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Default, Transition, and Recovery: 2016 Annual European Structured Finance Default Study And Rating Transitions

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Default, Transition, and Recovery:

2016 Annual European Structured Finance Default Study And Rating Transitions

Overall European structured finance credit quality increased in 2016, with the upgrade rate reaching an all-time high and greatly exceeding the downgrade rate. That said, the annual default rate rose compared with 2015.

S&P Global Ratings had just under 4,000 ratings outstanding on European structured finance securities at the beginning of 2016. Of these securities, 1.4% defaulted during the year. Over the same period, the downgrade rate decreased to a nine-year low of 5.2% from 16.5% in 2015. Meanwhile, the upgrade rate rose to a new high of 19.8%, from 14.6% a year earlier, far exceeding the one-year average of 7.1%. Combining upgrades and downgrades with their severity, we raised our ratings on European structured finance securities by an average of 0.38 notches on aggregate, compared with a 0.07-notch increase in average credit quality during 2015. This was the highest year-end reading since we began rating European structured finance securities in the early 1980s.

The commercial mortgage-backed securities (CMBS) sector continued to exhibit the highest downgrade rate, which expresses the number of downgrades as a proportion of the number of ratings outstanding. By contrast, the structured credit sector—including transactions such as leveraged loan collateralized loan obligations (CLOs) and synthetic collateralized debt obligations (CDOs)—exhibited strong credit performance, with an upgrade rate of nearly 30%, mainly due to structural amortization in more seasoned cash transactions.

Overview

Defaults: Annual default rate rises above long-term average

- We lowered 57 European structured finance ratings to 'D' in 2016, for an overall default rate of 1.4%, up from a multi-year low of 0.8% in 2015.
- This put the 2016 default rate above the one-year average default rate of 1.2%.

Rating transitions: Upgrades far exceed downgrades in 2016

- Of the 3,988 European structured finance ratings outstanding at the start of 2016, we left unchanged or raised 94.8%, and lowered 5.2%. This compares with 83.5% and 16.5%, respectively, in 2015.
- We raised 19.8% of ratings in 2016, up from 14.6% in 2015 and significantly higher than the long-term one-year average upgrade rate of 7.1%.
- The 2016 downgrade rate of 5.2% was much lower than the 2015 figure of 16.5% and the long-term one-year average downgrade rate of 16.6%.
- The average change in credit quality rose to +0.38 notches in 2016--up from +0.07 notches in 2015 and an all-time high.

Sector breakdown: Most downgrades in CMBS; upgrades in structured credit

- The CMBS sector saw the highest downgrade rate of 29.6% in 2015 and accounted for more than 70% of the defaults.
- By contrast, structured credit ratings saw a high upgrade rate of 25.9%, well above the one-year average upgrade rate of 8.9% for the sector.

Credit Performance—Average Change In Credit Quality Reaches Ten-Year High

By many metrics, the overall credit performance of European structured finance securities that we rate was broadly positive in 2016, improving on the performance in the previous year. During 2016, we raised 19.8% of our ratings on European structured finance securities that were outstanding at the beginning of the year (see chart 1). This was up from 14.6% in 2015. The number of upgrades significantly exceeded the number of downgrades, and the downgrade rate of 5.2% was the lowest since 2007.

The 12-month trailing average change in credit quality (see definition in Appendix I) for European structured finance was +0.38 rating notches at the end of 2016. This measure had remained negative for most of the period from 2008 to end-2015, indicating that, on average, ratings continued to drift lower. However, the average change in credit quality has turned increasingly positive since the end of 2015, with the 2016 year-end figure of +0.38 notches constituting an all-time high, well away from the trough of -2.14 notches recorded in November 2009 (see chart 1).

However, other metrics indicated more negative credit performance in 2016. The default rate of 1.4% was up from 0.8% in the previous year (see chart 2), exceeding the one-year weighted-average default rate of 1.2%. In 2016, there was only one default among the 2,735 investment-grade ratings outstanding at the beginning of the year, giving an investment-grade default rate of 0.04%. By contrast, the speculative-grade default rate was 4.5%.

Chart 1

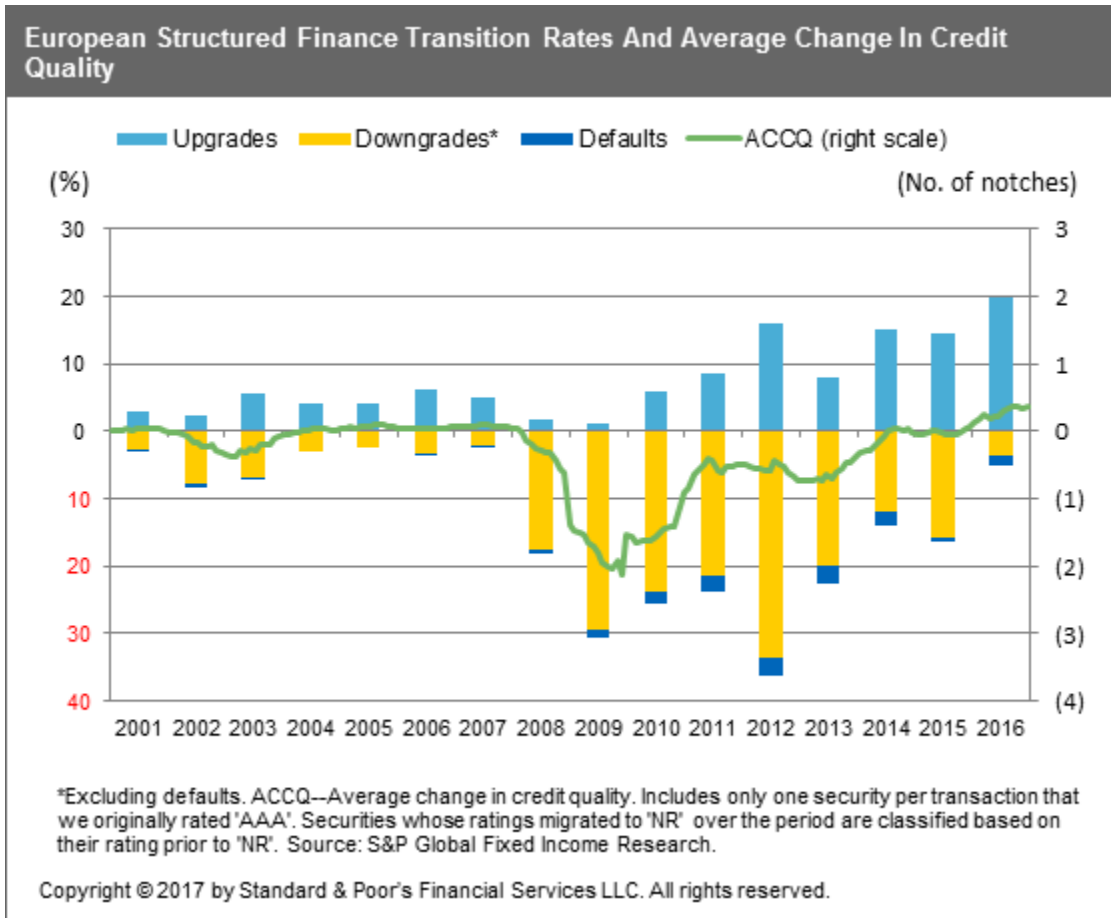
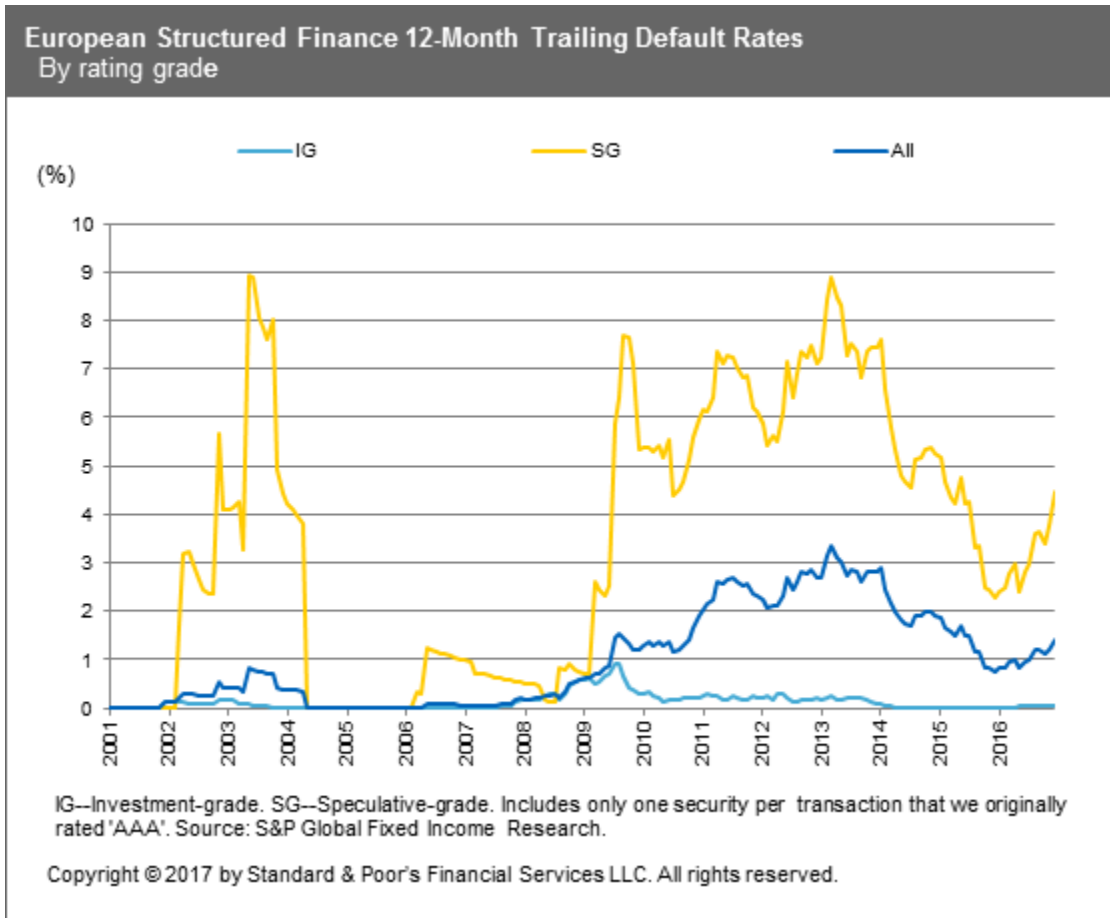


Chart 2



Sector comparisons

European structured finance credit performance in 2016 diverged significantly between sectors. The structured credit sector performed best, with ratings rising by an average of 0.70 notches over the year, an upgrade rate of 29.3%, and a downgrade rate of 4.0%. These upgrade and downgrade rates were well above and below their one-year weighted-averages, respectively, (see chart 3).

At the other end of the performance spectrum, CMBS had the highest downgrade (25.6%) and default rates (10.7%). This was the only sector where the downgrade and default rates in 2016 significantly exceeded their one-year weighted-averages (see charts 3 and 4).

Chart 3

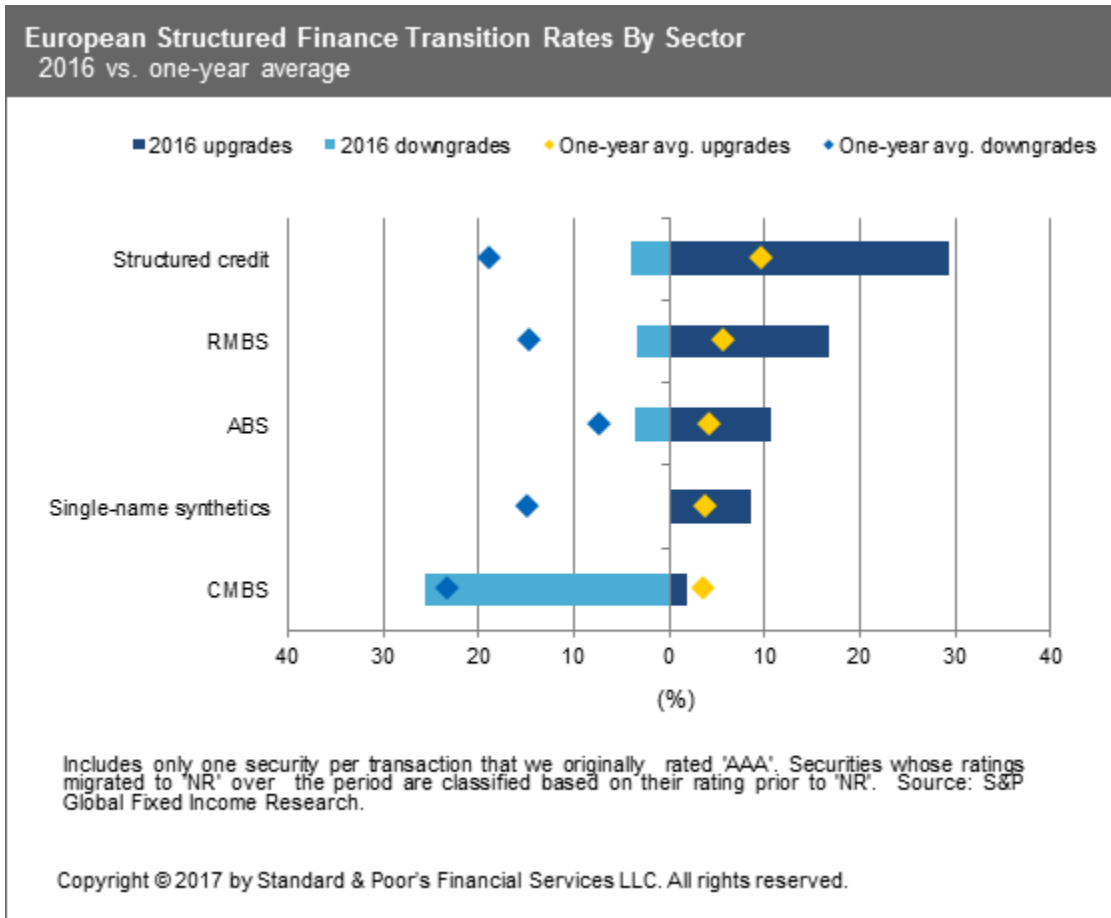
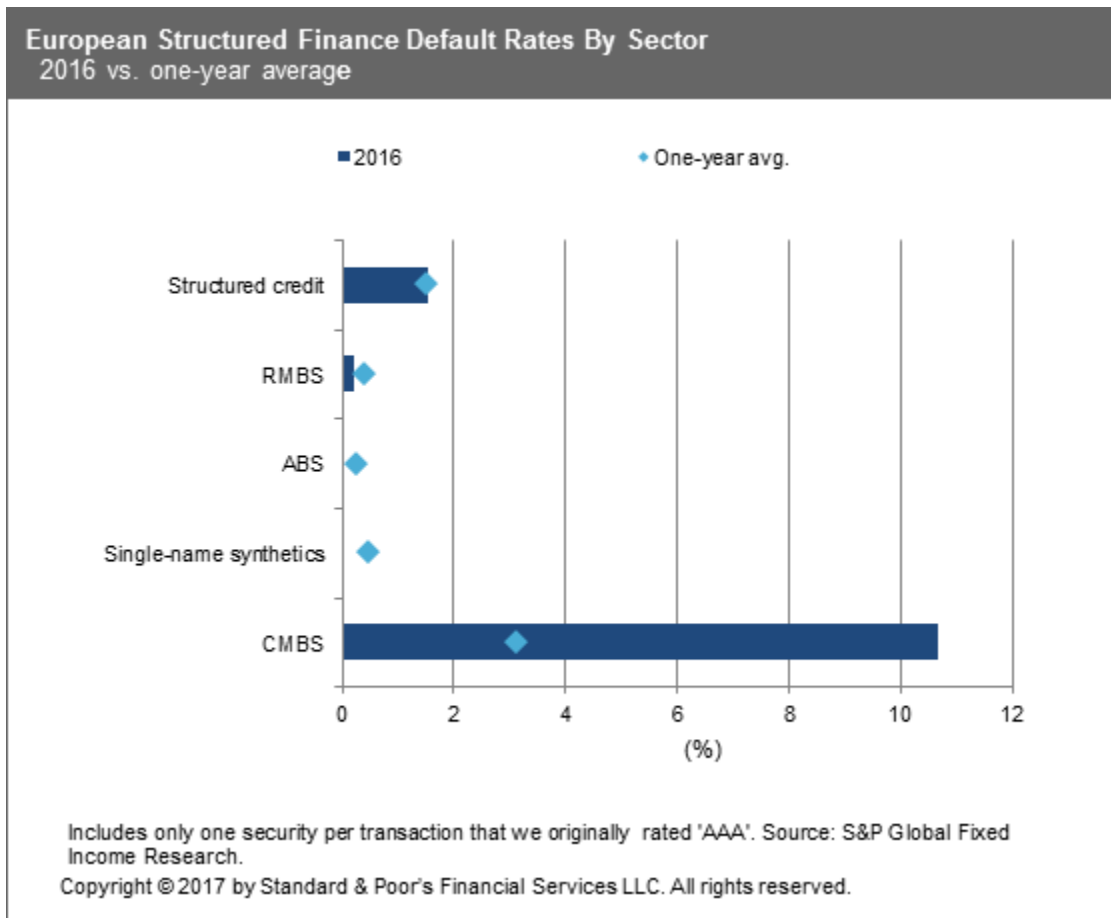


Chart 4



Vintages

Credit performance continues to be somewhat differentiated by the year of issuance—or vintage—of structured finance securities. The fundamental credit characteristics and economic environment of a transaction's vintage can influence its subsequent credit behavior.

Segmenting European structured finance credit performance by transaction vintage reveals that the upgrade rate in 2016 was highest for the 2010 vintage (see chart 5). These upgrades were concentrated in the structured credit sector, where just three transactions accounted for 49 upgrades. These were due to significant structural amortization, increasing the securities' relative credit enhancement and putting upward pressure on ratings.

In 2016, downgrade rates were at or below the one-year average in all vintages (see chart 5). Defaults, however, were strongly concentrated in the 2006 and 2007 vintages, which accounted for 65% of the year's 57 total defaults. Most of the 2006-2007 vintage defaults were in the CMBS sector.

