

Default, Transition, and Recovery:

2017 Annual Global Leveraged Loan CLO Default Study And Rating Transitions

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GLOBAL FIXED INCOME RESEARCH

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Key Takeaways

Defaults: Annual default rate remains low

- We lowered seven global CLO ratings to 'D' in 2017, for an overall default rate of 0.16%--on par with 0.17% in 2016.
- This puts the 2017 default rate above the one-year average default rate of 0.09%.

Rating transitions: Upgrade rate falls, but still strongly exceeds downgrade rate in 2017

- Of the 4,350 global CLO ratings outstanding at the start of 2017, we raised or left unchanged 99.1% and lowered 0.9%. This compares with 99.4% and 0.6%, respectively, in 2016.
- We raised 8.2% of ratings in 2017, down from 19.2% in 2016, making 2017 the first year since 2010 without a double-digit upgrade rate in the CLO sector.
- The 2017 downgrade rate of 0.9% was up slightly from 0.6% in 2016, but still much lower than the long-term one-year average downgrade rate of 8.3%.
- The average change in credit quality declined to +0.17 notches in 2017, compared with +0.41 notches in 2016.

Region and vintage breakdown: Upgrade rate highest in Europe and pre-crisis transactions

- For European CLOs, the upgrade rate was 15.3% in 2017, compared with 6.3% in the U.S.
- So-called "CLO 1.0" transactions (originated before 2010), accounted for most of the upgrades, with an upgrade rate of 19.9%.
- Six of the seven defaults in 2017 were in pre-2006 vintage European transactions, with one default in a 2006 vintage U.S. CLO.

In 2017, the ratings on global leveraged loan collateralized loan obligations (CLOs) generally moved higher, consistent with the trend of the previous six years. The upgrade rate remained elevated while there were few downgrades and defaults.

S&P Global Ratings had more than 4,300 ratings outstanding on leveraged loan CLOs globally at the beginning of 2017. Of these securities, only seven defaulted during the year, giving a default rate of 0.16%. The downgrade rate remained low at 0.9% in 2017, up slightly from 0.6% in 2016. Meanwhile, the upgrade rate decreased to 8.2% in 2017, from 19.2% in 2016. Combining upgrades and downgrades with their severity, we raised our ratings on global CLOs by an average of 0.17 notches on aggregate.

The trend of net upward rating movements in the global leveraged loan CLO sector has now been in place for several years. Since 2011, the downgrade rate has remained below 2.5%, while the annual upgrade rate has often been in the double digits. The broad trend of positive ratings performance over this time frame has been similar across both the U.S. and European markets.

Upgrades Continue To Outpace Downgrades In 2017

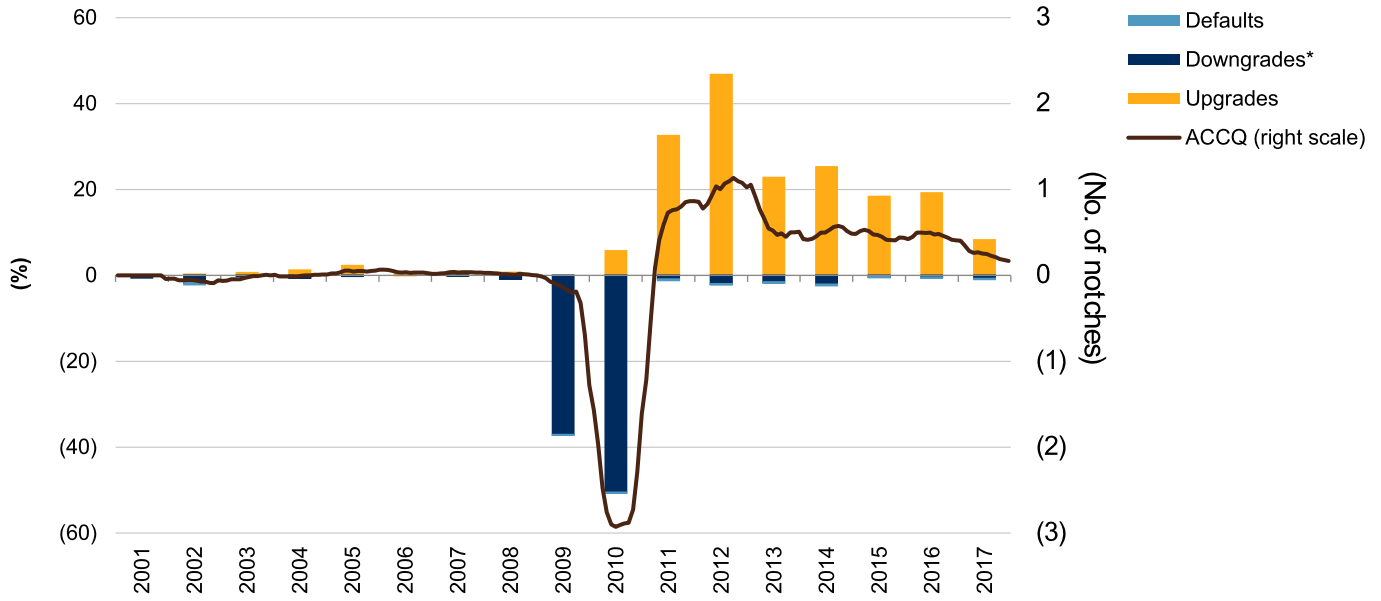
By most metrics, the overall performance of global CLO securities that we rate was positive in 2017. During the year, we raised 8.2% of our ratings on global CLO securities that were outstanding at the beginning of the year (see chart 1, below). This was down from 19.2% in the previous year, although the number of upgrades still exceeded the number of downgrades by a large margin--a trend that has continued since 2011.

