

**General | Research** 

# KBRA's Global Rating Transition Study: 2011-2021

KBRA assigned its first credit rating nearly 11 years ago and has since assigned approximately 25,000 initial ratings and effectuated over 65,000 subsequent affirmations, upgrades, and downgrades. In this report, we examine the 1-year and lifetime transition of our ratings across asset classes and rating categories between 2011 and 2021.

KBRA assigns long-term credit ratings to both issuers and securities using the same <u>rating scale</u>. In either case, KBRA's ratings are intended to reflect both the probability of default and severity of loss in the event of default, with greater emphasis on probability of default at higher rating categories. KBRA may periodically raise or lower a long-term credit rating by one or more "notches" on our ratings scale (for

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example, a rating change to BB- from BB would be a one-notch downgrade). For purposes of this report, a rating's "transition" refers to the change of a long-term credit rating (either up or down) over a predefined time frame.

The study includes both published and unpublished long-term credit ratings<sup>2</sup> assigned across all geographical regions. We exclude short-term ratings from this analysis given the small sample size (representing approximately 2% of all ratings assigned during the study period). For certain bank and corporate entities,<sup>3</sup> we include only the senior unsecured rating, when available, or the issuer rating, but exclude their subordinate or other ratings which typically move in lockstep with the senior unsecured and/or issuer ratings. This approach avoids overstating the frequency of rating actions relating to a single entity.

#### **Key Takeaways**

- Based on KBRA's aggregate one-year transition analysis, 7.9% (4,957) of KBRA ratings transitioned to a higher rating between 2011 and 2021, while 2.3% (1,412) experienced a downward transition. Meanwhile, 82.4% (51,564) of our ratings were stable and 7.4% (4,634) were withdrawn during the study period, with 93.9% (4,353) of withdrawn ratings occurring after a full pay-off of the securities.
- Lifetime rating transitions were overwhelmingly positive, as upgrades outpaced downgrades by 4:1. Further, 82.6% of assigned ratings have been stable over their lifetime.
- As expected, downward transitions were concentrated within the non-investment grade (non-IG) rating categories (BB+ and lower). Approximately 10% of non-IG ratings transitioned to a lower rating during the study period, while under 1% of investment grade (IG) ratings (BBB- and higher) migrated lower.
- Over the study period, 12 KBRA ratings transitioned to D, accounting for 0.05% of assigned ratings. Additionally, seven of the 12 were initially assigned a non-IG rating, while five were initially assigned a BBB or BBB-.

## **KBRA Aggregate One-Year Transition Analysis**

In this section we analyze 1-year rating transitions between the calendar years 2011 and 2021. KBRA employed a cohort approach, creating 11 1-year cohorts. Each cohort included all outstanding ratings as of January 1 of the year in question. For each rating within the cohort, KBRA recorded the rating outstanding as of the beginning of the year, and the rating outstanding as of the end of the year. For ratings that were withdrawn during the year, KBRA recorded the year-end status as withdrawn.

<sup>&</sup>lt;sup>1</sup> Hereafter referred to as "rating actions" in this publication.

<sup>&</sup>lt;sup>2</sup> For insurance operating companies, we used KBRA's insurance financial strength ratings (IFSRs) instead of long-term credit ratings.

<sup>&</sup>lt;sup>3</sup> All corporate and financial institution secured debt transaction ratings are included in this study as these ratings can move independently from the senior unsecured or issuer credit ratings of their parent or related entities.

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The vast majority of withdrawn ratings (93.9% through YE 2021) occurred following the full pay-off of a given security. The remaining withdrawals were primarily due to mergers and acquisitions, were performed at the issuer's request, and/or KBRA decided to no longer provide a rating. In the latter instances, analysis was generally conducted to effectuate a rating action prior to the rating withdrawal.

Each cohort was transformed into a transition matrix, with the row heading of the matrix indicating the start of the period rating, and the column headings indicating the end period state. Each cell within the matrix reflects the number of ratings having that combination of beginning of period and end of period ratings.

The aggregate 1-year transition matrix is the parallel sum of every cohort's transition matrix (see Figure 1). For example, the value (23) in the A row and AAA column represents the aggregate number of A rated issues extant at the beginning of any of the 11 cohort observation periods that migrated to AAA during said cohort's observation period.