Chart 5

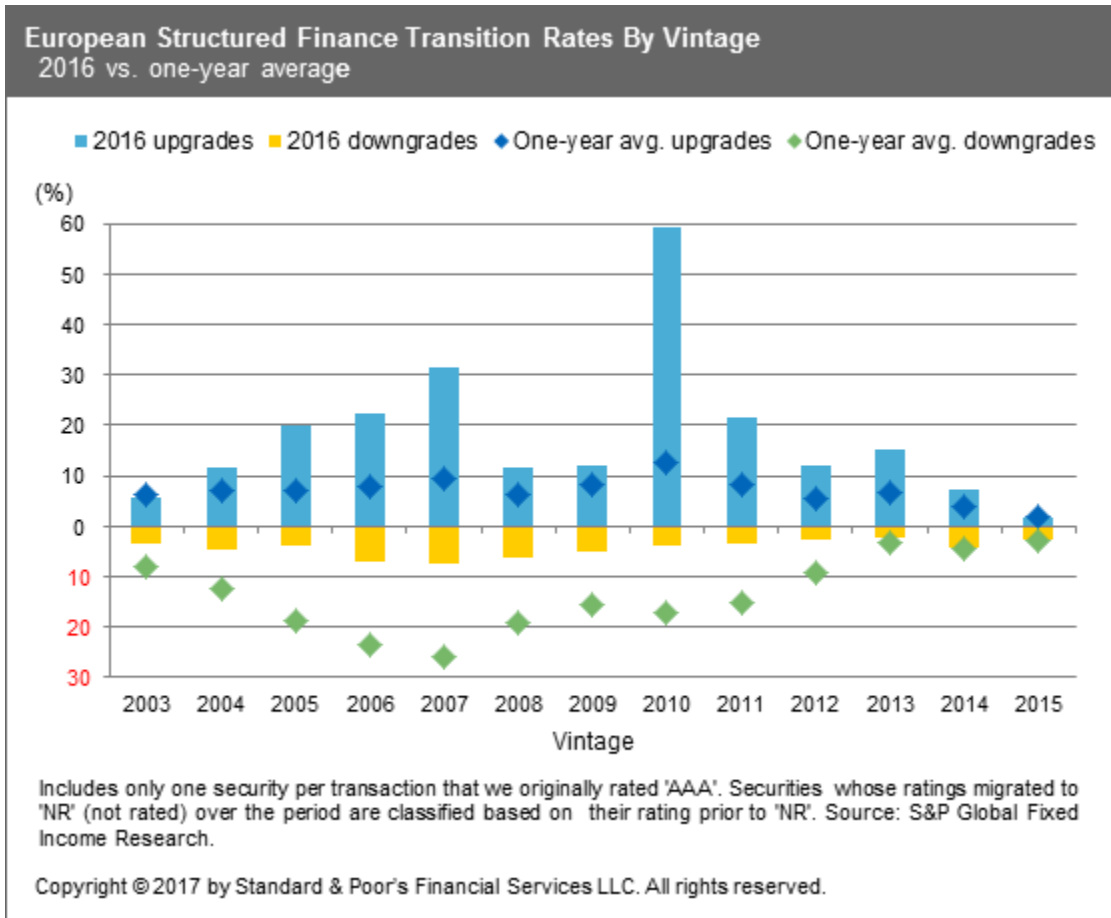


Chart 6

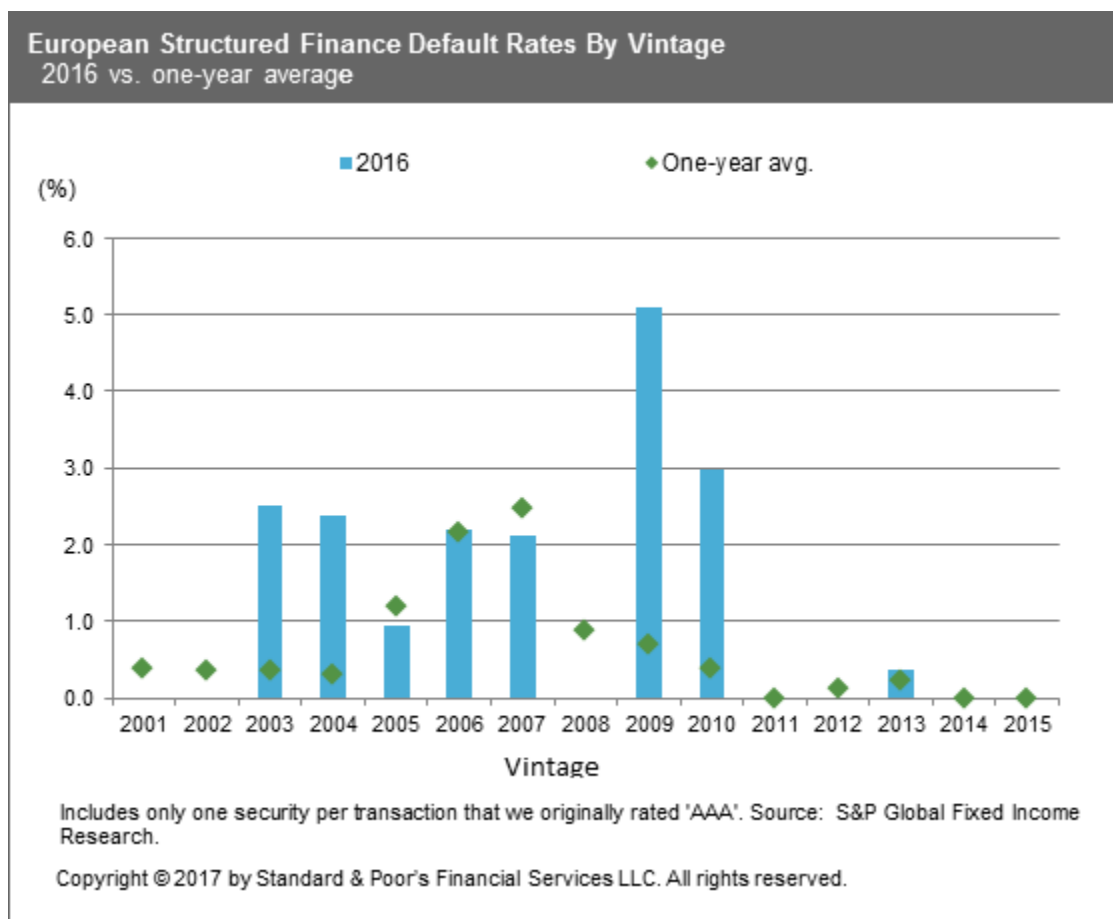


Table 1 shows a summary of 2016 credit performance for European structured finance segmented in various ways and compared with the 1983-2016 one-year weighted-average statistics.

Table 1

European Structured Finance Transition And Default Summary

2016 vs. one-year average

	2016						One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	
Overall	3,988	75.0	19.8	5.2	1.4	57	76.3	7.1	16.6	1.2	
Sectors											
RMBS	1,759	79.8	16.8	3.4	0.2	4	79.8	5.7	14.5	0.4	
Structured credit	1,505	66.7	29.3	4.0	1.5	23	71.6	9.7	18.7	1.5	
ABS	420	85.7	10.7	3.6	0.0	0	88.5	4.3	7.2	0.3	
CMBS	281	72.6	1.8	25.6	10.7	30	73.2	3.7	23.1	3.1	
Single-name synthetics	23	91.3	8.7	0.0	0.0	0	81.4	3.9	14.7	0.5	

Table 1

European Structured Finance Transition And Default Summary (cont.)

2016 vs. one-year average

	2016					One-year average					
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	
Collateral country											
U.K.	1,434	77.3	18.3	4.5	0.9	13	78.9	6.5	14.6	0.7	
Spain	359	75.5	20.3	4.2	0.6	2	71.7	6.4	22.0	2.0	
Italy	266	92.9	5.3	1.9	0.4	1	79.7	4.2	16.1	0.4	
The Netherlands	246	63.8	24.0	12.2	0.4	1	87.3	4.6	8.1	0.1	
Germany	158	80.4	8.2	11.4	7.6	12	80.8	5.6	13.6	1.8	
Portugal	106	92.5	5.7	1.9	0.0	0	79.3	4.0	16.8	0.1	
Multiple	1,178	65.0	29.7	5.3	2.4	28	70.1	10.2	19.8	1.7	
Other	241	90.5	5.0	4.6	0.0	0	82.6	3.6	13.8	1.2	
Vintage											
Pre-2005	446	84.8	10.8	4.5	2.0	9	85.3	5.8	8.9	0.3	
2005	419	76.4	19.8	3.8	1.0	4	74.1	7.1	18.8	1.2	
2006	773	70.8	22.4	6.9	2.2	17	68.6	7.8	23.6	2.2	
2007	945	61.3	31.4	7.3	2.1	20	64.8	9.3	25.8	2.5	
2008	145	82.1	11.7	6.2	0.0	0	74.3	6.5	19.2	0.9	
2009	59	83.1	11.9	5.1	5.1	3	76.2	8.3	15.5	0.7	
2010	101	36.6	59.4	4.0	3.0	3	70.2	12.4	17.4	0.4	
2011	88	75.0	21.6	3.4	0.0	0	76.6	8.2	15.2	0.0	
2012	149	85.2	12.1	2.7	0.0	0	85.2	5.5	9.2	0.1	
2013	273	82.4	15.4	2.2	0.4	1	89.9	6.7	3.4	0.2	
2014	262	88.5	7.3	4.2	0.0	0	91.7	3.8	4.6	0.0	
2015	328	95.4	1.8	2.7	0.0	0	95.4	1.8	2.7	0.0	
Rating category											
AAA	364	100.0	0.0	0.0	0.0	0	88.4	0.0	11.6	0.2	
AA	547	68.2	27.2	4.6	0.0	0	74.7	7.1	18.2	0.1	
A	1,142	82.1	15.3	2.5	0.0	0	75.8	8.6	15.6	0.1	
BBB	682	67.9	28.3	3.8	0.1	1	74.7	9.6	15.7	0.3	
BB	394	65.7	28.2	6.1	0.3	1	67.7	11.2	21.1	0.7	
B	484	69.2	23.8	7.0	1.0	5	63.4	13.3	23.3	2.6	
CCC	336	69.3	13.7	17.0	11.3	38	66.8	11.4	21.8	10.4	
CC	39	69.2	0.0	30.8	30.8	12	63.5	1.4	35.0	34.7	
Rating grade											
Investment-grade	2,735	78.2	18.9	2.9	0.0	1	78.9	6.0	15.1	0.2	
Speculative-grade	1,253	68.2	21.7	10.1	4.5	56	66.1	11.5	22.4	5.0	

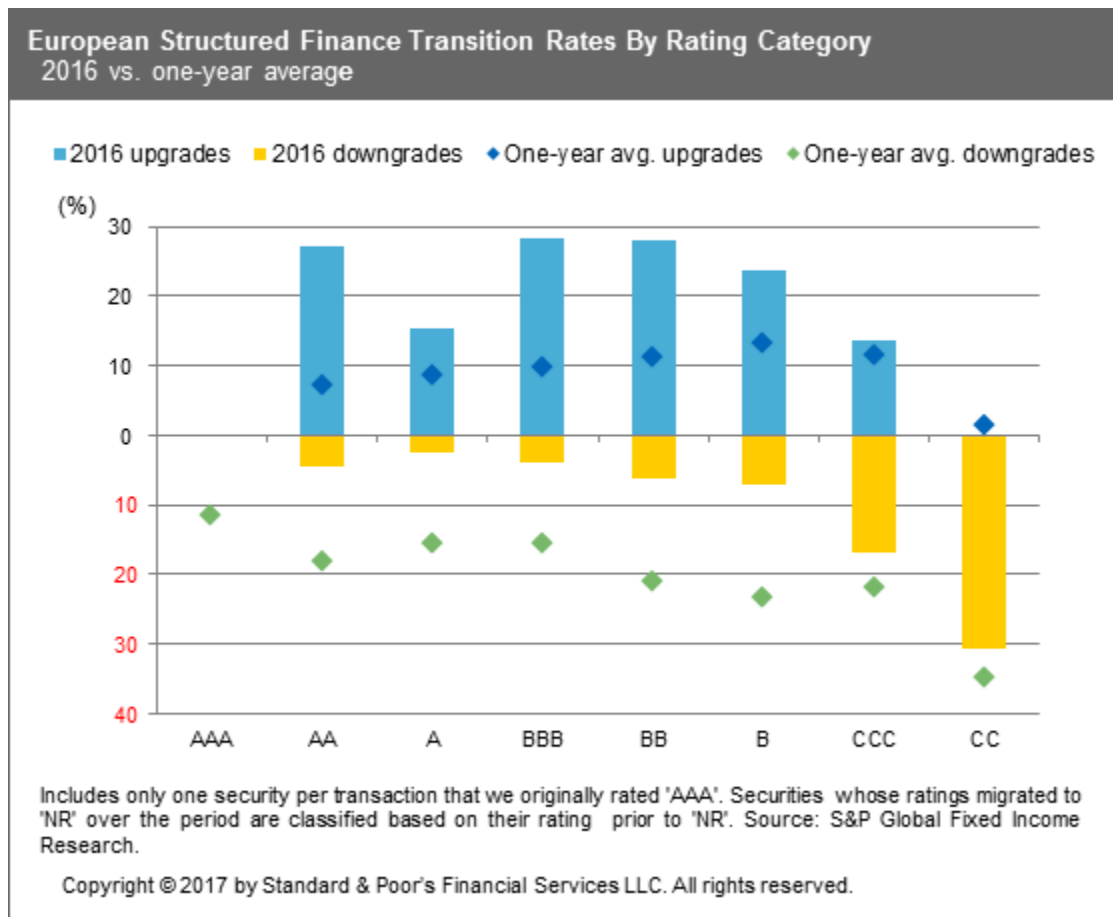
*Including defaults. Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

Ratings Performance—Ratings Have Historically Differentiated Default Rates

Our structured finance ratings express an opinion of securities' creditworthiness, for which the centerpiece is an assessment of default likelihood, rather than the likelihood of upgrade or downgrade. That said, our ratings do also consider credit stability as a secondary factor.

Across European structured finance, upgrade and downgrade rates in 2016 differed somewhat by securities' ratings at the beginning of the year. There were no downgrades for securities rated 'AAA' at the beginning of the year, compared with a 30.8% downgrade rate for those rated 'CC', for example (see chart 7). In 2016, downgrade rates were generally higher for lower rating categories. The 'AA' rating category slightly bucked this trend, exhibiting a higher downgrade rate than the 'A' and 'BBB' rating categories.

Chart 7

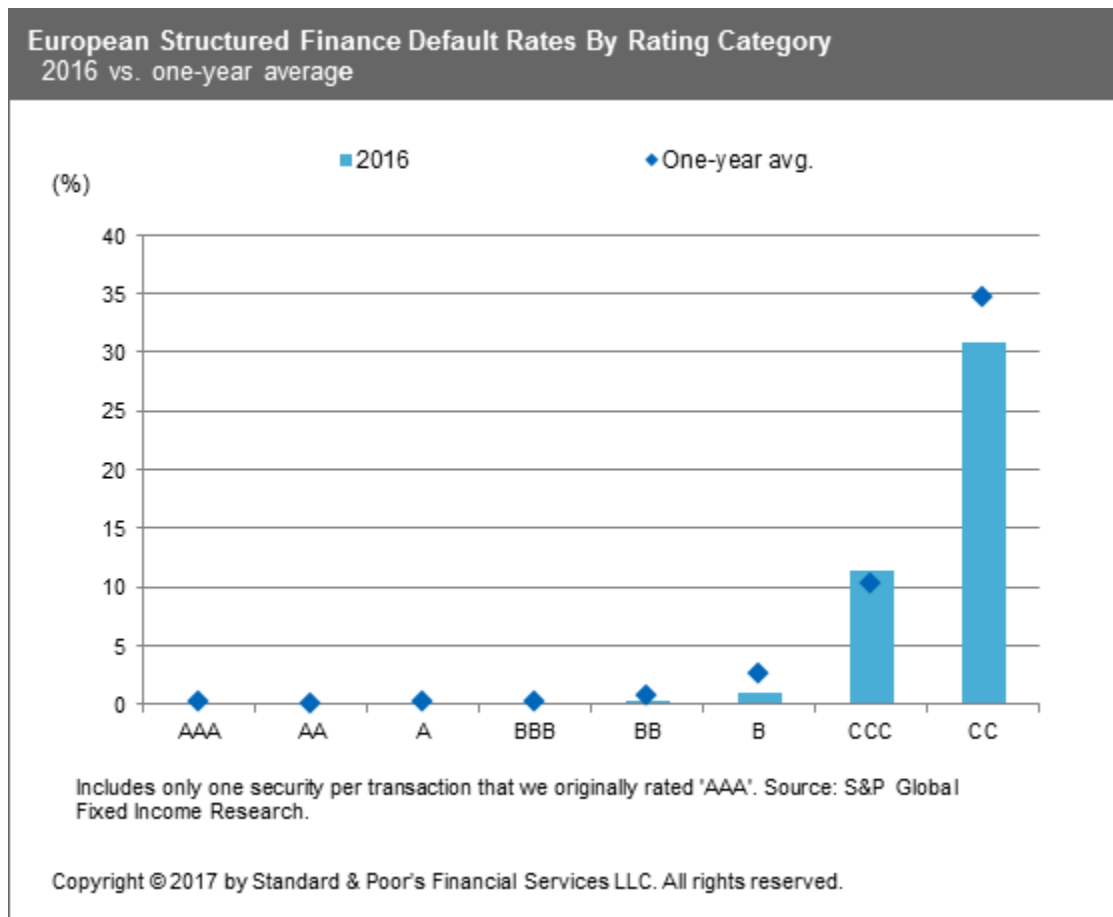


In contrast to credit stability, default likelihood is the primary factor in our assessment of creditworthiness that the ratings reflect. As such, we would typically expect default rates to be lower for higher-rated securities, provided that observations are made over sufficiently long time horizons and large samples. Over shorter timeframes or smaller samples, this relationship may not always hold, and default rates can also vary over time.

For European structured finance, higher-rated securities have generally been associated with lower one-year weighted-average default rates between 1983 and 2016 (see chart 8). This pattern is clearest at rating categories below 'AA'.

Given the limited number of defaults in the 2016 calendar year, the same pattern is only visible at the lower rating levels. There were no defaults in 2016 among European structured finance securities that we rated in the 'A' category or higher at the beginning of the year. Below this rating category, the 'BBB' default rate was 0.1%, contrasting with 0.3%, 1.0%, 11.3%, and 30.8% for the 'BB', 'B', 'CCC', and 'CC' rating categories, respectively.

Chart 8



In order to further explore the extent to which our structured finance ratings have successfully rank-ordered securities' creditworthiness over time, we can calculate cumulative default rates by rating category for various time horizons on the same basis as in our corporate default and transition studies. This approach constructs average multi-year cumulative default rates by first aggregating across static pools the period-to-period one-year marginal default rates that are conditional on the securities' survival (i.e. non-default) in the prior one-year period (see Appendix I for more details). We note that this approach differs from the calculations we use in constructing the weighted-average multi-year default and transition rates included elsewhere in this study, where default rates are not conditional on survival.

The cumulative default rates (conditional on survival) based on our full data history for European structured finance—from the beginning of 1983 to the end of 2016—show that lower ratings have generally been associated with higher default rates and vice versa (see table 2). In other words, ratings appear to have successfully ranked-ordered creditworthiness over each time horizon. For some timeframes, there has been a limited distinction in observed cumulative default rate between the 'AA' and 'A' rating categories. This is partly due to a different mix of sectors at different rating categories, with sectors that were more adversely affected by the financial crisis (e.g., structured credit) accounting for a relatively larger portion of the 'AA' category than less-affected sectors (e.g., residential mortgage-backed securities [RMBS]).

Table 2

European Structured Finance Cumulative Default Rates, Conditional On Survival, 1983-2016 (%)										
	Time horizon (years)									
	1	2	3	4	5	6	7	8	9	10
AAA	0.16	0.38	0.63	1.01	1.41	1.68	1.87	1.99	2.06	2.10
AA	0.13	0.36	0.78	1.31	2.11	2.74	3.19	3.45	3.59	3.72
A	0.14	0.43	0.88	1.40	2.14	2.85	3.50	3.90	4.12	4.29
BBB	0.28	0.87	1.70	2.77	4.18	5.42	6.51	7.35	8.00	8.51
BB	0.65	2.01	3.83	5.70	7.30	8.72	10.20	11.31	12.16	12.93
B	2.57	5.96	9.79	13.52	17.07	19.10	20.52	21.09	21.09	21.09
CCC	10.36	19.04	25.31	29.86	31.16	32.01	32.51	32.94	32.94	32.94
CC	34.71	54.15	67.01	69.56	69.85	69.85	69.85	69.85	69.85	69.85
IG	0.17	0.49	0.96	1.55	2.33	2.98	3.52	3.87	4.10	4.28
SG	5.03	9.57	13.49	16.52	18.37	19.69	20.87	21.75	22.41	22.99
Overall	1.17	2.33	3.46	4.50	5.45	6.19	6.80	7.20	7.45	7.66

IG--Investment-grade. SG--Speculative-grade. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

Sectors In Detail

RMBS

In 2016, the upgrade rate for European RMBS rose sharply to 16.8% while the downgrade rate dropped significantly compared with 2015, to 3.4% (see chart 9). The default rate increased to 0.2% from 0.1% in 2015. Incorporating both the magnitude and frequency of rating actions, the overall average change in credit quality for European RMBS was +0.33 notches for the year, representing a net annual upward movement in this sector's ratings for the first time since 2007. This compared with an average change in credit quality of -0.33 notches in 2015.

On a 12-month trailing basis, the European RMBS default rate reached its lowest level since May 2009 in July 2015, falling below 0.1%, well down from the peak of 1.6% in mid-2014 (see chart 10). While the default rate rose slightly during 2016, there were only four defaults among European RMBS transactions, affecting transactions from Germany, Italy, and Spain (see table 3).

Within the RMBS sector, the nonconforming subsector exhibited the highest upgrade rate of 29.0% in 2016. This subsector mostly comprises pre-crisis transactions backed by U.K. collateral, which are generally performing well and

delivering.

Transactions backed by Dutch collateral accounted for a significant portion of European RMBS rating movements in 2016. Many of these rating actions were due to the effect of criteria changes we made in late 2015, which became effective on Jan. 18, 2016, being reflected in outstanding ratings during 2016 (see "Dutch RMBS Criteria Update Has A Limited Negative Rating Impact," published on July 21, 2016). About one-third of our outstanding Dutch RMBS ratings were affected by the updated criteria, which led to both upgrades and downgrades.

Additionally, several of the upgrades in the Spanish RMBS sector were related to our upgrade of the Spanish sovereign to 'BBB+' from 'BBB' on Oct. 2, 2015 (see "Related Research").

More than 70% of our European RMBS ratings outstanding at the beginning of 2016 were on transactions in the 2007 and earlier vintages, and all the defaults were in these more seasoned transactions (see table 3).

The majority of European RMBS downgrades in 2016 were from the investment-grade rating categories, which constituted about 71% of our European RMBS ratings universe at the beginning of 2016.