The 12-month trailing average change in credit quality (see definition in Appendix I) for global CLOs was +0.17 rating notches at the end of 2017. This measure has been positive since 2011, indicating that, on average, CLO ratings have been drifting higher for many years.

The default rate of 0.16% in 2017 was on par with the previous year and above the one-year weighted-average default rate of 0.09%. However, the default rate remains low compared with some other structured finance sectors, such as residential mortgage-backed securities. Annual CLO default rates have been low and generally steady throughout the sector's history, with no annual default rate so far exceeding 0.5% (see chart 2). There were no defaults on investment-grade CLO ratings in 2017. The default rate on speculative-grade CLO tranches was 0.75%, although this was equivalent to only seven defaults among 934 speculative-grade ratings outstanding at the beginning of the year.

Chart 1

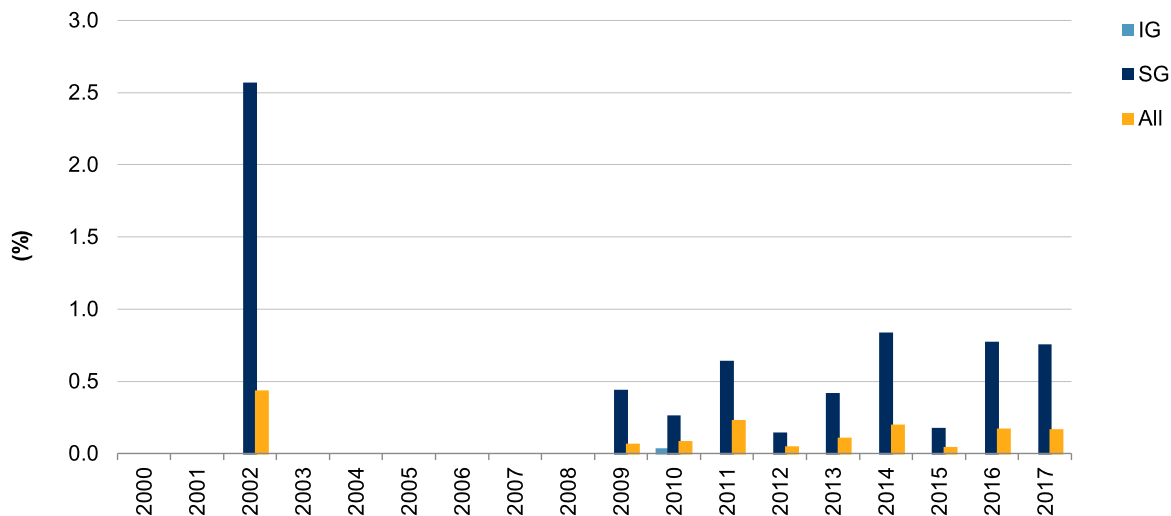
Global CLO Transition Rates And Average Change In Credit Quality



*Excluding defaults. ACCQ--Average change in credit quality. 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. Copyright © 2018 by Standard & Poor's Financial Services LLC. All rights reserved.

Chart 2

Global CLO Default Rates
By rating grade



The elevated speculative-grade default rate in 2002 is derived from a relatively small base of 78 ratings outstanding at the beginning of the year. IG--Investment-grade. SG--Speculative-grade.

Source: S&P Global Fixed Income Research.