Figure 1: KBRA's Aggregate One-Year Rating Transition Matrix 2011-20214

												Rating to:													
		Rating Count	AAA	AA+	AA	AA-	A+	A	Α-	BBB+	ввв	ввв-	BB+	ВВ	ВВ-	В+	В	В-	ccc+	ссс	ссс-	сс	С	D	WR
	AAA	31,742	29,297	2	4	1		2			1	2		1			1						2	L	2,429
	AA+	1,118	281	647	1	2		2			1														184
	AA	2,276	256	275	1,568	3	1	3	1		2	1		2										oxdot	164
	AA-	1,641	50	53	88	1,307	2	4	6					2											129
	A+	875	50	56	58	56	527		1		1	2					1	2						<u> </u>	121
	Α	2,818	23	76	203	84	169	1,939	35	21	7	1		1			1	2						<u> </u>	256
	A-	3,106	8	13	16	58	61	102	2,581	29	23	12			1	4								<u> </u>	198
	BBB+	1,851	3	10	10	30	63	64	108	1,380	29	5	1	3	1	1	1		1	2				<u> </u>	139
	BBB	3,547	15	9	11	9	91	143	113	224	2,513	51	22	14	2		5	6		3				<u> </u>	316
Rating	BBB-	4,206	6	7	3	1	5	120	24	52	178	3,369	45	41	31	2	19	2		8		3		1	289
from:	BB+	1,081			3		3	20	121	18	72	68	678	17	9	3	8	5						<u> </u>	56
	BB	2,906			1		1	36	4	89	72	102	202	1,968	77	35	130	18		43		3	1	1	123
	BB-	1,827	1		2	1		1	1	2	87	8	26	76	1,394	19	43	27	1	32		3		1	102
	B+	831								4	19	90	10	58	31	513	35	27		17		1	2	1	23
	В	1,317										16	167	22	12	39	846	90	1	61	1	11	5	3	43
	B-	1,145											2	59	19	5	15	894		74	3	19	7	<u> </u>	48
	CCC+	9																	3	1				1	4
	ccc	214													8	2	4	23		110	3	33	21	<u> </u>	10
	CCC-	5																			5			$\vdash$	
	cc	30																				5	23	2	1
	С	22																					20	2	
	Total	62,567	29,990	1,148	1,968	1,552	923	2,436	2,995	1,819	3,005	3,727	1,153	2,264	1,585	623	1,109	1,096	6	351	12	78	81	12	4,634

Source: KBRA

Figure 2: Aggregate One-Year Transitions - Rating

Orig Rating	Total	Up	Stable	Down	WR	Up	Stable	Down	WR
AAA	31,742	-	29,297	16	2,429	-	92.3%	0.1%	7.7%
AA+	1,118	281	647	6	184	25.1%	57.9%	0.5%	16.5%
AA	2,276	531	1,568	13	164	23.3%	68.9%	0.6%	7.2%
AA-	1,641	191	1,307	14	129	11.6%	79.6%	0.9%	7.9%
A+	875	220	527	7	121	25.1%	60.2%	0.8%	13.8%
А	2,818	555	1,939	68	256	19.7%	68.8%	2.4%	9.1%
A-	3,106	258	2,581	69	198	8.3%	83.1%	2.2%	6.4%
BBB+	1,851	288	1,380	44	139	15.6%	74.6%	2.4%	7.5%
BBB	3,547	615	2,513	103	316	17.3%	70.8%	2.9%	8.9%
BBB-	4,206	396	3,369	152	289	9.4%	80.1%	3.6%	6.9%
BB+	1,081	305	678	42	56	28.2%	62.7%	3.9%	5.2%
BB	2,906	507	1,968	308	123	17.4%	67.7%	10.6%	4.2%
BB-	1,827	205	1,394	126	102	11.2%	76.3%	6.9%	5.6%
B+	831	212	513	83	23	25.5%	61.7%	10.0%	2.8%
В	1,317	256	846	172	43	19.4%	64.2%	13.1%	3.3%
B-	1,145	100	894	103	48	8.7%	78.1%	9.0%	4.2%
CCC+	9	0	3	2	4	0.0%	33.3%	22.2%	44.4%
ccc	214	37	110	57	10	17.3%	51.4%	26.6%	4.7%
ccc-	5	0	5	0	0	0.0%	100.0%	0.0%	0.0%
cc	30	0	5	25	0	0.0%	16.7%	83.3%	0.0%
С	22	0	20	2	0	0.0%	90.9%	9.1%	0.0%
Total	62,567	4,957	51,564	1,412	4,634	7.9%	82.4%	2.3%	7.4%

Source: KBRA

Figure 3: Aggregate One-Year Transitions - Year

		<b>3</b>							
Year	Total	Up	Stable	Down	WR	Up	Stable	Down	WR
2011	0	0	0	0	0	-	-	-	-
2012	40	0	34	0	6	0.0%	85.0%	0.0%	15.0%
2013	375	11	353	0	11	2.9%	94.1%	0.0%	2.9%
2014	1,340	33	1,271	0	36	2.5%	94.9%	0.0%	2.7%
2015	2,670	110	2,526	0	34	4.1%	94.6%	0.0%	1.3%
2016	4,615	250	4,177	20	168	5.4%	90.5%	0.4%	3.6%
2017	5,994	433	5,231	23	307	7.2%	87.3%	0.4%	5.1%
2018	8,081	677	6,912	43	449	8.4%	85.5%	0.5%	5.6%
2019	10,512	996	8,901	65	550	9.5%	84.7%	0.6%	5.2%
2020	13,537	416	11,478	788	855	3.1%	84.8%	5.8%	6.3%
2021	15,403	2,031	10,681	473	2,218	13.2%	69.3%	3.1%	14.4%
Total	62,567	4,957	51,564	1,412	4,634	7.9%	82.4%	2.3%	7.4%

Source: KBRA

<sup>&</sup>lt;sup>4</sup> The 1-year transition matrix includes multiple (annual) observations for ratings that are outstanding for more than one year, hence the total count in the 1-year matrix (62,567) is greater than the total number of ratings issued (24,550).

# Corporate, Financial, and Government (CFG) Aggregate One-Year Transition Analysis

KBRA assigned 1,519 ratings across our Corporate, Financial, and Governments (CFG) sectors and effectuated 4,379 subsequent rating actions between 2011 and 2021.<sup>5</sup> Over this period, 161 CFG ratings transitioned to a higher rating, while 141 transitioned lower. Meanwhile, 3,317 ratings remained stable and 259 were withdrawn during the study period (see Figures 4-6).

