

**Morningstar Credit Ratings, LLC ("Morningstar")**  
**Form NRSRO Annual Update**  
**Exhibit 1**

**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **1-year (i.e., "short-term")** credit ratings transition matrix for **2,923** tranches of commercial mortgage-backed securities that were rated on 1/1/2016. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2016") lists the number of these tranches in each rating category at 1/1/16. The horizontal rows list the corresponding number of these tranches in each ratings category at 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 1/1/2016 and 12/31/2016 (Tranches issued during 2016 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2016-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated CMBS is as follows:

Of the	1,386	CMBS bonds rated AAA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	274	CMBS bonds rated AA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	368	CMBS bonds rated A at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	99.73%	were rated A, AA or AAA at 12/31/16.

**One-year (i.e., "short-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2016		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 1/1/2016 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)
AAA	1,457	95.13%																					4.80%	0.07%
AA+	40	15.00%	85.00%																					
AA	101	8.91%	9.90%	79.21%	0.99%																		0.99%	
AA-	138	2.17%		5.07%	89.86%																		2.90%	
A+	40		2.50%	5.00%	7.50%	85.00%																		
A	117	2.56%	2.56%	0.85%	2.56%	10.26%	80.34%	0.85%																
A-	215	0.93%		0.47%		0.93%	3.72%	91.63%	0.47%														1.86%	
BBB+	58			1.72%	1.72%	1.72%	5.17%	12.07%	77.59%															
BBB	85	1.18%				1.18%	1.18%	2.35%	5.88%	87.06%										1.18%				
BBB-	204	0.98%			0.49%		0.49%		2.45%	3.92%	89.22%	0.49%							0.49%				1.47%	
BB+	42								2.38%	4.76%	88.10%											2.38%	2.38%	
BB	122	1.64%					0.82%		0.82%	0.82%	8.20%	85.25%	0.82%								0.82%		0.82%	
BB-	102											0.98%	98.04%										0.98%	
B+	46							2.17%				2.17%	4.35%	89.13%									2.17%	
B	96	1.04%										1.04%	5.21%	90.63%	1.04%						1.04%			
B-	57											1.75%			3.51%	89.47%	1.75%				1.75%		1.75%	
CCC+	0																							
CCC	0																							
CCC-	1																					100.00%		
D	2																					100.00%		
Total	2,923																							

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**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **3-year (i.e., "mid-term")** credit ratings transition matrix for **4,855** tranches of commercial mortgage-backed securities that were rated on 12/31/13. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2014") lists the number of these tranches in each rating category as of 1/1/2014. The horizontal rows list the corresponding number of these tranches in each ratings category as of 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 12/31/2016 (Tranches issued during 2015 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2014-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated CMBS is as follows:

Of the	304	CMBS bonds rated AAA at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	76	CMBS bonds rated AA at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	92	CMBS bonds rated A at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	98.91%	were rated A, AA or AAA at 12/31/16.

**Three-year (i.e., "mid-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2014		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 1/1/2014 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)	
AAA	1,597	19.04%																					47.09%	33.88%	
AA+	112	1.79%	12.50%																				23.21%	62.50%	
AA	143	9.79%	6.29%	15.38%																			13.99%	54.55%	
AA-	103	0.97%	0.97%	0.97%	11.65%																		24.27%	61.17%	
A+	79				2.53%	18.99%																	26.58%	51.90%	
A	115	3.48%	3.48%	1.74%	3.48%	7.83%	22.61%																10.43%	46.96%	
A-	109	0.92%		0.92%			1.83%	19.27%	0.92%														18.35%	57.80%	
BBB+	129			0.78%	0.78%	0.78%	1.55%	4.65%	14.73%														10.08%	66.67%	
BBB	111	0.90%		0.90%		0.90%			1.80%	13.51%										0.90%			12.61%	68.47%	
BBB-	176	1.14%			0.57%		1.14%	0.57%	3.98%	2.27%	20.45%									0.57%	0.57%		5.68%	63.07%	
BB+	135									0.74%	1.48%	2.96%											6.67%	88.15%	
BB	125	0.80%					0.80%			1.60%	0.80%	8.00%	17.60%								0.80%	0.80%	1.60%	67.20%	
BB-	51												1.96%	15.69%									5.88%	76.47%	
B+	66								1.52%					1.52%	6.06%								1.52%	1.52%	87.88%
B	62												3.23%	1.61%	8.06%	33.87%					1.61%	1.61%		50.00%	
B-	87												1.15%			2.30%	5.75%						2.30%	1.15%	87.36%
CCC+	47																						2.13%	97.87%	
CCC	20																							100.00%	
CCC-	513																						3.12%	0.78%	96.10%
D	1,075																						39.63%		60.37%
Total	4,855																								