Chart 9

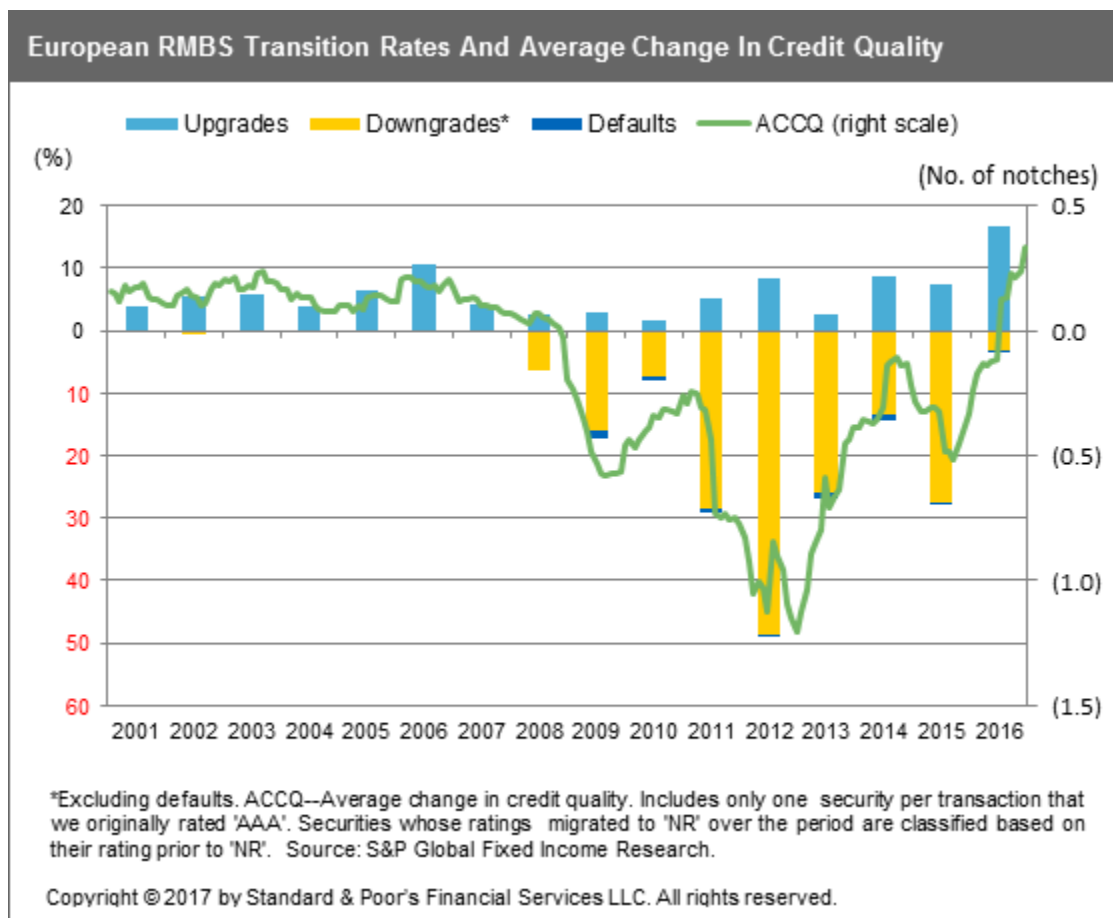


Chart 10

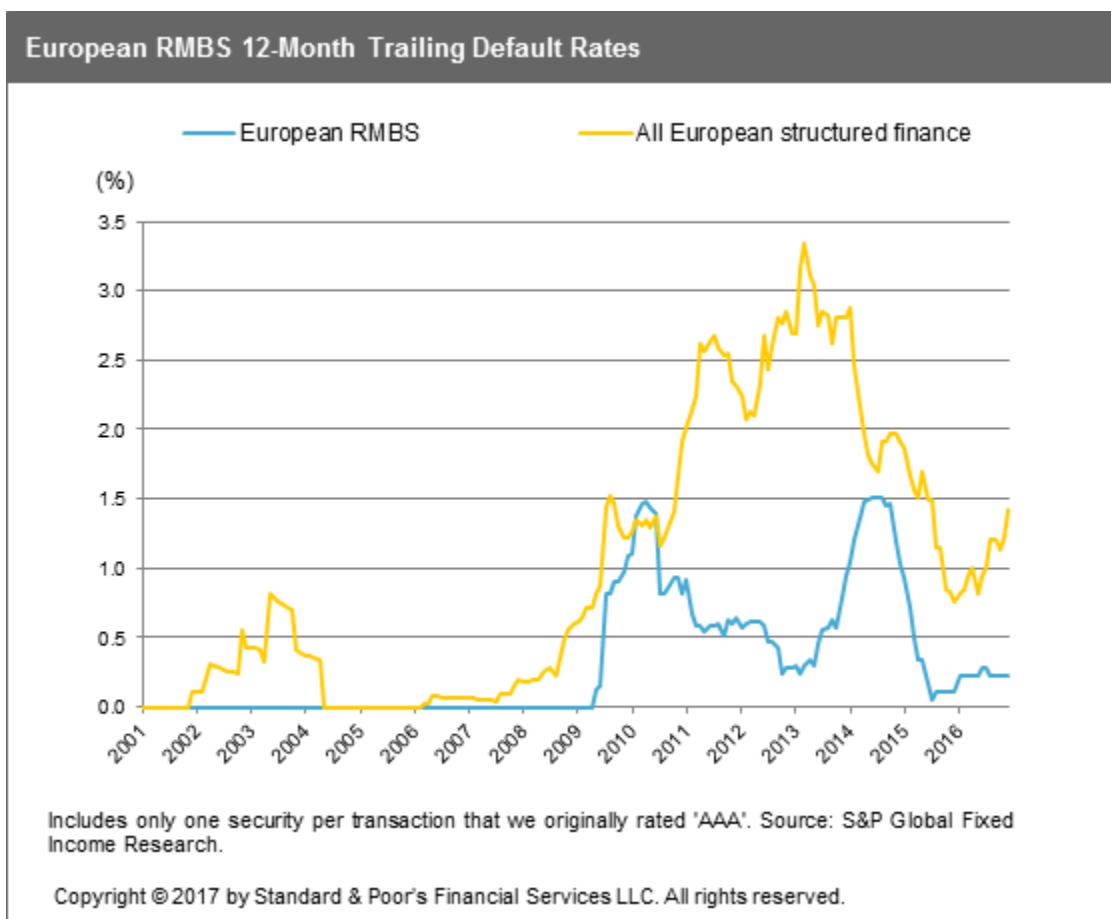


Table 3

European RMBS Transition And Default Summary

2016 vs. one-year average

	2016					One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Overall	1,759	79.8	16.8	3.4	0.2	4	79.8	5.7	14.5	0.4
Subsector										
Nonconforming	573	68.8	29.0	2.3	0.0	0	73.2	8.6	18.1	0.1
Spanish	273	77.3	18.3	4.4	0.4	1	72.2	5.8	22.0	2.0
U.K. prime	188	97.3	2.7	0.0	0.0	0	89.0	3.7	7.4	0.0
Dutch prime	192	62.5	24.5	13.0	0.0	0	87.6	5.4	7.0	0.0
Italian	168	94.0	4.2	1.8	0.6	1	76.7	4.8	18.4	0.4
Portuguese	94	92.6	5.3	2.1	0.0	0	73.1	4.6	22.2	0.1
German	24	83.3	8.3	8.3	8.3	2	85.2	6.5	8.3	0.5
Other	247	93.1	5.7	1.2	0.0	0	83.0	4.5	12.5	0.3

Table 3

European RMBS Transition And Default Summary (cont.)

2016 vs. one-year average

	2016					One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Vintage										
Pre-2005	288	88.5	9.7	1.7	0.3	1	85.9	6.7	7.4	0.0
2005	259	83.8	15.8	0.4	0.0	0	79.2	5.3	15.5	0.1
2006	381	79.0	17.6	3.4	0.3	1	75.6	4.7	19.7	0.5
2007	346	73.7	20.5	5.8	0.6	2	71.5	4.4	24.0	1.6
2008	73	72.6	16.4	11.0	0.0	0	74.3	4.2	21.5	0.6
2009	23	69.6	30.4	0.0	0.0	0	70.4	8.9	20.7	0.8
2010	34	76.5	23.5	0.0	0.0	0	86.0	4.6	9.4	0.4
2011	61	72.1	24.6	3.3	0.0	0	75.9	6.4	17.7	0.0
2012	68	73.5	23.5	2.9	0.0	0	79.1	7.6	13.2	0.0
2013	64	65.6	29.7	4.7	0.0	0	85.7	12.2	2.0	0.0
2014	79	82.3	13.9	3.8	0.0	0	88.0	7.6	4.4	0.0
2015	83	95.2	1.2	3.6	0.0	0	95.2	1.2	3.6	0.0
Rating category										
AAA	123	100.0	0.0	0.0	0.0	0	91.5	0.0	8.5	0.0
AA	194	79.4	15.5	5.2	0.0	0	75.2	5.6	19.2	0.0
A	643	85.8	11.7	2.5	0.0	0	75.8	7.8	16.4	0.0
BBB	281	65.8	31.0	3.2	0.0	0	80.4	8.6	11.0	0.1
BB	164	65.2	26.2	8.5	0.0	0	71.9	7.2	20.9	0.5
B	270	76.7	21.1	2.2	0.0	0	78.4	6.7	14.9	1.4
CCC	79	91.1	5.1	3.8	2.5	2	73.9	7.3	18.8	12.7
CC	5	60.0	0.0	40.0	40.0	2	52.6	5.3	42.1	31.6
Rating grade										
Investment-grade	1,241	81.7	15.5	2.8	0.0	0	80.8	5.4	13.7	0.0
Speculative-grade	518	75.1	20.1	4.8	0.8	4	74.5	7.0	18.4	2.4

Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

Structured credit

Over the past six years, the European structured credit sector has seen a high upgrade rate of consistently more than 10% per year, and 2016 was no exception. In 2016, we raised 29.3% of our European structured credit ratings that were outstanding at the beginning of the year, up from 25.7% in 2015 and reaching a new all-time high (see chart 11). At the same time, the European structured credit downgrade rate has been declining from year to year, falling to 4.0% in 2016—the lowest level since 2005.

The average change in credit quality continued to rise to +0.70 notches in 2016, up from +0.59 notches at the end of 2015 and a record high. European structured credit was one of the sectors with the most positive credit performance

globally on this measure.

Although the downgrade rate has been declining for European structured credit, the 2016 default rate ticked higher to 1.5%, up from only 0.3% a year earlier (see chart 12).

Credit performance in the overall European structured credit sector in 2016 continued to be somewhat polarized between CLOs—which have historically performed very well—and other types of structured credit transactions, which had performed poorly after 2007. In 2016, CLOs constituted more than half of the European structured credit sector and had a downgrade rate of only 1.7% with a default rate of 0.9% (eight defaults), compared with 15 defaults and a combined downgrade rate of 7.0% across the smaller structured credit subsectors, including structured finance CDOs, small and midsize enterprise (SME) CLOs, and various types of synthetic transactions (see table 4). In fact, the one-year average default rate for CLOs remains at only 0.1%, compared with 3.3% for structured finance CDOs, for example. As CLOs have evolved to become the largest subsector within European structured credit, so the aggregate performance statistics for the sector as a whole have also improved significantly.

Some of the higher structured credit upgrade rates were generally among the 2007 and earlier vintages, in which CLO transactions in particular are now amortizing, increasing the relative credit enhancement for the rated securities and therefore raising their creditworthiness, all else being equal.

Finally, all the 2016 defaults in European structured credit were on securities that we rated in the 'CCC' or 'CC' categories at the beginning of the year.

Chart 11

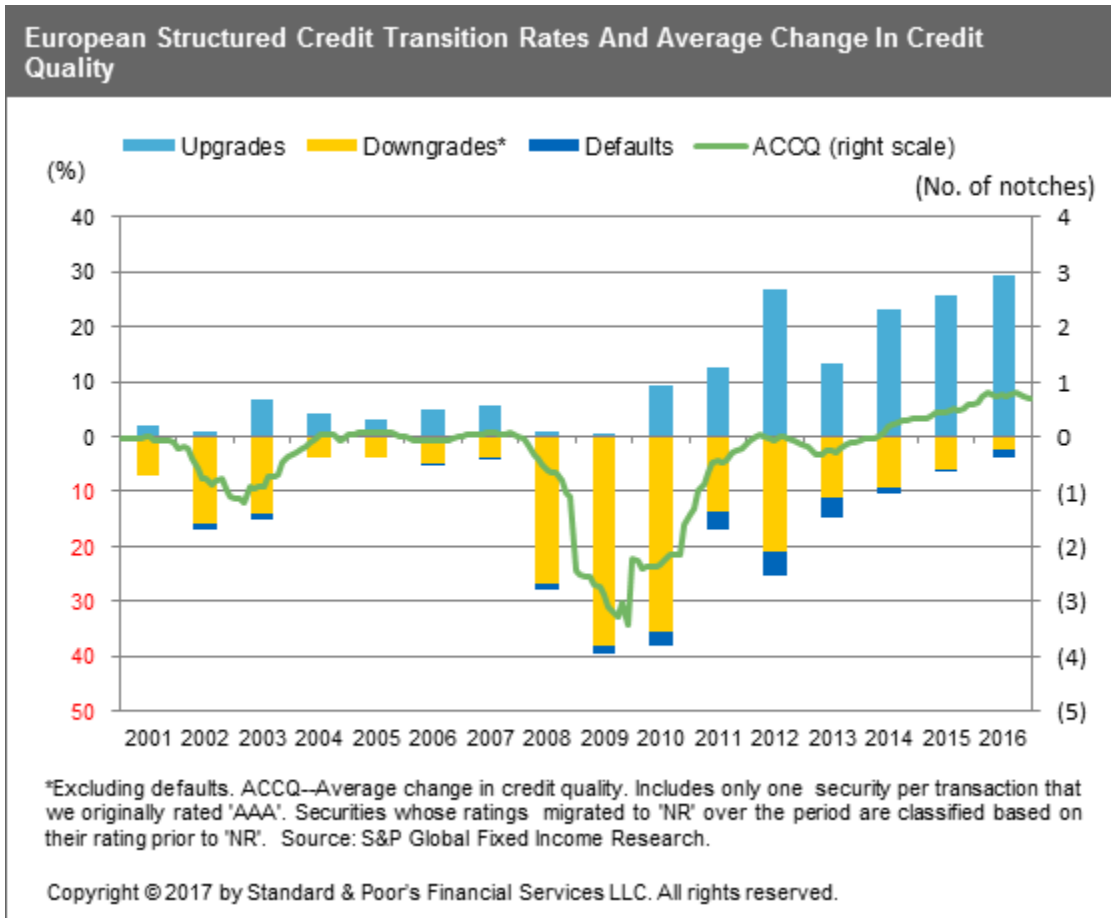


Chart 12

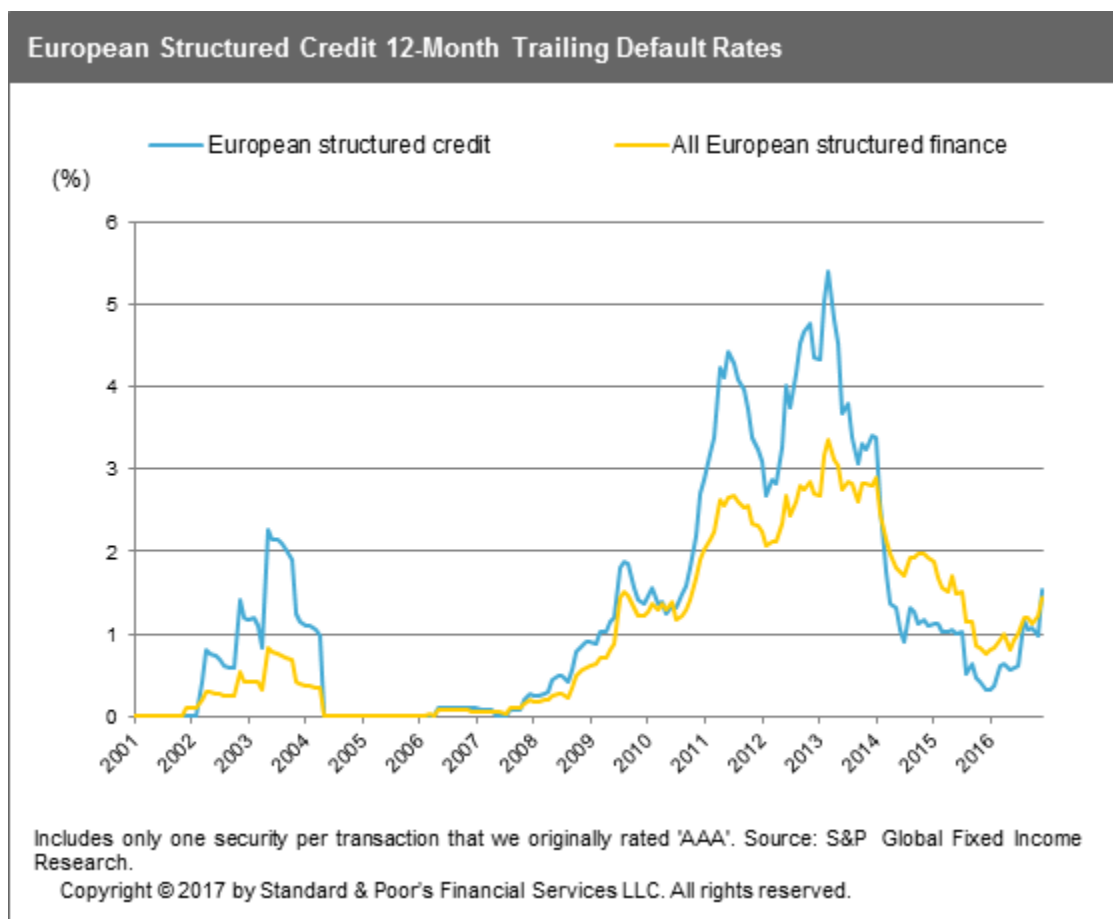


Table 4

European Structured Credit Transition And Default Summary

2016 vs. one-year average

	2016					One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Overall	1,505	66.7	29.3	4.0	1.5	23	71.6	9.7	18.7	1.5
Subsector										
Leveraged loan CLOs	865	63.4	34.9	1.7	0.9	8	68.9	18.1	12.9	0.1
Structured finance CDOs	194	57.2	37.1	5.7	4.6	9	68.4	5.9	25.7	3.3
SME CLOs	98	70.4	25.5	4.1	4.1	4	79.0	4.8	16.2	1.6
Other	348	79.3	12.1	8.6	0.6	2	72.7	7.1	20.1	1.7
Vintage										
Pre-2005	96	76.0	11.5	12.5	8.3	8	82.1	6.4	11.4	0.5
2005	116	62.1	31.9	6.0	3.4	4	69.1	9.1	21.9	1.8
2006	300	63.7	32.3	4.0	1.3	4	63.3	11.5	25.2	2.6

Table 4

European Structured Credit Transition And Default Summary (cont.)

	2016						One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	
2007	469	50.1	47.3	2.6	0.6	3	61.7	14.2	24.0	2.2	
2008	63	92.1	6.3	1.6	0.0	0	71.6	8.2	20.1	1.2	
2009	27	88.9	0.0	11.1	11.1	3	79.4	9.9	10.7	1.1	
2010	60	11.7	86.7	1.7	0.0	0	60.0	21.7	18.2	0.0	
2011	13	69.2	23.1	7.7	0.0	0	70.1	10.2	19.7	0.0	
2012	29	86.2	6.9	6.9	0.0	0	78.8	7.3	13.9	0.6	
2013	131	89.3	8.4	2.3	0.8	1	92.0	3.4	4.6	0.5	
2014	79	94.9	0.0	5.1	0.0	0	93.1	0.0	6.9	0.0	
2015	122	96.7	1.6	1.6	0.0	0	96.7	1.6	1.6	0.0	
Rating category											
AAA	129	100.0	0.0	0.0	0.0	0	84.3	0.0	15.7	0.3	
AA	265	53.6	42.3	4.2	0.0	0	71.6	9.1	19.2	0.2	
A	310	73.2	25.2	1.6	0.0	0	71.6	11.3	17.1	0.3	
BBB	252	60.3	36.5	3.2	0.0	0	67.0	12.7	20.4	0.3	
BB	181	62.4	35.9	1.7	0.0	0	65.8	14.8	19.4	0.4	
B	153	60.1	36.6	3.3	0.0	0	54.9	22.5	22.6	0.6	
CCC	188	67.0	20.2	12.8	10.1	19	67.4	13.0	19.6	7.7	
CC	27	85.2	0.0	14.8	14.8	4	65.7	1.2	33.0	33.0	
Rating grade											
Investment-grade	956	68.0	29.5	2.5	0.0	0	74.3	7.7	18.0	0.3	
Speculative-grade	549	64.5	29.0	6.6	4.2	23	64.2	15.0	20.8	4.8	

SME CLOs--CLOs backed by loans to small and mid-sized enterprises. Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

ABS

Credit performance for the European asset-backed securities (ABS) sector was positive in 2016, with upgrades exceeding downgrades. The upgrade rate more than doubled to 10.7% from 5.1% a year earlier, and the downgrade rate declined to 3.6% from 4.6% in 2015 (see chart 13). As a result, the annual average change in credit quality for 2016 was +0.17 notches, an all-time high for year-end readings.