Many of the upward transitions in the CFG portfolio occurred in the U.S. banking sector. Following the global financial crisis (GFC), U.S. banks have generally adopted more conservative risk appetites, combined with stronger liquidity and capital positions. Over time, there has been a modest upward drift in the average U.S. bank rating as rating upgrades have exceeded downgrades. Most upgrades reflect efforts by issuer management teams to execute growth and diversification strategies while improving financial metrics. Rating movements among individual banks in KBRA's rated portfolio have generally been within one notch with few exceptions.

Meanwhile, insurance ratings have exhibited a stable profile due to healthy balance sheet asset credit profiles combined with a generally favorable operating environment for pricing of liabilities and prudent risk management. While there are some limited instances of KBRA-rated entities with Negative Outlooks, there have been no rating downgrades to date.

As expected, downward transitions were more likely in non-IG rating categories, which experienced 43 transitions to a lower rating during the study period, accounting for 15.6% of all non-IG observations. Meanwhile, IG ratings were markedly more stable, experiencing 98 transitions to a lower rating, which accounted for just 2.7% of all IG observations.

Also, as expected, many of the transitions to lower ratings in CFG sectors occurred in the past two years, which accounted for 111 of the 141 (78.7%) downward rating transitions observed between 2011 and 2021. Many of the downward transitions occurred due to the outsize impact that the COVID-19 pandemic had on certain subsectors such as secured aircraft transactions, aircraft lessors, and student housing. Five of the six ratings that have transitioned to a D rating did so over the past two years and were from these three subsectors. Many of the remaining downward transitions occurred as a result of persistent declines in energy prices, which displaced demand and negatively affected cash flows for certain project finance-rated transactions.

Outside of these limited cases, the vast majority of KBRA's CFG ratings have been remarkably stable or positive over the observed period, including during the stressed credit environment experienced over the past two years. Like banks and insurance companies, KBRA's public finance, funds, and sovereigns sectors have also experienced a very high degree of ratings stability.

Figure 4: KBRA's CFG One-Year Rating Transition Matrix 2011-2021

												Rati	ng to:												
		Rating Count	AAA	AA+	AA	AA-	A+	A	A-	BBB+	ввв	ввв-	вв+	ВВ	вв-	В+	В	В-	ccc+	ссс	ссс-	сс	С	D	WR
	AAA	82	82																						0
	AA+	109	8	96	1																				4
	AA	151		4	143	1																			3
	AA-	152			6	136	1																		9
	A+	146		1		7	132																		6
	Α	167			1		3	147	2	1	1														12
	A-	641						8	585	10	2					4									32
	BBB+	753					2	1	27	654	11	1				1	1		1						54
	BBB	817							1	36	695	18	1	1			3	3							59
Rating	BBB-	584						2	2	1	33	476	25	4		1	1	2						1	36
from:	BB+	118									1	7	88	6	5										11
	BB	59											3	34	5		1								16
	BB-	37										1		3	21	2	2	1						1	6
	B+	24										1				14				5				1	3
	В	19													1		7	2		2	1	1		2	3
	B-	12												1				4			1	4			2
	CCC+	2																						1	1
	CCC	5																		3					2
	CCC-	0																							
	CC	0																							
	С	0																							
	Total	3,878	90	101	151	144	138	158	617	702	743	504	117	49	32	22	15	12	1	10	2	5	0	6	259

Source: KBRA

<sup>&</sup>lt;sup>5</sup> The number of ratings actions (4,379) is higher than the total number of annual ratings transitions reported in Figure 4 (3,878) because the latter accounts for the cumulative effect of all rating actions within a given year.

Figure 5: CFG One-Year Transitions - Rating

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Orig Rating	Total	Up	Stable	Down	WR		Up	Stable	Down	WR
AAA	82	0	82	0	0	1	-	100.0%	0.0%	0.0%
AA+	109	8	96	1	4		7.3%	88.1%	0.9%	3.7%
AA	151	4	143	1	3		2.6%	94.7%	0.7%	2.0%
AA-	152	6	136	1	9		3.9%	89.5%	0.7%	5.9%
A+	146	8	132	0	6		5.5%	90.4%	0.0%	4.1%
Α	167	4	147	4	12		2.4%	88.0%	2.4%	7.2%
A-	641	8	585	16	32		1.2%	91.3%	2.5%	5.0%
BBB+	753	30	654	15	54		4.0%	86.9%	2.0%	7.2%
BBB	817	37	695	26	59		4.5%	85.1%	3.2%	7.2%
BBB-	584	38	476	34	36		6.5%	81.5%	5.8%	6.2%
BB+	118	8	88	11	11		6.8%	74.6%	9.3%	9.3%
BB	59	3	34	6	16		5.1%	57.6%	10.2%	27.1%
BB-	37	4	21	6	6		10.8%	56.8%	16.2%	16.2%
B+	24	1	14	6	3		4.2%	58.3%	25.0%	12.5%
В	19	1	7	8	3		5.3%	36.8%	42.1%	15.8%
B-	12	1	4	5	2		8.3%	33.3%	41.7%	16.7%
CCC+	2	0	0	1	1		0.0%	0.0%	50.0%	50.0%
CCC	5	0	3	0	2		0.0%	60.0%	0.0%	40.0%
CCC-							-	-	-	-
CC							-	-	-	-
С							-	-	-	-
Total	3,878	161	3,317	141	259	l	4.2%	85.5%	3.6%	6.7%

