low)	0																							
CC (high)	0																							
CC	0																							
Total	229																							

DBBS

Credit Ratings as of 12/31/2019		RMBS One Year Transition December 31,2018 – December 31,2019																			Other Outcomes			
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	3847	87%																					13%	
AA(high)	269	52%	43%																				6%	
AA	435	19%	38%	40%																			2%	1%
AA(low)	76	20%	9%	22%	43%																		5%	
A(high)	137	15%	4%	15%	10%	53%																	2%	
A	312	3%	4%	14%	9%	21%	46%																1%	
A(low)	42	7%		2%	2%		17%	67%															5%	
BBB(high)	83			1%	1%	7%	18%	7%	54%					1%										
BBB	272			2%	1%	1%	15%	7%	25%	48%													1%	
BBB(low)	72						6%		8%	21%	57%												6%	
BB(high)	83				1%	4%	2%	5%	4%	24%	6%	53%											2%	
BB	288							1%	1%	5%	3%	38%	47%										5%	
BB(low)	35									6%		11%	23%	57%									3%	
B(high)	141											3%	3%	3%	38%	55%							1%	
B	220											2%	6%	3%	35%	51%	67%						3%	2%
B(low)	12																33%							
CCC(high)	0																							
CCC	0																							
CCC(low)	0																							
CC	0																							
C	3300																							
Total	9624																						96%	3%

DBBS

Credit Ratings as of 12/31/2019		RMBS Three Year Transition December 31, 2016 -- December 31, 2019																				Other Outcomes			
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	3087	59%																							41%
AA(high)	187	49%	18%		1%		1%																		32%
AA	434	50%	7%	9%																					32%
AA(low)	24	21%	8%	4%																					58%
A(high)	70	53%	6%	7%	1%	21%	1%	1%																	10%
A	421	38%	11%	7%	5%	2%	11%	4%			1%														25%
A(low)	25	24%	8%	4%		12%	4%	4%			4%														40%
BBB(high)	37	5%	3%	19%		19%	16%	19%	14%																5%
BBB	351	25%	8%	17%	5%	7%	4%	2%	3%	9%		1%													16%
BBB(low)	43	26%	2%	7%	2%	7%	26%	14%	7%	12%															5%
BB(high)	38	11%			3%	3%	5%	13%	24%	8%	3%	18%		5%											8%
BB	89	3%		10%	4%	4%	6%	9%	4%	10%	15%	2%	6%	11%	1%	2%	2%						4%	10%	1%
BB(low)	33	6%	3%	3%	3%	3%	6%	3%	9%	3%	10%	15%	3%	3%	10%	6%	3%					3%	3%	9%	5%
B(high)	21	14%		5%					3%	10%	4%	38%	19%	11%	8%	2%	1%					1%	11%	9%	1%
B	130	5%		1%		2%	2%	3%	4%	1%		15%	11%	8%	2%	22%	1%								
B(low)	3						67%								33%										
CCC(high)	0																								
CCC	0																								
CCC(low)	0																								
CC	0																								
C	3439																1%								
Total	8432																						92%	4%	1%

DBRS

Credit Ratings as of 12/31/2019		RMBS Ten Year Transition December 31,2009 – December 31,2019																			Other Outcomes			
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	1014	5%		1%	1%	1%	1%	1%	1%	1%	1%						2%				3%	2%	71%	8%
AA(high)	52	4%		2%	2%			2%		2%	2%			2%			2%				13%	2%	69%	
AA	178	6%	1%	5%		2%	2%	1%		2%	1%		1%			1%					13%	5%	54%	6%
AA(low)	28			7%									4%								14%		68%	7%
A(high)	23	17%		4%						4%	13%										17%		17%	
A	384	9%	1%	1%	1%	2%	2%	1%	1%	1%	1%		1%	2%		2%	2%				21%	7%	48%	4%
A(low)	53	6%		2%	2%	2%	2%	2%	4%	2%	2%		2%	2%	2%	4%					51%	2%	19%	2%
BBB(high)	61	2%						2%	2%	2%	2%		2%	2%							67%	7%	13%	
BBB	510	3%	1%	2%		1%	1%	1%	2%	1%	2%		2%	2%		3%	3%				50%	10%	19%	2%
BBB(low)	231															2%	2%				84%	6%	6%	
BB(high)	11								9%								9%				27%		55%	
BB	170	1%		1%	1%	2%	1%	1%	2%	1%	1%		2%		1%	2%					61%	9%	14%	1%
BB(low)	13			8%						8%											38%	8%	38%	
B(high)	23			4%				4%		4%	4%										35%	13%	35%	4%
B	252	1%				1%	1%		1%	1%	1%		1%	2%		4%					65%	7%	15%	
B(low)	7																				71%	14%	14%	
CCC(high)	0																							
CCC	33																						100%	
CCC(low)	0																							
CC	0																							
C	2557																							
Total	5600																				86%	11%	3%	

DBBS

Credit Ratings as of 12/31/2019		CMBS One Year Transition December 31,2018 – December 31,2019																			Other Outcomes				
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	1361	93%																						6%	
AA(high)	84	14%	82%																					4%	
AA	155	8%	3%	83%																				6%	
AA(low)	151	5%	2%	7%	80%																			1%	
A(high)	118	3%	1%	6%	3%	78%				1%														6%	
A	157	1%	1%	3%	6%	4%	78%																	2%	
A(low)	184	1%	1%	1%	1%	5%	2%	84%																6%	
BBB(high)	75	1%	1%	1%	1%	3%	1%	84%																7%	
BBB	162								7%	82%														6%	
BBB(low)	228																							6%	
BB(high)	68								1%	2%	3%	86%												4%	
BB	140								1%	7%	81%													6%	
BB(low)	129									1%		4%	89%											4%	
B(high)	74	1%																						1%	
B	131			1%						1%														4%	
B(low)	87										1%													6%	
CCC(high)	0																								
CCC	6																								
CCC(low)	0																								
CC	0																								
C	20																								
Total	3330																								