There were no defaults in European ABS in 2016, and the default rate has historically remained low relative to other sectors in European structured finance. The notable exception was in 2014, when there was a pronounced uptick in defaults for the corporate securitization subsector, leading to an overall European ABS default rate of 2.5% for that year (see chart 14).

In terms of rating movements, the downgrade rate was highest for the credit card ABS subsector, at 14.0%. However, this was due to our lowering the ratings on only six tranches, following an update to our approach for rating European

credit card ABS. In the largest subsector--auto ABS--there were no downgrades in 2016 (see table 5).

Leaving aside downgrades related to criteria changes, most ABS downgrades were in the 2007 and earlier vintages, although these vintages also generally saw the highest upgrade rates, typically due to transaction deleveraging. There were no downgrades for tranches rated 'AAA' at the beginning of the year, and in other rating categories the 2016 downgrade rates were at or below their one-year weighted-averages.

Chart 13

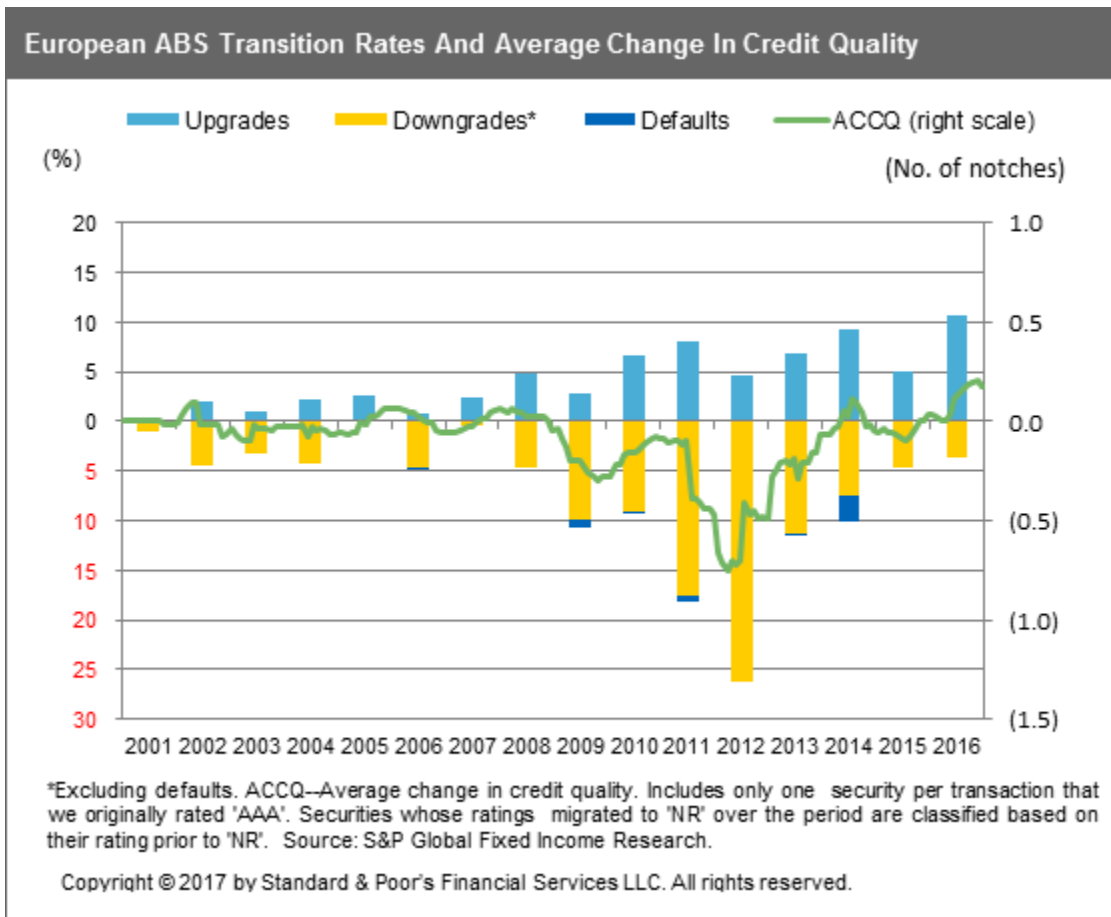


Chart 14

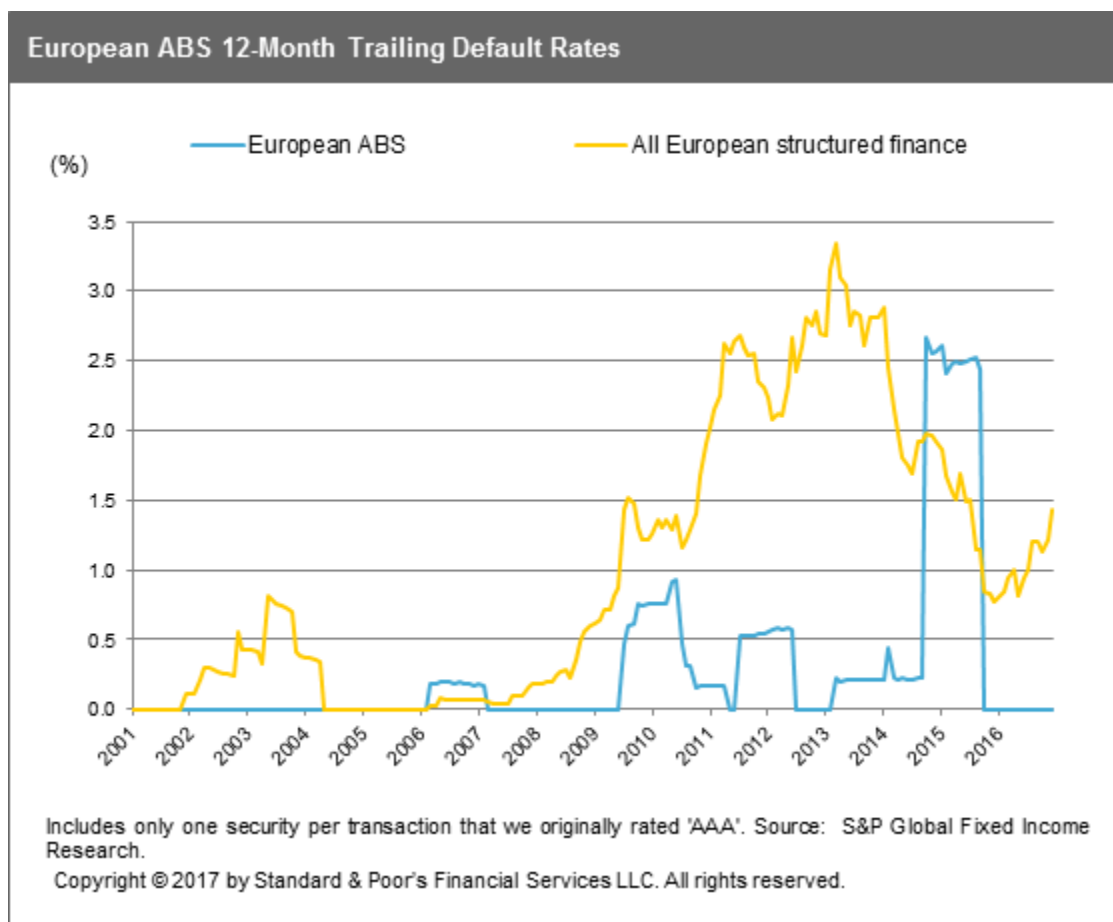


Table 5

European ABS Transition And Default Summary

2016 vs. one-year average

	2016					One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Overall	420	85.7	10.7	3.6	0.0	0	88.5	4.3	7.2	0.3
Subsector										
Auto	157	90.4	9.6	0.0	0.0	0	90.1	6.3	3.6	0.3
Corporate securitizations	107	81.3	11.2	7.5	0.0	0	84.6	3.4	12.0	0.9
Other consumer	51	82.4	15.7	2.0	0.0	0	88.5	4.3	7.2	0.1
Credit card	43	76.7	9.3	14.0	0.0	0	95.1	2.0	2.9	0.0
Other	62	90.3	9.7	0.0	0.0	0	85.5	4.1	10.3	0.1
Vintage										
Pre-2005	35	82.9	14.3	2.9	0.0	0	91.7	3.4	5.0	0.2
2005	22	54.5	22.7	22.7	0.0	0	85.7	3.6	10.8	0.1
2006	23	65.2	34.8	0.0	0.0	0	81.1	6.2	12.7	0.5

Table 5

European ABS Transition And Default Summary (cont.)

2016 vs. one-year average											
	2016						One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	
2007	11	63.6	18.2	18.2	0.0	0	79.5	3.6	16.9	1.5	
2008	9	88.9	11.1	0.0	0.0	0	87.6	5.3	7.1	0.2	
2009	7	100.0	0.0	0.0	0.0	0	84.7	5.0	10.3	0.0	
2010	2	100.0	0.0	0.0	0.0	0	82.0	9.3	8.7	0.0	
2011	13	92.3	7.7	0.0	0.0	0	85.7	8.6	5.7	0.0	
2012	48	100.0	0.0	0.0	0.0	0	94.6	2.8	2.5	0.0	
2013	71	83.1	16.9	0.0	0.0	0	89.6	8.5	1.9	0.0	
2014	89	87.6	9.0	3.4	0.0	0	92.7	4.5	2.8	0.0	
2015	90	92.2	3.3	4.4	0.0	0	92.2	3.3	4.4	0.0	
Rating category											
AAA	102	100.0	0.0	0.0	0.0	0	96.1	0.0	3.9	0.0	
AA	55	81.8	12.7	5.5	0.0	0	82.2	6.0	11.8	0.0	
A	135	80.0	15.6	4.4	0.0	0	87.9	6.4	5.7	0.0	
BBB	95	87.4	9.5	3.2	0.0	0	86.7	5.4	7.8	0.1	
BB	14	71.4	21.4	7.1	0.0	0	71.3	10.7	18.0	0.4	
B	9	77.8	11.1	11.1	0.0	0	66.1	9.9	24.0	4.1	
CCC	10	50.0	40.0	10.0	0.0	0	73.7	5.3	21.1	15.8	
CC	0	N/A	N/A	N/A	N/A	N/A	100.0	0.0	0.0	0.0	
Rating grade											
Investment-grade	387	87.3	9.6	3.1	0.0	0	89.7	4.0	6.4	0.0	
Speculative-grade	33	66.7	24.2	9.1	0.0	0	70.6	9.4	20.0	4.3	

Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. N/A--Not applicable. Source: S&P Global Fixed Income Research.

CMBS

European CMBS credit performance in 2016 was similar to the previous year, with the number of downgrades continuing to substantially exceed upgrades, and defaults remaining elevated. The upgrade rate declined to 1.8% from 4.4% in 2015. The downgrade rate fell to 25.6% from 29.9%, but the default rate increased to a new high of 10.7% from 8.1% in 2015 (see chart 15). Given the high proportion of downgrades and defaults, the 12-month trailing average change in credit quality continued to be strongly negative, measuring -0.78 notches at the end of 2016.

The European CMBS sector has seen its 12-month trailing default rate generally remain elevated at 7%-11% over the past few years, even as the default rate for European structured finance as a whole has gradually declined from its peak in 2013 (see chart 16).

In terms of downgrades, the weakness in CMBS credit performance was spread across subsectors. However, transactions backed solely by U.K. collateral saw proportionally fewer defaults than other CMBS subsectors in 2016,

with 11 defaults across 133 ratings for a default rate of 8.3%. By contrast, there were 19 defaults across 109 ratings in transactions backed by German or multi-country collateral, giving a default rate of 17.4% across these subsectors (see table 6).

One-year average downgrade and default rates have been highest in the 2007 vintage, which was the most exposed to lower lending standards before the financial crisis and subsequent falling real estate values, and where many loans have now reached maturity with borrowers unable to refinance, leading to loan defaults. Most European CMBS defaults in 2016 occurred on securities that we rated in the 'CCC' and 'CC' categories at the beginning of the year.

Chart 15

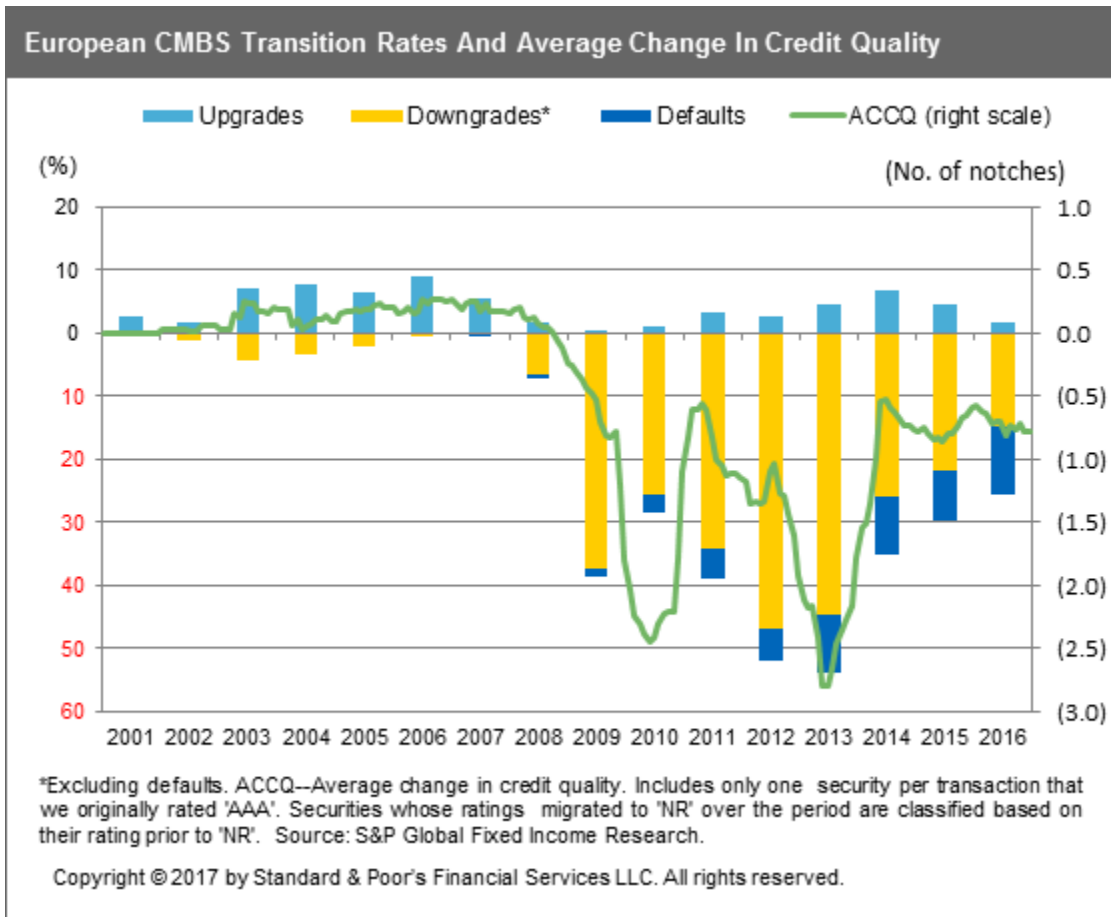


Chart 16

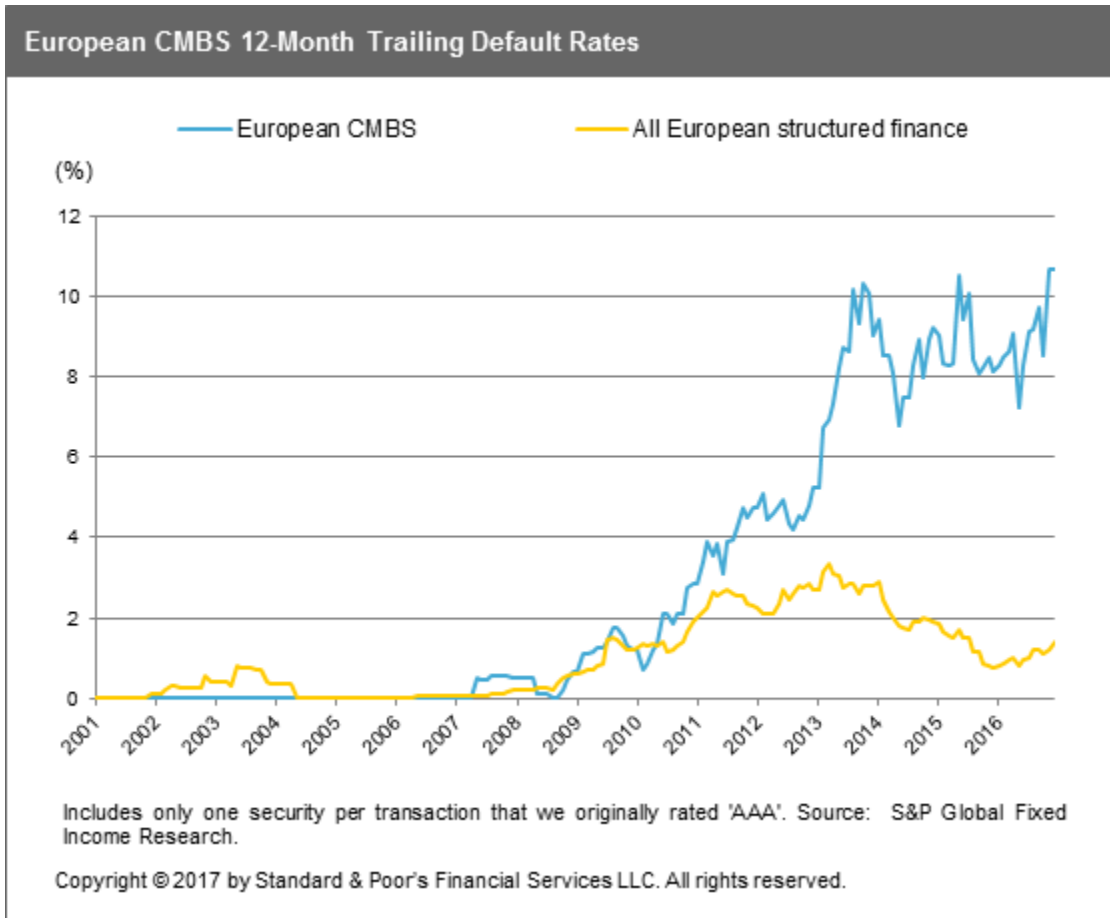


Table 6

European CMBS Transition And Default Summary

2016 vs. one-year average

	2016					One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Overall	281	72.6	1.8	25.6	10.7	30	73.2	3.7	23.1	3.1
Subsector										
U.K.	133	73.7	3.8	22.6	8.3	11	74.3	4.6	21.1	2.5
German	30	53.3	0.0	46.7	26.7	8	68.4	3.5	28.1	4.8
Multi-country	79	68.4	0.0	31.6	13.9	11	67.0	2.7	30.3	4.3
Other	39	92.3	0.0	7.7	0.0	0	81.0	2.7	16.3	1.9
Vintage										
Pre-2005	27	77.8	14.8	7.4	0.0	0	89.3	5.8	4.9	0.3
2005	20	85.0	0.0	15.0	0.0	0	75.0	5.6	19.4	2.0
2006	68	57.4	1.5	41.2	17.6	12	67.2	1.8	31.0	4.9
2007	99	64.6	0.0	35.4	15.2	15	57.5	1.6	40.9	5.9

Table 6

European CMBS Transition And Default Summary (cont.)

2016 vs. one-year average											
	2016						One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	
Post-2007	67	94.0	0.0	6.0	4.5	3	66.8	2.7	30.5	1.5	
Rating category											
AAA	10	100.0	0.0	0.0	0.0	0	87.7	0.0	12.3	0.0	
AA	28	96.4	0.0	3.6	0.0	0	77.7	5.2	17.1	0.1	
A	51	94.1	2.0	3.9	0.0	0	74.9	5.3	19.7	0.2	
BBB	41	75.6	9.8	14.6	2.4	1	74.3	5.0	20.7	0.8	
BB	34	82.4	0.0	17.6	2.9	1	66.0	4.1	29.9	2.2	
B	51	56.9	0.0	43.1	9.8	5	53.9	1.6	44.5	10.4	
CCC	59	50.8	0.0	49.2	28.8	17	47.2	0.6	52.2	36.5	
CC	7	14.3	0.0	85.7	85.7	6	24.0	0.0	76.0	76.0	
Rating grade											
Investment-grade	130	89.2	3.8	6.9	0.8	1	78.3	4.0	17.7	0.3	
Speculative-grade	151	58.3	0.0	41.7	19.2	29	58.1	2.6	39.3	11.6	

Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

Appendix I: Terminology, Data Selection, And Calculation Approaches

This Appendix discusses the data and calculations, and explains the terminology we use in this report.

