

# **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, 2017 through December 31, 2018)**

Credit Ratings as of 12/31/2017		Credit Ratings as of 12/31/2018 (Percent)																				Other Outcomes During 12/31/2017 - 12/31/2018			
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of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	Default	Paid Off	Withdrawn (other)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+	3					33.33%																			66.67%
A	7						42.86%																		57.14%
A-	11						9.09%	18.18%	9.09%																63.64%
BBB+	13								23.08%																76.92%
BBB	5								20.00%	40.00%															40.00%
BBB-	2									50.00%															50.00%
BB+	0																								
BB	0																								
BB-	0																								
B+	0																								
B	0																								
B-	0																								
CCC+	0																								
CCC	0																								
CCC-	0																								
CC	0																								
C	0																								
Total	44																								

**Table 2: Financial Institutions, Brokers, or Dealers - 3 Year Transition and Default Rates  
(December 31, 2015 through December 31, 2018)**

Credit Ratings as of 12/31/2015		Credit Ratings as of 12/31/2018 (Percent)																				Other Outcomes During 12/31/2015 - 12/31/2018			
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of Ratings Outstanding	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	Default	Paid Off	Withdrawn (other)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				33.33%																				66.67%
A+	9				22.22%	11.11%																			66.67%
A	12						8.33%																		91.67%
A-	15						20.00%	6.67%	20.00%																53.33%
BBB+	13							7.69%	7.69%																84.62%
BBB	9								11.11%	22.22%															66.67%
BBB-	6								16.67%																83.33%
BB+	0																								
BB	0																								
BB-	0																								
B+	0																								
B	0																								
B-	0																								
CCC+	0																								
CCC	0																								
CCC-	0																								
CC	0																								
C	0																								
Total	67																								

**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, 2017 through December 31, 2018)**

Credit Ratings as of 12/31/2017		Credit Ratings as of 12/31/2018 (Percent)																				Other Outcomes During 12/31/2017 - 12/31/2018			
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	7			57.14%	14.29%																				28.57%
AA-	14				71.43%	7.14%																			21.43%
A+	16				6.25%	56.25%	6.25%																		31.25%
A	31						51.61%	9.68%																	38.71%
A-	40						2.50%	37.50%	10.00%	2.50%															47.50%
BBB+	52							5.77%	53.85%	1.92%															38.46%
BBB	45								4.44%	48.89%	2.22%														44.44%
BBB-	39									10.26%	33.33%	2.56%	5.13%												48.72%
BB+	18										27.78%	22.22%													50.00%
BB	13											23.08%	30.77%												46.15%
BB-	5													20.00%	20.00%										60.00%
B+	4													25.00%	25.00%										50.00%
B	4													25.00%		25.00%									50.00%
B-	6															16.67%	16.67%								66.67%
CCC+	0																								
CCC	0																								
CCC-	0																								
CC	0																								
C	0																								
Total	297																								

**Table 5: Corporate Issuers - 3 Year Transition and Default Rates  
(December 31, 2015 through December 31, 2018)**

Credit Ratings as of 12/31/2015		Credit Ratings as of 12/31/2018 (Percent)																				Other Outcomes During 12/31/2015 - 12/31/2018				
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	33.33%	66.67%																							
AA+	0																									
AA	12			33.33%	33.33%	8.33%																			25.00%	
AA-	14				42.86%	28.57%	7.14%	7.14%																		14.29%
A+	19				10.53%	15.79%	21.05%		10.53%																	42.11%
A	40					5.00%	22.50%	7.50%	15.00%																	50.00%
A-	45						6.67%	20.00%	8.89%	4.44%	2.22%															57.78%
BBB+	56						1.79%	3.57%	17.86%	7.14%		1.79%	1.79%													66.07%
BBB	45							2.22%	13.33%	17.78%	8.89%		2.22%													55.56%
BBB-	39								2.56%	20.51%	17.95%		5.13%													53.85%
BB+	21									4.76%	23.81%				4.76%											66.67%
BB	15								6.67%	26.67%			6.67%													60.00%
BB-	11									9.09%		9.09%	9.09%	9.09%			9.09%									54.55%
B+	5										20.00%	20.00%														60.00%
B	4													25.00%		25.00%										50.00%
B-	3														33.33%											66.67%
CCC+	0																									
CCC	1																									100.00%
CCC-	0																									
CC	0																									
C	0																									
Total	333																									

