

**S&P Global Ratings
Ratings Performance for
Exhibit 1 Form NRSRO**

Page	Table Title	Table Number
3	Financial Institutions, Brokers, or Dealers Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 1
4	Financial Institutions, Brokers, or Dealers Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 2
5	Financial Institutions, Brokers, or Dealers Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 3
6	Insurance Companies Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 4
7	Insurance Companies Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 5
8	Insurance Companies Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 6
9	Corporate Issuers Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 7
10	Corporate Issuers Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 8
11	Corporate Issuers Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 9
12	Issuers of Asset-Backed Securities - Residential Mortgage-Backed Securities Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 10
13	Issuers of Asset-Backed Securities - Residential Mortgage-Backed Securities Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 11
14	Issuers of Asset-Backed Securities - Residential Mortgage-Backed Securities Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 12
15	Issuers of Asset-Backed Securities - Commercial Mortgage-Backed Securities Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 13
16	Issuers of Asset-Backed Securities - Commercial Mortgage-Backed Securities Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 14
17	Issuers of Asset-Backed Securities - Commercial Mortgage-Backed Securities Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 15
18	Issuers of Asset-Backed Securities - Collateralized Loan Obligations Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 16
19	Issuers of Asset-Backed Securities - Collateralized Loan Obligations Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 17
20	Issuers of Asset-Backed Securities - Collateralized Loan Obligations Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 18
21	Issuers of Asset-Backed Securities - Collateralized Debt Obligations Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 19
22	Issuers of Asset-Backed Securities - Collateralized Debt Obligations Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 20
23	Issuers of Asset-Backed Securities - Collateralized Debt Obligations Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 21
24	Issuers of Asset-Backed Securities - Asset-Backed Commercial Paper Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 22
25	Issuers of Asset-Backed Securities - Asset-Backed Commercial Paper Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 23
26	Issuers of Asset-Backed Securities - Asset-Backed Commercial Paper Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 24
27	Issuers of Asset-Backed Securities - Other Asset-Backed Securities Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 25
28	Issuers of Asset-Backed Securities - Other Asset-Backed Securities Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 26
29	Issuers of Asset-Backed Securities - Other Asset-Backed Securities Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 27
30	Issuers of Asset-Backed Securities - Other Structured Finance Products Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 28
31	Issuers of Asset-Backed Securities - Other Structured Finance Products Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 29
32	Issuers of Asset-Backed Securities - Other Structured Finance Products Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 30
33	Sovereign Issuers Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 31
34	Sovereign Issuers Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 32
35	Sovereign Issuers Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 33
36	U.S. Public Finance Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 34
37	U.S. Public Finance Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 35
38	U.S. Public Finance Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 36
39	International Public Finance Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)	Table 37
40	International Public Finance Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)	Table 38
41	International Public Finance Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)	Table 39
42	Appendix	

Table 1		Financial Institutions, Brokers, or Dealers Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	5	80.00%																							20.00%
AA+	23		91.30%	4.35%	4.35%																				
AA	18		5.56%	77.78%	16.67%																				
AA-	76				92.11%	5.26%																			2.63%
A+	63				1.59%	71.43%	22.22%																		4.76%
A	160					16.25%	68.13%	5.00%	4.38%																6.25%
A-	110						10.91%	80.91%	5.45%																2.73%
BBB+	150							4.00%	85.33%	4.67%	1.33%														4.67%
BBB	124								9.68%	83.06%	1.61%														5.65%
BBB-	123								0.81%	6.50%	77.24%	5.69%	1.63%												8.13%
BB+	95									3.16%	53.68%	28.42%	2.11%	1.05%			1.05%								10.53%
BB	64									1.56%	4.69%	68.75%	10.94%	3.13%											10.94%
BB-	82											1.22%	81.71%	3.66%	2.44%										10.98%
B+	76												10.53%	57.89%	15.79%	3.95%									10.53%
B	64													4.69%	62.50%	9.38%	3.13%	4.69%							1.32%
B-	59														3.39%	74.58%	1.69%								10.17%
CCC+	11																45.45%	27.27%							18.18%
CCC	6																	16.67%							66.67%
CCC-	2																100.00%								16.67%
CC	1																								100.00%
C																									
Total	1312																								

Table 2		Financial Institutions, Brokers, or Dealers Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																								
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	7	42.86%	28.57%	14.29%																					14.29%	
AA+	24	4.17%	79.17%	12.50%																						4.17%
AA	17		5.88%	58.82%	23.53%																					11.76%
AA-	69				81.16%	8.70%	2.90%																			7.25%
A+	89					4.49%	39.33%	29.21%	2.25%	5.62%																19.10%
A	152						14.47%	51.32%	13.82%	7.89%																12.50%
A-	105						1.90%	10.48%	46.67%	22.86%	4.76%	0.95%	0.95%													11.43%
BBB+	129								11.63%	55.04%	14.73%	2.33%	0.78%	1.55%												13.95%
BBB	114							3.51%	17.54%	37.72%	12.28%	7.02%	7.02%													14.91%
BBB-	108								4.63%	11.11%	45.37%	9.26%	9.26%	4.63%	0.93%		0.93%						0.93%			12.96%
BB+	61								3.28%	4.92%	11.48%	27.87%	18.03%	6.56%	3.28%	1.64%										22.95%
BB	55									1.82%	5.45%	18.18%	38.18%	10.91%	1.82%	1.82%										21.82%
BB-	89										1.12%	2.25%	7.87%	46.07%	6.74%	7.87%	5.62%									22.47%
B+	60										1.67%	1.67%			11.67%	35.00%	15.00%	1.67%	1.67%							
B	71														9.86%	32.39%	16.90%	4.23%	4.23%				11.67%			20.00%
B-	44										2.27%				2.27%	9.09%	40.91%	2.27%				9.09%				34.09%
CCC+	23																47.83%	4.35%				4.35%				43.48%
CCC	8																	12.50%				62.50%				25.00%
CCC-	2																					50.00%				50.00%
CC																										
C																										
Total	1227																									

Table 3		Financial Institutions, Brokers, or Dealers Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																							
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	33	9.09%	42.42%	12.12%		3.03%	3.03%			3.03%		3.03%													24.24%
AA+	16		31.25%	12.50%	6.25%	12.50%			6.25%																31.25%
AA	62	1.61%		6.45%	9.68%	8.06%	19.35%	8.06%	3.23%	4.84%					1.61%										37.10%
AA-	126			0.79%	16.67%	8.73%	17.46%	4.76%	6.35%		3.97%	0.79%												0.79%	39.68%
A+	100				10.00%	11.00%	11.00%	4.00%	11.00%	2.00%	3.00%	1.00%		2.00%		1.00%								1.00%	43.00%
A	135			0.74%	1.48%	5.93%	17.78%	8.89%	11.85%	4.44%	4.44%	0.74%	0.74%		0.74%									1.48%	40.74%
A-	126				1.59%	2.38%	10.32%	20.63%	7.94%	6.35%	3.17%		2.38%	2.38%										3.17%	39.68%
BBB+	104					0.96%		13.46%	19.23%	7.69%	7.69%	1.92%			0.96%	0.96%								5.77%	41.35%
BBB	86					1.16%		3.49%	16.28%	13.95%	5.81%	1.16%	1.16%	1.16%	1.16%		1.16%							10.47%	43.02%
BBB-	56							1.79%	12.50%	12.50%	10.71%	1.79%		3.57%		1.79%								12.50%	42.86%
BB+	40							2.50%	2.50%	10.00%	7.50%	15.00%			2.50%	5.00%	7.50%							5.00%	27.50%
BB	37						2.70%		2.70%	2.70%	2.70%	8.11%	21.62%			2.70%	2.70%							8.11%	45.95%
BB-	45										4.44%	4.44%	20.00%	4.44%	2.22%	2.22%								13.33%	48.89%
B+	43									2.33%			2.33%	9.30%	4.65%	2.33%	4.65%	4.65%						13.95%	55.81%
B	31													6.45%	3.23%	12.90%	3.23%	3.23%						19.35%	51.61%
B-	18												5.56%		5.56%	27.78%	16.67%							11.11%	33.33%
CCC+	10															10.00%	20.00%							10.00%	60.00%
CCC	8													12.50%										25.00%	62.50%
CCC-																									
CC																									
C																									
Total	1076																								

Table 4		Insurance Companies Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA																									
AA+	15		93.33%	6.67%																					
AA	37			97.30%																					2.70%
AA-	79				84.81%	12.66%																			2.53%
A+	147				4.08%	85.71%	3.40%																		6.80%
A	148			0.68%		3.38%	87.84%	2.70%	0.68%																4.73%
A-	155						8.39%	83.87%	1.94%																5.81%
BBB+	89					1.12%		5.62%	79.78%	6.74%	2.25%														4.49%
BBB	49								4.08%	83.67%															12.24%
BBB-	30							3.33%		6.67%	70.00%	3.33%													13.33%
BB+	22									9.09%	9.09%	50.00%	13.64%												18.18%
BB	17											5.88%	64.71%	17.65%											11.76%
BB-	12													33.33%	33.33%	16.67%									16.67%
B+	6														33.33%	16.67%	16.67%								16.67%
B	34															2.94%	82.35%	2.94%		2.94%					8.82%
B-	4																50.00%								50.00%
CCC+																									
CCC	1																								100.00%
CCC-																									
CC																									
C																									
Total	845																								

Table 5		Insurance Companies Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																							
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA																									
AA+	15		93.33%	6.67%																					
AA	24			91.67%																					8.33%
AA-	84			14.29%	64.29%	14.29%																			7.14%
A+	138				8.70%	69.57%	10.14%																		11.59%
A	113			0.88%	0.88%	15.04%	63.72%	8.85%	0.88%																9.73%
A-	170				0.59%		23.53%	52.35%	5.29%	1.76%				0.59%											15.88%
BBB+	86					2.33%	2.33%	19.77%	48.84%	5.81%	2.33%		1.16%												17.44%
BBB	50							6.00%	20.00%	40.00%	6.00%		2.00%												26.00%
BBB-	45							4.44%	6.67%	22.22%	28.89%	4.44%													26.67%
BB+	17					5.88%					11.76%	17.65%	11.76%	17.65%											29.41%
BB	16											18.75%	50.00%	6.25%	6.25%										18.75%
BB-	9												11.11%	33.33%	22.22%										33.33%
B+	9															44.44%									44.44%
B	18										11.11%		5.56%			5.56%	44.44%					11.11%			27.78%
B-	8												25.00%			5.56%	12.50%	12.50%							50.00%
CCC+	1																								100.00%
CCC																									
CCC-																									
CC																									
C																									
Total	803																								