DBBS

Credit Ratings as of 12/31/2019		CWBS Three Year Transition December 31, 2016 -- December 31, 2019																			Other Outcomes				
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	1552	53%	1%	1%			1%	2%		1%	2%													27%	4%
AA(high)	19	21%	42%																					37%	
AA	95	6%	5%	62%		1%																		25%	
AA(low)	87	9%	2%	11%	53%																			22%	2%
A(high)	54	7%		6%	7%	35%																		44%	
A	105	5%	7%	7%	10%	7%	42%																	30%	
A(low)	132	4%	1%	1%	2%	8%	4%	58%		13%	4%											1%		20%	2%
BBB(high)	27	4%			4%				30%	39%														37%	
BBB	85	1%	1%	1%		4%		5%	12%	39%														38%	1%
BBB(low)	178	1%	1%	1%		1%	1%	2%	4%	3%	62%						1%						1%	22%	1%
BB(high)	30	3%							1%	10%	7%	50%		3%									3%	23%	
BB	98									3%	1%	3%	1%	3%	2%		1%						2%	27%	1%
BB(low)	77				1%						6%	1%		5%	60%	1%	1%						22%	1%	
B(high)	32	3%												3%	56%		3%					3%	3%	28%	
B	81				1%	1%							2%	3%	6%	57%	5%			1%		1%	1%	19%	1%
B(low)	70						1%				1%			3%	1%	1%	6%	59%	3%				23%		
CCC(high)	0																								
CCC	20									5%			5%										20%	35%	5%
CCC(low)	0																								
CC	0																								
C	15																								
Total	2757																						47%		53%

DBBS

Credit Ratings as of 12/31/2019		CMBS Ten Year Transition December 31, 2009 -- December 31, 2019																			Other Outcomes							
Credit Rating	Number of Outstanding Ratings	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC	C	Default	Paid Off	Withdraw n-Other			
AAA	374	1%						1%																	89%	9%		
AA (high)	11																								100%			
AA	43	2%								2%																88%	2%	
AA (low)	17																6%									76%	6%	
A (high)	13																									92%	8%	
A	48	2%			2%									2%												75%	12%	
A (low)	26									4%	4%															58%	15%	
BBB (high)	30	3%																								17%	63%	13%
BBB	51	2%			2%			2%		3%																	76%	10%
BBB (low)	50	4%																									66%	24%
BB (high)	35	6%						2%			2%	3%															80%	11%
BB	42	2%											3%	2%													79%	14%
BB (low)	37	3%																									65%	30%
B (high)	39	3%				3%																					64%	31%
B	44				2%								2%														64%	30%
B (low)	43										2%																58%	37%
CCC (high)	0																											
CCC	41																											98%
CCC (low)	0																										2%	
CC	0																											
C	10																											
Total	954																										100%	



DBBS

Credit Ratings as of 12/31/2019		CLO One Year Transition December 31, 2018 -- December 31, 2019																			Other Outcomes			
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	6	33%																					67%	
AA(high)	0																							
AA	3			100%																				
AA(low)	0																							
A(high)	0																							
A	1																						100%	
A(low)	0																							
BBB(high)	0																							
BBB	0																							
BBB(low)	0																							
BB(high)	0																							
BB	0																							
BB(low)	0																							
B(high)	0																							
B	0																							
B(low)	0																							
CCC(high)	0																							
CCC	0																							
CCC(low)	0																							
CC	0																							
C	0																							
Total	10																							

DBBS

Credit Ratings as of 12/31/2019		CLO Three Year Transition December 31, 2016 – December 31, 2019																				Other Outcomes			
Credit Rating	Number of Outstanding Ratings	AAA	AA	AA(high)	AA	AA(low)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC	CCC(high)	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	11	18%																							82%
AA(high)	1																								100%
AA	17		18%																						82%
AA(low)	0																								
A(high)	1																								100%
A	9																								100%
A(low)	0																								
BBB(high)	0																								
BBB	3																								100%
BBB(low)	2																								100%
BB(high)	0																								
BB	3																								100%
BB(low)	0																								
B(high)	0																								
B	0																								
B(low)	2																								100%
CCC(high)	0																								
CCC	0																								
CCC(low)	0																								
CC	0																								
C	0																								
Total	49																								

DBBS

Credit Ratings as of 12/31/2019		CLO Ten Year Transition    December 31, 2009 -- December 31, 2019																	Other Outcomes					
Credit Rating	Number of Outstandi ng Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	6																						100%	
AA(high)	4																						100%	
AA	4																						100%	
AA(low)	2																						100%	
A(high)	1																						100%	
A	3																						100%	
A(low)	0																							
BBB(high)	0																							
BBB	1																						100%	
BBB(low)	0																							
BB(high)	0																							
BB	0																							
BB(low)	0																							
B(high)	0																							
B	0																							
B(low)	1																						100%	
CCC(high)	0																							
CCC	3																						33%	67%
CCC(low)	2																						100%	
CC	0																							
C	0																							
Total	27																							

DBBS

Credit Ratings as of 12/31/2019		CDO One Year Transition December 31, 2018 -- December 31, 2019																					Other Outcomes			
Credit Rating	Number of Outstanding Ratings	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC	C	Default	Paid Off	Withdraw n-Other	
AAA	14	86%																							14%	
AA (high)	6		100%																							
AA	57			98%																					2%	
AA (low)	4			75%	25%																					
A (high)	0																									
A	3																									
A (low)	8				33%			12%																	67%	
BBB (high)	0				25%																				62%	
BBB	2									100%																
BBB (low)	0																									
BB (high)	1																									
BB	0																								100%	
BB (low)	0																									
B (high)	0																									
B	0																									
B (low)	0																									
CCC (high)	0																									
CCC	0																									
CCC (low)	0																									
CC	1																									
C	2																									
Total	98																					100%				

DBBS

Credit Ratings as of 12/31/2019		CDO Three Year Transition December 31, 2016 -- December 31, 2019																	Other Outcomes					
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	27	44%																					56%	
AA(high)	14			86%																			14%	
AA	26		15%	62%																			19%	4%
AA(low)	3																					100%		
A(high)	3					33%																	67%	
A	3																						100%	
A(low)	43			2%		2%		2%															67%	
BBB(high)	1																					100%		
BBB	16					25%																	62%	
BBB(low)	15									12%													93%	7%
BB(high)	6																						100%	
BB	5																						100%	
BB(low)	0																							
B(high)	0																							
B	0																							
B(low)	0																							
CCC(high)	0																							
CCC	0																							
CCC(low)	0																							
CC	1																							
C	5																							
Total	168																				100%	40%		60%

DBBS

Credit Ratings as of 12/31/2019		CDO Ten Year Transition December 31, 2009 – December 31, 2019																				Other Outcomes				
Credit Rating	Number of Outstanding Ratings	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC	C	Default	Paid Off	Withdraw n-Other	
AAA	17																							82%	18%	
AA (high)	9																								89%	11%
AA	12	8%			17%																				75%	
AA (low)	20																								70%	30%
A (high)	13																								77%	23%
A	12																								75%	25%
A (low)	15																								40%	53%
BBB (high)	3																								67%	
BBB	12																								25%	58%
BBB (low)	26																								27%	73%
BB (high)	1																								100%	
BB	1																								100%	
BB (low)	16																								19%	81%
B (high)	1																								100%	
B	1																								100%	
B (low)	0																									
CCC (high)	2																								50%	50%
CCC	0																									
CCC (low)	0																									
CC	5																									
C	22																								80%	77%
Total	188																								14%	