Figure 6: CFG One-Year Transitions - Year

Year	Total	Up	Stable	Down	WR	Up	Stable	Down	WR
2011	0	0	0	0	0		-	-	-
2012	0	0	0	0	0	-	-	-	-
2013	18	0	18	0	0	0.0%	100.0%	0.0%	0.0%
2014	73	1	56	0	16	1.4%	76.7%	0.0%	21.9%
2015	134	9	120	0	5	6.7%	89.6%	0.0%	3.7%
2016	272	5	241	6	20	1.8%	88.6%	2.2%	7.4%
2017	384	24	330	8	22	6.3%	85.9%	2.1%	5.7%
2018	500	20	428	8	44	4.0%	85.6%	1.6%	8.8%
2019	660	24	592	8	36	3.6%	89.7%	1.2%	5.5%
2020	811	29	654	71	57	3.6%	80.6%	8.8%	7.0%
2021	1,026	49	878	40	59	4.8%	85.6%	3.9%	5.8%
Total	3,878	161	3,317	141	259	4.2%	85.5%	3.6%	6.7%

Source: KBRA

Source: KBRA

### Structured Finance (SF) Aggregate One-Year Transition Analysis

KBRA assigned 23,031 ratings across Structured Finance (SF) and effectuated 62,514 subsequent rating actions between 2011 and 2021. Over this period, 4,796 SF securities transitioned to a higher rating, while 1,271 experienced a downward transition. Additionally, 48,247 SF ratings remained stable and 4,375 ratings were withdrawn during the study period (see Figures 7-9).

As expected, downward transitions were concentrated within the non-IG rating categories. Non-IG ratings experienced 877 transitions to a lower rating during the study period (accounting for 69% of all downward transitions, and 9.6% of all non-IG observations). Meanwhile, IG ratings were markedly more stable, experiencing just 394 transitions to a lower rating, which accounted for just 0.8% of all IG observations.

Similar to CFG, most of the transitions to a lower rating observed between 2011 and 2021 occurred over the past two years, as the ongoing COVID-19 pandemic placed outsized stress on certain SF sectors. The asset classes experiencing the largest number of downward transitions during this period were concentrated in aircraft ABS (189), CMBS (649), and RMBS (285) and, with the exception of aircraft ABS, generally related to non-IG ratings (as highlighted above). Outside of these three asset classes, the rating transitions were overwhelmingly positive, as upgrades outpaced downgrades by over 20:1.

Over the study period, 30.5% (1,216) of consumer ABS ratings transitioned to a higher rating, while 47.6% (1,898) remained stable, just 0.1% (3) transitioned lower, and 21.8% (870) were withdrawn. Similar to other SF sectors, consumer ABS experienced overwhelmingly positive rating performance due to healthy economic conditions over much of the study period. In addition, it also benefited from strong consumer fundamentals throughout the pandemic, which were driven by government stimulus and consumer safety net programs.

The commercial ABS sector faced a more challenging credit environment over the past two years, leading to a higher number of downgrades during the study period. Between 2011 and 2021, 3.3% (68) commercial ABS ratings transition to a higher rating, 67.8% (1,396) remained stable, 11.2% (231) transitioned to a lower rating (with 189 of those downgrades, or 82%, concentrated in aircraft ABS in 2020 and 2021), while 17.6% (363) were withdrawn.

Meanwhile, 1.2% (315) of CMBS ratings transitioned to a higher rating, while 92% (24,695) remained stable, 2.8% (752) transitioned lower, and 4% (1,066) were withdrawn. The CMBS sector saw an historically high number of downward transitions following the onset of the pandemic (649 versus 53 upward transitions), with downward ratings migrations generally observed in deals with larger exposures to non-needs based retail and lodging properties. Of the sector's 16 AAA downgrades, 10 were on interest-only (IO) classes, which referenced notional balances from one or more classes that experienced rating downgrades, and as a result the ratings were lowered as they no longer qualified as AAA under our methodology for rating CMBS IO securities.



Finally, 12.6% (3,027) of RMBS ratings transitioned to a higher rating, while 78.9% (18,902) remained stable, 1.2% (285) transitioned lower, and 7.2% (1,729) were withdrawn. All the downward transitions in KBRA's RMBS ratings universe occurred in 2020 and 2021 and were triggered by the deteriorating collateral performance associated with the economic downturn caused by the pandemic. Nearly all the downgrades were among non-IG tranches, with just 1.4% of downward movement coming from IG-rated classes, all of which were rated in the BBB category.