This European structured finance default and ratings transition study uses our database of long-term, global scale issue credit ratings. We do not include national and regional scale ratings, which are not comparable between countries. The analysis also excludes public information ("pi") ratings, issuer credit ratings, and short-term issue ratings, such as those on asset-backed commercial paper (ABCP) conduits.

Our ongoing enhancement of the database used to generate this study occasionally leads to changes in the reported statistics from one edition of the study to the next. However, each study includes statistics for previous years, ensuring that the study is self-consistent and effectively supersedes all previous editions.

Issues included in this study

The study analyzes the rating histories of 16,476 European structured finance instruments that S&P Global Ratings first rated from 1982 until Dec. 31, 2016. The term "structured finance" in this report refers to ABS, CMBS, RMBS, structured credit, and single-name synthetic transactions. For some analyses, we break down these sectors further into subsectors.

Sector definitions

ABS includes underlying collateral types such as credit card receivables, auto loans, and leases. The sector also includes corporate securitizations.

RMBS includes transactions backed by residential mortgage loans. Structured credit includes CLOs, both cash and synthetic CDOs backed by exposures to corporate credit and/or other structured finance securities, as well as market-value CDOs and other leveraged funds. We include transactions backed by loans to SMEs in the structured credit sector, rather than the ABS sector.

Single-name synthetic transactions are also referred to as repackaged transactions (or "repacks"), especially in Europe. The definition of a repack in this instance is an issue backed by a single credit, where the rating on the note is directly linked to that on the underlying credit.

In this study, we no longer include structured covered bonds, which we previously treated as a separate sector.

Region definitions

This study presents rating transitions for European structured finance transactions. In defining a transaction's region, we use the location where we perform surveillance as the primary way to determine its region. We may also consider the transaction's issuer country (unless this is a tax-haven country such as the Cayman Islands) and/or its domicile of assets. In some cases, the domicile of assets may fail to provide additional insights into the region, especially when a transaction is backed by assets from more than one country.

Vintage definition

In this report we classify securities' vintage based on the date on which we first assigned a rating. Usually this is close to the security's original issuance date. However, in some cases we may first assign a rating to a security some time after closing.

Rating transitions

Our rating transition statistics use a "static pool" approach. To calculate the transition statistics over a given time period (or "transition window"), we consider the static pool of ratings outstanding at the beginning that time period. The transition statistics for that static pool of ratings are then based on the movements in ratings between the start and end of the transition window. For instance, we calculate the 2016 transition rates by determining the ratings on each security outstanding at the start of 2016 and determining the ratings on those same securities at the end of 2016. We then calculate statistics such as upgrade, downgrade, and stability rates, equivalent to the proportion of securities in the static pool whose ratings moved up, down, or remained that same respectively over the transition window. During this process, we count each security only once, even if the security experienced more than one rating change during the transition window being observed. In other words, we use a security's rating at the start and end of the transition window to calculate the transition rates, disregarding any interim rating changes.

Rating modifiers

We use rating modifiers ('+' and '-') to calculate the upgrade, downgrade, and stability rates quoted in the text, tables, and charts throughout this study. However, the transition matrices in Appendix II of this report show only the less granular full rating categories for practical reasons. In other words, we count transitions such as 'AA' to 'AA+' as an

upgrade and 'BBB+' to 'BBB-' as a downgrade, in the transition statistics we cite in this report. However, in the corresponding transition matrices, these transitions would appear in the cells corresponding to a stable rating category classification, such as 'AA' to 'AA', or 'BBB' to 'BBB'.

Rating discontinuance or withdrawal

We may discontinue ratings when, for example, a rated obligation's payments have been made in full in accordance with its terms or when a rated issue matures. Ratings may also be withdrawn, for example, because of a lack of sufficient information of satisfactory quality or at the issuer's request. In these cases, the rating may change to 'NR' (not rated). When we withdraw or discontinue ratings within the transition window under consideration we may either derive our reported statistics by classifying the rating transition as a move to 'NR' (the "NR-included" approach), or—for some other analyses—we may classify the transition as a move to the last "non-NR" rating before withdrawal or discontinuance (the "NR-adjusted" approach). In the text of this report, when we refer to upgrade and downgrade rates, for example, we use the latter approach. In the tables and charts, we clarify the approach used in the footnotes. We do not include a security with a withdrawn rating at the beginning of a transition window in the transition and default rate calculations for that period.

Treatment of 'AAA' ratings

In this study, we include the ratings history of all securities whose original rating was below the 'AAA' level. However, for each structured finance transaction we generally only include one of the securities that we originally rated 'AAA'. This is because some transactions historically had a disproportionate number of 'AAA'-rated tranches that were likely to exhibit similar or identical credit performance. By including only one such security per transaction we aim to avoid over-weighting their behavior in aggregate performance statistics.

Treatment of 'D' ratings

Counts of defaults and default rate statistics in this report are based on securities whose ratings we lowered to 'D'. For the purposes of this report, when a security's rating has moved to 'D', we consider this a terminal state and do not, for example, include such a security in any transition windows that start on a subsequent date. In practice, however, some securities whose ratings have migrated to 'D' may later once again be assigned a different rating. This can occur, for example, if the defaulted security is subsequently restructured to different terms, such as a lower coupon. In these cases, we treat the security's post-default rating history as if it were a new security, beginning from the date that the rating changed from 'D'. Where we segment statistics by vintage, however, we continue to base the vintage on the date we originally assigned a rating to the security.

Average change in credit quality calculation

Certain analyses in this study refer to the "average change in credit quality" of a set of structured finance securities over a given transition window. We define the average change in credit quality as the average number of rating notches by which ratings changed during the stated transition window, where we take the average across all ratings in the set under consideration (e.g., a particular sector). In this averaging, we count downgrades as a negative number of notches, whereas we count upgrades as a positive number. We consider stable ratings to have undergone a transition of zero notches. We believe this measure acts as a useful summary of the credit performance of, for example, a given sector, since it combines the relative number of ratings undergoing transition with the severity of that transition.

Weighted-average transition and default rate calculation

For weighted-average transition rates (including default rates), we calculate the individual transition rates for different static pools. We then calculate a single averaged transition rate, weighted by the number of ratings in each static pool. We use this technique, for example, to determine the five-year weighted-average transition rates by analyzing different static pools over different five-year periods and aggregating.

Average cumulative default rate calculation

In this report, we also calculate and present average cumulative default rates (CDRs) for different time horizons. For example, table 2 shows that the one-year average cumulative default rate for 'BBB'-rated European structured finance has been 0.28% and the three-year average has been 1.70%.

We first consider the static pool of ratings at the beginning of each calendar year. For each static pool, we calculate the marginal default rates for each calendar year after the static pool's formation. These one-year marginal default rates are "conditional on survival". For example, the marginal default rate for the third year is the number of defaults during the third year, divided by the number of ratings from the static pool that had "survived" (i.e., not moved to 'D') by the beginning of the third year. We then average the marginal default rates for each time horizon across static pools, weighting by the number of surviving ratings at the beginning of each time horizon, to give an average marginal default rate per time horizon, as well as average marginal survival rates (equal to one minus the average marginal default rate). Finally, the average cumulative default rate to each time horizon is calculated as one minus the product of marginal survival rates up to that time horizon.

We note that this approach differs from the calculations we use in constructing the weighted-average multi-year default and transition rates included elsewhere in this study (and as described above), where default rates are not conditional on survival.

Appendix II: Detailed Default And Transition Statistics

Tables 7-26 provide various default and transition rate statistics for European structured finance securities and major sectors.

European structured finance

Table 7

	European Structured Finance Cumulative Default Rates, Conditional On Survival, 1983-2016 (%)									
	Time horizon (years)									
	1	2	3	4	5	6	7	8	9	10
AAA	0.16	0.38	0.63	1.01	1.41	1.68	1.87	1.99	2.06	2.10
AA	0.13	0.36	0.78	1.31	2.11	2.74	3.19	3.45	3.59	3.72
A	0.14	0.43	0.88	1.40	2.14	2.85	3.50	3.90	4.12	4.29
BBB	0.28	0.87	1.70	2.77	4.18	5.42	6.51	7.35	8.00	8.51
BB	0.65	2.01	3.83	5.70	7.30	8.72	10.20	11.31	12.16	12.93
B	2.57	5.96	9.79	13.52	17.07	19.10	20.52	21.09	21.09	21.09
CCC	10.36	19.04	25.31	29.86	31.16	32.01	32.51	32.94	32.94	32.94
CC	34.71	54.15	67.01	69.56	69.85	69.85	69.85	69.85	69.85	69.85

Table 7

European Structured Finance Cumulative Default Rates, Conditional On Survival, 1983-2016 (%) (cont.)											
IG	0.17	0.49	0.96	1.55	2.33	2.98	3.52	3.87	4.10	4.28	
SG	5.03	9.57	13.49	16.52	18.37	19.69	20.87	21.75	22.41	22.99	
Overall	1.17	2.33	3.46	4.50	5.45	6.19	6.80	7.20	7.45	7.66	

IG--Investment-grade. SG--Speculative-grade. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

Table 8

European Structured Finance One-Year Default Rates, 1983-2016 (%)												
Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC	
1983	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1984	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1985	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1986	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1987	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1988	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1989	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1990	0.00	0.00	N/A	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1991	0.00	0.00	N/A	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A
1992	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A
1993	0.00	0.00	N/A	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1994	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A
1995	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	0.00	N/A	N/A	N/A
1996	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	0.00	N/A	N/A	N/A
1997	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
1998	0.25	0.00	16.67	0.00	0.00	0.00	0.00	33.33	0.00	N/A	N/A	N/A
1999	0.22	0.00	9.09	0.00	0.00	0.00	0.00	0.00	0.00	N/A	100.00	N/A
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2001	0.11	0.12	0.00	0.00	0.00	0.00	0.68	0.00	0.00	N/A	N/A	N/A
2002	0.43	0.15	4.08	0.00	0.00	0.00	0.75	2.15	50.00	33.33	N/A	N/A
2003	0.38	0.00	4.42	0.00	0.00	0.00	0.00	0.00	0.00	30.00	66.67	N/A
2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	0.07	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	8.33	100.00	N/A
2007	0.19	0.16	0.53	0.16	0.27	0.00	0.21	0.00	6.25	0.00	N/A	N/A
2008	0.60	0.58	0.76	0.76	0.32	0.50	0.70	0.15	2.67	6.25	0.00	N/A
2009	1.21	0.29	5.33	0.13	0.30	0.58	0.22	0.58	3.90	14.17	12.50	N/A
2010	1.91	0.23	5.98	0.00	0.25	0.20	0.50	1.50	3.50	10.55	14.74	N/A
2011	2.31	0.21	6.13	0.23	0.10	0.00	0.56	1.46	2.93	11.20	19.35	N/A
2012	2.70	0.20	7.12	0.00	0.10	0.14	0.57	1.08	2.76	7.75	54.55	N/A
2013	2.81	0.09	7.47	0.00	0.00	0.15	0.11	0.84	2.57	13.41	47.57	N/A
2014	1.91	0.00	5.28	0.00	0.00	0.00	0.00	0.00	2.87	10.06	46.81	N/A
2015	0.77	0.00	2.28	0.00	0.00	0.00	0.00	0.00	1.50	4.41	17.65	N/A
2016	1.43	0.04	4.47	0.00	0.00	0.00	0.15	0.25	1.03	11.31	30.77	N/A

Table 8

European Structured Finance One-Year Default Rates, 1983-2016 (%) (cont.)											
Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC
Weighted-average	1.17	0.17	5.03	0.16	0.13	0.14	0.28	0.65	2.57	10.36	34.71
Median	0.00	0.00	3.18	0.00	0.00	0.00	0.00	0.00	0.52	10.06	25.06
Std. dev.	0.85	0.12	4.17	0.14	0.10	0.15	0.27	7.39	10.50	9.72	34.26
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	2.81	0.58	16.67	0.76	0.32	0.58	0.75	33.33	50.00	33.33	100.00

IG--Investment-grade. SG--Speculative-grade. N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'.
Source: S&P Global Fixed Income Research.

Table 9

European Structured Finance Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2016										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	17.92	80.26	1.46	0.37	0.00	0.00	0.00	0.00	0.00	0.00
A	1.84	9.46	87.48	1.23	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	4.11	16.28	77.42	1.61	0.15	0.29	0.00	0.00	0.15
BB	0.25	0.00	3.55	18.53	72.84	4.57	0.00	0.00	0.00	0.25
B	0.00	0.21	0.41	4.75	12.81	77.48	3.10	0.21	0.00	1.03
CCC	0.00	0.00	0.00	1.49	1.19	7.74	74.70	3.57	0.00	11.31
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.23	0.00	30.77
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average										
AAA	88.40	6.23	2.48	1.21	0.55	0.41	0.56	0.01	0.00	0.16
AA	4.01	82.19	7.99	2.92	1.07	0.67	0.99	0.04	0.00	0.13
A	0.91	4.65	84.87	5.49	2.33	0.75	0.82	0.05	0.00	0.14
BBB	0.26	1.02	5.09	80.60	6.56	3.24	2.82	0.13	0.00	0.28
BB	0.18	0.14	0.98	6.76	72.86	11.07	7.11	0.25	0.00	0.65
B	0.00	0.04	0.13	1.58	8.20	72.70	14.18	0.58	0.02	2.57
CCC	0.02	0.02	0.00	0.28	1.22	6.47	76.31	5.33	0.00	10.36
CC	0.00	0.00	0.00	0.00	0.00	0.48	0.96	63.54	0.32	34.71
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two-year weighted-average										
AAA	78.58	9.95	5.22	2.18	1.02	0.66	1.92	0.08	0.00	0.38
AA	6.46	69.92	12.78	4.74	1.84	1.01	2.68	0.21	0.00	0.36
A	2.02	7.77	73.18	8.41	4.37	1.77	1.84	0.20	0.00	0.44
BBB	0.64	1.79	8.27	66.87	10.18	6.17	4.79	0.42	0.00	0.87
BB	0.44	0.34	2.01	10.92	54.91	16.92	11.92	0.48	0.03	2.03
B	0.00	0.12	0.39	3.13	12.69	56.14	20.13	1.25	0.02	6.12
CCC	0.00	0.04	0.04	0.60	2.59	10.12	60.58	7.04	0.02	18.97
CC	0.00	0.00	0.00	0.17	0.00	1.19	1.02	42.95	0.34	54.33
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 9

European Structured Finance Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
Three-year weighted-average										
AAA	70.91	12.66	7.55	2.88	1.52	0.97	2.68	0.18	0.00	0.64
AA	7.53	61.46	16.23	5.87	2.40	1.61	3.79	0.32	0.00	0.80
A	3.13	8.98	65.03	10.37	5.84	2.74	2.62	0.37	0.00	0.92
BBB	1.08	2.67	9.41	57.56	11.84	8.37	6.58	0.73	0.01	1.74
BB	0.64	0.69	2.96	12.10	44.25	19.30	15.09	0.96	0.04	3.96
B	0.00	0.22	0.86	4.53	13.42	46.79	21.90	1.78	0.03	10.48
CCC	0.00	0.05	0.21	0.92	3.65	10.13	52.47	6.81	0.05	25.71
CC	0.00	0.00	0.18	0.18	0.36	1.08	0.54	29.19	0.36	68.11
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average										
AAA	65.63	14.14	9.33	3.50	1.92	1.34	2.82	0.28	0.00	1.04
AA	8.01	55.70	18.65	6.28	2.86	2.29	4.36	0.48	0.00	1.37
A	3.87	9.67	59.41	11.49	6.62	3.59	3.25	0.58	0.00	1.50
BBB	1.62	3.12	9.58	51.91	12.20	9.64	8.04	0.98	0.02	2.89
BB	0.87	0.87	3.66	11.66	38.53	19.81	16.88	1.54	0.08	6.10
B	0.00	0.46	1.31	5.81	13.02	40.83	21.68	1.84	0.03	15.02
CCC	0.00	0.05	0.38	1.37	4.53	9.77	48.05	4.88	0.05	30.91
CC	0.00	0.00	0.39	0.00	0.79	1.18	0.20	25.59	0.00	71.85
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average										
AAA	62.22	14.75	10.60	4.05	2.23	1.59	2.88	0.23	0.00	1.45
AA	8.03	52.43	19.94	6.28	3.34	2.86	4.49	0.39	0.00	2.24
A	4.43	9.91	55.85	12.05	6.53	4.33	3.90	0.67	0.00	2.32
BBB	2.00	3.05	9.39	49.22	11.69	10.16	9.02	1.00	0.03	4.44
BB	1.35	1.33	3.72	10.14	36.08	19.51	18.08	1.75	0.10	7.94
B	0.04	0.87	1.77	6.10	12.03	36.78	20.60	1.77	0.04	19.99
CCC	0.00	0.10	0.57	2.09	5.14	9.51	44.69	4.98	0.03	32.89
CC	0.00	0.00	0.25	0.00	0.99	0.74	0.00	23.70	0.00	74.32
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average										
AAA	71.88	10.15	7.53	2.96	1.66	1.12	2.95	0.13	0.00	1.62
AA	11.34	59.95	12.50	4.54	2.41	2.06	4.37	0.09	0.00	2.74
A	6.97	13.32	58.31	7.34	3.61	3.15	3.56	0.63	0.00	3.10
BBB	2.38	3.66	12.58	57.10	6.00	5.23	6.08	1.10	0.10	5.76
BB	3.00	0.25	1.38	9.94	49.63	13.00	12.44	2.31	0.19	7.88
B	0.00	1.69	0.00	0.56	16.38	54.80	13.56	1.69	0.56	10.73
CCC	0.00	0.84	0.00	0.00	0.84	5.04	61.34	10.08	0.00	21.85
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.71	0.00	64.29

Table 9

European Structured Finance Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

Table 10

European Structured Finance Rating Transitions, 2016 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2016											
AAA	76.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.63
AA	14.99	67.46	1.46	0.37	0.00	0.00	0.00	0.00	0.00	0.00	15.72
A	1.31	9.11	65.50	1.14	0.00	0.00	0.00	0.00	0.00	0.00	22.94
BBB	0.00	3.96	15.54	63.20	1.61	0.15	0.29	0.00	0.00	0.15	15.10
BB	0.00	0.00	3.55	17.77	65.48	4.06	0.00	0.00	0.00	0.25	8.88
B	0.00	0.21	0.41	4.75	12.19	67.98	3.10	0.21	0.00	1.03	10.12
CCC	0.00	0.00	0.00	1.49	0.89	7.14	67.56	3.57	0.00	11.31	8.04
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.97	0.00	30.77	10.26
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average											
AAA	74.70	5.85	2.33	1.10	0.50	0.38	0.48	0.01	0.00	0.16	14.49
AA	3.45	70.29	7.54	2.75	1.03	0.63	0.93	0.04	0.00	0.13	13.22
A	0.70	4.26	74.41	5.19	2.25	0.68	0.78	0.04	0.00	0.14	11.54
BBB	0.15	0.89	4.65	71.10	6.20	3.13	2.66	0.11	0.00	0.28	10.83
BB	0.09	0.03	0.72	6.23	64.79	10.75	6.78	0.22	0.00	0.65	9.74
B	0.00	0.04	0.10	1.21	7.24	64.67	13.10	0.58	0.00	2.57	10.49
CCC	0.02	0.02	0.00	0.20	1.06	5.97	63.24	4.73	0.00	10.36	14.41
CC	0.00	0.00	0.00	0.00	0.00	0.32	0.96	54.46	0.00	34.71	9.55
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two-year weighted-average											
AAA	53.18	8.48	4.57	1.78	0.82	0.55	1.55	0.07	0.00	0.38	28.62
AA	4.43	48.58	11.21	4.10	1.61	0.87	2.29	0.19	0.00	0.36	26.36
A	1.28	6.18	54.51	7.42	4.10	1.59	1.68	0.16	0.00	0.44	22.63
BBB	0.26	1.22	6.85	49.65	9.13	5.74	4.10	0.32	0.00	0.87	21.86
BB	0.21	0.08	1.28	9.11	40.90	15.59	10.38	0.36	0.00	2.03	20.06
B	0.00	0.12	0.23	2.06	9.58	42.84	17.23	1.18	0.00	6.12	20.62
CCC	0.00	0.02	0.02	0.36	1.82	8.28	38.93	5.95	0.00	18.97	25.65
CC	0.00	0.00	0.00	0.17	0.00	0.85	1.02	28.35	0.00	54.33	15.28
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average											
AAA	35.70	9.75	6.15	2.00	1.05	0.73	1.89	0.16	0.00	0.64	41.93
AA	4.06	32.29	13.25	4.58	1.90	1.26	2.79	0.27	0.00	0.80	38.80