DBBS

Credit Ratings as of 12/31/2019		ABCP One Year Transition December 31,2018 -- December 31,2019																				Other Outcomes				
Credit Rating	Number of Outstanding Ratings	AAA	AA	AA(high)	AA	AA(low)	A	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B	B(high)	B	B(low)	CCC	CCC(low)	C	Default	Paid Off	Withdrawn-Other
AAA	26	81%																								
AA(high)	0																									
AA	31		71%			3%																				
AA(low)	1					100%																				
A(high)	3						100%																			
A	16																									
A(low)	1										100%															
BBB(high)	0																									
BBB	1										100%															
BBB(low)	0																									
BB(high)	0																									
BB	1															100%										
BB(low)	0																									
B(high)	0																									
B	1																			100%						
B(low)	0																									
CCC(high)	0																									
CCC	0																									
CCC(low)	0																									
CC	0																									
C	0																									
Total	81																									

DBRS

Credit Ratings as of 12/31/2019		ABCP Three Year Transition December 31, 2016 – December 31, 2019																Other Outcomes							
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	6	50%																						50%	
AA(high)	2		50%																					50%	
AA	25		60%		4%																			32%	4%
AA(low)	2			50%																					
A(high)	1				100%																				
A	10					50%																			
A(low)	5					60%	20%																		10%
BBB(high)	1																							20%	10%
BBB	1									100%															100%
BBB(low)	0																								
BB(high)	0																								
BB	1												100%												
BB(low)	0													100%											
B(high)	0																								
B	1															100%									
B(low)	0																								
CCC(high)	0																								
CCC	0																								
CCC(low)	0																								
CC	0																								
C	0																								
Total	55																								



DBRS

Credit Ratings as of 12/31/2019		ABCP Ten Year Transition December 31, 2009 --December 31, 2019																Other Outcomes							
		AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)					CCC(high)	CCC	CCC(low)	CC
Credit Rating	Number of Outstanding	6	17%																						83%
AAA	1																								100%
AA	10																								70%
AA(low)	3			30%																					100%
A(high)	2																								100%
A	4																								75%
A(low)	3																								100%
BBB(high)	1																								100%
BBB	3																								33%
BBB(low)	0																								100%
BB(high)	1																								
BB	1																								
BB(low)	0																								
B(high)	0																								
B	1																								
B(low)	0																								
CCC(high)	0																								
CCC	0																								
CCC(low)	0																								
CC	0																								
C	0																								
Total	34																								

DBBS

Credit Ratings as of 12/31/2019		Other ABS One Year Transition December 31, 2018 – December 31, 2019																			Other Outcomes				
Credit Rating	Number of Outstandi ng Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	651	79%																						20%	1%
AA(high)	59	39%	19%																					12%	31%
AA	160	24%	18%	44%																				12%	1%
AA(low)	18	22%	6%		44%		11%																	17%	
A(high)	71	11%	23%	15%	3%	27%	1%																	7%	13%
A	139	2%	7%	17%	33%	2%	5%	53%																12%	1%
A(low)	12							25%																33%	
BBB(high)	27	11%				8%	22%	4%	44%															15%	
BBB	109					1%	4%	17%	9%	59%														6%	1%
BBB(low)	13							15%	8%	54%														23%	
BB(high)	10					10%			50%	10%		20%												10%	
BB	56									11%		20%	66%											2%	2%
BB(low)	4										25%			50%										25%	
B(high)	0																								
B	9												11%			11%	67%								11%
B(low)	0																								
CCC(high)	0																								
CCC	0																								
CCC(low)	0																								
CC	0																								
C	0																								
Total	1338																								

DBBS

Credit Ratings as of 12/31/2019		Other ABS Three Year Transition December 31, 2016 – December 31, 2019																Other Outcomes						
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC(low)	CC	C	Default	Paid Off	Withdrawn-Other
AAA	462	37%																					56%	6%
AA(high)	32	22%	9%																				69%	
AA	105	32%		15%																			50%	3%
AA(low)	31	55%	10%		6%			6%															19%	3%
A(high)	61	30%	2%	2%		15%		2%															31%	20%
A	137	24%	2%	12%	2%	18%		18%															39%	2%
A(low)	18	6%		6%				6%	11%														67%	6%
BBB(high)	28	14%	7%	7%	7%	7%			18%														36%	4%
BBB	96	18%	9%	11%	1%		5%	1%															31%	2%
BBB(low)	22				9%		5%		5%		23%												55%	5%
BB(high)	12			8%		17%		8%															50%	8%
BB	35	9%				3%	6%	17%	6%	9%	3%		11%	11%									17%	3%
BB(low)	5									40%			20%	20%									20%	
B(high)	2								50%															50%
B	11							9%	9%	27%			18%	9%		9%							18%	
B(low)	1													100%										
CCC(high)	0																							
CCC	0																							
CCC(low)	0																							
CC	0																							
C	0																							
Total	1058																							

DBRS

Credit Ratings as of 12/31/2019		Other ABS Ten Year Transition December 31, 2009 – December 31, 2019																				Other Outcomes			
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other	
AAA	273	11%																						79%	11%
AA(high)	3		33%																					67%	
AA	34			3%																				50%	47%
AA(low)	3																							33%	67%
A(high)	4																							100%	
A	60																							77%	12%
A(low)	3																							100%	
BBB(high)	5									20%														80%	
BBB	18																							89%	11%
BBB(low)	1																							100%	
BB(high)	2																							100%	
BB	3																							100%	
BB(low)	0																							100%	
B(high)	0																								
B	1																							100%	
B(low)	0																								
CCC(high)	0																								
CCC	2																							50%	50%
CCC(low)	0																								
CC	0																								
C	2																							100%	
Total	414																								

DBBS

Credit Ratings as of 12/31/2019		Other One Year Transition    December 31,2018 -- December 31,2019																			Other Outcomes				
Credit Rating	Number of Outstandi ng Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	60	88%																							
AA(high)	13	8%	92%			3%																			8%
AA	37	8%	14%	65%	5%																				8%
AA(low)	14			21%	79%																				
A(high)	16			6%	6%	88%																			
A	77			8%	8%	3%	61%																		
A(low)	26						8%	92%																	21%
BBB(high)	23				4%		4%		83%																9%
BBB	48					2%	2%	2%		88%															4%
BBB(low)	50							4%		6%	60%														28%
BB(high)	14											100%													
BB	9											11%	89%												
BB(low)	3												67%												33%
B(high)	0																								
B	1																100%								
B(low)	0																								
CCC(high)	0																								
CCC	0																								
CCC(low)	0																								
CC	0																								
C	0																								
Total	392																								100%