Table 6		Insurance Companies Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																								
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	36		33.33%	25.00%	5.56%														2.78%				2.78%		30.56%	
AA+	8		12.50%	25.00%	37.50%	12.50%																			12.50%	
AA	69		1.45%	13.04%	17.39%	11.59%	11.59%	5.80%		2.90%		1.45%											7.25%		27.54%	
AA-	80		8.75%	18.75%	31.25%	5.00%	3.75%	2.50%						1.25%											28.75%	
A+	95		4.21%	8.42%	28.42%	8.42%	7.37%	1.05%	2.11%																40.00%	
A	127		1.57%	1.57%	12.60%	29.92%	13.39%	3.94%		0.79%			1.57%	0.79%		0.79%							1.57%		31.50%	
A-	109			2.75%	7.34%	23.85%	25.69%	5.50%	0.92%														0.92%		33.03%	
BBB+	77			1.30%	1.30%	10.39%	19.48%	23.38%	5.19%	2.60%				1.30%											35.06%	
BBB	56					7.14%	12.50%	8.93%	14.29%	7.14%							1.79%								48.21%	
BBB-	37						2.70%	13.51%	16.22%	10.81%	2.70%											2.70%			51.35%	
BB+	22							4.55%	9.09%	4.55%	9.09%	4.55%													68.18%	
BB	15												13.33%			6.67%							6.67%		66.67%	
BB-	8													12.50%	25.00%										62.50%	
B+	9												11.11%	11.11%		11.11%	11.11%								44.44%	
B	17												5.88%			5.88%										76.47%
B-	3																									66.67%
CCC+																										
CCC	1																									100.00%
CCC-																										
CC																										
C																										
Total	769																									

Table 7		Corporate Issuers Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																								
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	11	81.82%	18.18%																							
AA+	5		60.00%	20.00%	20.00%																					
AA	24			75.00%	12.50%																				12.50%	
AA-	77			9.09%	74.03%	10.39%	1.30%																		5.19%	
A+	89				2.25%	82.02%	7.87%	5.62%	1.12%																1.12%	
A	168					1.19%	85.12%	8.93%	1.79%	0.60%															2.38%	
A-	308				0.32%		5.19%	81.17%	9.09%	0.65%	0.65%														2.92%	
BBB+	349						1.72%	6.02%	80.80%	7.16%	1.15%	0.57%													2.58%	
BBB	492							1.02%	11.79%	71.95%	8.13%	0.81%	0.20%	0.20%											5.89%	
BBB-	391							0.51%	0.77%	6.65%	71.87%	6.39%	1.53%	2.05%	0.51%										9.21%	
BB+	310									0.65%	8.06%	63.23%	16.77%	3.23%	0.97%	0.32%	0.97%						0.32%		5.48%	
BB	323										1.55%	7.74%	65.02%	13.00%	3.10%	0.93%					0.31%				8.36%	
BB-	359											0.56%	10.86%	61.56%	8.08%	3.34%	0.56%	0.28%				0.28%			13.09%	
B+	468											0.64%	0.21%	11.11%	56.41%	16.03%	2.14%	0.43%	0.21%	0.21%	0.21%				11.54%	
B	861													0.58%	5.57%	64.92%	9.87%	2.44%	1.05%	0.12%	0.35%				12.66%	
B-	355												0.28%	0.28%	1.13%	4.51%	49.86%	9.86%	4.23%	1.97%	1.13%				16.06%	
CCC+	118															1.69%	9.32%	33.90%	10.17%	2.54%					11.86%	
CCC	35																17.14%	5.71%	20.00%	5.71%		2.86%			14.29%	
CCC-	22													4.55%		4.55%	9.09%	4.55%	13.64%	27.27%	4.55%				4.55%	
CC	6													16.67%												83.33%
C																										
Total	4771																									

Table 8		Corporate Issuers Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																								
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	12	75.00%	16.67%	8.33%																						
AA+	5		40.00%	20.00%	40.00%																					
AA	25		4.00%	52.00%	24.00%		4.00%																		16.00%	
AA-	65		7.69%	70.77%	16.92%	16.92%	3.08%																		1.54%	
A+	95		5.26%	4.21%	56.84%	11.58%	7.37%	2.11%	1.05%																11.58%	
A	174				5.17%	60.34%	19.54%	6.32%	0.57%	1.72%	0.57%														5.75%	
A-	260				0.38%	11.54%	58.08%	16.15%	4.62%	0.77%	1.54%														6.92%	
BBB+	327					2.14%	17.74%	54.43%	10.09%	4.89%	0.92%	0.31%	0.31%	0.31%											8.87%	
BBB	475						4.21%	19.37%	48.63%	9.89%	3.79%	1.47%	1.05%	0.42%		0.21%								0.21%	10.74%	
BBB-	369					0.27%	0.54%	4.07%	18.43%	44.72%	5.15%	4.88%	2.71%	0.81%	0.54%	0.27%	0.54%							0.54%	16.53%	
BB+	271			0.37%			0.74%	1.85%	18.45%	34.69%	17.34%	3.69%	2.58%	1.11%	1.11%	0.37%									1.11%	16.61%
BB	303						0.33%	0.33%	1.32%	3.96%	16.83%	33.66%	14.85%	2.97%	2.64%	1.32%			0.33%					1.32%	20.13%	
BB-	337									0.89%	4.15%	16.02%	28.49%	9.50%	6.53%	1.19%	1.48%	0.30%		0.59%				3.86%	27.00%	
B+	459										1.09%	4.58%	11.33%	25.49%	14.38%	4.79%	0.87%	0.22%	0.44%	0.22%				4.14%	32.46%	
B	822										0.12%	0.49%	4.14%	7.79%	30.90%	7.91%	4.14%	2.31%	0.36%	0.49%				7.42%	33.94%	
B-	313										0.64%	0.32%	0.96%	3.19%	10.22%	21.41%	4.79%	2.56%	1.60%	0.32%				17.89%	36.10%	
CCC+	94											2.13%				1.06%	10.64%	12.77%	1.06%	2.13%		1.06%		29.79%	39.36%	
CCC	40															5.00%	10.00%		5.00%	5.00%				35.00%	40.00%	
CCC-	6																	16.67%						50.00%	33.33%	
CC	7																	14.29%						42.86%	42.86%	
C																										
Total	4459																									

Table 9		Corporate Issuers Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																									
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)		
AAA	16	25.00%	12.50%	31.25%	18.75%	6.25%																			6.25%		
AA+	14		7.14%	7.14%	35.71%		7.14%	35.71%																		7.14%	
AA	44	4.55%	2.27%	15.91%	20.45%	18.18%	4.55%	2.27%	2.27%		2.27%															27.27%	
AA-	72			4.17%	19.44%	20.83%	2.78%	6.94%	5.56%	1.39%																38.89%	
A+	117				8.55%	15.38%	19.66%	17.09%	3.42%	4.27%	2.56%	1.71%														27.35%	
A	223			1.79%	1.35%	4.48%	17.49%	22.87%	9.42%	4.93%	1.79%	1.35%	0.45%		0.45%	0.45%							0.45%			32.74%	
A-	287			0.70%	1.05%	2.09%	11.50%	17.42%	20.56%	8.01%	4.18%	1.05%	0.35%	1.39%												31.71%	
BBB+	335					0.90%	5.67%	13.43%	20.30%	15.52%	8.96%	1.19%	0.30%	0.90%	1.19%											31.34%	
BBB	410				0.24%		2.68%	8.05%	17.56%	15.37%	12.20%	3.17%	2.68%	1.22%	1.46%		0.24%								0.98%	34.15%	
BBB-	288					0.69%	0.35%	3.13%	7.29%	21.53%	11.11%	5.21%	4.17%	0.69%	0.35%	1.04%									2.43%	42.01%	
BB+	202					0.50%	0.50%	2.48%	7.92%	13.86%	8.42%	5.94%	4.95%	2.97%	0.99%	0.50%	0.99%								4.46%	45.54%	
BB	266							0.38%	3.38%	1.50%	6.02%	8.65%	7.89%	7.14%	2.63%	4.51%	1.50%	0.38%	0.38%						10.15%	45.49%	
BB-	366			0.27%	0.55%	0.82%				0.82%	4.37%	4.92%	9.02%	8.20%	4.64%	2.46%	1.64%	1.09%	0.27%	0.27%					14.75%	45.90%	
B+	463								0.22%	0.65%	0.65%	2.16%	3.46%	3.46%	3.46%	6.48%	2.59%	0.86%	0.22%	0.22%	0.22%				17.93%	57.45%	
B	416								0.48%	0.24%	0.96%	0.48%	0.96%	3.85%	1.92%	6.49%	1.68%	0.96%	0.24%		0.24%				28.61%	52.88%	
B-	201											1.00%	1.49%	1.49%	1.49%	2.99%	2.49%		1.00%						34.33%	53.73%	
CCC+	56															1.79%	3.57%								46.43%	48.21%	
CCC	23												4.35%													69.57%	26.09%
CCC-	4																25.00%								50.00%	25.00%	
CC	3																								100.00%		
C																											
Total	3806																										

Table 10		Issuers of Asset-Backed Securities - Residential Mortgage-Backed Securities Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	3714	80.18%	0.78%	0.13%	0.03%	0.03%	0.03%			0.03%	0.11%	0.08%	0.03%	0.03%	0.03%				0.19%					17.88%	0.46%
AA+	2124	2.78%	78.34%	0.99%	0.61%	0.89%	0.09%	0.19%	0.47%	0.28%	0.24%	0.09%				0.05%			0.09%		0.05%		0.42%	11.06%	3.34%
AA	1047	15.09%	4.97%	55.59%	1.05%	0.48%	0.38%	0.96%	0.38%		0.10%	0.29%		0.10%	0.10%	0.10%			0.48%				0.67%	18.43%	0.86%
AA-	392	2.55%	2.55%	2.55%	67.60%	2.81%	3.32%	2.30%				0.51%					0.51%							13.78%	1.53%
A+	1776	0.96%	5.01%	4.00%	1.80%	72.69%	0.56%	1.35%	1.18%	1.69%	0.39%	0.84%	0.17%		0.06%		0.06%		0.17%				0.06%	8.33%	0.68%
A	1005	7.56%	3.28%	4.38%	2.19%	3.88%	52.24%	1.79%	0.40%	1.19%	0.70%	0.70%	0.10%	0.50%		0.20%	0.10%		0.30%				0.20%	19.70%	0.60%
A-	640	1.09%	0.94%	1.41%	1.25%	2.03%	1.41%	61.09%	0.47%	1.09%	0.63%	0.47%	0.31%						0.63%					27.03%	0.16%
BBB+	1170	0.43%	2.39%	1.11%	0.85%	7.18%	3.76%	1.62%	63.59%	0.68%	2.39%	3.76%	0.43%	0.43%	0.51%	0.51%	0.09%		0.51%					9.06%	0.68%
BBB	980	5.82%	2.04%	2.86%	1.63%	2.24%	5.41%	2.76%	1.84%	51.63%	1.22%	1.33%	0.71%	0.51%	0.20%	0.41%	0.20%		0.41%				0.82%	17.24%	0.71%
BBB-	397	0.25%	0.50%	0.76%	0.25%	2.02%	4.53%	1.01%	4.53%	1.51%	60.20%	2.77%	2.02%	1.76%	1.01%	1.51%			0.50%					14.86%	
BB+	1089	0.64%	0.28%	0.64%	0.18%	1.65%	1.65%	0.46%	3.67%	3.21%	1.01%	65.01%	1.29%	2.11%	2.85%	1.47%	2.85%		1.38%				0.28%	7.62%	1.74%
BB	625	0.64%	0.80%	1.76%	0.32%	1.92%	1.12%	0.32%	2.72%	4.80%	2.56%	1.60%	61.60%	1.28%	1.44%	3.20%	2.08%		1.60%				0.16%	9.60%	0.48%
BB-	357	1.68%	0.28%	0.56%		0.28%	0.28%	1.68%	2.52%	3.08%	2.24%	3.08%	2.52%	65.55%	1.96%	2.24%	2.80%		1.96%					6.16%	1.12%
B+	482	0.21%	0.21%	0.83%		0.41%		0.21%	0.83%	2.07%	1.24%	2.70%	2.28%	0.83%	66.60%	1.45%	8.09%		3.11%				0.62%	7.26%	1.04%
B	745		0.27%	0.27%		0.27%	1.07%	0.13%	0.81%	2.15%	1.61%	2.01%	3.22%	0.94%	1.21%	54.09%	3.62%		21.88%				0.54%	4.43%	1.48%
B-	1326	0.23%	0.08%	0.08%		0.30%	0.60%	0.23%	0.68%	0.98%	0.60%	1.51%	1.96%	2.19%	1.51%	1.58%	73.83%		5.20%				1.28%	5.58%	1.58%
CCC+	15																	100.00%							
CCC	8109	0.01%	0.04%	0.02%		0.01%	0.05%		0.21%	0.15%	0.02%	0.31%	0.26%	0.27%	0.36%	0.85%	1.15%		86.51%		0.84%		5.23%	2.73%	0.99%
CCC-	14																			92.86%			7.14%		
CC	2100			0.05%		0.05%							0.29%		0.05%		0.19%	0.33%		5.48%			32.00%	2.10%	0.90%
C																									
Total	28107																								