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**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

***There is no ten-year/long-term credit ratings transition matrix for CMBS. Morningstar did not have letter-grade credit ratings in 2006.***

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**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **1-year (i.e., "short-term")** credit ratings transition matrix for **255** tranches of residential mortgage-backed securities that were rated on 12/31/16. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2016") lists the number of these tranches in each rating category at 1/1/16. The horizontal rows list the corresponding number of these tranches in each ratings category at 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 12/31/2016 (Tranches issued during 2016 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2016-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated RMBS is as follows:

Of the	78	RMBS bonds rated AAA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	26	RMBS bonds rated AA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	32	RMBS bonds rated A at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.

**One-year (i.e., "short-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2016		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 1/1/2016 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)
AAA	84	92.86%																					7.14%	
AA+	13		100.00%																					
AA	21		4.76%	47.62%																			47.62%	
AA-	2				100.00%																			
A+	13					100.00%																		
A	30			3.33%			53.33%																43.33%	
A-	2							100.00%																
BBB+	23								100.00%															
BBB	34							2.94%		44.12%													52.94%	
BBB-	16									100.00%														
BB+	7										100.00%													
BB	4											25.00%	75.00%											
BB-	3												100.00%											
B+	0																							
B	0																							
B-	3																100.00%							
CCC+	0																							
CCC	0																							
CCC-	0																							
D	0																							
Total	255																							

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**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **3-year (i.e., "mid-term")** credit ratings transition matrix for **5** tranches of residential mortgage-backed securities that were rated on 12/31/13. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2014") lists the number of these tranches in each rating category as of 1/1/2014. The horizontal rows list the corresponding number of these tranches in each ratings category as of 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 12/31/2016 (Tranches issued during 2015 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2014-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated CMBS is as follows:

Of the	1	RMBS bonds rated AAA at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	1	RMBS bonds rated AA at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	1	RMBS bonds rated A at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	100.00%	were rated A, AA or AAA at 12/31/16.

**Three-year (i.e., "mid-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2014		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 1/1/2014 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)
AAA	1	100.00%																						
AA+	0																							
AA	1			100.00%																				
AA-	0																							
A+	0																							
A	1						100.00%																	
A-	0																							
BBB+	1								100.00%															
BBB	0																							
BBB-	1										100.00%													
BB+	0																							
BB	0																							
BB-	0																							
B+	0																							
B	0																							
B-	0																							
CCC+	0																							
CCC	0																							
CCC-	0																							
D	0																							
Total	5																							

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**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

***There is no ten-year credit ratings transition matrix for RMBS. Morningstar began providing ratings on RMBS transactions in 2013.***

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**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **1-year (i.e., "short-term")** credit ratings transition matrix for **4** tranches of asset-backed securities that were rated on 12/31/16. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2016") lists the number of these tranches in each rating category at 1/1/16. The horizontal rows list the corresponding number of these tranches in each ratings category at 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 12/31/2016 (Tranches issued during 2016 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2016-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated RMBS is as follows:

Of the	-	ABS bonds rated AAA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	-	were rated A, AA or AAA at 12/31/16.
Of the	-	ABS bonds rated AA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	-	were rated A, AA or AAA at 12/31/16.
Of the	1	ABS bonds rated A at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.