**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, 2017 through December 31, 2018)**

Credit Ratings as of 12/31/2017		Credit Ratings as of 12/31/2018 (Percent)																		Other Outcomes During 12/31/2017 - 12/31/2018			
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	129	88.37%																				11.63%	
AA+	19	73.68%	10.53%																			15.79%	
AA	28	25.00%	14.29%	28.57%																		32.14%	
AA-	15		40.00%		53.33%																	6.67%	
A+	10	10.00%	20.00%	10.00%	10.00%	20.00%																30.00%	
A	33	3.03%	6.06%	12.12%	9.09%	9.09%	33.33%															27.27%	
A-	15		6.67%		13.33%	46.67%	6.67%	20.00%														6.67%	
BBB+	30	3.33%	3.33%		6.67%		6.67%	13.33%	36.67%													30.00%	
BBB	19					5.26%	21.05%	21.05%		47.37%												5.26%	
BBB-	42							30.95%	4.76%	2.38%	42.86%											19.05%	
BB+	30							3.33%	3.33%	46.67%	40.00%	6.67%											
BB	12								8.33%		33.33%		58.33%										
BB-	22										4.55%	68.18%		22.73%								4.55%	
B+	5										40.00%	20.00%	20.00%	20.00%									
B	10											20.00%		20.00%	10.00%	40.00%						10.00%	
B-	5																100.00%						
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	424																						



**Table 8: RMBS - 3 Year Transition and Default Rates  
(December 31, 2015 through December 31, 2018)**

Credit Ratings as of 12/31/2015		Credit Ratings as of 12/31/2018 (Percent)																		Other Outcomes During 12/31/2015 - 12/31/2018			
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	86	70.93%																				29.07%	
AA+	15	40.00%	6.67%																			53.33%	
AA	21	4.76%																				95.24%	
AA-	2				100.00%																		
A+	15	26.67%		6.67%	6.67%	6.67%																53.33%	
A	30	3.33%					6.67%															90.00%	
A-	2							100.00%															
BBB+	25	16.00%					4.00%	4.00%	4.00%													72.00%	
BBB	36		2.78%	2.78%	5.56%		2.78%			13.89%												72.22%	
BBB-	17										17.65%											82.35%	
BB+	8							12.50%				12.50%										75.00%	
BB	4								25.00%				50.00%									25.00%	
BB-	3											33.33%		66.67%									
B+	0																						
B	0																						
B-	3																100.00%						
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	267																						

**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, 2017 through December 31, 2018)**

Credit Ratings as of 12/31/2017		Credit Ratings as of 12/31/2018 (Percent)																			Other Outcomes During 12/31/2017 - 12/31/2018		
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	1,088	88.69%																				8.09%	3.22%
AA+	36	2.78%	80.56%																			13.89%	2.78%
AA	59		5.08%	72.88%	1.69%																	16.95%	3.39%
AA-	105	0.95%		2.86%	79.05%		1.90%															12.38%	2.86%
A+	33				6.06%	69.70%		6.06%														15.15%	3.03%
A	49				2.04%	2.04%	69.39%	2.04%														10.20%	14.29%
A-	164	0.61%		0.61%		0.61%	2.44%	78.05%		0.61%	0.61%											12.80%	3.66%
BBB+	45								80.00%			2.22%										13.33%	4.44%
BBB	76									85.53%	2.63%			1.32%								5.26%	5.26%
BBB-	138	0.72%							1.45%	0.72%	80.43%		0.72%			0.72%			0.72%			10.87%	3.62%
BB+	21										4.76%	52.38%										38.10%	4.76%
BB	45	2.22%											75.56%									11.11%	11.11%
BB-	98											1.02%		78.57%		2.04%						17.35%	1.02%
B+	18														61.11%	5.56%	5.56%		5.56%			22.22%	
B	52												1.92%			78.85%	1.92%					9.62%	5.77%
B-	52																80.77%		1.92%			17.31%	
CCC+	0																						
CCC	1																				100.00%		
CCC-	0																						
Total	2,080																						