Table 10

European Structured Finance Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
A	1.59	5.94	39.27	8.58	5.24	2.36	2.11	0.29	0.00	0.92	33.71
BBB	0.41	1.63	6.79	33.90	9.96	7.48	5.23	0.58	0.00	1.74	32.29
BB	0.22	0.34	1.84	8.92	25.69	16.61	12.29	0.74	0.00	3.96	29.39
B	0.00	0.16	0.46	2.77	8.73	30.25	16.68	1.67	0.00	10.48	28.80
CCC	0.00	0.00	0.09	0.47	2.07	7.05	24.91	5.00	0.00	25.71	34.71
CC	0.00	0.00	0.00	0.18	0.36	0.72	0.54	11.53	0.00	68.11	18.56
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average											
AAA	22.86	9.68	6.97	2.10	1.18	0.92	1.46	0.23	0.00	1.04	53.55
AA	3.32	20.32	14.03	4.26	1.98	1.65	2.54	0.41	0.00	1.37	50.11
A	1.57	5.15	28.02	8.82	5.49	2.86	2.22	0.46	0.00	1.50	43.92
BBB	0.50	1.64	5.81	23.10	9.45	8.15	5.90	0.76	0.00	2.89	41.80
BB	0.25	0.51	2.09	7.52	16.63	16.00	12.88	1.19	0.00	6.10	36.84
B	0.00	0.23	0.75	3.25	6.69	21.97	14.23	1.67	0.00	15.02	36.18
CCC	0.00	0.00	0.08	0.59	2.33	5.77	16.02	2.17	0.00	30.91	42.13
CC	0.00	0.00	0.00	0.00	0.39	0.79	0.20	6.30	0.00	71.85	20.47
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average											
AAA	13.73	8.65	7.16	2.05	1.14	0.94	1.00	0.15	0.00	1.45	63.74
AA	2.17	12.16	13.76	3.44	2.04	1.79	1.95	0.30	0.00	2.24	60.14
A	1.42	4.05	19.82	8.56	4.80	3.14	2.11	0.47	0.00	2.32	53.30
BBB	0.58	1.22	4.64	16.37	8.28	8.13	5.97	0.68	0.00	4.44	49.68
BB	0.26	0.93	1.80	4.83	11.19	14.97	12.74	1.28	0.00	7.94	44.07
B	0.04	0.22	0.95	2.73	4.72	15.32	10.95	1.34	0.00	19.99	43.75
CCC	0.00	0.03	0.10	0.79	2.41	4.35	9.96	1.43	0.00	32.89	48.05
CC	0.00	0.00	0.00	0.00	0.49	0.49	0.00	5.19	0.00	74.32	19.51
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average											
AAA	1.95	2.54	3.45	0.74	0.22	0.21	0.15	0.02	0.00	1.62	89.10
AA	0.64	1.71	4.08	0.87	0.54	0.28	0.49	0.01	0.00	2.74	88.63
A	0.12	1.47	5.82	2.98	1.25	1.42	0.60	0.12	0.00	3.10	83.12
BBB	0.02	0.12	3.22	4.62	2.60	3.05	2.58	0.35	0.00	5.76	77.68
BB	0.00	0.00	0.06	1.38	1.38	7.44	5.94	1.13	0.00	7.88	74.81
B	0.00	0.00	0.00	0.00	0.00	2.26	2.26	0.56	0.00	10.73	84.18
CCC	0.00	0.00	0.00	0.00	0.00	0.00	1.68	0.00	0.00	21.85	76.47
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.29	35.71
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

European RMBS

Table 11

European RMBS Cumulative Default Rates, Conditional On Survival, 1988-2016 (%)										
	Time horizon (years)									
	1	2	3	4	5	6	7	8	9	10
AAA	0.05	0.08	0.10	0.10	0.10	0.10	0.12	0.12	0.12	0.12
AA	0.02	0.06	0.13	0.15	0.17	0.23	0.32	0.32	0.32	0.38
A	0.01	0.08	0.18	0.27	0.38	0.64	0.85	0.92	0.96	0.96
BBB	0.08	0.23	0.57	0.95	1.29	1.68	2.06	2.29	2.51	2.64
BB	0.46	1.37	2.57	3.42	4.38	4.97	5.80	6.62	6.81	6.81
B	1.43	3.36	5.63	7.99	11.30	14.93	15.84	15.84	15.84	15.84
CCC	12.73	23.54	28.36	30.65	31.16	31.81	31.81	31.81	31.81	31.81
CC	31.58	52.11	71.26	71.26	71.26	100.00	100.00	100.00	100.00	100.00
IG	0.04	0.11	0.23	0.34	0.44	0.60	0.77	0.83	0.89	0.93
SG	2.37	4.78	6.76	8.19	9.64	10.85	11.62	12.28	12.45	12.45
Overall	0.41	0.83	1.20	1.48	1.73	1.99	2.20	2.30	2.37	2.41

RMBS--Residential mortgage-backed security. IG--Investment-grade. SG--Speculative-grade. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

Table 12

European RMBS One-Year Default Rates, 1988-2016 (%)											
Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC
1988	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1989	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1990	0.00	0.00	N/A	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A
1991	0.00	0.00	N/A	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A
1992	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
1993	0.00	0.00	N/A	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A
1994	0.00	0.00	N/A	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A
1995	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	0.00	N/A	N/A
1996	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	0.00	N/A	N/A
1997	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
1998	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
1999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2006	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2009	1.09	0.04	8.33	0.00	0.00	0.00	0.19	0.94	7.14	47.62	N/A
2010	0.82	0.25	3.68	0.00	0.22	0.21	0.68	1.30	3.39	13.56	N/A

Table 12

European RMBS One-Year Default Rates, 1988-2016 (%) (cont.)											
Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC
2011	0.64	0.16	2.73	0.48	0.00	0.00	0.00	0.83	1.40	14.29	N/A
2012	0.29	0.00	1.29	0.00	0.00	0.00	0.00	0.38	0.63	9.76	0.00
2013	0.94	0.00	3.36	0.00	0.00	0.00	0.00	1.10	1.75	15.38	33.33
2014	1.03	0.00	3.56	0.00	0.00	0.00	0.00	0.00	2.07	15.87	60.00
2015	0.11	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.35	1.64	0.00
2016	0.23	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	2.53	40.00
Weighted-average	0.41	0.04	2.37	0.05	0.02	0.01	0.08	0.46	1.43	12.73	31.58
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.76	33.33
Std. dev.	0.35	0.05	2.07	0.09	0.04	0.04	0.14	0.43	1.79	13.87	26.25
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	1.09	0.25	8.33	0.48	0.22	0.21	0.68	1.30	7.14	47.62	60.00

IG--Investment-grade. SG--Speculative-grade. N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'.
Source: S&P Global Fixed Income Research.

Table 13

European RMBS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	
2016											
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AA	2.06	94.85	2.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
A	0.78	6.38	91.91	0.93	0.00	0.00	0.00	0.00	0.00	0.00	
BBB	0.00	1.78	21.00	75.09	1.78	0.36	0.00	0.00	0.00	0.00	
BB	0.00	0.00	4.27	19.51	69.51	6.71	0.00	0.00	0.00	0.00	
B	0.00	0.00	0.00	6.67	10.00	83.33	0.00	0.00	0.00	0.00	
CCC	0.00	0.00	0.00	0.00	0.00	5.06	92.41	0.00	0.00	2.53	
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	0.00	40.00	
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
One-year weighted-average											
AAA	91.46	5.85	2.12	0.37	0.07	0.08	0.00	0.00	0.00	0.05	
AA	2.21	85.46	10.74	1.04	0.30	0.18	0.06	0.00	0.00	0.02	
A	0.46	3.62	89.75	4.45	1.37	0.30	0.03	0.00	0.00	0.01	
BBB	0.06	0.34	5.64	85.17	6.68	1.96	0.06	0.00	0.00	0.08	
BB	0.00	0.00	0.37	5.10	76.61	15.22	2.13	0.09	0.00	0.46	
B	0.00	0.06	0.00	1.61	3.23	86.26	7.05	0.36	0.00	1.43	
CCC	0.00	0.00	0.00	0.00	0.40	6.26	79.80	0.81	0.00	12.73	
CC	0.00	0.00	0.00	0.00	0.00	5.26	0.00	52.63	10.53	31.58	
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Two-year weighted-average											
AAA	83.59	9.05	5.75	1.03	0.32	0.15	0.03	0.00	0.00	0.08	
AA	3.98	74.43	17.70	2.57	0.83	0.33	0.10	0.00	0.00	0.06	
A	1.05	6.58	80.88	7.49	2.69	1.08	0.13	0.00	0.00	0.08	

Table 13

European RMBS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
BBB	0.15	0.59	9.92	72.95	11.30	4.37	0.49	0.00	0.00	0.23
BB	0.00	0.00	0.70	8.74	58.26	25.62	5.02	0.20	0.05	1.41
B	0.00	0.14	0.07	2.35	5.20	75.64	12.18	0.78	0.00	3.63
CCC	0.00	0.00	0.00	0.00	0.96	11.78	61.06	0.72	0.24	25.24
CC	0.00	0.00	0.00	0.00	0.00	7.14	0.00	28.57	14.29	50.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average										
AAA	76.24	11.00	9.83	1.79	0.48	0.46	0.10	0.00	0.00	0.10
AA	5.25	65.81	22.83	3.84	1.26	0.76	0.09	0.02	0.00	0.13
A	1.92	8.89	73.21	9.23	4.37	1.96	0.23	0.00	0.00	0.20
BBB	0.29	0.99	13.34	63.55	13.22	6.96	1.04	0.02	0.00	0.59
BB	0.00	0.05	1.09	11.54	45.49	31.93	6.72	0.33	0.11	2.73
B	0.00	0.18	0.09	3.14	6.63	66.40	15.68	1.16	0.00	6.72
CCC	0.00	0.00	0.00	0.00	1.69	14.37	49.86	0.56	0.56	32.96
CC	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	18.18	72.73
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average										
AAA	70.04	11.87	13.66	2.70	0.61	0.80	0.21	0.00	0.00	0.10
AA	6.26	58.97	26.57	4.64	2.02	1.19	0.14	0.05	0.00	0.16
A	2.66	11.28	66.89	9.63	5.55	3.24	0.42	0.02	0.00	0.30
BBB	0.41	1.42	15.24	57.90	13.06	9.43	1.54	0.00	0.00	1.01
BB	0.06	0.06	1.33	12.52	38.90	33.39	9.01	0.60	0.24	3.87
B	0.00	0.24	0.36	3.87	6.78	60.17	17.19	1.09	0.00	10.29
CCC	0.00	0.00	0.00	0.00	3.08	16.44	41.44	0.68	0.68	37.67
CC	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	83.33
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average										
AAA	64.68	12.21	17.05	3.73	0.81	1.11	0.30	0.00	0.00	0.11
AA	6.82	53.83	29.45	4.97	2.83	1.60	0.25	0.05	0.00	0.20
A	3.38	13.12	61.53	9.85	6.13	4.43	1.07	0.02	0.00	0.46
BBB	0.57	1.69	16.76	54.54	11.44	11.34	2.21	0.05	0.00	1.40
BB	0.07	0.00	0.54	13.53	36.64	32.77	10.27	0.82	0.34	5.03
B	0.00	0.37	0.37	2.03	5.91	57.12	17.19	1.11	0.00	15.90
CCC	0.00	0.00	0.00	0.00	3.96	19.82	34.80	0.44	0.44	40.53
CC	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	66.67
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average										
AAA	73.68	8.37	14.24	2.61	0.30	0.42	0.38	0.00	0.00	0.00
AA	10.96	61.69	23.61	1.63	1.33	0.42	0.30	0.00	0.00	0.06
A	8.35	21.52	56.69	6.36	2.32	3.37	1.11	0.00	0.00	0.28

Table 13

European RMBS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
BBB	1.06	3.92	25.84	53.30	6.16	6.35	1.81	0.12	0.00	1.43
BB	0.00	0.00	1.55	17.39	38.82	31.37	6.21	0.00	0.62	4.04
B	0.00	0.00	0.00	0.00	9.38	78.13	9.38	0.00	0.00	3.13
CCC	0.00	0.00	0.00	0.00	0.00	0.00	28.57	0.00	0.00	71.43
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

Table 14

European RMBS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2016											
AAA	82.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.89
AA	2.06	85.57	2.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	9.28
A	0.78	6.07	67.03	0.93	0.00	0.00	0.00	0.00	0.00	0.00	25.19
BBB	0.00	1.42	20.64	59.43	1.78	0.36	0.00	0.00	0.00	0.00	16.37
BB	0.00	0.00	4.27	19.51	68.29	6.71	0.00	0.00	0.00	0.00	1.22
B	0.00	0.00	0.00	6.67	10.00	80.74	0.00	0.00	0.00	0.00	2.59
CCC	0.00	0.00	0.00	0.00	0.00	5.06	91.14	0.00	0.00	2.53	1.27
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	0.00	40.00	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average											
AAA	80.25	5.61	1.94	0.23	0.07	0.08	0.00	0.00	0.00	0.05	11.78
AA	2.05	75.64	10.38	0.94	0.30	0.18	0.00	0.00	0.00	0.02	10.50
A	0.42	3.47	81.69	4.25	1.36	0.30	0.01	0.00	0.00	0.01	8.47
BBB	0.06	0.32	5.42	76.99	6.30	1.92	0.06	0.00	0.00	0.08	8.84
BB	0.00	0.00	0.32	5.06	72.11	14.94	2.09	0.05	0.00	0.46	4.97
B	0.00	0.06	0.00	1.43	3.05	83.21	6.33	0.36	0.00	1.43	4.12
CCC	0.00	0.00	0.00	0.00	0.40	6.06	76.16	0.81	0.00	12.73	3.84
CC	0.00	0.00	0.00	0.00	0.00	5.26	0.00	52.63	0.00	31.58	10.53
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two-year weighted-average											
AAA	62.02	8.35	5.14	0.68	0.28	0.15	0.00	0.00	0.00	0.08	23.30
AA	3.09	56.07	16.58	2.30	0.79	0.33	0.02	0.00	0.00	0.06	20.76
A	0.83	5.72	66.87	6.87	2.61	1.07	0.06	0.00	0.00	0.08	15.88
BBB	0.11	0.51	8.95	57.58	10.47	4.24	0.42	0.00	0.00	0.23	17.49
BB	0.00	0.00	0.60	8.39	49.42	24.81	4.87	0.10	0.00	1.41	10.40
B	0.00	0.14	0.07	1.85	4.49	69.52	10.68	0.78	0.00	3.63	8.83
CCC	0.00	0.00	0.00	0.00	0.48	11.06	53.37	0.72	0.00	25.24	9.13
CC	0.00	0.00	0.00	0.00	0.00	7.14	0.00	28.57	0.00	50.00	14.29

Table 14

European RMBS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average											
AAA	45.37	9.69	8.69	1.16	0.39	0.44	0.00	0.00	0.00	0.10	34.16
AA	3.45	39.94	20.62	3.43	1.13	0.74	0.00	0.00	0.00	0.13	30.56
A	1.28	6.88	53.44	8.07	4.23	1.92	0.11	0.00	0.00	0.20	23.88
BBB	0.20	0.70	10.97	41.50	11.85	6.71	0.90	0.02	0.00	0.59	26.56
BB	0.00	0.05	0.93	10.55	32.91	30.02	6.45	0.22	0.00	2.73	16.13
B	0.00	0.18	0.09	2.24	5.47	57.71	13.62	1.16	0.00	6.72	12.81
CCC	0.00	0.00	0.00	0.00	0.56	12.68	38.03	0.56	0.00	32.96	15.21
CC	0.00	0.00	0.00	0.00	0.00	9.09	0.00	0.00	0.00	72.73	18.18
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average											
AAA	31.79	10.03	11.99	1.85	0.47	0.77	0.02	0.00	0.00	0.10	42.98
AA	3.24	26.78	23.04	3.99	1.81	1.15	0.02	0.00	0.00	0.16	39.81
A	1.32	7.53	41.70	7.93	5.37	3.10	0.24	0.02	0.00	0.30	32.49
BBB	0.19	0.82	11.08	29.86	11.08	8.87	1.37	0.00	0.00	1.01	35.71
BB	0.06	0.06	1.09	10.65	23.23	30.55	8.11	0.48	0.00	3.87	21.90
B	0.00	0.24	0.36	2.66	5.33	49.52	14.89	1.09	0.00	10.29	15.62
CCC	0.00	0.00	0.00	0.00	0.68	13.70	26.37	0.68	0.00	37.67	20.89
CC	0.00	0.00	0.00	0.00	0.00	16.67	0.00	0.00	0.00	83.33	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average											
AAA	20.85	9.81	14.84	2.60	0.61	1.02	0.02	0.00	0.00	0.11	50.14
AA	2.56	16.10	24.80	4.21	2.61	1.50	0.10	0.00	0.00	0.20	47.92
A	1.33	7.31	31.02	7.47	5.83	4.23	0.69	0.02	0.00	0.46	41.65
BBB	0.26	0.75	10.48	22.29	9.16	10.51	1.95	0.05	0.00	1.40	43.15
BB	0.00	0.00	0.27	8.57	17.68	29.16	8.97	0.68	0.00	5.03	29.64
B	0.00	0.37	0.37	0.37	4.07	43.81	15.16	1.11	0.00	15.90	18.85
CCC	0.00	0.00	0.00	0.00	0.44	14.98	18.06	0.44	0.00	40.53	25.55
CC	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	66.67	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average											
AAA	2.46	5.76	10.22	1.63	0.19	0.27	0.11	0.00	0.00	0.00	79.36
AA	0.72	1.27	12.77	1.33	1.27	0.36	0.18	0.00	0.00	0.06	82.05
A	0.11	3.15	13.50	4.09	2.21	2.77	0.83	0.00	0.00	0.28	73.06
BBB	0.00	0.06	8.72	7.29	4.67	5.54	1.43	0.12	0.00	1.43	70.73
BB	0.00	0.00	0.31	4.35	2.17	28.26	5.28	0.00	0.00	4.04	55.59
B	0.00	0.00	0.00	0.00	0.00	9.38	9.38	0.00	0.00	3.13	78.13
CCC	0.00	0.00	0.00	0.00	0.00	0.00	28.57	0.00	0.00	71.43	0.00
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 14

European RMBS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

European structured credit

Table 15

European Structured Credit Cumulative Default Rates, Conditional On Survival, 1987-2016 (%)

	Time horizon (years)									
	1	2	3	4	5	6	7	8	9	10
AAA	0.33	0.76	1.24	1.98	2.69	3.13	3.40	3.57	3.64	3.69
AA	0.24	0.65	1.39	2.22	3.56	4.46	5.04	5.32	5.45	5.56
A	0.31	0.85	1.58	2.36	3.49	4.37	5.15	5.55	5.63	5.73
BBB	0.27	0.85	1.59	2.63	4.13	5.20	6.18	6.90	7.44	8.13
BB	0.38	0.91	1.84	2.93	3.75	4.61	5.75	6.73	7.81	8.85
B	0.64	2.05	3.69	5.45	7.71	8.13	8.48	8.48	8.48	8.48
CCC	7.73	15.03	21.01	25.89	27.35	28.27	28.84	29.33	29.33	29.33
CC	33.04	53.13	66.67	69.42	69.73	69.73	69.73	69.73	69.73	69.73
IG	0.29	0.77	1.43	2.26	3.39	4.17	4.75	5.09	5.26	5.44
SG	4.84	9.06	12.63	15.30	16.56	17.33	18.13	18.84	19.63	20.38
Overall	1.52	3.00	4.42	5.71	6.86	7.63	8.24	8.62	8.85	9.09

IG--Investment-grade. SG--Speculative-grade. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

Table 16

European Structured Credit One-Year Default Rates, 1987-2016 (%)

Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC
1987	0.00	0.00	N/A	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1988	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1989	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1990	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1991	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1992	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1993	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1994	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1995	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1996	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1997	0.00	0.00	N/A	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A
1998	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
1999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2002	1.21	0.29	5.97	0.00	0.00	0.00	1.23	3.17	100.00	33.33	N/A
2003	1.15	0.00	6.20	0.00	0.00	0.00	0.00	0.00	0.00	31.58	66.67

Table 16

European Structured Credit One-Year Default Rates, 1987-2016 (%) (cont.)											
Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC
2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	0.09	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	4.76	100.00
2007	0.27	0.29	0.00	0.28	0.44	0.00	0.33	0.00	0.00	0.00	N/A
2008	0.91	0.93	0.71	1.31	0.53	1.02	0.70	0.00	0.00	13.64	0.00
2009	1.36	0.49	4.00	0.17	0.56	1.33	0.11	0.36	0.95	9.80	6.67
2010	2.71	0.17	6.29	0.00	0.21	0.16	0.31	1.25	0.78	9.85	14.89
2011	3.22	0.18	6.04	0.00	0.00	0.00	0.69	0.64	0.53	9.77	18.70
2012	4.35	0.28	8.44	0.00	0.27	0.19	0.54	0.50	0.62	6.04	56.46
2013	3.40	0.16	7.14	0.00	0.00	0.22	0.28	0.33	1.02	7.25	48.39
2014	1.11	0.00	2.53	0.00	0.00	0.00	0.00	0.00	0.87	1.96	37.84
2015	0.32	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	1.72	4.35
2016	1.53	0.00	4.19	0.00	0.00	0.00	0.00	0.00	0.00	10.11	14.81
Weighted-average	1.52	0.29	4.84	0.33	0.24	0.31	0.27	0.38	0.64	7.73	33.04
Median	0.00	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	7.25	14.89
Std. dev.	1.20	0.20	3.03	0.25	0.17	0.37	0.34	0.78	23.51	10.35	31.36
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	4.35	0.93	8.44	1.31	0.56	1.33	1.23	3.17	100.00	33.33	100.00

IG--Investment-grade. SG--Speculative-grade. N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'.
Source: S&P Global Fixed Income Research.