Table 11		Issuers of Asset-Backed Securities - Residential Mortgage-Backed Securities Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																							
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	3418	54.42%	2.43%	0.26%	0.29%	0.56%	0.06%		0.09%	0.03%	0.12%	0.41%	0.03%	0.03%	0.09%	0.06%	0.03%		0.38%					39.76%	0.97%
AA+	2808	3.85%	51.96%	2.35%	2.14%	2.67%	0.96%	0.82%	1.64%	0.50%	0.53%	0.85%	0.14%	0.11%	0.14%	0.07%	0.14%		0.85%		0.04%		0.57%	21.87%	7.80%
AA	876	18.95%	5.71%	21.58%	6.16%	1.14%	2.97%	0.91%	1.03%	0.11%	0.23%	0.68%	0.23%	0.11%	0.34%	0.34%	0.11%		0.91%				0.11%	36.87%	1.48%
AA-	594	2.36%	5.22%	22.90%	18.86%	8.42%	2.36%	2.86%	1.18%		0.84%	1.18%	0.34%				0.17%		1.85%		0.67%		2.19%	27.27%	1.35%
A+	2378	1.26%	7.91%	6.39%	2.48%	41.42%	2.69%	3.87%	3.28%	2.40%	1.51%	2.48%	0.80%	0.34%	0.63%	0.34%	0.63%		1.14%				0.50%	18.63%	1.30%
A	1219	6.40%	2.95%	5.50%	1.72%	3.61%	16.24%	15.50%	1.15%	1.07%	0.74%	0.98%	0.33%	0.57%	0.16%	0.41%	0.25%		0.90%				0.25%	39.38%	1.89%
A-	311	0.64%	2.25%	1.61%	2.25%	8.68%	13.83%	29.26%	4.82%	4.18%	0.32%	5.47%	2.89%	0.96%	0.32%	0.96%	0.96%		1.93%				0.96%	17.04%	1.61%
BBB+	1619	0.49%	2.04%	1.67%	0.93%	11.74%	6.36%	0.93%	32.12%	3.64%	3.27%	7.35%	1.24%	1.05%	1.61%	1.48%	1.61%		2.66%				0.31%	17.60%	1.91%
BBB	1086	5.62%	2.30%	3.41%	1.75%	2.67%	6.81%	3.41%	2.39%	26.06%	3.31%	3.68%	1.84%	1.47%	1.29%	0.37%	2.03%		1.84%				1.29%	27.44%	1.01%
BBB-	483	0.41%	1.04%	0.83%		3.11%	5.38%	3.11%	6.00%	4.14%	22.77%	8.49%	2.28%	4.76%	2.90%	4.97%	5.59%		3.73%		0.21%		0.41%	18.84%	1.04%
BB+	1193	0.84%	0.34%	0.25%	0.17%	2.35%	1.76%	1.01%	5.53%	4.19%	2.10%	33.28%	2.68%	3.52%	4.19%	3.94%	8.63%		6.96%				1.34%	13.66%	3.27%
BB	787	0.64%	0.76%	1.78%	0.25%	2.29%	2.03%	0.89%	5.34%	6.35%	3.18%	3.18%	24.78%	2.54%	4.70%	5.46%	7.12%		8.64%				0.64%	17.28%	2.16%
BB-	419	1.91%	0.24%	1.19%		0.48%	0.48%	1.43%	3.10%	2.63%	2.63%	4.06%	2.63%	31.03%	4.77%	3.58%	12.17%		9.07%	0.24%			0.95%	15.99%	1.43%
B+	506	0.20%		2.96%		0.40%	0.20%	0.20%	2.96%	2.57%	1.38%	4.55%	2.77%	1.38%	32.81%	2.57%	15.22%		10.08%				3.75%	12.25%	3.75%
B	864	0.35%	0.35%	0.23%		0.46%	1.85%	0.23%	1.04%	2.55%	1.85%	3.59%	5.44%	1.50%	1.50%	24.77%	8.45%	0.23%	29.05%				2.20%	11.23%	3.13%
B-	1500	0.27%	0.20%	0.13%	0.13%	0.40%	0.67%	0.13%	0.60%	1.33%	0.60%	2.13%	3.07%	2.33%	2.33%	2.47%	39.73%	0.47%	26.60%	0.07%	0.13%		3.13%	10.33%	2.73%
CCC+	11																	54.55%	27.27%	9.09%			9.09%		
CCC	8889	0.03%	0.06%	0.02%		0.02%	0.09%	0.01%	0.19%	0.20%	0.03%	0.34%	0.53%	0.27%	0.37%	1.15%	1.48%		65.77%	0.03%	2.46%		20.89%	4.13%	1.91%
CCC-	14																		50.00%				35.71%	14.29%	
CC	4594			0.02%		0.02%								0.13%		0.04%	0.04%	0.17%	0.33%				11.30%	23.23%	
C																									
Total	33569																								

Table 12		Issuers of Asset-Backed Securities - Residential Mortgage-Backed Securities Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																							
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	39073	1.67%	4.16%	0.97%	0.42%	2.99%	0.76%	0.57%	1.71%	0.79%	0.61%	1.18%	0.59%	0.53%	0.65%	0.65%	1.28%		7.74%		0.96%		21.45%	29.24%	21.08%
AA+	2605	1.27%	2.26%	0.61%	0.12%	1.73%	0.88%	0.65%	1.42%	0.65%	0.81%	2.96%	1.07%	0.92%	1.07%	1.42%	4.64%		12.78%		1.57%		42.65%	15.12%	5.37%
AA	5410	1.09%	0.65%	1.28%	0.26%	1.29%	0.78%	1.24%	1.15%	0.68%	0.39%	2.75%	0.83%	0.65%	0.87%	1.20%	2.96%	0.02%	14.01%		2.05%		43.99%	16.52%	5.34%
AA-	1588	0.50%	0.57%	0.38%	0.44%	1.51%	0.38%	0.19%	1.01%	0.50%	0.50%	1.51%	0.31%	0.69%	0.50%	1.26%	1.95%		12.59%		2.02%		62.47%	7.75%	2.96%
A+	1941	0.26%	0.46%	0.31%	0.26%	0.57%	0.26%	0.77%	0.93%	0.52%	0.05%	0.98%	0.41%	0.36%	0.67%	1.03%	2.01%	0.05%	12.83%		2.78%		63.94%	7.62%	2.94%
A	4622	0.35%	0.26%	0.30%	0.15%	0.65%	0.71%	1.08%	0.45%	0.50%	0.35%	0.80%	0.43%	0.32%	0.45%	0.71%	1.90%		12.85%	0.02%	2.44%		58.87%	12.55%	3.83%
A-	2235	0.04%	0.09%			0.18%	0.18%	0.40%	0.31%	0.18%	0.27%	0.31%	0.27%	0.09%	0.18%	0.36%	1.25%	0.09%	10.11%		3.53%		68.10%	10.16%	3.89%
BBB+	2273	0.09%				0.09%	0.26%	0.18%	0.35%	0.31%	0.13%	0.40%	0.18%	0.13%	0.18%	0.40%	0.53%		8.18%		3.61%		74.66%	8.14%	2.20%
BBB	4554	0.42%	0.09%	0.04%	0.04%	0.24%	0.24%	0.22%	0.20%	0.61%	0.18%	0.48%	0.42%	0.13%	0.15%	0.46%	1.12%	0.13%	4.85%	0.04%	2.44%		68.18%	15.00%	4.30%
BBB-	2522		0.04%				0.04%	0.04%	0.20%	0.08%	0.16%	0.12%	0.20%	0.04%	0.04%	0.12%	0.20%		2.78%		1.63%		79.78%	11.18%	3.37%
BB+	967							0.10%	0.10%			0.41%		0.10%							2.07%		84.80%	8.17%	2.79%
BB	2669						0.04%	0.04%	0.04%			0.04%	0.07%	0.26%		0.15%	0.26%	0.04%	1.84%	0.11%	1.09%		81.87%	9.22%	3.71%
BB-	174											0.57%					0.57%		4.60%		1.15%		78.74%	9.20%	2.87%
B+	85																				1.18%		83.53%	8.24%	3.53%
B	1881												0.05%								0.69%		91.12%	4.47%	2.55%
B-	53																				5.66%		92.45%	1.89%	
CCC+																									
CCC	87																						93.10%	3.45%	3.45%
CCC-	6																			16.67%			83.33%		
CC	3																						66.67%		33.33%
C																									
Total	72748																								