Other Structured Finance contains: Insurance Premium Finance, Structured Settlements, Timeshare Loans, Healthcare Receivables, Marine Container Leases, Film Rights, Property Assessed Clean Energy (PACE) Assessments and Aircraft Leases

DBBS

Credit Ratings as of 12/31/2019		Other Three Year Transition December 31,2016 – December 31,2019																	Other Outcomes				
Credit Rating	Number of Outstanding Ratings	AAA	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other
AAA	28	79%																					11%
AA	13	33%	67%																				31%
AA	13		23%	31%																			15%
AA(low)	6		17%	33%	17%																		17%
A(high)	3				33%	67%																	
A	45	7%		4%	2%	4%	33%																
A(low)	17						6%	59%															
BBB(high)	9							78%															
BBB	35			3%	3%	3%		3%	49%														
BBB(low)	20								5%	30%													
BB(high)	3										100%												
BB	9																						
BB(low)	1			11%																			
B(high)	0																						
B	0																						
B(low)	0																						
CCC	0																						
CCC	0																						
CCC	0																						
CCC(low)	0																						
CC	0																						
C	0																						
C	0																						
Total	192																						

Other Structured Finance contains: Insurance Premium Finance, Structured Settlements, Timeshare Loans, Healthcare Receivables, Marine Container Leases, Film Rights, Property Assessed Clean Energy (PACE) Assessments and Aircraft Leases

DBRS

Credit Ratings as of 12/31/2019		Other Ten Year Transition December 31,2009 – December 31,2019																					Other Outcomes			
Credit Rating	Number of Outstanding Ratings	AAA	AA(high)	AA	AA(low)	A(high)	A	A(low)	BBB(high)	BBB	BBB(low)	BB(high)	BB	BB(low)	B(high)	B	B(low)	CCC(high)	CCC	CCC(low)	CC	C	Default	Paid Off	Withdraw n-Other	
AAA	9	11%																							89%	
AA(high)	0																									
AA	1																								100%	
AA(low)	0																									
A(high)	2																								50%	
A	3																								33%	
A(low)	2																								67%	
BBB(high)	2																								50%	
BBB	5																								100%	
BBB(low)	1																								50%	
BB(high)	1																								80%	
BB	2																								20%	
BB(low)	0																								100%	
B(high)	0																								100%	
B	0																								50%	
B(low)	0																									
CCC(high)	0																									
CCC	0																									
CCC(low)	0																									
CC	0																									
C	0																									
Total	28																									

Other Structured Finance contains: Insurance Premium Finance, Structured Settlements, Timeshare Loans, Healthcare Receivables, Marine Container Leases, Film Rights, Property Assessed Clean Energy (PACE) Assessments and Aircraft Leases

Sovereign Issuers - 1-Year Transition and Default Rates (December 31, 2018 through December 31, 2019)

DBRS		Credit Ratings as of 12/31/2018														Credit Ratings as of 12/31/2019 (Percent)												Other Outcomes During 12/31/2018			
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)						
AAA	14	100.00%																													
AA (high)	2		100.00%																												
AA	0																														
AA (low)	1			100.00%																											
A (high)	4					100.00%																									
A	4					25.00%	75.00%																								
A (low)	2						50.00%																								
BBB (high)	2																														
BBB	3								100.00%	33.33%																					
BBB (low)	2								66.67%																						
BB (high)	1										100.00%																				
BB	0																														
BB (low)	1																														
B (high)	1													100.00%																	
B	1													100.00%																	
B (low)	0																														
CCC (high)	0																														
CCC	0																														
CCC (low)	0																														
CC (high)	0																														
CC	0																														
Total	38																														



Sovereign Issuers - 3-Year Transition and Default Rates (December 31, 2016 through December 31, 2019)

DBRS

Credit Ratings as of 12/31/2016		Credit Ratings as of 12/31/2019 (Percent)													Other Outcomes During 12/31/2016 - 12/31/2019 (Percent)										
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	14	100.00%																							
AA (high)	2		100.00%																						
AA	0																								
AA (low)	1																								
A (high)	3					100.00%																			100.00%
A	3						33.33%																		
A (low)	2						50.00%																		
BBB (high)	2								50.00%																
BBB	2								50.00%																50.00%
BBB (low)	3								66.67%																50.00%
BB (high)	1										33.33%														100.00%
BB	1													100.00%											
BB (low)	0																								
B (high)	0																								
B	2																								
B (low)	0										50.00%														50.00%
CCC (high)	1																								
CCC	0																								
CCC (low)	0																								
CC (high)	0																								
CC	0																								
Total	37																								

Sovereign Issuers - 10-Year Transition and Default Rates (December 31, 2009 through December 31, 2019)

DBRS

Credit Ratings as of 12/31/2009		Credit Ratings as of 12/31/2019 (Percent)														Other Outcomes During 12/31/2009 - 12/31/2019 (Percent)									
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	1	100.00%																							
AA (high)	0																								
AA	0																								
AA (low)	0																								
A (high)	1					100.00%																			
A	0																								
A (low)	0																								
BBB (high)	0																								
BBB	1									100.00%															
BBB (low)	4										100.00%														
BB (high)	0																								
BB	0																								
BB (low)	1												100.00%												
B (high)	0																								
B	0																								
B (low)	1																100.00%								
CCC (high)	0																								
CCC	0																								
CCC (low)	0																								
CC (high)	0																								
CC	0																								
Total	9																								

DBRS

DBRS		Credit Ratings as of 12/31/2018														Credit Ratings as of 12/31/2019														Other Outcomes During 12/31/2018 - 12/31/2019		
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)								
AAA	0																															
AA (high)	0																															
AA	0																															
AA (low)	0																															
A (high)	0																															
A	0																															
A (low)	1							100.00%																								
BBB (high)	1							100.00%																								
BBB	2							100.00%		100.00%																						
BBB (low)	2							50.00%		50.00%																						
BB (high)	0																															
BB	0																															
BB (low)	0																															
B (high)	0																															
B	0																															
B (low)	0																															
CCC (high)	0																															
CCC	0																															
CCC (low)	0																															
CC (high)	0																															
CC	0																															
Total	6																															

United States Public Finance - 3-Year Transition and Default Rates (December 31, 2016 through December 31, 2019)

DBRS

DBRS		Credit Ratings as of 12/31/2019																			Other Outcomes During 12/31/2016 - 12/31/2019				
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0																								
AA (high)	0																								
AA	0																								
AA (low)	0																								
A (high)	0																								
A	0																								
A (low)	1																								
BBB (high)	1																								
BBB	2																								
BBB (low)	0																								
BB (high)	0																								
BB	0																								
BB (low)	0																								
B (high)	0																								
B	0																								
B (low)	0																								
CCC (high)	0																								
CCC	0																								
CCC (low)	0																								
CC (high)	0																								
CC	0																								
Total	4																								