**One-year (i.e., "short-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2016		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 1/1/2016 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)
AAA	0																							
AA+	0																							
AA	0																							
AA-	0																							
A+	1					100.00%																		
A	0																							
A-	0																							
BBB+	1								100.00%															
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																							
D	0																							
Total	4																							

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**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

***There is no three-year or ten-year credit ratings transition matrix for ABS. Morningstar began providing ratings on ABS transactions in 2015.***



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**Credit Ratings Performance Measurement Statistics: Default Rates Relative to Initial Ratings**

The tables at right present the default rates of commercial mortgage-backed securities ("CMBS") tranches for which Morningstar maintained a rating at January 1 2016, or at December 31, 2013, as applicable, relative to Morningstar's initial rating thereof.

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been referenced at the end of this Exhibit.

**Table 1** at right shows the percentage of CMBS tranches that Morningstar rated at 1/1/2016, grouped by Morningstar's initial rating thereof, that were either (i) rated 'D' at 12/31/16 or (ii) non-rated at 12/31/16 by reason of a complete loss of principal during the period 01/01/16 to 12/31/16.

**Table 2** at right shows the percentage of CMBS tranches that Morningstar rated at 12/31/13, grouped by Morningstar's initial rating thereof, that were either (i) rated 'D' at 12/31/16 or (ii) non-rated at 12/31/16 by reason of a complete loss of principal during the period 01/01/14 to 12/31/16.

/———— <b>Table 1</b> ————/		/———— <b>Table 2</b> ————/	
<b>Morningstar Rating Categories</b>	<b>Default rates relative to initial ratings</b>	<b>Morningstar Rating Categories</b>	<b>Default rates relative to initial ratings</b>
<b>AAA</b>	<b>0.62%</b>	<b>AAA</b>	<b>0.66%</b>
<b>AA+</b>	<b>1.33%</b>	<b>AA+</b>	<b>1.61%</b>
<b>AA</b>	<b>4.36%</b>	<b>AA</b>	<b>3.60%</b>
<b>AA-</b>	<b>1.98%</b>	<b>AA-</b>	<b>2.53%</b>
<b>A+</b>	<b>6.36%</b>	<b>A+</b>	<b>5.69%</b>
<b>A</b>	<b>7.74%</b>	<b>A</b>	<b>5.58%</b>
<b>A-</b>	<b>2.94%</b>	<b>A-</b>	<b>3.77%</b>
<b>BBB+</b>	<b>16.52%</b>	<b>BBB+</b>	<b>11.80%</b>
<b>BBB</b>	<b>9.60%</b>	<b>BBB</b>	<b>6.56%</b>
<b>BBB-</b>	<b>7.43%</b>	<b>BBB-</b>	<b>8.67%</b>
<b>BB+</b>	<b>16.35%</b>	<b>BB+</b>	<b>9.56%</b>
<b>BB</b>	<b>8.70%</b>	<b>BB</b>	<b>6.81%</b>
<b>BB-</b>	<b>6.09%</b>	<b>BB-</b>	<b>7.81%</b>
<b>B+</b>	<b>14.91%</b>	<b>B+</b>	<b>9.50%</b>
<b>B</b>	<b>11.97%</b>	<b>B</b>	<b>11.03%</b>
<b>B-</b>	<b>13.68%</b>	<b>B-</b>	<b>18.59%</b>
<b>CCC+</b>	<b>100.00%</b>	<b>CCC+</b>	<b>100.00%</b>
<b>CCC</b>	<b>60.00%</b>	<b>CCC</b>	<b>27.27%</b>
<b>CCC-</b>	<b>0.00%</b>	<b>CCC-</b>	<b>0.00%</b>
<b>CC+</b>	<b>0.00%</b>	<b>CC+</b>	<b>0.00%</b>
<b>CC</b>	<b>0.00%</b>	<b>CC</b>	<b>0.00%</b>
<b>CC-</b>	<b>0.00%</b>	<b>CC-</b>	<b>0.00%</b>
<b>C+</b>	<b>0.00%</b>	<b>C+</b>	<b>0.00%</b>
<b>C</b>	<b>0.00%</b>	<b>C</b>	<b>0.00%</b>
<b>C-</b>	<b>0.00%</b>	<b>C-</b>	<b>0.00%</b>
<b>D</b>	<b>N/A</b>	<b>D</b>	<b>N/A</b>