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CLO credit performance in 2017 differed somewhat between the U.S. and Europe. European CLOs saw a higher upgrade rate of 15.3% and a downgrade rate of 3.3%, with ratings rising by an average of 0.25 notches over the year. U.S. transactions saw a lower upgrade rate of 6.3%, but also a lower downgrade rate of only 0.2% and an average increase in credit quality of 0.15 notches. In both cases, downgrade rates were well below their one-year weighted-averages. We think the lower upgrade rate for U.S. CLOs reflects the large number of CLO resets that have occurred in that region, reducing the number of outstanding transactions that are entering their amortization periods, which often leads to upgrades as the senior notes pay down.

Credit performance continues to differ by the year of issuance--or vintage--of CLO securities. The fundamental credit characteristics and economic environment of a transaction's vintage can influence its subsequent credit behavior. Segmenting global CLO credit performance by transaction vintage reveals that the upgrade rate in 2017 was highest for the 2011 vintage, generally due to transactions deleveraging (see chart 3). We also segment CLO transactions into so-called "1.0" and "2.0" generations, generally referring to transactions originated before and after the 2008-2009 financial crisis, respectively. For these purposes, we consider CLO 2.0 transactions to be those issued since the beginning of 2010, designating those issued in 2009 or earlier as CLO 1.0 transactions. Aggregating across vintages into the 1.0 and 2.0 generations, we note that there had not been any CLO 2.0 tranche defaults as of mid-2018. The upgrade rate for 1.0 transactions was 19.9%, compared with 4.1% for 2.0 transactions.

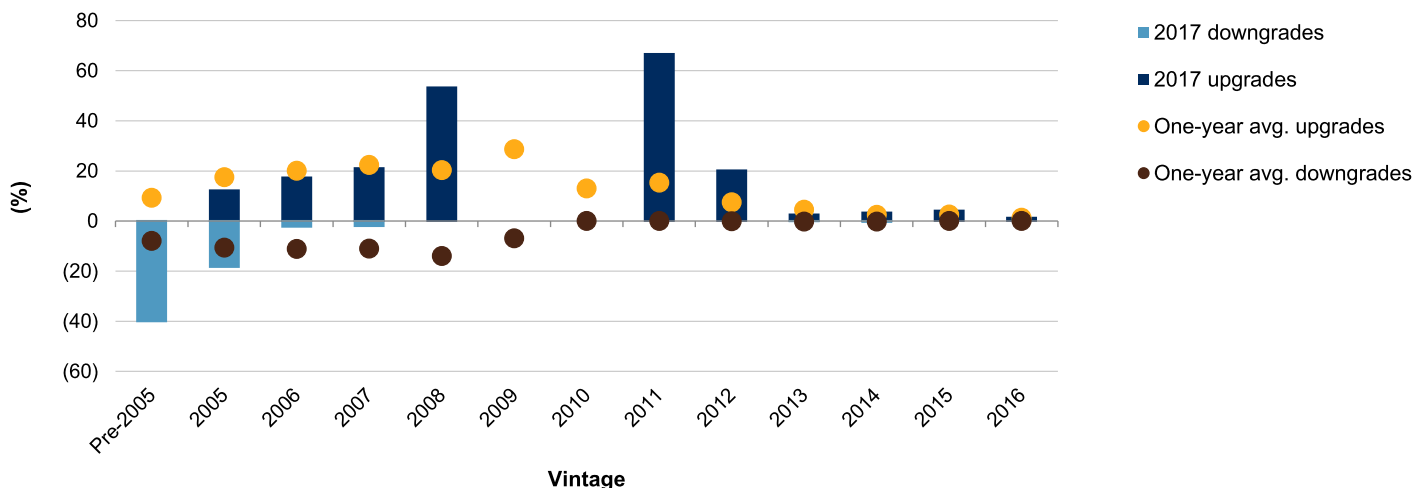
In 2017, the downgrade rate was highest among transactions from the pre-2005 vintages, although this transition rate is based on a small universe of only 10 ratings outstanding. By

contrast, the downgrade rate was close to zero for post-2005 vintages. Similarly, the only CLO defaults in 2017 were in 2004-2006 vintage transactions. Higher default rates in earlier vintages are partly due to survival bias, in our view. Those securities from earlier vintage transactions that performed well will increasingly have paid off by now, exiting the pool of ratings considered in the 2017 performance statistics. Those that remain in the pool are therefore increasingly those that have shown weaker performance to date. In addition, the underlying collateral pools in some earlier vintage transactions now contain only a handful of loans, increasing idiosyncratic risk.