DBRS

Credit Ratings as of 12/31/2009		Credit Ratings as of 12/31/2019														Other Outcomes During 12/31/2009 - 12/31/2019								
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	0	AAA																						
AA (high)	0		AA (high)																					
AA	0			AA																				
AA (low)	0				AA (low)																			
A (high)	0					A (high)																		
A	0						A																	
A (low)	0							A (low)																
BBB (high)	0								BBB (high)															
BBB	0									BBB														
BBB (low)	0										BBB (low)													
BB (high)	0											BB (high)												
BB	0												BB											
BB (low)	0													BB (low)										
B (high)	0														B (high)									
B	0															B								
B (low)	0																B (low)							
CCC (high)	0																	CCC (high)						
CCC	0																		CCC					
CCC (low)	0																			CCC (low)				
CC (high)	0																				CC (high)			
CC	0																					CC		
Total	0																							

DBRS

DBRS		Credit Ratings as of 12/31/2018																			Credit Ratings as of 12/31/2019				Other Outcomes During 12/31/2018 - 12/31/2019			
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)			
AAA	8	100.00%																										
AA (high)	4	100.00%																										
AA	8		87.50%																									
AA (low)	5		100.00%																									
A (high)	14			7.14%		92.86%																						
A	9						100.00%																					
A (low)	15						13.33%	86.67%																				
BBB (high)	8								87.50%		100.00%																	
BBB	4																											
BBB (low)	2										100.00%																	
BB (high)	0																								12.50%			
BB	1											100.00%																
BB (low)	0																											
B (high)	0																											
B	0																											
B (low)	0																											
CCC (high)	0																											
CCC	0																											
CCC (low)	0																											
CC (high)	0																											
CC	0																											
Total	78																											

DBRS		Credit Ratings as of 12/31/2016														Credit Ratings as of 12/31/2019														Other Outcomes During 12/31/2016 - 12/31/2019			
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)								
AAA	7	100.00%																															
AA (high)	5		80.00%	20.00%																													
AA	6			83.33%																													
AA (low)	5				20.00%																												
A (high)	10					80.00%																											
A	11					10.00%	90.00%																										
A (low)	16						63.64%	9.09%																									
BBB (high)	3						25.00%	62.50%	12.50%																								
BBB	4							33.33%	66.67%																								
BBB (low)	1								25.00%	50.00%	25.00%																						
BB (high)	0									100.00%																							
BB	0																																
BB (low)	0																																
B (high)	0																																
B	0																																
B (low)	0																																
CCC (high)	0																																
CCC	0																																
CCC (low)	0																																
CC (high)	0																																
CC	0																																
Total	68																																

DBRS

DBRS		Credit Ratings as of 12/31/2019																			Other Outcomes During 12/31/2009 - 12/31/2019				
Credit Rating	Number of Ratings Outstanding	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CC (high)	CC	Default	Paid Off	Withdrawn (other)
AAA	7	85.71%		14.29%																					
AA (high)	3		66.67%																						
AA	7			71.43%	14.29%																				14.29%
AA (low)	5				60.00%	20.00%																			20.00%
A (high)	11				9.09%	72.73%	9.09%																		9.09%
A	10					30.00%	40.00%	20.00%	10.00%																
A (low)	4						25.00%	25.00%																	
BBB (high)	3						33.33%	33.33%																	
BBB	1									100.00%															50.00%
BBB (low)	0																						33.33%		
BB (high)	0																								
BB	0																								
BB (low)	0																								
B (high)	0																								
B	0																								
B (low)	0																								
CCC (high)	0																								
CCC	0																								
CCC (low)	0																								
CC (high)	0																								
CC	0																								
Total	51																								



**MORNINGSTAR CREDIT RATINGS**  
Form NRSRO Annual Certification

**EXHIBIT 1:**  
Performance Measurement Statistics

Table 1: Financial Institutions, Brokers, or Dealers - 1 Year Transition and Default Rates  
(December 31, 2018 through December 31, 2019)

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019 (Percent)															Other Outcomes During 12/31/2018 - 12/31/2019 (Percent)								
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	Default	Paid Off	Withdrawn (other)
AAA	0																								
AA+	0																								
AA	0																								
AA-	3																								100.00%
A+	1																								100.00%
A	4																								100.00%
A-	2																								100.00%
BBB+	5																								100.00%
BBB	3																								100.00%
BBB-	0																								100.00%
BBB+	0																								100.00%
BBB-	0																								100.00%
BB	0																								100.00%
BB-	0																								100.00%
B+	0																								100.00%
B	0																								100.00%
B-	0																								100.00%
CCC+	0																								100.00%
CCC	0																								100.00%
CCC-	0																								100.00%
CC	0																								100.00%
C	0																								100.00%
Total	18																								

Table 2: Financial Institutions, Brokers, or Dealers - 3 Year Transition and Default Rates  
(December 31, 2016 through December 31, 2019)

Credit Ratings as of 12/31/2016		Credit Ratings as of 12/31/2019 (Percent)															Other Outcomes During 12/31/2016 - 12/31/2019 (Percent)								
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	Default	Paid Off	Withdrawn (other)
AAA	0																								
AA+	0																								
AA	0																								
AA-	2																								
A+	4																								
A	5																								
A-	10																								
BBB+	11																								
BBB	7																								
BBB-	1																								
BBB+	0																								
BBB	0																								
BB-	0																								
B+	0																								
B	0																								
B-	0																								
CCC+	0																								
CCC	0																								
CCC-	0																								
CC	0																								
C	0																								
Total	40																								

**Table 3: Financial Institutions, Brokers, or Dealers - 10 Year Transition and Default Rates**  
Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix

Table 4: Corporate Issuers - 1 Year Transition and Default Rates  
(December 31, 2018 through December 31, 2019)

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019 (Percent)													Other Outcomes During 12/31/2018 - 12/31/2019 (Percent)										
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	Default	Paid Off	Withdrawn (other)
AAA	1																								100.00%
AA+	2																								100.00%
AA	4																								100.00%
AA-	12																								100.00%
A+	10																								100.00%
A	18																								100.00%
A-	22																								100.00%
BBB+	36																								100.00%
BBB	31																								100.00%
BBB-	19																								100.00%
BB+	8																								100.00%
BB	6																								100.00%
BB-	3																								100.00%
B+	2																								100.00%
B	2																								100.00%
B-	1																								100.00%
CCC+	1																								100.00%
CCC	0																								
CCC-	0																								
CC	0																								
C	0																								
Total	178																								

Table 5: Corporate Issuers - 3 Year Transition and Default Rates  
(December 31, 2016 through December 31, 2019)