Figure 7: KBRA's SF One-Year Rating Transition Matrix 2011-2021

												Rating t	0:												
		Rating Count	AAA	AA+	AA	AA-	A+	А	A-	BBB+	ввв	BBB-	BB+	ВВ	BB-	B+	В	B-	ccc+	ссс	ссс-	сс	С	D	WR
	AAA	31,660	29,215	2	4	1		2			1	2		1			1						2		2,429
	AA+	1,009	273	551		2		2			1														180
	AA	2,125	256	271	1,425	2	1	3	1		2	1		2											161
	AA-	1,489	50	53	82	1,171	1	4	6					2											120
	A+	729	50	55	58	49	395		1		1	2					1	2							115
	А	2,651	23	76	202	84	166	1,792	33	20	6	1		1			1	2							244
	A-	2,465	8	13	16	58	61	94	1,996	19	21	12			1										166
	BBB+	1,098	3	10	10	30	61	63	81	726	18	4	1	3	1					2					85
	BBB	2,730	15	9	11	9	91	143	112	188	1,818	33	21	13	2		2	3		3					257
Rating	BBB-	3,622	6	7	3	1	5	118	22	51	145	2,893	20	37	31	1	18			8		3			253
from:	BB+	963			3		3	20	121	18	71	61	590	11	4	3	8	5							45
	ВВ	2,847			1		1	36	4	89	72	102	199	1,934	72	35	129	18		43		3	1	1	107
	BB-	1,790	1		2	1		1	1	2	87	7	26	73	1,373	17	41	26	1	32		3			96
	B+	807								4	19	89	10	58	31	499	35	27		12		1	2		20
	В	1,298										16	167	22	11	39	839	88	1	59		10	5	1	40
	B-	1,133											2	58	19	5	15	890		74	2	15	7		46
	CCC+	7																	3	1					3
	ccc	209													8	2	4	23		107	3	33	21		8
	CCC-	5																			5				0
	СС	30																				5	23	2	0
	С	22																					20	2	0
	Total	58,689	29,900	1,047	1,817	1,408	785	2,278	2,378	1,117	2,262	3,223	1,036	2,215	1,553	601	1,094	1,084	5	341	10	73	81	6	4,375

Source: KBRA

Figure 8: SF One-Year Transitions - Rating

Orig Rating	Total	Up	Stable	Down	WR		Up	Stable	Down	WR
AAA	31,660	0	29,215	16	2,429		-	92.3%	0.1%	7.7%
AA+	1,009	273	551	5	180	l	27.1%	54.6%	0.5%	17.8%
AA	2,125	527	1,425	12	161		24.8%	67.1%	0.6%	7.6%
AA-	1,489	185	1,171	13	120	l	12.4%	78.6%	0.9%	8.1%
A+	729	212	395	7	115		29.1%	54.2%	1.0%	15.8%
Α	2,651	551	1,792	64	244	١	20.8%	67.6%	2.4%	9.2%
A-	2,465	250	1,996	53	166		10.1%	81.0%	2.2%	6.7%
BBB+	1,098	258	726	29	85	١	23.5%	66.1%	2.6%	7.7%
BBB	2,730	578	1,818	77	257		21.2%	66.6%	2.8%	9.4%
BBB-	3,622	358	2,893	118	253	l	9.9%	79.9%	3.3%	7.0%
BB+	963	297	590	31	45		30.8%	61.3%	3.2%	4.7%
ВВ	2,847	504	1,934	302	107	l	17.7%	67.9%	10.6%	3.8%
BB-	1,790	201	1,373	120	96		11.2%	76.7%	6.7%	5.4%
B+	807	211	499	77	20	l	26.1%	61.8%	9.5%	2.5%
В	1,298	255	839	164	40		19.6%	64.6%	12.6%	3.1%
B-	1,133	99	890	98	46	l	8.7%	78.6%	8.6%	4.1%
CCC+	7	0	3	1	3		0.0%	42.9%	14.3%	42.9%
CCC	209	37	107	57	8	١	17.7%	51.2%	27.3%	3.8%
CCC-	5	0	5	0	0		0.0%	100.0%	0.0%	0.0%
CC	30	0	5	25	0		0.0%	16.7%	83.3%	0.0%
С	22	0	20	2	0		0.0%	90.9%	9.1%	0.0%
Total	58,689	4,796	48,247	1,271	4,375	1	8.2%	82.2%	2.2%	7.5%

Source: KBRA

Figure 9: SF One-Year Transitions - Year

5								_	
Year	Total	Up	Stable	Down	WR	Up	Stable	Down	WR
2011	0	0	0	0	0	-	-	-	-
2012	40	0	34	0	6	0.0%	85.0%	0.0%	15.0%
2013	357	11	335	0	11	3.1%	93.8%	0.0%	3.1%
2014	1,267	32	1,215	0	20	2.5%	95.9%	0.0%	1.6%
2015	2,536	101	2,406	0	29	4.0%	94.9%	0.0%	1.1%
2016	4,343	245	3,936	14	148	5.6%	90.6%	0.3%	3.4%
2017	5,610	409	4,901	15	285	7.3%	87.4%	0.3%	5.1%
2018	7,581	657	6,484	35	405	8.7%	85.5%	0.5%	5.3%
2019	9,852	972	8,309	57	514	9.9%	84.3%	0.6%	5.2%
2020	12,726	387	10,824	717	798	3.0%	85.1%	5.6%	6.3%
2021	14,377	1,982	9,803	433	2,159	13.8%	68.2%	3.0%	15.0%
Total	58,689	4,796	48,247	1,271	4,375	8.2%	82.2%	2.2%	7.5%

Source: KBRA

# **KBRA Lifetime Transition Analysis**

To illustrate the lifetime performance of KBRA's ratings, we created an additional transition matrix showing the movement of ratings from the rating issued at the date of assignment to the rating outstanding as of December 31, 2021. For ratings that were withdrawn prior to December 31, 2021, KBRA recorded the rating that was outstanding immediately prior to being withdrawn. This data was then transformed into a transition matrix, with the row heading of the matrix indicating the assignment rating, and the column headings indicating the rating as of December 31, 2021, or rating immediately prior to withdrawal (see Figure 10).