Table 17

European Structured Credit Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2016										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	33.96	65.66	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	4.84	17.74	77.10	0.32	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	7.54	19.84	71.43	1.19	0.00	0.00	0.00	0.00	0.00
BB	0.55	0.00	3.87	22.10	72.38	1.10	0.00	0.00	0.00	0.00
B	0.00	0.65	1.31	2.61	22.22	72.55	0.65	0.00	0.00	0.00
CCC	0.00	0.00	0.00	1.60	2.13	11.70	71.81	2.66	0.00	10.11
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.19	0.00	14.81
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average										
AAA	84.30	6.78	3.02	2.26	1.15	0.87	1.26	0.02	0.00	0.33
AA	5.58	77.78	6.74	4.59	1.87	1.20	1.93	0.06	0.00	0.24
A	1.31	6.76	77.80	6.50	3.74	1.33	2.12	0.13	0.00	0.31
BBB	0.36	1.76	6.22	74.22	6.35	4.15	6.41	0.26	0.00	0.27
BB	0.19	0.24	1.44	8.66	71.13	6.92	10.75	0.29	0.00	0.38
B	0.00	0.05	0.27	2.09	14.27	64.79	17.26	0.64	0.00	0.64

Table 17

European Structured Credit Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
CCC	0.02	0.00	0.00	0.30	1.43	7.12	77.46	5.94	0.00	7.73
CC	0.00	0.00	0.00	0.00	0.00	0.17	1.05	65.73	0.00	33.04
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two-year weighted-average										
AAA	71.87	10.58	5.34	3.68	1.91	1.37	4.31	0.17	0.00	0.76
AA	8.59	63.27	10.68	6.60	2.83	1.63	5.33	0.41	0.00	0.65
A	2.90	10.41	62.27	9.53	6.59	2.45	4.52	0.46	0.00	0.86
BBB	0.93	3.23	9.26	57.91	9.60	7.15	10.12	0.94	0.00	0.86
BB	0.43	0.60	3.08	13.89	53.21	10.73	16.54	0.60	0.00	0.93
B	0.00	0.10	0.78	4.39	21.83	46.48	23.05	1.27	0.00	2.10
CCC	0.00	0.03	0.05	0.67	2.97	10.77	62.58	8.01	0.00	14.93
CC	0.00	0.00	0.00	0.18	0.00	0.73	1.10	44.22	0.00	53.76
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average										
AAA	63.31	13.43	6.75	4.45	2.74	1.72	5.95	0.40	0.00	1.26
AA	9.49	53.96	13.78	7.54	3.46	2.20	7.51	0.64	0.00	1.43
A	4.41	10.42	52.82	12.24	8.00	3.52	6.08	0.86	0.00	1.65
BBB	1.67	4.89	8.75	47.41	11.92	9.14	12.95	1.61	0.00	1.65
BB	0.69	1.16	4.50	14.56	43.14	12.47	20.33	1.24	0.00	1.91
B	0.00	0.22	1.69	6.66	21.49	40.10	24.06	1.80	0.00	3.98
CCC	0.00	0.03	0.25	1.03	4.10	10.39	55.01	7.82	0.00	21.36
CC	0.00	0.00	0.19	0.19	0.38	0.57	0.57	29.69	0.00	68.39
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average										
AAA	58.04	15.28	7.53	4.93	3.40	2.09	6.08	0.62	0.00	2.01
AA	9.63	48.37	15.83	7.72	3.63	3.07	8.46	0.96	0.00	2.32
A	5.18	9.54	47.40	14.38	8.67	3.80	7.11	1.36	0.00	2.55
BBB	2.65	5.55	7.44	41.00	13.54	10.07	14.85	2.11	0.00	2.79
BB	1.00	1.52	5.50	13.43	37.39	13.94	22.13	1.95	0.00	3.15
B	0.00	0.56	2.31	8.36	19.59	36.49	24.45	2.06	0.00	6.18
CCC	0.00	0.03	0.43	1.52	4.93	9.62	50.48	5.49	0.00	27.49
CC	0.00	0.00	0.41	0.00	0.82	0.62	0.21	25.36	0.00	72.58
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average										
AAA	55.79	15.77	7.94	5.27	3.70	2.24	6.02	0.53	0.00	2.74
AA	9.24	46.18	16.38	7.59	3.97	3.60	8.52	0.75	0.00	3.77
A	5.55	8.43	44.90	15.31	8.49	4.34	7.59	1.50	0.00	3.88
BBB	3.31	5.13	5.66	38.60	14.28	10.32	16.24	2.00	0.00	4.46
BB	1.82	2.32	5.90	10.19	34.52	14.80	23.96	2.26	0.00	4.23
B	0.08	1.15	2.98	9.63	16.90	34.10	24.08	1.83	0.00	9.25

Table 17

European Structured Credit Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
CCC	0.00	0.07	0.64	2.28	5.45	8.86	46.53	5.45	0.00	30.72
CC	0.00	0.00	0.26	0.00	1.02	0.26	0.00	23.47	0.00	75.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average										
AAA	66.13	8.30	6.01	4.51	3.27	1.92	6.28	0.30	0.00	3.30
AA	13.09	50.25	8.88	6.68	3.74	3.71	8.55	0.18	0.00	4.93
A	6.09	11.68	47.30	8.21	6.38	4.30	7.92	1.48	0.00	6.63
BBB	2.97	4.77	5.83	49.74	7.63	6.04	12.61	2.54	0.00	7.89
BB	3.22	0.21	0.86	8.69	48.61	10.52	17.92	3.65	0.00	6.33
B	0.00	0.00	0.00	0.00	17.71	53.13	21.88	3.13	0.00	4.17
CCC	0.00	0.00	0.00	0.00	0.97	5.83	65.05	11.65	0.00	16.50
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.27	0.00	72.73
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

Table 18

European Structured Credit Rating Transitions, 2016 And Multi-Year Averages, NR Included (%)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2016											
AAA	69.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.23
AA	28.30	51.70	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.62
A	2.90	17.74	58.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.97
BBB	0.00	7.54	18.25	59.13	1.19	0.00	0.00	0.00	0.00	0.00	13.89
BB	0.00	0.00	3.87	20.44	60.22	0.55	0.00	0.00	0.00	0.00	14.92
B	0.00	0.65	1.31	2.61	20.26	55.56	0.65	0.00	0.00	0.00	18.95
CCC	0.00	0.00	0.00	1.60	1.60	10.64	61.17	2.66	0.00	10.11	12.23
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.07	0.00	14.81	11.11
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average											
AAA	70.20	6.46	2.92	2.14	1.02	0.81	1.06	0.02	0.00	0.33	15.03
AA	4.84	66.28	6.30	4.30	1.80	1.13	1.86	0.06	0.00	0.24	13.20
A	1.03	6.34	66.73	6.13	3.64	1.21	2.03	0.12	0.00	0.31	12.47
BBB	0.18	1.61	5.65	64.79	6.02	3.92	6.04	0.24	0.00	0.27	11.26
BB	0.10	0.05	1.05	7.78	62.21	6.68	10.32	0.26	0.00	0.38	11.18
B	0.00	0.05	0.23	1.45	12.36	53.16	16.17	0.64	0.00	0.64	15.31
CCC	0.02	0.00	0.00	0.20	1.23	6.55	62.32	5.22	0.00	7.73	16.72
CC	0.00	0.00	0.00	0.00	0.00	0.17	1.05	56.64	0.00	33.04	9.09
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 18

European Structured Credit Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
Two-year weighted-average											
AAA	46.64	9.12	4.70	3.04	1.48	1.12	3.49	0.14	0.00	0.76	29.51
AA	5.91	43.19	8.87	5.51	2.41	1.37	4.63	0.37	0.00	0.65	27.09
A	1.93	8.62	43.43	8.23	6.24	2.08	4.17	0.39	0.00	0.86	24.05
BBB	0.35	2.29	7.68	41.89	8.35	6.41	8.65	0.74	0.00	0.86	22.78
BB	0.18	0.15	2.00	11.13	38.68	9.51	14.34	0.43	0.00	0.93	22.67
B	0.00	0.10	0.44	2.59	16.16	28.37	19.14	1.17	0.00	2.10	29.93
CCC	0.00	0.03	0.03	0.39	2.12	8.73	38.04	6.71	0.00	14.93	29.03
CC	0.00	0.00	0.00	0.18	0.00	0.73	1.10	29.91	0.00	53.76	14.31
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average											
AAA	29.01	10.49	5.18	3.00	1.77	1.21	4.26	0.34	0.00	1.26	43.46
AA	4.91	26.64	10.55	5.43	2.56	1.56	5.55	0.56	0.00	1.43	40.80
A	2.39	7.23	28.10	9.98	7.05	2.73	4.92	0.69	0.00	1.65	35.26
BBB	0.60	3.14	6.13	26.51	9.66	7.64	10.03	1.31	0.00	1.65	33.35
BB	0.21	0.56	2.81	9.93	24.22	10.01	16.38	0.98	0.00	1.91	33.01
B	0.00	0.16	0.87	3.76	13.53	18.66	16.37	1.69	0.00	3.98	40.97
CCC	0.00	0.00	0.11	0.50	2.37	7.09	24.35	5.72	0.00	21.36	38.48
CC	0.00	0.00	0.00	0.19	0.38	0.57	0.57	12.26	0.00	68.39	17.62
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average											
AAA	16.30	10.75	4.85	2.56	1.90	1.22	3.21	0.51	0.00	2.01	56.70
AA	3.80	15.29	11.01	4.55	2.12	1.88	4.84	0.85	0.00	2.32	53.33
A	2.41	5.04	18.26	10.92	6.65	2.46	4.74	1.08	0.00	2.55	45.90
BBB	0.83	3.09	4.09	16.36	10.17	7.72	10.22	1.69	0.00	2.79	43.05
BB	0.29	0.86	3.06	7.84	15.23	10.51	16.49	1.52	0.00	3.15	41.05
B	0.00	0.25	1.25	4.30	9.36	12.54	13.23	1.87	0.00	6.18	51.03
CCC	0.00	0.00	0.09	0.62	2.64	5.43	15.54	2.42	0.00	27.49	45.76
CC	0.00	0.00	0.00	0.00	0.41	0.62	0.21	6.60	0.00	72.58	19.59
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average											
AAA	8.28	9.61	3.89	1.86	1.55	0.99	2.10	0.34	0.00	2.74	68.63
AA	2.25	8.52	10.05	3.16	1.76	1.69	3.45	0.60	0.00	3.77	64.75
A	2.06	2.94	12.70	10.80	5.30	2.23	3.57	1.08	0.00	3.88	55.45
BBB	1.03	2.16	1.98	10.89	9.82	7.23	9.70	1.37	0.00	4.46	51.36
BB	0.41	1.60	2.85	4.20	9.44	10.54	16.18	1.66	0.00	4.23	48.89
B	0.08	0.23	1.53	4.51	6.19	7.57	8.87	1.22	0.00	9.25	60.55
CCC	0.00	0.04	0.11	0.82	2.67	3.67	9.43	1.53	0.00	30.72	51.01
CC	0.00	0.00	0.00	0.00	0.51	0.26	0.00	5.36	0.00	75.00	18.88
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 18

European Structured Credit Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
10-year weighted-average											
AAA	1.33	1.40	0.89	0.39	0.25	0.17	0.22	0.05	0.00	3.30	92.00
AA	0.95	0.86	1.04	0.47	0.36	0.33	0.71	0.03	0.00	4.93	90.32
A	0.25	1.43	1.63	2.03	0.84	1.09	0.59	0.25	0.00	6.63	85.25
BBB	0.05	0.16	0.48	2.49	1.96	2.22	4.56	0.79	0.00	7.89	79.40
BB	0.00	0.00	0.00	0.75	1.39	2.90	7.62	1.82	0.00	6.33	79.18
B	0.00	0.00	0.00	0.00	0.00	1.04	1.04	1.04	0.00	4.17	92.71
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.50	83.50
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.73	27.27
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

European ABS

Table 19

European ABS Cumulative Default Rates, Conditional On Survival, 1987-2016 (%)											
	Time horizon (years)										
	1	2	3	4	5	6	7	8	9	10	
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	
AA	0.00	0.00	0.00	0.12	0.12	0.12	0.12	0.12	0.12	0.12	
A	0.00	0.04	0.09	0.14	0.30	0.53	0.71	0.93	1.17	1.46	
BBB	0.12	0.32	0.60	1.05	1.85	2.61	3.35	3.97	4.72	5.49	
BB	0.37	0.76	4.04	7.18	7.66	7.66	7.66	7.66	7.66	7.66	
B	4.13	7.72	12.73	15.09	15.09	15.09	15.09	15.09	15.09	15.09	
CCC	15.79	32.63	38.62	38.62	38.62	38.62	38.62	38.62	38.62	38.62	
CC	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	100.00	100.00	
IG	0.03	0.08	0.15	0.28	0.49	0.72	0.95	1.14	1.36	1.60	
SG	4.29	8.47	12.57	15.05	15.38	15.38	15.38	15.38	15.38	15.38	
Overall	0.28	0.58	0.88	1.12	1.34	1.56	1.78	1.97	2.18	2.41	

IG--Investment-grade. SG--Speculative-grade. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

Table 20

European ABS One-Year Default Rates, 1987-2016 (%)											
Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC
1987	0.00	0.00	N/A	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1988	0.00	0.00	N/A	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1989	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1990	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1991	0.00	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A	N/A	N/A
1992	0.00	0.00	N/A	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A
1993	0.00	0.00	N/A	0.00	0.00	0.00	N/A	N/A	N/A	N/A	N/A
1994	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A

Table 20

European ABS One-Year Default Rates, 1987-2016 (%) (cont.)											
Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC
1995	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
1996	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
1997	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
1998	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
1999	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
2000	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2006	0.17	0.00	11.11	0.00	0.00	0.00	0.00	0.00	N/A	100.00	N/A
2007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2009	0.75	0.16	10.81	0.00	0.00	0.00	0.63	0.00	25.00	60.00	N/A
2010	0.17	0.00	2.27	0.00	0.00	0.00	0.00	0.00	0.00	50.00	N/A
2011	0.55	0.20	4.17	0.00	0.00	0.00	1.02	3.45	0.00	50.00	N/A
2012	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2013	0.21	0.00	1.59	0.00	0.00	0.00	0.00	0.00	4.17	0.00	0.00
2014	2.56	0.00	20.69	0.00	0.00	0.00	0.00	0.00	18.75	40.91	N/A
2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
Weighted-average	0.28	0.03	4.29	0.00	0.00	0.00	0.12	0.37	4.13	15.79	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Std. dev.	0.49	0.05	5.96	0.00	0.00	0.00	0.24	0.86	8.54	34.02	N/A
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	2.56	0.20	20.69	0.00	0.00	0.00	1.02	3.45	25.00	100.00	0.00

IG--Investment-grade. SG--Speculative-grade. N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'.
Source: S&P Global Fixed Income Research.

Table 21

European ABS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2016										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	7.27	87.27	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.74	8.89	85.93	4.44	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.00	1.05	98.95	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.00	7.14	85.71	7.14	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	11.11	0.00	88.89	0.00	0.00	0.00	0.00
CCC	0.00	0.00	0.00	20.00	0.00	0.00	70.00	10.00	0.00	0.00

Table 21

European ABS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average										
AAA	96.09	3.08	0.68	0.04	0.04	0.00	0.08	0.00	0.00	0.00
AA	3.57	90.14	5.60	0.39	0.10	0.00	0.19	0.00	0.00	0.00
A	1.03	4.33	91.09	2.97	0.33	0.17	0.08	0.00	0.00	0.00
BBB	0.19	0.31	2.23	92.69	3.10	1.05	0.19	0.12	0.00	0.12
BB	0.00	0.00	0.00	6.62	79.04	11.03	2.94	0.00	0.00	0.37
B	0.00	0.00	0.00	2.48	6.61	75.21	10.74	0.00	0.83	4.13
CCC	0.00	0.00	0.00	2.11	1.05	0.00	80.00	1.05	0.00	15.79
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two-year weighted-average										
AAA	92.42	5.21	1.78	0.32	0.12	0.00	0.16	0.00	0.00	0.00
AA	6.43	84.59	7.55	0.82	0.20	0.00	0.41	0.00	0.00	0.00
A	2.14	8.00	83.61	4.59	0.96	0.44	0.17	0.04	0.00	0.04
BBB	0.46	0.72	3.88	86.97	4.28	2.50	0.66	0.20	0.00	0.33
BB	0.00	0.00	0.00	8.14	68.99	14.34	7.36	0.00	0.39	0.78
B	0.00	0.00	0.00	8.93	5.36	60.71	16.07	0.00	0.89	8.04
CCC	0.00	0.00	0.00	2.35	2.35	0.00	60.00	1.18	0.00	34.12
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average										
AAA	89.25	7.15	2.52	0.50	0.29	0.04	0.25	0.00	0.00	0.00
AA	8.76	80.54	8.22	1.08	0.65	0.11	0.65	0.00	0.00	0.00
A	3.07	10.55	77.88	5.90	1.12	0.84	0.46	0.09	0.00	0.09
BBB	0.77	1.12	5.03	82.45	4.83	3.15	1.68	0.28	0.07	0.63
BB	0.00	0.00	0.00	9.43	63.93	15.16	6.97	0.00	0.41	4.10
B	0.00	0.00	0.00	9.90	6.93	52.48	15.84	0.00	0.99	13.86
CCC	0.00	0.00	0.00	2.70	2.70	0.00	48.65	1.35	0.00	44.59
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average										
AAA	86.77	8.81	2.82	0.69	0.48	0.09	0.35	0.00	0.00	0.00
AA	9.76	77.76	9.18	0.82	1.06	0.35	0.94	0.00	0.00	0.12
A	3.86	11.92	73.53	7.27	1.19	1.14	0.84	0.10	0.00	0.15
BBB	1.05	1.34	5.83	78.86	5.38	3.29	2.61	0.37	0.15	1.12
BB	0.00	0.00	0.00	8.48	62.95	16.07	4.46	0.00	0.45	7.59
B	0.00	0.00	0.00	11.76	9.41	44.71	17.65	0.00	1.18	15.29
CCC	0.00	0.00	0.00	3.85	1.92	0.00	46.15	1.92	0.00	46.15

Table 21

European ABS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average										
AAA	84.47	10.58	2.91	0.86	0.54	0.18	0.45	0.00	0.00	0.00
AA	10.59	75.19	10.34	0.78	1.42	0.39	1.16	0.00	0.00	0.13
A	4.52	12.43	70.46	8.66	1.06	1.28	1.17	0.11	0.00	0.32
BBB	1.20	1.59	6.22	76.08	5.98	3.43	2.79	0.48	0.24	1.99
BB	0.00	0.00	0.00	8.65	62.50	14.90	4.81	0.00	0.48	8.65
B	0.00	0.00	0.00	4.92	13.11	45.90	19.67	0.00	1.64	14.75
CCC	0.00	0.00	0.00	6.67	0.00	0.00	40.00	3.33	0.00	50.00
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average										
AAA	91.52	5.50	1.10	0.63	0.24	0.39	0.63	0.00	0.00	0.00
AA	12.04	78.06	4.52	4.09	0.43	0.00	0.86	0.00	0.00	0.00
A	5.74	10.89	71.69	6.42	1.17	1.26	1.85	0.10	0.00	0.88
BBB	1.42	1.26	5.20	78.74	3.94	2.83	1.89	0.47	0.79	3.46
BB	0.00	0.00	0.00	4.17	76.39	8.33	8.33	0.00	1.39	1.39
B	0.00	0.00	0.00	0.00	0.00	83.33	0.00	0.00	16.67	0.00
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