Credit Ratings as of 12/31/2016		Credit Ratings as of 12/31/2019 (Percent)															Other Outcomes During 12/31/2016 - 12/31/2019 (Percent)								
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	Default	Paid Off	Withdrawn (other)
AAA	2																								100.00%
AA+	1																								100.00%
AA	8																								100.00%
AA-	14																								100.00%
A+	20																								100.00%
A	32																								100.00%
A-	36																								100.00%
BBB+	50																								100.00%
BBB	39																								100.00%
BBB-	41																								100.00%
BBB+	19																								100.00%
BB	15																								100.00%
BB-	12																								100.00%
B+	3																								100.00%
B	6																								100.00%
B-	4																								100.00%
CCC+	0																								100.00%
CCC	1																								100.00%
CCC-	0																								100.00%
CC	0																								100.00%
C	0																								100.00%
Total	303																								

Table 6: Corporate Issuers - 10 Year Transition and Default Rates  
Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix

Table 7: RMBS - 1 Year Transition and Default Rates  
(December 31, 2018 through December 31, 2019)

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019 (Percent)														Other Outcomes During 12/31/2018 - 12/31/2019 (Percent)							
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	Default	Paid Off	Withdrawn
AAA	211	62.09%			0.47%					0.95%	0.47%											5.69%	30.33%
AA+	32	18.75%	43.75%																			9.38%	28.13%
AA	23	17.39%	17.39%	39.13%																		4.35%	21.74%
AA-	24	8.33%	12.50%	4.17%	54.17%																	16.67%	4.17%
A+	23	4.35%	13.04%		4.35%	69.57%																4.35%	4.35%
A	38				10.53%	13.16%	52.63%																23.68%
A-	54		1.85%		3.70%	12.96%	1.85%	74.07%														5.56%	
BBB+	40				2.50%	7.50%	40.00%	5.00%	30.00%													7.50%	7.50%
BBB	79						3.80%	16.46%	25.32%	44.30%												3.80%	6.33%
BBB-	66	1.52%						18.18%	21.21%	4.55%	42.42%											6.06%	6.06%
BB+	94									1.06%	35.11%	58.51%	27.59%									2.13%	3.19%
BB	29								3.45%		41.38%	13.79%	10.00%	60.00%								13.79%	13.79%
BB-	20											15.00%	10.00%		84.62%							5.00%	10.00%
B+	13											7.69%			20.00%	40.00%							7.69%
B	10														12.50%		75.00%						40.00%
B-	8											12.50%											
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	764																						



Table 8: RMBS - 3 Year Transition and Default Rates  
(December 31, 2016 through December 31, 2019)

Credit Ratings as of 12/31/2016			Credit Ratings as of 12/31/2019 (Percent)														Other Outcomes During 12/31/2016 - 12/31/2019 (Percent)						
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	Default	Paid Off	Withdrawn (other)
AAA	92	14.13%			1.09%																	31.52%	53.26%
AA+	19	31.58%	5.26%																			47.37%	15.79%
AA	22	13.64%																				77.27%	9.09%
AA-	4		50.00%		25.00%																		25.00%
A+	15	26.67%	13.33%			6.67%																53.33%	
A	31	6.45%			3.23%	6.45%																77.42%	6.45%
A-	5				20.00%	20.00%		20.00%	5.56%													20.00%	20.00%
BBB+	36	11.11%	2.78%			2.78%	2.78%															69.44%	5.56%
BBB	22		4.55%	4.55%	4.55%	4.55%			4.55%	13.64%												54.55%	4.55%
BBB-	30	3.33%								6.67%	13.33%											73.33%	3.33%
BB+	9							11.11%		11.11%												55.56%	22.22%
BB	7								14.29%													28.57%	14.29%
BB-	9												11.11%	33.33%								33.33%	22.22%
B+	0																						
B	6																						
B-	4																50.00%					16.67%	50.00%
CCC+	0												25.00%										
CCC	0																						
CCC-	0																						
Total	311																						

**Table 9: RMBS – 10 Year Transition and Default Rates**  
Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix

Table 10: CMBS - 1 Year Transition and Default Rates  
(December 31, 2018 through December 31, 2019)

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019 (Percent)																	Other Outcomes During 12/31/2018 - 12/31/2019				
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	Default	Paid Off	Withdrawn (other)
AAA	352	47.44%	0.28%	0.28%		0.57%	0.28%	0.57%														30.68%	19.89%
AA+	38	2.63%	71.05%																			21.05%	5.26%
AA	42			69.05%																		11.90%	19.05%
AA-	55	5.45%	1.82%	1.82%	50.91%																	20.00%	20.00%
A+	32				3.13%	59.38%																12.50%	25.00%
A	48						54.17%															20.83%	25.00%
A-	77	1.30%		1.30%		2.60%	1.30%	61.04%														14.29%	18.18%
BBB+	32	3.13%						53.13%														6.25%	37.50%
BBB	46						2.17%			56.52%												13.04%	26.09%
BBB-	89	1.12%						2.25%		55.06%												15.73%	24.72%
BB+	13									7.69%			69.23%									7.69%	15.38%
BB	26													53.85%								19.23%	26.92%
BB-	59	1.69%												1.69%	64.41%							18.64%	13.56%
B+	7																					14.29%	28.57%
B	22														57.14%							4.55%	36.36%
B-	37																48.65%					22.73%	36.36%
CCC+	0																					32.43%	18.92%
CCC	1																						
CCC-	1																			100.00%			
Total	977																						100.00%

Table 11: CMBS - 3 Year Transition and Default Rates  
(December 31, 2016 through December 31, 2019)

Credit Ratings as of 12/31/2016		Credit Ratings as of 12/31/2019 (Percent)															Other Outcomes During 12/31/2016 - 12/31/2019 (Percent)						
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	Default	Paid Off	Withdrawn (other)
AAA	1,046	10.13%	0.10%	0.10%		0.19%	0.10%	0.19%														22.37%	66.83%
AA+	50		28.00%																			22.00%	50.00%
AA	95	1.05%		18.95%	1.05%																	18.95%	60.00%
AA-	116	2.59%	0.86%	1.72%	7.76%	0.86%																27.59%	58.62%
A+	54			1.85%		18.52%																11.11%	68.52%
A	120	0.83%				10.83%		0.83%														12.50%	75.00%
A-	173	1.73%				1.16%	1.16%	13.87%		0.58%												23.70%	57.80%
BBB+	62								16.13%													17.74%	66.13%
BBB	84						1.19%		1.19%	21.43%	1.19%		0.57%								0.57%	21.43%	53.57%
BBB-	176	2.27%							0.57%	1.14%	10.80%											18.75%	65.34%
BB+	52									1.92%		3.85%		5.10%								19.23%	75.00%
BB	98	1.02%																				12.24%	81.63%
BB-	96	1.04%													1.04%						1.04%	37.50%	41.67%
B+	42														2.38%						2.38%	9.52%	85.71%
B	71																				1.41%	15.49%	78.87%
B-	47																12.77%					48.94%	38.30%
CCC+	1																						100.00%
CCC	0																						
CCC-	2																						
Total	2,385																						100.00%