Table 13		Issuers of Asset-Backed Securities - Commercial Mortgage-Backed Securities Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																								
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	882	64.51%	0.57%		0.45%																			26.53%	7.94%	
AA+	107	11.21%	53.27%						0.93%														0.93%	33.64%		
AA	144	10.42%	9.72%	54.86%	0.69%					0.69%														23.61%		
AA-	174	3.45%	2.30%	3.45%	74.71%																		0.57%	15.52%		
A+	82	3.66%	6.10%	7.32%	7.32%	45.12%	1.22%					1.22%									1.22%		1.22%	25.61%		
A	129	3.10%	3.10%	5.43%	1.55%	0.78%	63.57%			0.78%														21.71%		
A-	224	3.13%	1.34%	3.13%	1.79%	0.89%	1.79%	70.54%			0.45%		0.45%											16.52%		
BBB+	120	5.83%	2.50%	7.50%	2.50%	1.67%	3.33%		48.33%		0.83%	1.67%					1.67%							23.33%		
BBB	109	2.75%	4.59%	2.75%	0.92%	0.92%	6.42%			45.87%		1.83%	0.92%	0.92%									0.92%	31.19%		
BBB-	265	1.51%	3.02%	0.38%		3.40%	0.75%	1.51%	1.89%	1.89%	69.81%								0.38%	0.38%				15.09%		
BB+	140	2.86%	8.57%	1.43%	1.43%	2.86%	1.43%	3.57%		5.00%	1.43%	50.00%	0.71%	0.71%	1.43%	0.71%			0.71%					17.14%		
BB	135		4.44%	2.96%	0.74%	2.22%	3.70%	0.74%	1.48%		5.19%	4.44%	56.30%	0.74%	0.74%		0.74%						2.22%	12.59%		
BB-	207	1.45%	0.97%	0.97%	0.48%	1.45%	0.48%	0.48%	1.45%	0.97%	0.48%	1.45%	0.97%	78.26%			0.48%	0.48%		0.48%			0.48%	8.21%		
B+	125	0.80%	0.80%	1.60%	1.60%	1.60%	4.00%		1.60%	2.40%	1.60%	2.40%	2.40%	4.00%	52.80%	0.80%	3.20%	1.60%		1.60%			4.80%	10.40%		
B	139			2.16%	0.72%	1.44%	0.72%	0.72%	0.72%	0.72%	2.16%	2.16%	0.72%	2.16%	3.60%	60.43%	6.47%		1.44%	2.88%			0.72%	10.07%		
B-	289	0.35%	1.04%		1.04%	0.35%	0.69%	0.69%	0.69%		0.35%		1.38%	0.69%	2.08%	1.73%	66.09%	0.35%	2.42%	4.15%	0.35%		5.54%	10.03%		
CCC+	38						2.63%					7.89%						2.63%	2.63%	7.89%	42.11%	5.26%	2.63%	2.63%	18.42%	5.26%
CCC	93					1.08%				1.08%			2.15%					2.15%		6.45%	46.24%	9.68%	2.15%	22.58%	6.45%	
CCC-	123		0.81%			0.81%					0.81%	2.44%				0.81%		3.25%		1.63%	39.84%	2.44%		38.21%	8.94%	
CC	8																							87.50%	12.50%	
C																										
Total	3533																									

Table 14		Issuers of Asset-Backed Securities - Commercial Mortgage-Backed Securities Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																								
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	1402	27.46%	0.36%		0.29%																			57.63%	14.27%	
AA+	120	10.83%	18.33%						0.83%															67.50%	2.50%	
AA	172	8.72%	11.63%	22.67%						0.58%														55.81%	0.58%	
AA-	135	8.15%	1.48%	11.11%	24.44%																			54.07%	0.74%	
A+	133	5.26%	6.02%	6.77%	6.77%	12.78%	3.01%	1.50%		0.75%	1.50%	0.75%									0.75%		1.50%	51.13%	1.50%	
A	193	4.66%	2.59%	3.63%	2.59%	2.59%	22.80%	3.11%		1.04%	1.04%	0.52%											0.52%	53.37%	1.55%	
A-	204	3.92%	2.45%	4.90%	2.94%	0.98%	5.88%	23.04%	2.45%				0.49%										0.49%	50.49%	0.98%	
BBB+	201	4.48%	2.49%	2.49%	1.00%	2.49%	3.98%	1.99%	17.91%		1.49%	3.98%											2.49%	53.23%	1.49%	
BBB	184	4.89%	2.72%	2.72%	1.09%	2.17%	5.43%	1.09%	2.72%	15.22%	3.80%	0.54%	0.54%	1.09%	0.54%				0.54%	0.54%	0.54%			52.17%	1.63%	
BBB-	218	2.29%	4.13%	2.29%		4.13%	1.38%	2.29%	2.29%	3.21%	27.52%	1.38%	0.46%									0.92%	1.83%	44.04%	1.83%	
BB+	175	2.29%	5.14%	1.14%	0.57%	1.14%	1.14%	2.86%	1.14%	5.14%	2.29%	16.57%	1.14%	0.57%	1.14%	1.14%			0.57%	0.57%	0.57%			3.43%	49.71%	1.71%
BB	187	1.07%	4.81%	2.14%	1.07%	2.14%	3.21%	1.07%	1.07%	0.53%	4.28%	4.28%	22.46%	2.14%	1.60%	1.07%	1.07%			0.53%	1.07%			4.81%	38.50%	1.07%
BB-	159	2.52%	2.52%	2.52%	0.63%	2.52%		0.63%	3.14%	2.52%	3.14%	2.52%	3.14%	24.53%	1.26%	1.26%	1.26%			1.89%	1.26%			3.14%	38.36%	1.26%
B+	197	0.51%	2.54%	0.51%	1.52%	1.02%	2.54%	0.51%	1.02%	1.52%	2.03%	2.54%	4.06%	5.58%	22.84%	1.02%	5.58%	0.51%				1.02%		11.17%	30.96%	1.02%
B	181		0.55%	1.66%		2.76%		0.55%		1.66%	1.66%	3.31%	1.66%	1.66%	2.21%	24.31%	9.94%	1.10%	1.66%	3.31%	0.55%			15.47%	24.86%	1.10%
B-	324		1.85%	0.31%	0.62%	0.31%	0.62%	0.31%	0.31%		0.31%	0.62%	1.54%	1.54%	1.85%	1.85%	28.70%	0.93%	5.25%	6.17%	0.93%			22.22%	22.53%	1.23%
CCC+	104		1.92%	0.96%	0.96%	0.96%	0.96%		1.92%			3.85%		0.96%	1.92%	1.92%	5.77%	10.58%	2.88%	2.88%	0.96%			34.62%	22.12%	3.85%
CCC	184		1.09%	0.54%		0.54%	0.54%	0.54%	0.54%	1.09%			1.09%	0.54%		2.17%	6.52%		14.67%	4.35%	0.54%			49.46%	13.04%	2.72%
CCC-	348		0.29%	0.57%	0.29%	0.29%	0.57%		0.29%			0.57%	0.86%		0.29%	0.57%		2.30%		0.57%	9.77%	0.29%		60.06%	19.54%	2.87%
CC	5																							100.00%		
C																										
Total	4826																									

Table 15		Issuers of Asset-Backed Securities - Commercial Mortgage-Backed Securities Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																							
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	3775	1.70%	0.32%	0.21%	0.21%	0.11%	0.26%	0.19%	0.05%	0.13%	0.11%	0.16%	0.11%	0.08%	0.16%	0.13%	0.19%		0.03%	0.08%			2.09%	79.02%	14.68%
AA+	290	0.69%	3.10%			0.34%			0.69%			0.69%	0.69%	0.34%	0.34%	0.69%	1.03%	0.34%	0.34%	0.69%			3.10%	79.66%	7.24%
AA	659	0.61%	0.46%	1.82%	0.61%	0.46%	0.91%	0.15%	0.46%	0.30%	1.06%	0.76%	0.15%	0.61%	0.61%	0.46%	0.76%	0.15%	0.61%	0.61%			10.93%	68.74%	8.80%
AA-	332	1.81%	1.51%	0.60%	0.60%	0.60%	1.20%	0.60%	0.30%	0.90%	1.20%	0.60%	0.30%	0.60%	2.11%	0.60%	1.51%		0.30%	0.30%			15.36%	63.55%	5.42%
A+	237	0.84%	0.42%	0.42%	1.27%	0.84%			1.27%	0.84%	2.11%	0.42%	0.42%		0.42%		0.42%		1.69%	0.84%			10.97%	68.78%	8.02%
A	572	1.57%	0.87%	0.17%	0.17%	0.70%	1.92%	0.52%	0.17%	0.17%	0.70%	0.35%	0.87%	0.35%	0.70%	0.52%	0.70%	0.17%	0.17%	0.35%			19.41%	60.49%	8.92%
A-	390	0.77%	0.77%	0.51%	0.77%	0.26%	0.77%	1.03%	0.77%	0.51%	1.28%	1.03%	0.77%	0.51%	0.51%	1.54%	1.54%		0.51%	1.28%			24.62%	55.13%	5.13%
BBB+	411	1.22%	0.73%	0.24%	0.24%	0.49%	0.73%	0.97%	2.19%	0.73%	0.24%	0.24%	0.49%		0.73%	0.49%	1.95%	0.24%	0.49%	1.46%			29.44%	52.31%	4.38%
BBB	629	1.43%	0.32%	0.16%	0.32%	0.48%	0.48%	0.32%	0.48%	0.79%		0.64%	0.64%	0.32%	0.16%		1.27%		0.64%	1.59%			32.91%	51.83%	5.25%
BBB-	497	0.60%	1.41%	0.20%	0.20%		0.20%	0.20%	0.20%	0.60%	0.20%	1.01%	0.40%	0.20%	0.20%	0.20%	0.20%	0.20%		0.60%			40.64%	46.28%	6.24%
BB+	379	0.53%	1.58%	0.79%	0.26%	0.26%	0.26%			0.53%		1.06%	1.06%	0.53%	0.53%	0.26%	0.26%		0.53%	0.26%			49.34%	37.73%	4.22%
BB	428		1.17%	1.17%	0.23%	0.23%	0.23%	0.23%	0.23%	0.23%			0.23%	0.47%			0.47%			0.70%	0.23%		57.71%	32.24%	4.21%
BB-	315	0.32%	1.59%	1.27%	0.32%	1.27%	0.32%		0.32%	0.32%		0.95%		0.63%	0.63%		0.32%			0.63%			66.98%	21.27%	2.86%
B+	284		1.06%		1.06%	0.35%	0.35%		0.70%	0.35%			0.35%	0.35%	1.06%	1.06%	0.35%						74.30%	17.61%	1.06%
B	316		0.63%	0.63%	0.32%	1.90%	0.32%		0.32%	0.32%		0.32%			0.32%	0.63%	0.63%						77.85%	14.56%	1.27%
B-	290		0.34%		0.34%		0.69%			0.34%	1.03%	0.69%	0.69%				0.69%	0.34%					82.76%	11.72%	0.34%
CCC+	22											4.55%					4.55%						63.64%	22.73%	4.55%
CCC	35																						91.43%	5.71%	2.86%
CCC-	16														6.25%								87.50%	6.25%	
CC																									
C																									
Total	9877																								