Figure 10: KBRA's Lifetime Rating Transition Matrix 2011-2021

											Rat	ting to:												
		Rating Count	AAA	AA+	AA	AA-	A+	A	Α-	BBB+	BBB	BBB-	BB+	ВВ	вв-	В+	В	B-	ccc+	ссс	ссс-	сс	С	D
	AAA	12,107	12,091	2	2	1					1	1		2				2		2		1	2	
	AA+	375	122	251	2																			
	AA	964	329	80	543	1	1	4	2		2	1								1				
	AA-	517	41	24	43	399	1	4	3					1						1				
	A+	378	23	24	12	19	299															1		
	Α	1,324	172	52	119	27	53	825	20	29	15	3	1	2	2		1	3						
	A-	1,060	16	17	15	26	23	52	866	7	17	8		2			1			8		2		
	BBB+	713	17	5	6	6	25	8	41	574	18	6		2		1	1			3				
	BBB	1,720	106	61	34	26	55	73	43	63	1,153	34	31	17	4	1	5	2		4	1	4		3
Rating	BBB-	1,598	28	14	14	22	26	67	17	22	76	1,179	24	28	22	3	20	4		17		9	4	2
from:	BB+	415		8	1	5	44	31	14	10	28	10	239	5	5	1	7	4		1			2	
	BB	1,257	19	16	16	7	23	98	107	50	43	71	153	513	28	7	21	19		44	1	13	7	1
	BB-	844	5	1	4	2	7	6	6	23	45	8	31	49	588	5	9	20		21		6	6	2
	B+	345			4			8	7	25	50	28	32	8	7	138	4	9		17		2	5	1
	В	487	9			1		1			2	36	7	35	20	10	257	47		35	2	6	18	1
	B-	418	2								1		2	3	5	4	9	342		26	2	4	16	2
	CCC+	14																	14					
	ccc	12																		12				
	CCC-	2																			2			
	CC																							
	С																							
	Total	24,550	12,980	555	815	542	557	1,177	1,126	803	1,451	1,385	520	667	681	170	335	452	14	192	8	48	60	12

Source: KBRA

Figure 11: KBRA Lifetime Transitions - Rating

Orig Rating	Total	Up	Stable	Down	U	p	Stable	Down
AAA	12,107	0	12,091	16	0.0	%	99.9%	0.1%
AA+	375	122	251	2	32.5	5%	66.9%	0.5%
AA	964	409	543	12	42.4	1%	56.3%	1.2%
AA-	517	108	399	10	20.9	9%	77.2%	1.9%
A+	378	78	299	1	20.6	5%	79.1%	0.3%
Α	1,324	423	825	76	31.9	9%	62.3%	5.7%
A-	1,060	149	866	45	14.1	L%	81.7%	4.2%
BBB+	713	108	574	31	15.1	L%	80.5%	4.3%
BBB	1,720	461	1,153	106	26.8	3%	67.0%	6.2%
BBB-	1,598	286	1,179	133	17.9	9%	73.8%	8.3%
BB+	415	151	239	25	36.4	1%	57.6%	6.0%
ВВ	1,257	603	513	141	48.0	)%	40.8%	11.2%
BB-	844	187	588	69	22.2	2%	69.7%	8.2%
B+	345	169	138	38	49.0	)%	40.0%	11.0%
В	487	121	257	109	24.8	3%	52.8%	22.4%
B-	418	26	342	50	6.2	%	81.8%	12.0%
CCC+	14	0	14	0	0.0	%	100.0%	0.0%
ссс	12	0	12	0	0.0	%	100.0%	0.0%
ccc-	2	0	2	0	0.0	%	100.0%	0.0%
СС	0	0	0	0	-		-	-
С	0	0	0	0	-		-	-
Total	24,550	3,401	20,285	864	13.9	9%	82.6%	3.5%

Figure 12: KBRA Lifetime Transitions - Vintage

Vintage	Total	Up	Stable	Down		Up	Stable	Down
2011	40	6	31	3		15.0%	77.5%	7.5%
2012	340	60	219	61		17.6%	64.4%	17.9%
2013	971	212	676	83		21.8%	69.6%	8.5%
2014	1,352	272	932	148		20.1%	68.9%	10.9%
2015	1,982	265	1,579	138		13.4%	79.7%	7.0%
2016	1,557	351	1,111	95		22.5%	71.4%	6.1%
2017	2,394	697	1,599	98		29.1%	66.8%	4.1%
2018	2,878	601	2,203	74		20.9%	76.5%	2.6%
2019	3,564	556	2,898	110		15.6%	81.3%	3.1%
2020	2,736	371	2,310	55		13.6%	84.4%	2.0%
2021	6,736	9	6,727	0		0.1%	99.9%	0.0%
Total	24,550	3,400	20,285	865	l	13.8%	82.6%	3.5%

Source: KBRA

Source: KBRA

## Corporate, Financial, and Government (CFG) Lifetime Transition Analysis

In KBRA's CFG ratings universe, 9.7% (147) transitioned to a higher rating during the observed period, with the vast majority (82.9%, 1,259) remaining stable and 7.4% (113) transitioning lower. The BBB category accounted for 87 of the 147 upgrades and 82 of the 113 downgrades. Meanwhile, 80% of the rating transitions (48 out of 60) from IG to non-IG occurred since the onset of the pandemic.