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**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **1-year (i.e., "short-term")** credit ratings transition matrix for **62** financial institution securities that were rated on 12/31/16. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2016") lists the number of these tranches in each rating category at 1/1/16. The horizontal rows list the corresponding number of these tranches in each ratings category at 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 12/31/2016 (Tranches issued during 2016 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2016-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated RMBS is as follows:

Of the	-	financial institution securities rated AAA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	-	were rated A, AA or AAA at 12/31/16.
Of the	1	financial institution securities rated AA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	19	financial institution securities rated A at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	94.74%	were rated A, AA or AAA at 12/31/16.

**One-year (i.e., "short-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2016		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 1/1/2016 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)
AAA	0																							
AA+	0																							
AA	0																							
AA-	3				33.33%																			66.67%
A+	9				11.11%	44.44%																		44.44%
A	11						27.27%	9.09%																63.64%
A-	14						7.14%	57.14%	7.14%															28.57%
BBB+	12								58.33%															41.67%
BBB	8								12.50%	62.50%														25.00%
BBB-	5									20.00%	20.00%													60.00%
BB+	0																							
BB	0																							
BB-	0																							
B+	0																							
B	0																							
B-	0																							
CCC+	0																							
CCC	0																							
CCC-	0																							
D	0																							
Total	62																							

**Morningstar Credit Ratings, LLC ("Morningstar")**  
**Form NRSRO Annual Update**  
**Exhibit 1**

**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **3-year (i.e., "mid-term")** credit ratings transition matrix for **79** financial institution securities that were rated on 12/31/13. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2014") lists the number of these tranches in each rating category as of 1/1/2014. The horizontal rows list the corresponding number of these tranches in each ratings category as of 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 12/31/2016 (Tranches issued during 2015 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2014-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated CMBS is as follows:

Of the	-	financial institution securities rated AAA at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	-	were rated A, AA or AAA at 12/31/16.
Of the	1	financial institution securities rated AA at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	16	financial institution securities rated A at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	93.75%	were rated A, AA or AAA at 12/31/16.

**Three-year (i.e., "mid-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2014		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 1/1/2014 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)
AAA	0																							
AA+	0																							
AA	0																							
AA-	4				25.00%																		75.00%	
A+	12				8.33%	16.67%	8.33%																66.67%	
A	13						7.69%	15.38%															76.92%	
A-	15						6.67%	46.67%	6.67%														40.00%	
BBB+	14								35.71%														64.29%	
BBB	13								15.38%	30.77%													53.85%	
BBB-	4									25.00%	25.00%												50.00%	
BB+	1																						100.00%	
BB	1																						100.00%	
BB-	1																						100.00%	
B+	1																						100.00%	
B	0																							
B-	0																							
CCC+	0																							
CCC	0																							
CCC-	0																							
D	0																							
Total	79																							

**Morningstar Credit Ratings, LLC ("Morningstar")**  
**Form NRSRO Annual Update**  
**Exhibit 1**

**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

***There is no ten-year credit ratings transition matrix for financial institutions. Morningstar began providing ratings on financial institutions in 2010.***

**Morningstar Credit Ratings, LLC ("Morningstar")**  
**Form NRSRO Annual Update**  
**Exhibit 1**

**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **1-year (i.e., "short-term")** credit ratings transition matrix for **338** corporate securities that were rated on 12/31/16. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2016") lists the number of these tranches in each rating category at 1/1/16. The horizontal rows list the corresponding number of these tranches in each ratings category at 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 12/31/2016 (Tranches issued during 2016 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2016-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated RMBS is as follows:

Of the	3	corporate securities rated AAA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	26	corporate securities rated AA at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	97	corporate securities rated A at 1/1/2016 (and not withdrawn/redeemed/cancelled during '16),	85.57%	were rated A, AA or AAA at 12/31/16.