Table 16		Issuers of Asset-Backed Securities - Collateralized Loan Obligations Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	1355	61.48%																						38.30%	0.22%
AA+	319	36.36%	28.84%																					34.48%	0.31%
AA	677	5.32%	14.48%	62.78%	0.30%																			16.84%	0.30%
AA-	80	16.25%	15.00%	1.25%	42.50%																			25.00%	
A+	218	5.50%	15.14%	3.21%	1.83%	36.70%																		36.70%	0.92%
A	520	0.19%	3.65%	0.77%	2.50%	10.38%	65.77%																	16.54%	0.19%
A-	55		9.09%	1.82%	10.91%	7.27%	1.82%	34.55%																34.55%	
BBB+	209	0.96%	2.87%	2.39%	4.78%	12.44%	0.48%	2.87%	33.49%															39.23%	0.48%
BBB	441		0.23%	0.23%	0.23%	1.81%	1.13%	0.45%	7.03%	74.83%	0.23%													13.61%	0.23%
BBB-	75					8.00%	4.00%	4.00%	16.00%	4.00%	48.00%	2.67%												13.33%	
BB+	171		0.58%			2.92%		1.17%	14.62%	2.92%	44.44%				1.17%									29.24%	
BB	401								1.00%	0.25%	0.75%	4.99%	79.05%	0.75%	0.25%	0.25%								29.91%	0.25%
BB-	87					1.15%					2.30%	3.45%	82.76%											10.34%	
B+	117				0.85%		0.85%		1.71%			15.38%	3.42%	1.71%	46.15%									29.91%	
B	176											0.57%	0.57%			89.77%	2.84%		1.70%					4.55%	
B-	70								2.86%		1.43%	5.71%	4.29%		10.00%		55.71%							20.00%	
CCC+	41											2.44%		4.88%	19.51%		12.20%	36.59%						24.39%	
CCC	14														7.14%		7.14%	14.29%	57.14%					14.29%	
CCC-	73								1.37%								4.11%	2.74%	1.37%	64.38%	2.74%		12.33%	10.96%	
CC	18																						22.22%	11.11%	5.56%
C																									
Total	5117																								

Table 17		Issuers of Asset-Backed Securities - Collateralized Loan Obligations Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																							
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	1086	26.52%																						72.47%	1.01%
AA+	624	28.04%	2.08%	0.16%		0.16%																		69.55%	
AA	615	13.33%	15.93%	24.07%		0.33%																		45.04%	1.30%
AA-	188	22.34%	8.51%		2.13%			0.53%																66.49%	
A+	300	15.33%	11.67%	0.67%	4.00%	3.67%	0.33%																	64.33%	
A	524	4.39%	7.82%	1.72%	3.05%	12.60%	24.62%		0.19%				0.19%											43.70%	1.72%
A-	126	7.14%	6.35%	1.59%	3.97%	5.56%	1.59%	3.17%	1.59%															65.87%	3.17%
BBB+	274	1.46%	7.66%	1.46%	6.20%	10.22%	0.73%	1.82%	4.01%				0.36%											66.06%	
BBB	433	0.92%	2.54%	0.46%	1.15%	7.62%	0.69%	1.85%	10.62%	30.48%	0.23%	0.46%			0.46%									41.34%	1.15%
BBB-	134	0.75%	2.24%	1.49%	0.75%	9.70%		1.49%	10.45%	2.24%	8.96%	1.49%		0.75%	1.49%									58.21%	
BB+	282	0.71%	2.48%	0.71%	0.71%	5.67%	1.77%	2.13%	12.41%	1.77%	2.48%	11.35%		0.35%	0.71%	0.35%								56.38%	
BB	355					0.56%		0.28%	3.10%	0.85%	1.41%	9.30%	43.66%	1.13%	0.85%	0.28%								38.03%	0.56%
BB-	92					1.09%			7.61%		1.09%	9.78%		31.52%	1.09%	1.09%								46.74%	
B+	222		0.45%		0.45%	0.45%	0.90%		5.41%	1.80%	0.45%	14.86%	1.35%	0.90%	15.77%	0.45%	3.15%	0.45%						53.15%	
B	122								0.82%		2.46%	1.64%		0.82%	0.82%	61.48%	1.64%		3.28%	1.64%				25.41%	
B-	36											2.78%	2.78%	2.78%	13.89%	2.78%	25.00%							44.44%	2.78%
CCC+	118								1.69%		0.85%	5.93%	3.39%	3.39%	10.17%		8.47%	8.47%	0.85%	3.39%	1.69%		0.85%	50.00%	0.85%
CCC	25									4.00%					8.00%			16.00%	24.00%	8.00%			12.00%	28.00%	
CCC-	102								0.98%		0.98%				5.88%		2.94%	3.92%	0.98%	37.25%	1.96%		16.67%	26.47%	1.96%
CC	33																				27.27%		54.55%	15.15%	3.03%
C																									
Total	5691																								

Table 18		Issuers of Asset-Backed Securities - Collateralized Loan Obligations Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																							
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	1468	5.52%	0.27%	0.07%	0.68%	0.68%	0.07%		0.27%			0.07%		0.07%			0.07%						0.20%	82.43%	9.60%
AA+	21																							80.95%	19.05%
AA	535	6.92%	2.43%	0.37%		0.75%	0.19%	0.19%	0.19%	0.19%					0.19%								1.12%	82.24%	5.23%
AA-	30																							76.67%	23.33%
A+	45				2.22%		2.22%	4.44%	2.22%									2.22%						80.00%	6.67%
A	600	2.83%	3.33%	0.33%	1.33%	3.83%	0.17%	0.33%	1.00%	0.17%	0.17%	0.67%			0.17%		0.33%	0.50%		0.17%			2.00%	79.67%	3.00%
A-	110	0.91%			0.91%	2.73%			0.91%											0.91%			0.91%	87.27%	5.45%
BBB+	37					2.70%			2.70%			5.41%			2.70%					5.41%			2.70%	62.16%	16.22%
BBB	678	0.29%	1.03%	0.15%	0.29%	1.18%		0.44%	2.36%	0.44%	0.15%	1.33%	0.15%	0.15%	1.33%		0.74%		0.15%	0.59%	0.29%		1.47%	80.38%	7.08%
BBB-	132			0.76%		1.52%		0.76%	6.82%		2.27%	6.06%			3.03%		1.52%		0.76%	0.76%			4.55%	60.61%	10.61%
BB+	28																						10.71%	67.86%	21.43%
BB	416		0.24%				0.24%	0.24%	0.96%	0.24%	0.72%	2.40%	0.48%	0.48%	3.85%		1.68%	0.48%		1.20%			6.01%	77.64%	3.13%
BB-	84								1.19%		1.19%	4.76%	1.19%	1.19%	3.57%		1.19%	2.38%	1.19%	7.14%	2.38%		2.38%	66.67%	3.57%
B+	5																						40.00%	20.00%	40.00%
B	17															5.88%	5.88%			5.88%			11.76%	47.06%	23.53%
B-	3																							100.00%	
CCC+	3																						100.00%		
CCC																									
CCC-	6																						100.00%		
CC																									
C																									
Total	4218																								

Table 19		Issuers of Asset-Backed Securities - Collateralized Debt Obligations Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																								
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	94	88.30%																						10.64%	1.06%	
AA+	42	23.81%	33.33%	4.76%	16.67%																			16.67%	4.76%	
AA	64	10.94%	3.13%	70.31%																				15.63%		
AA-	25	40.00%	12.00%		36.00%		4.00%																	8.00%		
A+	52		7.69%		5.77%	38.46%	5.77%																	40.38%	1.92%	
A	132		3.03%			0.76%	81.06%	1.52%																13.64%		
A-	47			4.26%	4.26%		6.38%	51.06%																34.04%		
BBB+	99				2.02%	4.04%	1.01%	4.04%	55.56%	16.16%	1.01%													16.16%		
BBB	35					5.71%	5.71%	11.43%	14.29%	37.14%	5.71%	5.71%												14.29%		
BBB-	50						2.00%	6.00%	14.00%	4.00%	56.00%	2.00%	2.00%											12.00%	2.00%	
BB+	51								7.84%	9.80%	9.80%	41.18%					1.96%							29.41%		
BB	33								6.06%	3.03%	3.03%	18.18%	33.33%				15.15%							21.21%		
BB-	44								2.27%			11.36%	6.82%	47.73%										31.82%		
B+	45							2.22%		2.22%		6.67%	4.44%	11.11%	40.00%	4.44%								24.44%	4.44%	
B	34													5.88%	5.88%	29.41%	5.88%		29.41%					23.53%		
B-	41													2.44%	19.51%	2.44%	36.59%							39.02%		
CCC+	46								4.35%		2.17%				2.17%	2.17%	4.35%	54.35%						30.43%		
CCC	31														3.23%				77.42%				3.23%	16.13%		
CCC-	241								0.41%		0.83%	0.41%		0.83%	0.83%		1.66%	1.66%	0.83%	65.15%			4.56%	8.30%	14.11%	0.41%
CC	59																							81.36%	15.25%	3.39%
C																										
Total	1265																									

Table 20		Issuers of Asset-Backed Securities - Collateralized Debt Obligations Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																								
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	260	21.15%		1.92%	0.77%	0.38%	0.38%																	45.38%	30.00%	
AA+	76	10.53%	15.79%	3.95%	5.26%	6.58%	1.32%																	56.58%		
AA	53	1.89%	1.89%	32.08%		1.89%	1.89%																	58.49%	1.89%	
AA-	70	20.00%	1.43%	25.71%		2.86%																		45.71%	4.29%	
A+	61	8.20%	1.64%	1.64%		3.28%	4.92%																	68.85%	11.48%	
A	173		1.16%			0.58%	45.66%	4.05%		5.20%														41.62%	1.73%	
A-	74	1.35%	4.05%			5.41%	9.46%	13.51%		2.70%	1.35%													52.70%	9.46%	
BBB+	136		2.94%	0.74%	4.41%	2.21%	2.21%	5.88%	15.44%	5.88%	0.74%	0.74%												51.47%	7.35%	
BBB	101		0.99%		1.98%	0.99%			7.92%	4.95%	15.84%	2.97%		1.98%	0.99%										50.50%	10.89%
BBB-	81				1.23%	3.70%	3.70%	4.94%	2.47%	4.94%	6.17%	4.94%	1.23%									1.23%	59.26%	6.17%		
BB+	159			0.63%	1.89%	1.26%	1.26%	3.14%	8.18%	1.26%	1.89%	3.77%	0.63%	1.26%	1.26%							0.63%	0.63%	50.31%	22.01%	
BB	64					1.56%		1.56%	4.69%		6.25%	6.25%	3.13%	1.56%	3.13%				1.56%					56.25%	14.06%	
BB-	77					1.30%	1.30%		7.79%	3.90%	1.30%	7.79%	1.30%	15.58%		1.30%							2.60%	44.16%	11.69%	
B+	126						0.79%	1.59%	0.79%	2.38%	1.59%	4.76%	1.59%	1.59%				1.59%		2.38%				66.67%	14.29%	
B	83							1.20%	1.20%					1.20%	4.82%	1.20%	4.82%	6.02%	3.61%				3.61%	46.99%	13.25%	
B-	75											5.33%	4.00%	5.33%	4.00%	1.33%	8.00%						1.33%	53.33%	17.33%	
CCC+	140							1.43%		0.71%		2.14%	1.43%	2.86%	0.71%	2.14%	15.71%	2.14%	3.57%	0.71%		3.57%	42.86%	20.00%		
CCC	81													7.41%	1.23%		2.47%	23.46%	4.94%	1.23%		4.94%	34.57%	19.75%		
CCC-	589							0.68%		0.34%	0.34%			1.02%	1.87%	0.51%	1.36%	0.51%	0.68%	24.45%	4.92%		16.13%	33.11%	14.09%	
CC	174													0.57%	0.57%								39.08%	9.20%	34.48%	
C																										
Total	2653																									