Table 12: CMBS - 10 Year Transition and Default Rates  
(December 31, 2009 through December 31, 2019)

Credit Ratings as of 12/31/2009		Credit Ratings as of 12/31/2019 (Percent)														Other Outcomes During 12/31/2016 - 12/31/2019 (Percent)									
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC+	C	Default	Paid Off	Withdrawn (other)
AAA	3,575																						0.17%	80.20%	19.64%
AA+	259																						0.39%	71.43%	28.19%
AA	325																						0.92%	57.23%	41.85%
AA-	228													0.44%									0.44%	53.51%	45.61%
A+	230																						2.61%	52.17%	45.22%
A	322																						3.73%	46.27%	50.00%
A-	298																						3.02%	40.27%	56.71%
BBB+	368																						6.52%	36.68%	56.79%
BBB	395																						10.38%	29.37%	60.25%
BBB-	374																						14.97%	24.33%	60.70%
BB+	273																						21.98%	20.88%	57.14%
BB	213																						21.60%	19.72%	58.69%
BB-	173																						26.01%	16.18%	57.80%
B+	186																						34.41%	13.44%	52.15%
B	176																						42.61%	7.39%	50.00%
B-	289																						39.45%	7.96%	52.60%
CCC+	181																						62.43%	2.76%	34.81%
CCC	181																						64.09%	3.87%	32.04%
CCC-	648																						73.15%	0.93%	25.93%
CC+	0																								
C	4																								
Total	8,698																						100.00%		

Table 13: CLOs - 1 Year Transition and Default Rates  
(December 31, 2018 through December 31, 2019)

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019 (Percent)																Other Outcomes During 12/31/2018 - 12/31/2019 (Percent)					
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	Default	Paid Off	Withdrawn (other)
AAA	59	89.83%																				8.47%	1.69%
AA+	1	100.00%																					
AA	0																						
AA-	5			20.00%																		50.00%	
A+	4		80.00%	50.00%																		66.67%	
A	3						33.33%															14.29%	
A-	7					28.57%		57.14%														16.67%	
BBB+	6								83.33%														
BBB	10								10.00%	90.00%													
BBB-	43								4.65%	76.74%	16.28%												
BB+	0																					2.33%	
BB	0																						
BB-	0																						
B+	0																						
B	1																						
B-	0															100.00%							
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	139																						

**Table 14: CLOs - 3 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 15: CLOs - 10 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix .



**Table 16: CDOs - 1 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 17: CDOs - 3 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 18: CDOs - 10 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 19: ABCP - 1 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 20: ABCP - 3 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 21: ABCP - 10 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

Table 22: Other ABS - 1 Year Transition and Default Rates  
(December 31, 2018 through December 31, 2019)

Credit Ratings as of 12/31/2018		Credit Ratings as of 12/31/2019 (Percent)																Other Outcomes During 12/31/2018 - 12/31/2019 (Percent)					
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	Default	Paid Off	Withdrawn (other)
AAA	16	31.25%																					68.75%
AA+	1	100.00%																					
AA	6			100.00%																			
AA-	1																						
A+	5			20.00%		60.00%																	
A	19					10.53%	57.89%																
A-	11							72.73%															
BBB+	2																						
BBB	13								69.23%														
BBB-	1																						
BB+	0																						
BB	2																						
BB-	0																						
B+	0																						
B	1																						
B-	0																						
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	78																						

Table 23: Other ABS - 3 Year Transition and Default Rates  
(December 31, 2016 through December 31, 2019)

Credit Ratings as of 12/31/2016			Credit Ratings as of 12/31/2019 (Percent)														Other Outcomes During 12/31/2016 - 12/31/2019 (Percent)						
Credit Rating	Number of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	Default	Paid Off	Withdrawn (other)
AAA	1																					100.00%	
AA+	1																					100.00%	
AA	1			100.00%																			
AA-	2																					100.00%	
A+	4					25.00%																50.00%	25.00%
A	3					66.67%																50.00%	33.33%
A-	4			25.00%		25.00%																50.00%	50.00%
BBB+	2							50.00%															
BBB	2								50.00%														
BBB-	0																						
BB+	2																						
BB	0																						
BB-	1																						
B+	0																						
B	1																						
B-	0																						
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	24																						



**Table 24: Other ABS - 10 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 25: SFP – 1 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 26: SFP – 3 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default Matrix.

**Table 27: SFP – 10 Year Transition and Default Rates**

Morningstar has not assigned credit ratings in this class/subclass for the length of time necessary to produce a Transition/Default

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### **Categories and notches within a category for each class and subclass of credit ratings in DBRS's<sup>1</sup> Transition/Default Matrix:**

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All rating categories below, other than AAA and D, also contain subcategories "(high)" and "(low)". The absence of either a "(high)" or "(low)" designation indicates the rating is in the middle of the category. Subcategory "(high)" reflects a lower risk that an issuer will fail to satisfy its financial obligations in accordance with the terms under which an obligations has been issued, while subcategory "(low)" reflects a higher risk.

#### **AAA**

Highest credit quality. The capacity for the payment of financial obligations is exceptionally high and unlikely to be adversely affected by future events.

#### **AA**

Superior credit quality. The capacity for the payment of financial obligations is considered high. Credit quality differs from AAA only to a small degree. Unlikely to be significantly vulnerable to future events.

#### **A**

Good credit quality. The capacity for the payment of financial obligations is substantial, but of lesser credit quality than AA. May be vulnerable to future events, but qualifying negative factors are considered manageable.

#### **BBB**

Adequate credit quality. The capacity for the payment of financial obligations is considered acceptable. May be vulnerable to future events.

#### **BB**

Speculative, non-investment grade credit quality. The capacity for the payment of financial obligations is uncertain. Vulnerable to future events.

#### **B**

Highly speculative credit quality. There is a high level of uncertainty as to the capacity to meet financial obligations.

#### **CCC / CC / C**

Very highly speculative credit quality. In danger of defaulting on financial obligations. There is little difference between these three categories, although CC and C ratings are normally applied to obligations that are seen as highly likely to default, or subordinated to obligations rated in the CCC

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<sup>1</sup> The DBRS Group of Companies is comprised of DBRS, Inc., DBRS Limited, DBRS Ratings Limited and DBRS Ratings GmbH.