Figure 13: KBRA's CFG Lifetime Rating Transition Matrix 2011-2021

												Rating	to:											
		Total	AAA	AA+	AA	AA-	A+	A	A-	BBB+	ввв	ввв-	BB+	ВВ	ВВ-	B+	В	B-	CCC+	ccc	ccc-	СС	С	D
	AAA	26	26																					
	AA+	35	7	26	2																			
	AA	32	1	2	29																			
	AA-	56		1	8	46	1																	
	A+	50		1		8	41																	
	Α	82			1		5	72	2	1		1												
	A-	240						9	219	5	3									4				
	BBB+	265					1		28	220	10	4		1						1				
	BBB	342							5	26	283	12	3	2	1		1	1			1	4		3
	BBB-	246						2	3	7	15	181	21	6	2	2	1			4		1		1
Rating from:	BB+	48								1	3	5	36	1	1		1							
	BB	39											1	33	3	1				1				
	BB-	19									1	1	1	2	13			1						
	B+	17										1				15								1
	В	14															13							1
	B-	5															1	3		1				
	CCC+	1																	1					
	ccc	1																		1				
	CCC-	1																			1			
	CC	0																						
	С	0																						
	Total	1,519	34	30	40	54	48	83	257	260	315	205	62	45	20	18	17	5	1	12	2	5	0	6

Source: KBRA

Figure 14: CFG Lifetime Transitions - Rating

Rating	Total	Up	Stable	Down	Up	Stable	Down
AAA	26	0	26	0	0.0%	100.0%	0.0%
AA+	35	7	26	2	20.0%	74.3%	5.7%
AA	32	3	29	0	9.4%	90.6%	0.0%
AA-	56	9	46	1	16.1%	82.1%	1.8%
A+	50	9	41	0	18.0%	82.0%	0.0%
Α	82	6	72	4	7.3%	87.8%	4.9%
A-	240	9	219	12	3.8%	91.3%	5.0%
BBB+	265	29	220	16	10.9%	83.0%	6.0%
BBB	342	31	283	28	9.1%	82.7%	8.2%
BBB-	246	27	181	38	11.0%	73.6%	15.4%
BB+	48	9	36	3	18.8%	75.0%	6.3%
ВВ	39	1	33	5	2.6%	84.6%	12.8%
BB-	19	5	13	1	26.3%	68.4%	5.3%
B+	17	1	15	1	5.9%	88.2%	5.9%
В	14	0	13	1	0.0%	92.9%	7.1%
B-	5	1	3	1	20.0%	60.0%	20.0%
CCC+	1	0	1	0	0.0%	100.0%	0.0%
CCC	1	0	1	0	0.0%	100.0%	0.0%
CCC-	1	0	1	0	0.0%	100.0%	0.0%
CC	0	0	0	0	-	-	-
С	0	0	0	0	-	-	1
Total	1,519	147	1,259	113	9.7%	82.9%	7.4%

Source: KBRA

Figure 15: CFG Lifetime Transitions - Vintage

Vintage	Total	Up	Stable	Down	Up	Stable	Down
2011	0	0	0	0	-	-	-
2012	17	6	11	0	35.3%	64.7%	0.0%
2013	50	9	38	3	18.0%	76.0%	6.0%
2014	63	15	39	9	23.8%	61.9%	14.3%
2015	146	25	86	35	17.1%	58.9%	24.0%
2016	142	32	90	20	22.5%	63.4%	14.1%
2017	138	19	106	13	13.8%	76.8%	9.4%
2018	196	12	170	14	6.1%	86.7%	7.1%
2019	178	16	148	14	9.0%	83.1%	7.9%
2020	268	12	250	6	4.5%	93.3%	2.2%
2021	321	0	321	0	0.0%	100.0%	0.0%
Total	1,519	146	1,259	114	9.6%	82.9%	7.5%

Source: KBRA

# Structured Finance (SF) Lifetime Transition Analysis

Of the 23,031 SF ratings assigned since 2011, 14.1% (3,254) have transitioned to a higher rating, 82.6% (19,026) have remained unchanged, and 3.3% (751) have migrated to a lower rating. Similar to our aggregate 1-year transition analysis, the small percentage of downward transitions were largely concentrated in sectors—namely, aircraft ABS and CMBS—experiencing outsized stress due to COVID-19.