Table 21		Issuers of Asset-Backed Securities - Collateralized Debt Obligations Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																							
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	5074	0.81%	0.02%	0.28%	0.02%	0.12%	0.10%	0.16%	0.12%	0.08%	0.02%	0.02%	0.04%	0.10%	0.08%	0.04%	0.06%	0.08%	0.20%	0.20%	0.16%		21.13%	55.75%	20.44%
AA+	266			0.38%															0.38%	0.75%			12.78%	65.04%	20.68%
AA	1667			0.06%	0.12%		0.18%	0.12%			0.18%	0.30%	0.06%		0.18%	0.06%	0.06%	0.30%	0.06%	0.60%	0.54%		34.49%	50.81%	11.88%
AA-	464				0.22%		2.59%		0.65%		0.22%								0.22%	0.22%			22.84%	54.74%	18.53%
A+	233				0.86%		0.43%	0.43%		0.43%	2.15%						0.43%	1.72%	0.43%	2.58%	1.29%		21.03%	51.93%	16.31%
A	901						0.11%		0.11%	0.11%		0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.22%	0.78%	0.78%		46.50%	35.96%	14.65%
A-	525						0.38%		0.38%					0.19%			0.19%	0.19%	0.57%	1.52%	0.95%		29.33%	52.19%	14.10%
BBB+	235								0.85%	0.43%	0.43%								1.28%	1.70%	0.85%		29.79%	49.79%	14.89%
BBB	968								0.21%	0.21%	0.10%			0.10%	0.21%			0.21%	0.21%	1.24%	0.72%		57.85%	29.13%	9.81%
BBB-	378								0.53%								0.53%	0.53%		2.12%	0.79%		38.10%	47.35%	10.05%
BB+	195																		0.51%	1.03%	0.51%		60.00%	25.13%	12.82%
BB	301																			2.33%	1.00%		48.50%	34.55%	13.62%
BB-	82																			4.88%			37.80%	32.93%	24.39%
B+	31																			3.23%	3.23%		38.71%	38.71%	12.90%
B	70											1.43%								2.86%	1.43%		47.14%	38.57%	8.57%
B-	30														3.33%						3.33%		43.33%	23.33%	26.67%
CCC+	8																						75.00%	25.00%	
CCC	8																						50.00%	25.00%	25.00%
CCC-	41																						68.29%	21.95%	9.76%
CC	72																						79.17%	19.44%	1.39%
C																									
Total	11549																								

Table 22		Issuers of Asset-Backed Securities - Asset-Backed Commercial Paper Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)								
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)						Other Outcomes During 12/31/2015 - 12/31/2016 (Percent)		
Credit Rating	Number of Ratings Outstanding	A-1+	A-1	A-2	A-3	B	C	Default	Paid Off	Withdrawn (Other)
A-1+	87	36.78%							57.47%	5.75%
A-1	145	0.69%	90.34%						4.14%	4.83%
A-2	28			50.00%					28.57%	21.43%
A-3	1				100.00%					
B										
C										
Total	261									

Table 23		Issuers of Asset-Backed Securities - Asset-Backed Commercial Paper Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)								
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)						Other Outcomes During 12/31/2013 - 12/31/2016 (Percent)		
Credit Rating	Number of Ratings Outstanding	A-1+	A-1	A-2	A-3	B	C	Default	Paid Off	Withdrawn (Other)
A-1+	84	29.76%							57.14%	13.10%
A-1	138		69.57%	2.90%					10.87%	16.67%
A-2	12			50.00%	8.33%				8.33%	33.33%
A-3	1								100.00%	
B										
C										
Total	235									

Table 24		Issuers of Asset-Backed Securities - Asset-Backed Commercial Paper Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)								
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)						Other Outcomes During 12/31/2006 - 12/31/2016 (Percent)		
Credit Rating	Number of Ratings Outstanding	A-1+	A-1	A-2	A-3	B	C	Default	Paid Off	Withdrawn (Other)
A-1+	463	0.86%	2.16%	0.65%				3.46%	36.29%	56.59%
A-1	164	0.61%	21.34%	1.83%	0.61%				28.66%	46.95%
A-2	8								75.00%	25.00%
A-3										
B										
C										
Total	635									

Table 25		Issuers of Asset-Backed Securities - Other Asset-Backed Securities Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	1548	73.06%																						26.81%	0.13%
AA+	562	6.58%	76.69%	0.18%			0.18%	0.71%																15.66%	
AA	627	7.81%	2.71%	75.60%		0.32%	0.16%																	13.24%	0.16%
AA-	111	18.02%	2.70%	2.70%	55.86%																			19.82%	0.90%
A+	295	9.15%	3.39%	24.75%	2.37%	46.44%	0.34%		0.68%															12.88%	
A	552	3.80%	1.81%	3.08%	2.72%	1.09%	72.28%	0.72%					0.36%											14.13%	
A-	136	3.68%	0.74%	2.94%	2.21%	2.94%	5.15%	71.32%	2.94%															8.09%	
BBB+	314	1.59%	0.64%	0.32%		1.27%	1.59%	0.64%	80.57%	0.96%			0.32%											11.78%	0.32%
BBB	371	0.27%	0.81%	1.08%	1.35%	3.23%	1.89%	2.96%	5.12%	68.46%	0.27%	0.27%	0.27%											13.48%	0.54%
BBB-	58						5.17%	1.72%		1.72%	79.31%		1.72%											6.90%	
BB+	36			5.56%				2.78%	8.33%	2.78%	2.78%	63.89%			2.78%									11.11%	
BB	100					3.00%	5.00%	5.00%	4.00%	3.00%	3.00%	3.00%	63.00%			1.00%								10.00%	
BB-	39									2.56%	10.26%	2.56%	10.26%	46.15%	2.56%			20.51%				2.56%		2.56%	
B+	24														91.67%									4.17%	
B	45							2.22%		4.44%	2.22%				44.44%	4.44%			31.11%					8.89%	2.22%
B-	72									1.39%					4.17%	4.17%	83.33%		5.56%					1.39%	
CCC+	15																	100.00%							
CCC	48																2.08%		91.67%		4.17%		2.08%		
CCC-	33									6.06%								6.06%		81.82%	3.03%		3.03%		
CC	88			1.14%																	87.50%		5.68%	5.68%	
C																									
Total	5074																								

Table 26		Issuers of Asset-Backed Securities - Other Asset-Backed Securities Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																								
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	1205	31.12%	0.41%		0.08%		0.17%	0.33%																67.30%	0.58%	
AA+	833	17.41%	37.94%	0.12%			0.12%																	44.42%		
AA	611	4.58%	2.62%	38.95%	0.65%		0.16%																	52.86%	0.16%	
AA-	168	4.76%	5.95%	11.90%	8.33%	0.60%																		67.26%	1.19%	
A+	289	9.69%	2.77%	19.72%	1.04%	20.76%	0.35%	2.08%																43.60%		
A	575	3.13%	3.48%	6.78%	4.52%	3.30%	33.39%	3.13%	0.35%															41.04%	0.87%	
A-	334	0.60%		0.30%		0.90%	3.89%	15.87%	50.60%	0.90%							0.60%							26.05%	0.30%	
BBB+	65	13.85%	3.08%					1.54%	40.00%				1.54%											38.46%	1.54%	
BBB	377	3.71%	0.80%	1.33%	1.06%	1.06%	1.33%	1.06%	7.43%	32.63%	2.39%	0.27%	0.27%			0.27%								45.36%	1.06%	
BBB-	47	2.13%			2.13%		4.26%			8.51%	31.91%	2.13%	2.13%											46.81%		
BB+	48	4.17%		2.08%		2.08%	6.25%	4.17%	2.08%	2.08%	4.17%	20.83%	2.08%	2.08%					2.08%					41.67%		
BB	89	3.37%		1.12%		2.25%	3.37%	1.12%	3.37%	2.25%	2.25%	8.99%	28.09%		1.12%					2.08%				41.57%		
BB-	42								2.38%	2.38%	11.90%		9.52%	19.05%				19.05%						35.71%		
B+	34									5.88%	2.94%			8.82%	47.06%	2.94%								5.88%	23.53%	
B	48						2.08%			6.25%			4.17%	2.08%	2.08%	8.33%	6.25%			29.17%				4.17%	27.08%	2.08%
B-	87							1.15%	1.15%	2.30%	1.15%			1.15%	4.60%	4.60%	65.52%	1.15%	5.75%					11.49%		
CCC+	17						5.88%											76.47%		5.88%	5.88%			5.88%		
CCC	72						1.39%									1.39%	2.78%	1.39%	54.17%					16.67%	11.11%	
CCC-	58									3.45%								3.45%	1.72%	44.83%				10.34%	5.17%	8.62%
CC	90			1.11%																				32.22%	8.89%	1.11%
C																										
Total	5089																									

Table 27		Issuers of Asset-Backed Securities - Other Asset-Backed Securities Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																								
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	4864	3.64%	3.95%	0.27%	0.39%	0.29%	0.19%	0.43%	0.08%	0.29%	0.02%	0.08%	0.12%		0.08%	0.06%	0.25%	0.06%	0.41%	0.12%	0.10%		0.02%	80.96%	8.18%	
AA+	67			44.78%	1.49%	4.48%	4.48%	1.49%	1.49%														2.99%	37.31%	1.49%	
AA	354	0.28%	0.56%	6.50%	0.28%	1.13%						0.28%						0.28%	0.56%	0.56%	0.28%		1.69%	72.88%	14.69%	
AA-	133	0.75%		3.01%		0.75%			29.32%	0.75%														63.16%	2.26%	
A+	142	2.82%	0.70%	5.63%					1.41%		6.34%		0.70%										2.11%	76.06%	4.23%	
A	829	0.48%	1.21%	3.14%	0.72%	0.24%	1.21%	0.36%	1.09%	0.36%	0.60%	0.12%	0.60%	0.12%	0.36%		0.72%		0.24%	0.12%	0.84%		2.17%	80.10%	5.19%	
A-	48					2.08%		4.17%																83.33%	10.42%	
BBB+	83			1.20%					9.64%		2.41%	3.61%		1.20%									6.02%	71.08%	3.61%	
BBB	773					0.13%	0.39%	0.13%	1.03%	2.85%	1.16%	0.65%	0.91%	0.65%	1.03%	0.26%	1.81%	0.13%	0.78%	0.52%	0.26%		2.33%	80.60%	4.40%	
BBB-	37									2.70%		2.70%						5.41%	2.70%		2.70%			72.97%	10.81%	
BB+	21						4.76%								4.76%		4.76%						9.52%	61.90%		
BB	112						0.89%			0.89%			1.79%						1.79%		2.68%		7.14%	78.57%	6.25%	
BB-	34																						11.76%	44.12%	5.88%	
B+	15									6.67%				6.67%									6.67%	33.33%		
B	22								4.55%	4.55%									4.55%	4.55%	4.55%	4.55%		18.18%	40.91%	13.64%
B-	33									3.03%	3.03%	3.03%		3.03%					6.06%	12.12%	15.15%	9.09%		12.12%	33.33%	
CCC+	11																	18.18%		9.09%	27.27%		45.45%			
CCC	56														1.79%				1.79%	1.79%	32.14%		41.07%	16.07%	5.36%	
CCC-	59																			1.69%	20.34%		71.19%	6.78%		
CC	14																				7.14%		85.71%		7.14%	
C																										
Total	7707																									