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to B range. Obligations in respect of which default has not technically taken place but is considered inevitable may be rated in the C category.

### **D**

When the issuer has filed under any applicable bankruptcy, insolvency or winding up statute or there is a failure to satisfy an obligation after the exhaustion of grace periods, a downgrade to D may occur. DBRS may also use SD (Selective Default) in cases where only some securities are impacted, such as the case of a “distressed exchange”.

### **Conditions under which DBRS classifies obligors, securities, or money market instruments as being in default:**

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DBRS issues a default rating when:

- The issuer has filed under any applicable bankruptcy, insolvency or winding up statute.
- There is failure to pay or satisfy an obligation (subject to applicable grace periods and/or waiver of such failure) in accordance with the underlying transaction documents and DBRS believes that this default will subsequently be general in nature and include all obligations.
- Independent of the issuer rating, securities described as a “Distressed Exchange” are downgraded to ‘D’.
- DBRS also reserves the right to downgrade ratings to ‘D’ when it believes that a general default is imminent and unavoidable, although this is a less frequent and a more subjective decision.

The preceding categories and subcategories are publicly available at:

[dbrsmorningstar.com/research/236754/long-term-obligations-rating-scale.pdf](http://dbrsmorningstar.com/research/236754/long-term-obligations-rating-scale.pdf)

For completeness, all of DBRS’s rating scales are publicly available at:

[dbrsmorningstar.com/understanding-ratings/#about-ratings](http://dbrsmorningstar.com/understanding-ratings/#about-ratings)

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### **Categories and notches within a category for each class and subclass of credit ratings in MCR's Transition/Default Matrix:**

MCR utilizes a set of letter ratings ranging from AAA to D to express its opinion on the credit quality of a security based on MCR's policies and procedures. MCR also provides finer gradations (notches) of the ratings ranging from AA to CCC by adding a plus or minus sign to indicate relative strength within the rating categories. The definitions for MCR's credit ratings are as follows:

#### **AAA**

A rating of AAA is the highest credit rating assigned by MCR. A rating of AAA indicates an extremely strong ability to make timely interest payments and ultimate principal payments on or prior to a rated final distribution or maturity date.

#### **AA+, AA, AA-**

A rating in the AA category indicates a very strong ability to make timely interest and ultimate principal payments on or prior to a rated final distribution or maturity date.

#### **A+, A, A-**

A rating in the A category indicates a strong ability to make timely interest and ultimate principal payments on or prior to a rated final distribution or maturity date, but that ability could be influenced by adverse changes in circumstances or conditions, such as adverse business or economic conditions.

#### **BBB+, BBB, BBB-**

A rating in the BBB category indicates the ability to make timely payments of interest and ultimate principal payments on or prior to a rated final distribution or maturity date, but that ability could be impacted by adverse changes in circumstances or conditions, such as adverse business or economic conditions.

#### **BB+, BB, BB-**

A rating in the BB category indicates the ability to make timely payments of interest and ultimate payment of principal on or prior to a rated final distribution or maturity date in the absence of various adverse circumstances or conditions such as adverse business or economic conditions. The vulnerability of securities rated BB to the previously mentioned conditions is greater than that of higher rated securities or issuers.

#### **B+, B, B-**

A rating in the B category indicates a default has not yet occurred, but the issuer or securities are vulnerable to adverse changes in the business or economic environment. Securities rated in the B category are more vulnerable to nonpayment of timely interest and ultimate payment of principal on or prior to a rated final distribution date than higher rated securities.

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### **CCC+, CCC, CCC**

A rating in the CCC category indicates a material likelihood of default, and for corporate and financial institution obligations, significant dependence on favorable business conditions to avoid default or capital restructuring. For structured finance securities, forecasted or actual losses may have eroded but not yet eliminated available credit support.

### **CC**

A rating of CC on a corporate or financial institution issuer or security indicates a default has not yet occurred but the issuer or security is extremely dependent on favorable business conditions to avoid default or significant capital restructuring. This rating does not apply to structured finance securities.

### **C**

A rating of C on a corporate or financial institution issuer or security indicates a default is expected in the very near term. Corporate and financial institution issuers or securities will be rated C and placed on Under Review Negative during a cure period for payments of interest and principal. This rating does not apply to structured finance securities.

### **SD**

A rating of SD indicates a selective default when an issuer has defaulted on one or more but not all its debt obligations without entering bankruptcy. Selective Default is not applicable to individual issues and therefore is not applicable to structured finance securities.

### **D**

A rating of 'D' indicates that a default has occurred; or, for structured finance securities, (1) actual losses have reduced the principal balance of the security; or (2) actual losses have eliminated available credit support.

Additionally, forecasted losses that would reduce the principal balance of the security or eliminate the available credit support, subject to our reasonable judgment, may be indicative of a D rating.

For purposes of the above, the following terms shall have the following meanings:

“Default” shall generally include one or more of the following:

(i) Failure to pay (1) timely interest and/or (2) principal. (ii) Any bankruptcy, administration, receivership, winding up, liquidation or other termination of the business of the issuer. (iii) Execution of a distressed debt exchange. A distressed debt exchange is the repayment of a debt instrument for any consideration other than the par value of the debt, in cash, at its contracted maturity date to avoid a payment default or bankruptcy. Execution of a distressed debt exchange for some, but not all, of an obligor’s debt obligations would result in a rating of SD. (iv) Failure to meet non-debt obligations such as trade payables would not be considered a default or selective default. (v) Under certain circumstances, subject to MCR’s reasonable judgment, an interest or



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principal shortfall on a structured finance security may not be deemed a default. Factors that would affect MCR's decision include the magnitude of the shortfall, likelihood of recurrence, certainty and timing of a repayment, and the current rating of the security.

"Forecasted losses" generally include one or more of the following: (i) Projected losses resulting from specially serviced loans, and/or (ii) Projected losses due to a decline in current appraisal values, and/or (iii) Projected losses due to anticipated payment defaults on any loans.

The preceding categories, subcategories and rating scales are publicly available at:

[ratingagency.morningstar.com/PublicDocs/RatingsDefinitions.pdf](http://ratingagency.morningstar.com/PublicDocs/RatingsDefinitions.pdf)

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### **URL Page:**

Please note that the uniform resource locator (URL) of the DBRS and MCR websites which provides the credit rating histories required to be disclosed pursuant to 17 CFR 17g-7(b) are:

DBRS:

[dbdsmorningstar.com/about/historyAgree/](http://dbdsmorningstar.com/about/historyAgree/)

MCR:

[ratingagency.morningstar.com/MCR/regulatory/Credit-Ratings-History](http://ratingagency.morningstar.com/MCR/regulatory/Credit-Ratings-History)