Figure 16: KBRA's SF Lifetime Rating Transition Matrix 2011-2021

											R	ating to:												
		Total	AAA	AA+	AA	AA-	A+	Α	A-	BBB+	ВВВ	BBB-	BB+	ВВ	вв-	B+	В	B-	CCC+	ССС	ccc-	СС	С	D
	AAA	12,081	12,065	2	2	1					1	1		2				2		2		1	2	
	AA+	340	115	225																				
	AA	932	328	78	514	1	1	4	2		2	1								1				
	AA-	461	41	23	35	353		4	3					1						1				
	A+	328	23	23	12	11	258															1		
	Α	1,242	172	52	118	27	48	753	18	28	15	2	1	2	2		1	3						
	A-	820	16	17	15	26	23	43	647	2	14	8		2			1			4		2		
	BBB+	448	17	5	6	6	24	8	13	354	8	2		1		1	1			2				
	BBB	1,378	106	61	34	26	55	73	38	37	870	22	28	15	3	1	4	1		4				
Rating	BBB-	1,352	28	14	14	22	26	65	14	15	61	998	3	22	20	1	19	4		13		8	4	1
from:	BB+	367		8	1	5	44	31	14	9	25	5	203	4	4	1	6	4		1			2	
	ВВ	1,218	19	16	16	7	23	98	107	50	43	71	152	480	25	6	21	19		43	1	13	7	1
	BB-	825	5	1	4	2	7	6	6	23	44	7	30	47	575	5	9	19		21		6	6	2
	B+	328			4			8	7	25	50	27	32	8	7	123	4	9		17		2	5	
	В	473	9			1		1			2	36	7	35	20	10	244	47		35	2	6	18	
	B-	413	2								1		2	3	5	4	8	339		25	2	4	16	2
	CCC+	13																	13					<u> </u>
	ccc	11																		11				$\vdash$
	CCC-	1																			1		<b></b>	<b> </b>
	CC -	0																						
	С	0																						
		23,031	12,946	525	775	488	509	1,094	869	543	1,136	1,180	458	622	661	152	318	447	13	180	6	43	60	6

Source: KBRA

Figure 17: SF Lifetime Transitions - Rating

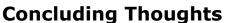
Orig Rating	Total	Up	Stable	Down		Up	Stable	Down
AAA	12,081	0	12,065	16		0.0%	99.9%	0.1%
AA+	340	115	225	0	l	33.8%	66.2%	0.0%
AA	932	406	514	12		43.6%	55.2%	1.3%
AA-	461	99	353	9	l	21.5%	76.6%	2.0%
A+	328	69	258	1		21.0%	78.7%	0.3%
Α	1,242	417	753	72	l	33.6%	60.6%	5.8%
A-	820	140	647	33		17.1%	78.9%	4.0%
BBB+	448	79	354	15		17.6%	79.0%	3.3%
BBB	1,378	430	870	78		31.2%	63.1%	5.7%
BBB-	1,352	259	998	95		19.2%	73.8%	7.0%
BB+	367	142	203	22		38.7%	55.3%	6.0%
BB	1,218	602	480	136	l	49.4%	39.4%	11.2%
BB-	825	182	575	68		22.1%	69.7%	8.2%
B+	328	168	123	37		51.2%	37.5%	11.3%
В	473	121	244	108		25.6%	51.6%	22.8%
B-	413	25	339	49		6.1%	82.1%	11.9%
CCC+	13	0	13	0		0.0%	100.0%	0.0%
ccc	11	0	11	0		0.0%	100.0%	0.0%
CCC-	1	0	1	0		0.0%	100.0%	0.0%
СС	0	0	0	0		-	-	-
С	0	0	0	0		-	-	-
Total	23,031	3,254	19,026	751		14.1%	82.6%	3.3%

Source: KBRA

Figure 18: SF Lifetime Transitions - Vintage

Vintage	Total	Up	Stable	Down	Up	Stable	Down
2011	40	6	31	3	15.0%	77.5%	7.5%
2012	323	54	208	61	16.7%	64.4%	18.9%
2013	921	203	638	80	22.0%	69.3%	8.7%
2014	1,289	257	893	139	19.9%	69.3%	10.8%
2015	1,836	240	1,493	103	13.1%	81.3%	5.6%
2016	1,415	319	1,021	75	22.5%	72.2%	5.3%
2017	2,256	678	1,493	85	30.1%	66.2%	3.8%
2018	2,682	589	2,033	60	22.0%	75.8%	2.2%
2019	3,386	540	2,750	96	15.9%	81.2%	2.8%
2020	2,468	359	2,060	49	14.5%	83.5%	2.0%
2021	6,415	9	6,406	0	0.1%	99.9%	0.0%
Total	23,031	3,254	19,026	751	14.1%	82.6%	3.3%

Source: KBRA



KBRA assigns and maintains forward-looking ratings in a manner consistent with our methodologies and rating definitions, with all assigned ratings subjected to ongoing surveillance until the rating is withdrawn. While we expect stability at high investment-grade rating categories, we generally expect ratings to experience both positive and negative credit drift as a natural result of issuer-specific performance and/or broader economic conditions.

Rating performance data provides insight into the resiliency and stability of our ratings, which KBRA has disclosed over the years in compliance with regulatory requirements as well as in selected reports for certain sectors. As our rating universe continues to expand, we look forward to providing more comprehensive reports such as this one on a periodic basis, to share broader performance data that spans all sectors and geographies where we provide ratings.

As always, KBRA will continue to provide a high degree of transparency through our new issue reports, surveillance monitoring, and research publications, and we welcome your feedback. Please reach out to the authors of this report with any questions or feedback.

#### **Primary Authors**

Brian Ford, CFA, Managing Director Structured Finance Research +1 (646) 731-2329 brian.ford@kbra.com

Matthew McDonald, Senior Managing Director Quantitative Modeling +1 (646) 731-2414 matthew.mcdonald@kbra.com

#### **Additional Contacts**

William Cox, Head of Global Corporate, Financial, and Government Ratings +1 (646) 731-2472 william.cox@kbra.com

Eric Thompson, Head of Global Structured Finance Ratings +1 (646) 731-2355 eric.thompson@kbra.com

#### **Media Inquiries**

Kate Kennedy, Senior Managing Director Business Development +1 (646) 731-2348 kate.kennedy@kbra.com

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