Table 28		Issuers of Asset-Backed Securities - Other Structured Finance Products* Issues Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	7	28.57%																						71.43%	
AA+	21		52.38%		28.57%																			19.05%	
AA	33			78.79%	18.18%																			3.03%	
AA-	17			5.88%	82.35%																			11.76%	
A+	16				6.25%	75.00%	6.25%																	12.50%	
A	34	2.94%				2.94%	47.06%	20.59%	11.76%															14.71%	
A-	33						6.06%	66.67%	21.21%															6.06%	
BBB+	86						2.33%	5.81%	75.58%	6.98%	1.16%													6.98%	1.16%
BBB	32								3.13%	78.13%														9.38%	9.38%
BBB-	44								47.73%	6.82%	29.55%	2.27%												13.64%	
BB+	14											78.57%	21.43%												
BB	18												88.89%											11.11%	
BB-	8													75.00%	25.00%										
B+	4												25.00%		25.00%	50.00%									
B	2																	50.00%	50.00%						
B-	6														33.33%	50.00%	16.67%								
CCC+																									
CCC	5																							100.00%	
CCC-	8																								
CC																									
C																									
Total	388																								

Other Structured Finance Products (Tables 28-30 / Page 30-32) is comprised of covered bonds, CDO operating companies, and synthetic structured finance products

Table 29		Issuers of Asset-Backed Securities - Other Structured Finance Products* Issues Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																							
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	90	2.22%																						87.78%	10.00%
AA+	40		27.50%		7.50%																			60.00%	5.00%
AA	17			47.06%	17.65%																			35.29%	
AA-	56			33.93%	26.79%	3.57%		3.57%	1.79%															30.36%	
A+	22				4.55%	27.27%	9.09%	9.09%	4.55%															45.45%	
A	49	2.04%				8.16%	24.49%	12.24%	10.20%															40.82%	2.04%
A-	93						3.23%	17.20%	39.78%	2.15%														36.56%	1.08%
BBB+	40						7.50%	2.50%	47.50%	15.00%	5.00%													22.50%	
BBB	93							4.30%	24.73%	23.66%	9.68%	1.08%	2.15%											34.41%	
BBB-	41								19.51%	4.88%	4.88%		9.76%											51.22%	9.76%
BB+	44								9.09%			20.45%	29.55%											40.91%	
BB	20												5.00%	5.00%										85.00%	5.00%
BB-	16												6.25%	31.25%	12.50%	12.50%								37.50%	
B+	6													16.67%										66.67%	
B	6																								83.33%
B-	6														33.33%	50.00%	16.67%								
CCC+	1																		100.00%						
CCC	5																			100.00%					
CCC-	11																72.73%								27.27%
CC	1																								100.00%
C																									
Total	657																								

**Other Structured Finance Products* (Tables 28-30 / Page 30-32) is comprised of covered bonds, CDO operating companies, and synthetic structured finance products

Table 30		Issuers of Asset-Backed Securities - Other Structured Finance Products* Issues Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																								
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	543	0.37%	1.10%	2.39%	0.37%	0.55%	0.55%	0.55%	3.68%		0.18%	0.37%				0.18%	0.18%		0.55%				1.29%	66.85%	20.81%	
AA+	8																							87.50%	12.50%	
AA	69				2.90%																		1.45%	68.12%	27.54%	
AA-	95					1.05%	4.21%		8.42%														6.32%	67.37%	12.63%	
A+	115				6.96%	1.74%	0.87%	3.48%		3.48%													6.96%	60.00%	16.52%	
A	157								14.01%			1.27%	7.64%										3.82%	57.32%	15.92%	
A-	59									3.39%	3.39%		1.69%										5.08%	74.58%	11.86%	
BBB+	74						2.70%		16.22%						4.05%	2.70%							4.05%	66.22%	4.05%	
BBB	111						2.70%	4.50%	1.80%	3.60%	2.70%		1.80%	2.70%									1.80%	65.77%	12.61%	
BBB-	58					1.72%				12.07%		5.17%					6.90%						3.45%	50.00%	20.69%	
BB+	18								5.56%					11.11%				5.56%					11.11%	66.67%		
BB	24									8.33%													29.17%	45.83%	16.67%	
BB-	28																							75.00%	25.00%	
B+	21											4.76%											9.52%	85.71%		
B	18																						27.78%	61.11%	11.11%	
B-	14																						14.29%	64.29%		
CCC+	10																						90.00%	10.00%		
CCC																										
CCC-	1																							100.00%		
CC	2																							100.00%		
C																										
Total	1425																									

Other Structured Finance Products (Tables 28-30 / Page 30-32) is comprised of covered bonds, CDO operating companies, and synthetic structured finance products

Table 31		Sovereign Issuers Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	13	92.31%		7.69%																					
AA+	6		66.67%		33.33%																				
AA	7			100.00%																					
AA-	4			25.00%	75.00%																				
A+	6					83.33%		16.67%																	
A	6						66.67%	33.33%																	
A-	7						14.29%	85.71%																	
BBB+	7							14.29%	57.14%	14.29%	14.29%														
BBB	5								20.00%	60.00%	20.00%														
BBB-	12									58.33%	25.00%	8.33%	8.33%												
BB+	5									20.00%	80.00%														
BB	4											75.00%	25.00%												
BB-	9												11.11%	77.78%	11.11%										
B+	13														61.54%	23.08%	7.69%								7.69%
B	13														7.69%	61.54%	23.08%								7.69%
B-	11															9.09%	81.82%				9.09%				
CCC+	2																100.00%								
CCC	1																		100.00%						
CCC-																									
CC																									
C																									
Total	131																								

Table 32		Sovereign Issuers Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																							
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	13	84.62%	7.69%	7.69%																					
AA+	7	14.29%	42.86%	14.29%	14.29%																				14.29%
AA	6			100.00%																					
AA-	7			14.29%	42.86%	28.57%		14.29%																	
A+	1					100.00%																			
A	7					14.29%	42.86%	28.57%			14.29%														
A-	8						12.50%	50.00%		12.50%			12.50%												
BBB+	7					14.29%		28.57%	28.57%																
BBB	7							14.29%	14.29%	42.86%		14.29%													
BBB-	8							25.00%	25.00%	37.50%	12.50%														
BB+	4									25.00%	50.00%	25.00%													
BB	3									33.33%	33.33%		33.33%												
BB-	16											12.50%	37.50%	12.50%	12.50%	18.75%									6.25%
B+	10												10.00%	50.00%	20.00%	20.00%									
B	11													27.27%	45.45%	18.18%									9.09%
B-	11											9.09%			18.18%	54.55%		9.09%		9.09%					
CCC+	1															100.00%									
CCC																									
CCC-																									
CC																									
C																									
Total	127																								

Table 33		Sovereign Issuers Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																							
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	20	55.00%	20.00%	10.00%		5.00%			5.00%																5.00%
AA+	1			100.00%																					
AA	6	16.67%		16.67%		16.67%	16.67%		16.67%		16.67%														
AA-	3				33.33%	33.33%						33.33%													
A+	10			30.00%		10.00%	10.00%	30.00%		10.00%	10.00%														
A	12			8.33%	16.67%	8.33%	8.33%	25.00%						8.33%									16.67%		8.33%
A-	6							33.33%				16.67%					16.67%								
BBB+	4									50.00%	25.00%	25.00%													
BBB	4								25.00%		50.00%			25.00%											
BBB-	4							25.00%			25.00%			25.00%			25.00%								
BB+	8									12.50%	12.50%	25.00%	12.50%	25.00%											
BB	6									16.67%		16.67%			16.67%	33.33%	16.67%								
BB-	6													16.67%	66.67%			16.67%							
B+	9									11.11%				11.11%	33.33%		33.33%								
B	7													14.29%			28.57%						28.57%		28.57%
B-	4												50.00%			25.00%	25.00%								
CCC+	2																				50.00%	50.00%			
CCC																									
CCC-																									
CC																									
C																									
Total	112																								

Table 34		U.S. Public Finance Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	1080	96.11%	0.65%	0.19%																				0.46%	2.59%
AA+	3028	1.49%	90.85%	1.06%	0.20%																			1.02%	5.38%
AA	3271	0.06%	2.57%	91.50%	1.16%	0.31%	0.03%																	0.46%	3.91%
AA-	3910		0.23%	3.02%	89.18%	2.76%	0.18%	0.03%		0.03%														0.84%	3.73%
A+	4926			0.20%	2.88%	91.03%	1.42%	0.20%	0.08%	0.02%	0.02%		0.02%											0.39%	3.74%
A	3391		0.06%	0.06%	0.80%	4.51%	87.17%	1.80%	0.50%	0.27%	0.12%		0.09%										0.03%	0.74%	3.86%
A-	1663		0.06%	0.06%	0.54%	1.62%	7.88%	73.66%	8.72%	1.08%	0.18%	0.06%	0.12%											1.20%	4.81%
BBB+	568			0.18%		0.35%	2.82%	8.45%	76.58%	2.99%	0.88%	1.06%	0.18%		0.53%	0.18%								1.94%	3.87%
BBB	468					0.64%	0.64%	1.71%	8.55%	75.21%	3.42%	1.28%	2.35%	0.43%	0.21%		0.21%							1.71%	3.63%
BBB-	359						0.56%	0.56%	1.39%	6.41%	75.21%	4.74%	3.06%	0.84%	0.28%	0.28%								2.79%	3.90%
BB+	141							0.71%	2.13%	0.71%	4.26%	77.30%	4.96%	0.71%	0.71%				0.71%					2.13%	5.67%
BB	77							1.30%					2.60%	2.60%	66.23%	10.39%	5.19%	1.30%						3.90%	6.49%
BB-	34												2.94%	2.94%	8.82%	55.88%	5.88%	5.88%	8.82%					8.82%	
B+	11														72.73%	9.09%		9.09%						9.09%	
B	24											4.17%		4.17%		66.67%	4.17%		4.17%					4.17%	
B-	19									5.26%					5.26%	5.26%	84.21%								
CCC+	9																11.11%	55.56%	11.11%		11.11%			11.11%	
CCC	5											20.00%				20.00%			40.00%						20.00%
CCC-	2																								100.00%
CC	41																							48.78%	
C																								34.15%	12.20%
Total	23027																								