**One-year (i.e., "short-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2016		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 1/1/2016 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)
AAA	3	66.67%	33.33%																					
AA+	0																							
AA	12			66.67%	25.00%	8.33%																		
AA-	14				71.43%	21.43%	7.14%																	
A+	19				5.26%	68.42%	5.26%		5.26%	5.26%	5.26%													5.26%
A	41					7.32%	68.29%	7.32%	9.76%															7.32%
A-	46						6.52%	67.39%	8.70%	4.35%	2.17%													10.87%
BBB+	57							3.51%	70.18%	10.53%	3.51%													12.28%
BBB	46							2.17%	4.35%	58.70%	10.87%		2.17%	2.17%										19.57%
BBB-	40								2.50%	10.00%	67.50%	7.50%	2.50%	2.50%										7.50%
BB+	21										9.52%	52.38%	14.29%	9.52%	4.76%									9.52%
BB	15										6.67%	26.67%	40.00%			6.67%	6.67%							13.33%
BB-	11											9.09%	27.27%	54.55%		9.09%								
B+	5												20.00%	20.00%	20.00%				20.00%					20.00%
B	4															100.00%								
B-	3													33.33%			66.67%							
CCC+	0																							
CCC	1																100.00%							
CCC-	0																							
D	0																							
Total	338																							

**Morningstar Credit Ratings, LLC ("Morningstar")**  
**Form NRSRO Annual Update**  
**Exhibit 1**

**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

Below is the **3-year (i.e., "mid-term")** credit ratings transition matrix for **534** corporate securities that were rated on 12/31/13. This matrix summarizes the number of these tranches in each rating category as of 12/31/16 to show the stability or migration, as applicable, of these ratings for and during this period. The vertical column to the far left of this matrix (which is the column titled "Credit Ratings as of 1/1/2014") lists the number of these tranches in each rating category as of 1/1/2014. The horizontal rows list the corresponding number of these tranches in each ratings category as of 12/31/16. The inputs, time horizons and metrics used to determine these credit ratings performance measurement statistics include a compilation of the number of tranches in each rating category as of 12/31/2016 (Tranches issued during 2015 are not included even though outstanding at 12/31/16).

The credit rating categories, ranging from AAA to D, including as applicable, a plus or minus sign to indicate relative strength within the rating categories have been included at the end of this Exhibit. The three columns under the header "Other Outcomes During 1/1/2014-12/31/2016 (Percent)" separate the number of non-rated tranches by reason of withdrawal ("Withdrawn") by Morningstar of a letter-grade rating from the number of non-rated tranches, by reason of a full return of principal ("Paid off") or complete loss of principal ("Default"). (Withdrawals herein do not include tranches that are non-rated because they were either redeemed or cancelled by the trustee thereof by reason of a complete loss of principal.)

A summary of the credit ratings transition matrix for the AAA, AA and A-rated CMBS is as follows:

Of the	3	corporate securities rated AAA at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	100.00%	were rated A, AA or AAA at 12/31/16.
Of the	35	corporate securities rated AA at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	94.29%	were rated A, AA or AAA at 12/31/16.
Of the	106	corporate securities rated A at 12/31/13 (and not withdrawn/redeemed/cancelled during '14, '15 or '16),	70.75%	were rated A, AA or AAA at 12/31/16.