Table 22

European ABS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2016											
AAA	77.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.55
AA	5.45	65.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.64
A	0.74	7.41	69.63	4.44	0.00	0.00	0.00	0.00	0.00	0.00	17.78
BBB	0.00	0.00	1.05	81.05	0.00	0.00	0.00	0.00	0.00	0.00	17.89
BB	0.00	0.00	0.00	7.14	71.43	7.14	0.00	0.00	0.00	0.00	14.29
B	0.00	0.00	0.00	11.11	0.00	55.56	0.00	0.00	0.00	0.00	33.33
CCC	0.00	0.00	0.00	20.00	0.00	0.00	70.00	10.00	0.00	0.00	0.00
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average											
AAA	76.31	2.62	0.68	0.00	0.04	0.00	0.08	0.00	0.00	0.00	20.27

Table 22

European ABS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
AA	2.71	69.57	5.31	0.39	0.10	0.00	0.19	0.00	0.00	0.00	21.74
A	0.66	3.22	77.96	2.81	0.17	0.08	0.08	0.00	0.00	0.00	15.02
BBB	0.00	0.25	1.67	79.94	2.85	0.99	0.19	0.06	0.00	0.12	13.93
BB	0.00	0.00	0.00	5.88	62.87	10.66	1.84	0.00	0.00	0.37	18.38
B	0.00	0.00	0.00	1.65	6.61	59.50	9.92	0.00	0.00	4.13	18.18
CCC	0.00	0.00	0.00	2.11	1.05	0.00	74.74	1.05	0.00	15.79	5.26
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two-year weighted-average											
AAA	53.99	3.59	1.54	0.20	0.08	0.00	0.12	0.00	0.00	0.00	40.48
AA	3.67	48.16	6.73	0.61	0.20	0.00	0.41	0.00	0.00	0.00	40.20
A	0.83	4.33	58.09	4.20	0.61	0.26	0.17	0.00	0.00	0.04	31.47
BBB	0.07	0.39	1.91	62.04	3.82	2.24	0.46	0.07	0.00	0.33	28.68
BB	0.00	0.00	0.00	5.81	38.76	12.79	5.81	0.00	0.00	0.78	36.05
B	0.00	0.00	0.00	7.14	3.57	33.04	13.39	0.00	0.00	8.04	34.82
CCC	0.00	0.00	0.00	2.35	1.18	0.00	51.76	1.18	0.00	34.12	9.41
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average											
AAA	35.32	4.01	1.99	0.29	0.21	0.04	0.17	0.00	0.00	0.00	57.98
AA	4.11	32.54	6.49	0.76	0.43	0.11	0.65	0.00	0.00	0.00	54.92
A	0.60	3.72	41.17	5.16	0.65	0.56	0.28	0.00	0.00	0.09	47.77
BBB	0.14	0.42	1.47	46.22	3.85	2.52	1.47	0.07	0.00	0.63	43.22
BB	0.00	0.00	0.00	5.74	23.77	12.30	4.51	0.00	0.00	4.10	49.59
B	0.00	0.00	0.00	7.92	3.96	18.81	12.87	0.00	0.00	13.86	42.57
CCC	0.00	0.00	0.00	2.70	1.35	0.00	36.49	1.35	0.00	44.59	13.51
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average											
AAA	22.91	3.77	1.74	0.43	0.35	0.09	0.22	0.00	0.00	0.00	70.50
AA	3.06	22.12	5.88	0.24	0.35	0.35	0.94	0.00	0.00	0.12	66.94
A	0.59	2.77	29.05	6.19	0.64	0.69	0.49	0.00	0.00	0.15	59.43
BBB	0.15	0.37	0.97	34.43	3.81	2.46	2.32	0.07	0.00	1.12	54.29
BB	0.00	0.00	0.00	2.23	15.63	11.16	0.89	0.00	0.00	7.59	62.50
B	0.00	0.00	0.00	9.41	5.88	9.41	14.12	0.00	0.00	15.29	45.88
CCC	0.00	0.00	0.00	3.85	0.00	0.00	32.69	1.92	0.00	46.15	15.38
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average											
AAA	13.62	3.45	1.18	0.50	0.36	0.18	0.27	0.00	0.00	0.00	80.43

Table 22

European ABS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
AA	1.81	15.37	5.56	0.00	0.13	0.39	1.16	0.00	0.00	0.13	75.45
A	0.64	1.91	19.23	7.39	0.58	0.53	0.58	0.00	0.00	0.32	68.81
BBB	0.08	0.40	0.72	24.40	4.07	2.47	2.31	0.08	0.00	1.99	63.48
BB	0.00	0.00	0.00	1.44	11.06	9.62	0.96	0.00	0.00	8.65	68.27
B	0.00	0.00	0.00	3.28	6.56	3.28	16.39	0.00	0.00	14.75	55.74
CCC	0.00	0.00	0.00	6.67	0.00	0.00	26.67	3.33	0.00	50.00	13.33
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average											
AAA	1.34	1.18	0.39	0.24	0.24	0.24	0.00	0.00	0.00	0.00	96.39
AA	0.00	5.59	0.00	2.80	0.00	0.00	0.86	0.00	0.00	0.00	90.75
A	0.00	0.00	3.02	4.86	0.68	0.78	0.39	0.00	0.00	0.88	89.40
BBB	0.00	0.00	0.16	5.83	2.36	2.20	1.26	0.00	0.00	3.46	84.72
BB	0.00	0.00	0.00	1.39	2.78	0.00	4.17	0.00	0.00	1.39	90.28
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

European CMBS

Table 23

	Time horizon (years)									
	1	2	3	4	5	6	7	8	9	10
AAA	0.00	0.21	0.57	1.22	2.17	3.13	3.85	4.38	4.81	5.08
AA	0.07	0.14	0.50	1.68	3.04	4.68	6.14	7.40	8.29	8.96
A	0.17	0.76	1.99	3.78	5.96	8.34	10.72	12.52	13.79	14.50
BBB	0.76	2.90	5.96	9.65	14.27	18.80	22.60	25.72	27.61	28.36
BB	2.23	8.30	14.68	21.49	27.91	33.73	38.46	40.99	42.27	43.16
B	10.44	22.48	35.46	48.75	59.80	67.46	75.60	81.23	81.23	81.23
CCC	36.52	59.47	76.54	84.36	84.36	84.36	84.36	84.36	84.36	84.36
CC	76.00	85.60	85.60	85.60	85.60	85.60	85.60	85.60	85.60	85.60
IG	0.27	1.08	2.40	4.29	6.61	9.02	11.11	12.78	13.91	14.51
SG	11.63	22.20	31.68	39.90	46.36	51.52	55.84	58.02	58.89	59.50
Overall	3.12	6.29	9.48	12.65	15.69	18.48	20.80	22.47	23.51	24.09

IG--Investment-grade. SG--Speculative-grade. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

Table 24

European CMBS One-Year Default Rates, 1990-2016 (%)											
Year	Overall	IG	SG	AAA	AA	A	BBB	BB	B	CCC	CC
1990	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1991	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1992	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1993	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1994	0.00	0.00	N/A	0.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1995	0.00	0.00	N/A	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A
1996	0.00	0.00	N/A	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A
1997	0.00	0.00	N/A	0.00	N/A	0.00	0.00	N/A	N/A	N/A	N/A
1998	0.00	0.00	N/A	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A
1999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A
2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	0.00
2005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	0.00
2006	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A
2007	0.52	0.14	4.35	0.00	0.00	0.00	0.56	0.00	30.00	0.00	N/A
2008	0.66	0.37	3.57	0.00	0.00	0.00	1.36	1.39	16.67	N/A	N/A
2009	1.20	0.14	9.57	0.00	0.00	0.00	0.51	1.49	17.39	100.00	N/A
2010	2.86	0.69	8.48	0.00	0.68	0.71	1.22	3.31	11.70	44.44	N/A
2011	4.75	0.42	12.19	0.00	0.00	0.00	1.50	4.83	13.46	43.33	N/A
2012	5.26	0.98	11.64	0.00	0.00	0.58	2.70	4.38	12.61	44.44	N/A
2013	9.00	0.34	17.51	0.00	0.00	0.72	0.00	2.30	7.46	50.68	100.00
2014	9.20	0.00	15.12	0.00	0.00	0.00	0.00	0.00	6.35	35.14	100.00
2015	8.10	0.00	13.83	0.00	0.00	0.00	0.00	0.00	9.52	19.12	62.50
2016	10.68	0.77	19.21	0.00	0.00	0.00	2.44	2.94	9.80	28.81	85.71
Weighted-average	3.12	0.27	11.63	0.00	0.07	0.17	0.76	2.23	10.44	36.52	76.00
Median	0.00	0.00	3.96	0.00	0.00	0.00	0.00	0.00	9.80	43.33	74.11
Std. dev.	3.42	0.27	7.00	0.00	0.16	0.24	0.83	1.68	8.36	27.26	47.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	10.68	0.98	19.21	0.00	0.68	0.72	2.70	4.83	30.00	100.00	100.00

IG--Investment-grade. SG--Speculative-grade. N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'.
Source: S&P Global Fixed Income Research.

Table 25

European CMBS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2016										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 25

European CMBS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
A	0.00	0.00	98.04	1.96	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	9.76	0.00	75.61	7.32	0.00	4.88	0.00	0.00	2.44
BB	0.00	0.00	0.00	0.00	85.29	11.76	0.00	0.00	0.00	2.94
B	0.00	0.00	0.00	0.00	0.00	60.78	27.45	1.96	0.00	9.80
CCC	0.00	0.00	0.00	0.00	0.00	0.00	61.02	10.17	0.00	28.81
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	85.71
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average										
AAA	87.74	6.31	4.89	0.78	0.21	0.00	0.07	0.00	0.00	0.00
AA	4.43	80.75	10.04	3.81	0.55	0.21	0.14	0.00	0.00	0.07
A	1.21	2.47	81.77	8.91	3.97	1.38	0.12	0.00	0.00	0.17
BBB	0.47	1.05	2.50	77.46	10.89	6.17	0.70	0.00	0.00	0.76
BB	0.51	0.10	0.71	1.62	70.55	19.94	4.15	0.20	0.00	2.23
B	0.00	0.00	0.00	0.00	1.19	65.26	22.19	0.92	0.00	10.44
CCC	0.00	0.29	0.00	0.00	0.00	0.29	57.10	5.80	0.00	36.52
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.00	0.00	76.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two-year weighted-average										
AAA	75.73	10.21	10.92	2.14	0.57	0.07	0.14	0.00	0.00	0.21
AA	7.49	65.40	15.75	7.63	2.26	1.06	0.28	0.00	0.00	0.14
A	2.67	4.27	66.82	12.86	7.64	4.15	0.83	0.00	0.00	0.77
BBB	1.13	1.25	4.89	59.90	15.63	12.05	2.27	0.00	0.00	2.86
BB	1.05	0.10	0.94	3.04	51.05	26.10	8.91	0.52	0.00	8.28
B	0.00	0.14	0.00	0.14	1.56	44.19	29.32	2.12	0.00	22.52
CCC	0.00	0.35	0.00	0.00	0.00	0.35	33.92	4.90	0.00	60.49
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	0.00	83.33
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average										
AAA	65.85	12.55	15.64	3.30	1.29	0.50	0.29	0.00	0.00	0.57
AA	8.72	55.08	18.24	10.24	3.39	3.10	0.72	0.00	0.00	0.50
A	3.68	4.78	57.72	13.36	10.54	6.13	1.84	0.00	0.00	1.96
BBB	1.53	1.28	5.69	50.09	15.23	15.41	4.71	0.12	0.00	5.93
BB	1.40	0.11	1.40	2.92	40.60	24.19	13.39	1.19	0.00	14.79
B	0.00	0.32	0.00	0.00	1.93	29.74	29.10	2.89	0.00	36.01
CCC	0.00	0.46	0.00	0.00	0.00	0.46	16.97	2.29	0.00	79.82
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	80.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average										
AAA	58.72	13.26	18.66	4.11	2.02	1.59	0.43	0.00	0.00	1.22
AA	9.54	47.65	19.90	10.79	4.63	4.33	1.47	0.00	0.00	1.69

Table 25

European CMBS Rating Transitions, 2016 And Multi-Year Averages, NR Adjusted (%) (cont.)										
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
A	4.36	5.26	51.54	12.50	11.28	8.53	2.76	0.06	0.00	3.72
BBB	1.84	1.40	5.79	45.10	12.34	15.71	7.82	0.38	0.00	9.61
BB	1.72	0.00	1.83	2.52	35.40	19.47	15.23	1.83	0.00	21.99
B	0.00	0.60	0.00	0.00	1.61	20.77	22.58	2.62	0.00	51.81
CCC	0.00	0.69	0.00	0.00	0.00	0.00	8.33	0.69	0.00	90.28
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	60.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average										
AAA	54.60	12.92	19.05	4.53	3.43	2.41	0.88	0.00	0.00	2.19
AA	9.82	43.28	20.47	9.82	5.29	6.19	1.96	0.08	0.00	3.10
A	5.14	5.56	48.84	11.26	9.29	9.71	4.36	0.14	0.00	5.70
BBB	2.10	1.29	6.10	43.39	9.15	13.83	9.02	0.75	0.00	14.37
BB	1.91	0.13	1.91	2.54	33.59	15.90	13.74	1.65	0.00	28.63
B	0.00	0.83	0.00	0.00	1.66	12.43	15.47	2.76	0.00	66.85
CCC	0.00	1.41	0.00	0.00	0.00	0.00	5.63	1.41	0.00	91.55
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average										
AAA	77.26	7.06	7.91	2.26	1.55	1.13	0.56	0.00	0.00	2.26
AA	17.40	58.70	11.95	3.69	2.81	1.41	0.70	0.00	0.00	3.34
A	11.65	5.35	62.83	8.35	2.52	2.99	1.42	0.00	0.00	4.88
BBB	4.91	2.76	8.74	62.73	2.61	3.07	2.61	0.15	0.00	12.42
BB	6.15	0.82	2.46	4.51	60.25	0.82	2.46	1.23	0.00	21.31
B	0.00	16.67	0.00	0.00	16.67	0.00	0.00	0.00	0.00	66.67
CCC	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research.

Table 26

European CMBS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2016											
AAA	80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00
AA	0.00	89.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.71
A	0.00	0.00	76.47	1.96	0.00	0.00	0.00	0.00	0.00	0.00	21.57
BBB	0.00	9.76	0.00	63.41	7.32	0.00	4.88	0.00	0.00	2.44	12.20
BB	0.00	0.00	0.00	0.00	76.47	8.82	0.00	0.00	0.00	2.94	11.76
B	0.00	0.00	0.00	0.00	0.00	41.18	27.45	1.96	0.00	9.80	19.61
CCC	0.00	0.00	0.00	0.00	0.00	0.00	55.93	10.17	0.00	28.81	5.08

Table 26

European CMBS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.71	14.29
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
One-year weighted-average											
AAA	73.99	6.17	4.25	0.78	0.21	0.00	0.07	0.00	0.00	0.00	14.53
AA	3.39	71.19	9.14	3.81	0.55	0.21	0.07	0.00	0.00	0.07	11.57
A	0.81	2.13	70.67	8.63	3.91	1.27	0.12	0.00	0.00	0.17	12.31
BBB	0.29	0.64	1.98	68.26	10.48	6.17	0.70	0.00	0.00	0.76	10.72
BB	0.20	0.00	0.40	1.62	61.44	19.13	3.95	0.20	0.00	2.23	10.83
B	0.00	0.00	0.00	0.00	1.06	58.78	20.21	0.92	0.00	10.44	8.59
CCC	0.00	0.29	0.00	0.00	0.00	0.00	53.33	5.51	0.00	36.52	4.35
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.00	0.00	76.00	8.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Two-year weighted-average											
AAA	51.32	8.85	8.78	2.14	0.57	0.07	0.14	0.00	0.00	0.21	27.91
AA	4.38	48.31	13.49	7.56	2.19	0.92	0.14	0.00	0.00	0.14	22.88
A	1.36	3.08	46.50	11.79	7.35	4.03	0.83	0.00	0.00	0.77	24.29
BBB	0.48	0.30	3.28	42.48	14.26	11.63	2.15	0.00	0.00	2.86	22.55
BB	0.31	0.00	0.10	2.62	34.17	23.38	7.23	0.52	0.00	8.28	23.38
B	0.00	0.14	0.00	0.14	1.13	34.14	26.35	1.98	0.00	22.52	13.60
CCC	0.00	0.00	0.00	0.00	0.00	0.00	27.62	4.55	0.00	60.49	7.34
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.33	16.67
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Three-year weighted-average											
AAA	33.07	9.25	11.55	3.16	1.22	0.50	0.22	0.00	0.00	0.57	40.46
AA	4.11	32.66	13.84	9.37	3.32	2.74	0.58	0.00	0.00	0.50	32.88
A	1.47	2.82	30.21	11.21	9.68	5.76	1.78	0.00	0.00	1.96	35.11
BBB	0.49	0.18	3.06	26.48	12.66	14.43	4.40	0.12	0.00	5.93	32.23
BB	0.32	0.00	0.32	2.05	18.90	19.33	10.04	0.97	0.00	14.79	33.26
B	0.00	0.16	0.00	0.00	1.13	18.01	24.76	2.57	0.00	36.01	17.36
CCC	0.00	0.00	0.00	0.00	0.00	0.00	10.09	1.83	0.00	79.82	8.26
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.00	20.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Four-year weighted-average											
AAA	19.38	7.85	11.89	3.67	1.80	1.59	0.29	0.00	0.00	1.22	52.31
AA	3.52	21.29	13.00	9.03	4.26	3.74	1.32	0.00	0.00	1.69	42.14
A	1.22	2.69	19.23	9.36	9.62	7.50	2.56	0.06	0.00	3.72	44.04
BBB	0.45	0.25	2.29	16.60	8.91	13.80	7.19	0.32	0.00	9.61	40.59
BB	0.23	0.00	0.69	1.37	10.77	12.94	11.57	1.37	0.00	21.99	39.06
B	0.00	0.20	0.00	0.00	0.40	9.88	17.54	2.42	0.00	51.81	17.74
CCC	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.00	0.00	90.28	8.33

Table 26

European CMBS Rating Transitions, 2016 And Multi-Year Averages, NR Included (%) (cont.)											
From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	40.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Five-year weighted-average											
AAA	10.29	5.55	9.49	3.72	2.85	2.26	0.58	0.00	0.00	2.19	63.07
AA	2.27	14.20	11.03	6.87	4.31	5.14	1.81	0.08	0.00	3.10	51.21
A	1.06	2.32	12.81	7.32	6.83	7.95	4.08	0.14	0.00	5.70	51.79
BBB	0.34	0.20	1.97	11.05	5.49	11.05	8.07	0.61	0.00	14.37	46.85
BB	0.13	0.13	0.76	0.76	6.87	9.03	10.05	1.15	0.00	28.63	42.49
B	0.00	0.00	0.00	0.00	0.00	3.87	12.43	2.49	0.00	66.85	14.36
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.55	8.45
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10-year weighted-average											
AAA	1.84	0.99	1.41	0.71	0.28	0.42	0.28	0.00	0.00	2.26	91.81
AA	0.00	6.50	4.04	1.23	0.70	0.35	0.53	0.00	0.00	3.34	83.30
A	0.00	0.00	3.31	1.26	1.10	0.47	0.63	0.00	0.00	4.88	88.35
BBB	0.00	0.31	1.23	3.83	0.15	0.77	1.53	0.00	0.00	12.42	79.75
BB	0.00	0.00	0.00	0.00	0.00	0.41	1.64	0.41	0.00	21.31	76.23
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	33.33
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A--Not applicable. Includes only one security per transaction that we originally rated 'AAA'. Source: S&P Global Fixed Income Research.

Related Criteria And Research

Related Criteria

- Methodology And Assumptions: Assessing Pools Of European Residential Loans, Dec. 23, 2016
- Global Methodology And Assumptions For Assessing The Credit Quality Of Securitized Consumer Receivables, Oct. 9, 2014
- Global Framework For Cash Flow Analysis Of Structured Finance Securities, Oct. 9, 2014
- Credit Stability Criteria, May 3, 2010
- Understanding Standard & Poor's Rating Definitions, June 3, 2009

Related Research

- 2016 Annual Global Structured Finance Default Study And Rating Transitions, May 9, 2017
- Dutch RMBS Criteria Update Has A Limited Negative Rating Impact, July 21, 2016
- Revised Rating Approach Effective For European Credit Card ABS, July 11, 2016

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