Table 35		U.S. Public Finance Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																							
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	943	87.38%	1.91%	0.42%					0.11%		0.11%													3.71%	6.36%
AA+	2724	4.66%	76.03%	1.47%	0.48%	0.11%					0.04%	0.04%											0.04%	3.30%	13.84%
AA	3031	1.12%	12.50%	68.92%	3.40%	1.72%	0.13%	0.03%																2.54%	9.63%
AA-	3617	0.06%	2.10%	15.90%	65.39%	4.37%	0.47%	0.14%	0.11%															1.88%	9.57%
A+	4825	0.06%	0.31%	2.28%	13.04%	66.32%	3.92%	0.75%	1.91%	0.19%		0.02%	0.02%	0.02%		0.02%						0.02%	0.02%	1.74%	9.37%
A	3423		0.12%	0.50%	3.65%	15.78%	61.50%	3.59%	0.73%	0.61%	0.20%		0.12%				0.03%					0.03%	2.37%	10.78%	
A-	1633			0.06%	1.71%	8.57%	16.90%	48.81%	3.49%	1.84%	0.92%	0.31%	0.37%				0.06%					0.06%	3.43%	13.47%	
BBB+	582		0.17%		0.34%	1.72%	7.04%	21.65%	43.30%	4.64%	1.20%	1.37%		0.17%	0.69%	0.17%	0.17%					0.34%	1.03%	5.15%	10.82%
BBB	452		0.22%	0.44%	0.66%	0.66%	3.98%	6.86%	16.15%	48.23%	3.98%	1.77%	1.77%			0.44%	0.22%		0.22%		0.44%	0.44%	0.44%	5.31%	8.19%
BBB-	418					0.48%	1.67%	0.72%	4.78%	11.24%	42.82%	9.09%	3.83%	0.96%	0.48%	0.24%	0.24%		0.24%		3.59%	1.91%	8.85%	8.85%	
BB+	131					0.76%	0.76%	3.82%	4.58%	3.05%	6.87%	37.40%	9.16%	6.87%	0.76%		1.53%				1.53%		6.11%	16.79%	
BB	69						1.45%	2.90%	1.45%	7.25%	2.90%	7.25%	27.54%	7.25%	5.80%	2.90%	4.35%	2.90%						13.04%	13.04%
BB-	37						2.70%	5.41%	5.41%		8.11%	2.70%	5.41%	13.51%	8.11%	10.81%	8.11%						8.11%	18.92%	2.70%
B+	14							7.14%			14.29%			7.14%	28.57%		7.14%						7.14%	14.29%	14.29%
B	27											11.11%	11.11%	3.70%		29.63%	3.70%						11.11%	14.81%	14.81%
B-	12														8.33%	8.33%	33.33%	25.00%			8.33%		8.33%	8.33%	
CCC+	2									50.00%							50.00%								
CCC	14										7.14%	14.29%					21.43%		7.14%					21.43%	28.57%
CCC-																									
CC	12																	8.33%	8.33%				50.00%	25.00%	8.33%
C	1																						100.00%		
Total	21967																								

Table 36		U.S. Public Finance Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																									
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)		
AAA	2613	12.02%	20.78%	1.30%	0.57%	0.04%	0.19%	0.04%	0.04%		0.04%	0.04%	0.08%	0.04%	0.11%	0.08%	0.04%				0.04%		0.04%	23.54%	40.99%		
AA+	744	18.68%	24.46%	4.17%	1.08%	0.27%					0.13%													9.68%	41.53%		
AA	1727	9.55%	18.99%	20.67%	4.75%	1.80%	0.69%	0.64%		0.12%		0.06%					0.06%						0.12%	8.51%	34.05%		
AA-	1944	2.47%	10.13%	19.70%	13.27%	3.29%	1.03%	0.05%	1.65%	0.10%	0.10%						0.05%		0.05%					2.73%	45.37%		
A+	1938	0.88%	5.37%	15.74%	17.44%	15.17%	3.25%	1.14%	0.41%	0.41%	0.05%	0.36%		0.05%	0.05%	0.05%		0.05%						5.26%	34.31%		
A	2357	0.21%	2.63%	8.06%	14.89%	19.26%	10.56%	1.74%	0.51%	0.55%	0.25%	0.08%	0.25%			0.04%	0.13%	0.08%				0.08%		0.30%	5.26%	35.09%	
A-	1695	0.06%	1.00%	3.60%	10.15%	19.12%	16.05%	8.38%	2.12%	0.88%	0.83%	0.12%	0.18%			0.06%	0.06%							0.12%	6.14%	31.15%	
BBB+	827		0.24%	2.18%	8.71%	16.57%	14.51%	8.95%	5.32%	2.18%	0.85%	0.36%	0.24%			0.12%			0.12%					0.48%	8.46%	30.47%	
BBB	741	0.13%	0.27%	0.81%	3.10%	8.91%	14.71%	10.39%	3.91%	6.21%	1.89%	0.94%	1.21%	0.13%		0.40%	0.13%		0.13%					0.67%	12.15%	33.33%	
BBB-	409		0.49%	0.24%	0.98%	3.18%	6.85%	10.02%	8.07%	7.09%	6.85%	2.93%	0.73%	0.73%	0.49%	0.49%	0.49%							2.20%	18.09%	28.85%	
BB+	47							2.13%		2.13%	4.26%	6.38%	4.26%	2.13%		2.13%									4.26%	19.15%	53.19%
BB	60			1.67%	1.67%	1.67%	1.67%	6.67%		1.67%	3.33%		5.00%			5.00%	1.67%								1.67%	30.00%	38.33%
BB-	16										12.50%						6.25%								12.50%	25.00%	43.75%
B+	9													11.11%											22.22%	22.22%	44.44%
B	30				3.33%		6.67%	3.33%	3.33%				3.33%	3.33%	3.33%		3.33%								10.00%	30.00%	30.00%
B-	8																12.50%		12.50%						25.00%	25.00%	25.00%
CCC+	1																										100.00%
CCC	9																								33.33%	22.22%	44.44%
CCC-	1																								100.00%		
CC	2																									100.00%	
C	2																										50.00%
Total	15180																										

Table 37		International Public Finance Issuers Ratings 1 Year Transition and Default Rates (December 31, 2015 through December 31, 2016)																							
Credit Rating as of 12/31/2015		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2015 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	30	93.33%	3.33%	3.33%																					
AA+	40		85.00%	10.00%	5.00%																				
AA	41			80.49%	4.88%																				14.63%
AA-	27			7.41%	70.37%	3.70%																			18.52%
A+	28				7.14%	78.57%	3.57%																		10.71%
A	9					11.11%	88.89%																		
A-	7						14.29%	71.43%	14.29%																
BBB+	10						10.00%		80.00%																10.00%
BBB	9									77.78%	11.11%														11.11%
BBB-	19									10.53%	73.68%		5.26%												10.53%
BB+	30										6.67%	70.00%	6.67%	3.33%											10.00%
BB	18												72.22%	16.67%									5.56%		5.56%
BB-	14													92.86%	7.14%										
B+	7													14.29%	71.43%	14.29%									
B	3															33.33%									
B-	3																	33.33%							66.67%
CCC+	1																100.00%								
CCC																									
CCC-	7																100.00%								
CC																									
C																									
Total	303																								

Table 38		International Public Finance Issuers Ratings 3 Year Transition and Default Rates (December 31, 2013 through December 31, 2016)																							
Credit Rating as of 12/31/2013		Credit Ratings as of 12/31/2016 (Percent)																			Other Outcomes During 12/31/2013 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)
AAA	33	81.82%	9.09%	6.06%																					3.03%
AA+	36	2.78%	75.00%	16.67%																					5.56%
AA	40		7.50%	60.00%	7.50%	2.50%																			22.50%
AA-	30			16.67%	36.67%	20.00%																			26.67%
A+	31			3.23%	22.58%	45.16%	3.23%																		25.81%
A	6				16.67%		50.00%																		33.33%
A-	5						40.00%	40.00%	20.00%																
BBB+	6						50.00%		50.00%																
BBB	20						5.00%		5.00%	10.00%	50.00%	20.00%	5.00%												5.00%
BBB-	24								16.67%	25.00%	12.50%	8.33%	8.33%	4.17%			4.17%						4.17%		16.67%
BB+	18										11.11%	38.89%	22.22%	5.56%											22.22%
BB	17											23.53%	41.18%	11.76%	5.88%			5.88%							11.76%
BB-	16												12.50%	68.75%	6.25%										12.50%
B+	4														25.00%	25.00%									50.00%
B	3															33.33%									66.67%
B-	11													9.09%		9.09%	9.09%						18.18%		54.55%
CCC+	7																85.71%								14.29%
CCC																									
CCC-																									
CC																									
C																									
Total	307																								

Table 39		International Public Finance Issuers Ratings 10 Year Transition and Default Rates (December 31, 2006 through December 31, 2016)																								
Credit Rating as of 12/31/2006		Credit Ratings as of 12/31/2016 (Percent)																				Other Outcomes During 12/31/2006 - 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-	CC	C	Default	Paid Off	Withdrawn (Other)	
AAA	26	42.31%	23.08%	26.92%																					7.69%	
AA+	31	25.81%	22.58%	12.90%		3.23%	6.45%		6.45%																22.58%	
AA	35	11.43%	22.86%	22.86%		2.86%	2.86%		2.86%	5.71%	2.86%				2.86%										22.86%	
AA-	22		22.73%	18.18%	13.64%	4.55%			4.55%				4.55%												31.82%	
A+	42	2.38%	2.38%	9.52%	11.90%	9.52%					19.05%														45.24%	
A	13				23.08%		15.38%																		61.54%	
A-	11				27.27%		9.09%	9.09%			9.09%														45.45%	
BBB+	10						10.00%		10.00%	10.00%															60.00%	
BBB	9								22.22%	11.11%	11.11%		11.11%												44.44%	
BBB-	12									8.33%	8.33%	33.33%			8.33%										41.67%	
BB+	19								10.53%	5.26%	26.32%			10.53%											31.58%	
BB	36											19.44%	16.67%	5.56%		2.78%									41.67%	
BB-	25												12.00%	8.00%											68.00%	
B+	15											6.67%	6.67%	20.00%											33.33%	
B	9											11.11%	11.11%		11.11%										66.67%	
B-	1																						100.00%			
CCC+																										
CCC																										
CCC-																										
CC																										
C																										
Total	316																									

S&P Global Ratings Definitions

https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352

The above URL represents the location of the Ratings Definitions page on S&P Global 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 S&P Global Ratings classifies obligors, securities, or money market instruments as being in default.