**Three-year (i.e., "mid-term") credit ratings transition matrix:**

Credit Ratings as of 1/1/2014		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 1/1/2014 - 12/31/2016 (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-	D	Default	Paid Off	Withdrawn (other)
AAA	3	66.67%	33.33%																					
AA+	1			100.00%																				
AA	15			40.00%	40.00%	13.33%			6.67%															
AA-	22			4.55%	31.82%	18.18%	22.73%	4.55%	4.55%															13.64%
A+	26				3.85%	42.31%	11.54%	7.69%	11.54%	3.85%	3.85%													15.38%
A	59					5.08%	30.51%	18.64%	11.86%		1.69%													32.20%
A-	64						9.38%	31.25%	15.63%	7.81%	4.69%													31.25%
BBB+	86							2.33%	27.91%	8.14%	5.81%		2.33%											53.49%
BBB	66							1.52%	3.03%	30.30%	4.55%		1.52%	3.03%										56.06%
BBB-	74								2.70%	6.76%	25.68%	2.70%	2.70%	1.35%	1.35%		1.35%							55.41%
BB+	43									6.98%	23.26%	6.98%	9.30%	2.33%			2.33%							48.84%
BB	23									13.04%	17.39%	8.70%	4.35%		8.70%									47.83%
BB-	21										9.52%	14.29%	9.52%		14.29%	4.76%								47.62%
B+	8											12.50%	12.50%						12.50%					62.50%
B	8													12.50%		12.50%	12.50%							62.50%
B-	11													9.09%										90.91%
CCC+	0																							
CCC	4																							100.00%
CCC-	0																							
D	0																							
Total	534																							

**Morningstar Credit Ratings, LLC ("Morningstar")**  
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**Exhibit 1**

**Credit Ratings Performance Measurement Statistics: Credit Ratings Transition Matrix**

***There is no ten-year credit ratings transition matrix for corporate issues. Morningstar began providing ratings on corporate issuers in 2009.***

### **Types of Rating Opinions**

Letter-Grade Credit Rating: A Morningstar letter-grade credit rating is only an opinion on the ability of the collateral to support timely interest payments and to repay principal by the rated final distribution date according to the terms of the transaction and subject to the various qualifications, caveats and considerations enumerated in its respective ratings letters, ratings reports, and Morningstar's website, [www.morningstarcreditratings.com](http://www.morningstarcreditratings.com), including the "Analysis and Considerations" link on this website.

Morningstar utilizes a set of letter ratings ranging from 'AAA' to 'D' to express its opinion on the credit quality of a security based on Morningstar's policies and procedures. The definitions for Morningstar's letter-grade ratings are as follows:

### **AAA**

A rating of 'AAA' is the highest letter-grade rating assigned by Morningstar. Securities rated 'AAA' have an extremely strong ability to make timely interest payments and ultimate principal payments on or prior to a rated final distribution date.

### **AA**

A rating of 'AA' indicates the securities have a very strong ability to make timely interest and ultimate principal payments on or prior to a rated final distribution date.

### **A**

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

### **BBB**

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

### **BB**

A rating of 'BB' indicates the securities should be able to meet their obligation to make timely payments of interest and ultimate payment of principal on or prior to a rated final distribution 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 higher rated securities.

### **B**

A rating of 'B' indicates a default has not yet occurred but the securities are vulnerable to a challenging or changes in environment, conditions or circumstances. Securities rated 'B' 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.

### **CCC**

A rating of 'CCC' indicates a material likelihood of default. Forecasted or actual losses may erode but have not yet eliminated available credit support.

### **CC and C**

Beginning in 2009, no ratings are issued by Morningstar in the 'CC' or 'C' category.

### **D**

A rating of 'D' indicates that (1) a default has occurred or there is a substantial likelihood of a default; (2) actual losses have reduced the principal balance of the security; or (3) 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 below:

- i. failure to pay (1) timely interest and/or (2) principal on the securities, and/or
- ii. any bankruptcy, administration, receivership, winding up, liquidation or other termination of the business of the issuer.

Under certain circumstances, subject to our reasonable judgment, an interest or principal shortfall may not be deemed a default. Factors that would impact our decision include the magnitude of the shortfall, likelihood of recurrence, certainty and timing of a repayment, and the current rating of the security.

"rated final distribution date" typically is the rated final distribution date or term of similar import used in the related offering documents for the respective transaction or otherwise enumerated in the related Morningstar ratings report for such transaction.

### **Credit Rating History**

To access Morningstar Credit Ratings credit rating history, please go to [www.morningstarcreditratings.com](http://www.morningstarcreditratings.com) and click on the Regulatory Disclosures tab.