**Table 11: CMBS - 3 Year Transition and Default Rates  
(December 31, 2015 through December 31, 2018)**

Credit Ratings as of 12/31/2015		Credit Ratings as of 12/31/2018 (Percent)																			Other Outcomes During 12/31/2015 - 12/31/2018		
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	1,533	45.14%																				14.94%	39.92%
AA+	43	4.65%	41.86%																			18.60%	34.88%
AA	105	2.86%	2.86%	22.86%	0.95%																	20.00%	50.48%
AA-	145	1.38%		1.38%	32.41%		0.69%															21.38%	42.76%
A+	41	2.44%		4.88%	2.44%	34.15%		4.88%	2.44%													7.32%	41.46%
A	123		0.81%		4.07%		16.26%	0.81%													0.81%	13.01%	64.23%
A-	222	1.35%		0.45%		0.90%	2.25%	41.44%		0.45%												16.67%	36.49%
BBB+	59					1.69%	1.69%	3.39%	25.42%			1.69%										13.56%	52.54%
BBB	88	1.14%							2.27%	42.05%	2.27%			1.14%								13.64%	37.50%
BBB-	211	0.95%							1.42%	0.47%	29.86%		0.47%						0.47%		0.95%	15.17%	49.76%
BB+	44										2.27%	9.09%									2.27%	22.73%	63.64%
BB	123	1.63%											20.33%	0.81%		0.81%					0.81%	8.94%	66.67%
BB-	106											0.94%				39.62%		0.94%			0.94%	27.36%	29.25%
B+	47														17.02%	2.13%	2.13%					10.64%	68.09%
B	97	1.03%											1.03%			27.84%	2.06%		1.03%		2.06%	9.28%	55.67%
B-	57																45.61%					24.56%	29.82%
CCC+	0																						
CCC	0																						
CCC-	1																					100.00%	
Total	3,045																						

**Table 12: CMBS - 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 13: CLOs - 1 Year Transition and Default Rates  
(December 31, 2016 through December 31, 2017)**

Credit Ratings as of 12/31/2017		Credit Ratings as of 12/31/2018 (Percent)																			Other Outcomes During 12/31/2017 - 12/31/2018		
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	24	87.50%																				12.50%	
AA+	1																					100.00%	
AA	1	100.00%																					
AA-	2	50.00%																				50.00%	
A+	1																					100.00%	
A	7				57.14%		14.29%															28.57%	
A-	4					50.00%		25.00%														25.00%	
BBB+	2							50.00%														50.00%	
BBB	1								100.00%														
BBB-	23								8.70%	30.43%	56.52%											4.35%	
BB+	0																						
BB	0																						
BB-	0																						
B+	0																						
B	1																					100.00%	
B-	0																						
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	67																						

**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, 2017 through December 31, 2018)**

Credit Ratings as of 12/31/2017		Credit Ratings as of 12/31/2018 (Percent)																			Other Outcomes During 12/31/2017 - 12/31/2018		
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	11	90.91%																				9.09%	
AA+	0																						
AA	5		20.00%	60.00%																		20.00%	
AA-	4						50.00%															50.00%	
A+	1					100.00%																	
A	10			10.00%	20.00%	70.00%																	
A-	5					40.00%		20.00%														20.00%	20.00%
BBB+	0																						
BBB	9							22.22%		66.67%	11.11%												
BBB-	0																						
BB+	0																						
BB	1												100.00%										
BB-	0																						
B+	0																						
B	1															100.00%							
B-	0																						
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	47																						

**Table 23: Other ABS - 3 Year Transition and Default Rates**

Credit Ratings as of 12/31/2015		Credit Ratings as of 12/31/2018 (Percent)																		Other Outcomes During 12/31/2015 - 12/31/2018			
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	0																						
AA+	0																						
AA	1																					100.00%	
AA-	2																					100.00%	
A+	1																					100.00%	
A	0																						
A-	1																					100.00%	
BBB+	2					50.00%																50.00%	
BBB	0																						
BBB-	0																						
BB+	1																					100.00%	
BB	0																						
BB-	1																					100.00%	
B+	0																						
B	0																						
B-	0																						
CCC+	0																						
CCC	0																						
CCC-	0																						
Total	9																						



**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*

**Ratings Definitions**

<https://ratingagency.morningstar.com/PublicDocs/RatingsDefinitions.pdf>

The above URL represents the location of the Ratings Definitions page on the Morningstar Credit Ratings Internet website. The Ratings Definitions page describes each symbol in the rating scale that is used to denote a credit rating category and notches within a category for each class and subclass of credit ratings in the tables presented in Exhibit 1. The Ratings Definitions page also explains the conditions under which Morningstar Credit Ratings classifies obligors, securities, or money market instruments as being in default.

**Credit Rating History**

To access Morningstar Credit Ratings credit rating history, please go to <https://ratingagency.morningstar.com/mcr> and click on the Regulatory Affairs tab.