We anticipate that the link between CLO transaction vintage and ratings movements may become less clear in the future. This is because many CLOs are now being restructured a few years after issuance, through a so-called "reset" or "refinancing". In our ratings performance data, we treat CLO resets and refinancings as new transactions whose vintage is based on the year in which the restructuring took place. Therefore, two transactions from the same vintage may now potentially exhibit significantly different underlying collateral and structural characteristics if one is a completely new transaction but the other is a refinancing or reset of an older transaction. This could mean there is less homogeneity in credit performance within a given vintage in the future.

Chart 3

Global CLO Transition Rates By Vintage
2017 vs. one-year average



Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'.

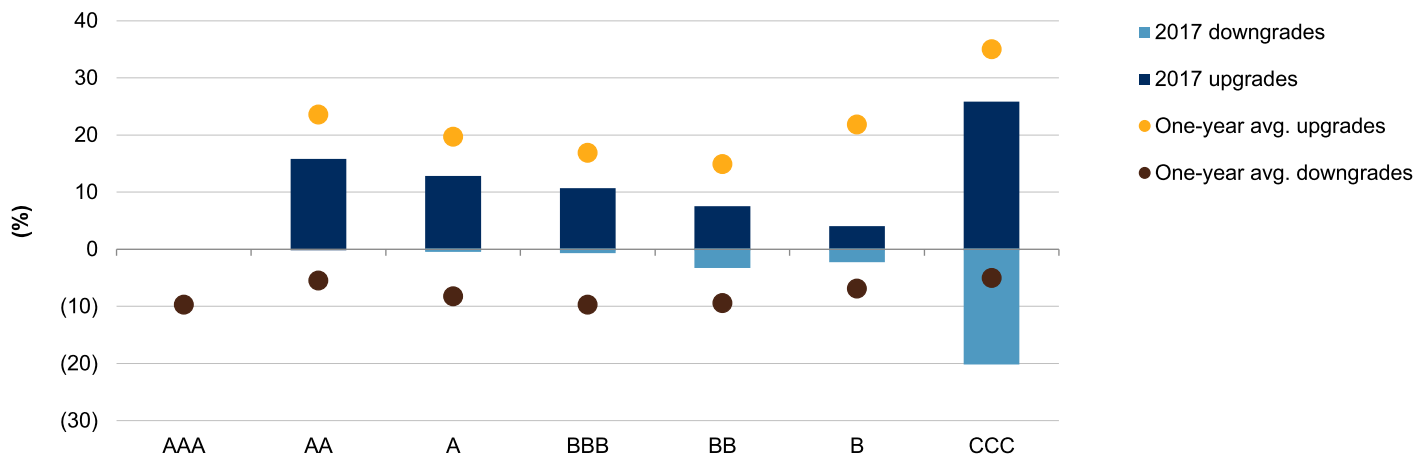
Source: S&P Global Fixed Income Research.

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Across global CLOs, downgrade rates in 2017 were somewhat differentiated by rating level at the beginning of the year, though the absolute numbers of downgrades were low. Broadly speaking, downgrade rates were higher for lower rating categories, with a downgrade rate of 3.1% for securities rated 'BB' at the beginning of the year compared with 20.0% for those rated 'CCC' (see chart 4). Downgrade rates in the 'BBB' and higher rating categories were all below 0.5%.

Chart 4

Global CLO Transition Rates By Rating Category
2017 vs. one-year average



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.

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Table 1 shows a summary of 2017 credit performance for global CLOs segmented in various ways and compared with the 1997-2017 one-year weighted-average statistics.

Table 1

Global CLO Transition And Default Summary

2017 vs. one-year average

	2017						One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	
Overall	4,350	90.9	8.2	0.9	0.2	7	76.6	15.1	8.3	0.1	
Region											
U.S.	3,423	93.5	6.3	0.2	0.0	1	78.5	14.3	7.2	0.1	
Europe	927	81.3	15.3	3.3	0.6	6	70.4	17.8	11.8	0.1	
Generation											
1.0	1,126	77.0	19.9	3.1	0.6	7	72.1	17.6	10.3	0.1	
2.0	3,224	95.8	4.1	0.1	0.0	0	94.9	4.9	0.1	0.0	
Vintage											
Pre-2005	10	60.0	0.0	40.0	30.0	3	82.9	9.2	7.9	0.3	
2005	49	69.4	12.2	18.4	6.1	3	71.8	17.5	10.7	0.0	
2006	310	80.3	17.4	2.3	0.3	1	68.8	20.1	11.1	0.1	
2007	741	76.9	21.1	2.0	0.0	0	66.6	22.4	11.0	0.0	

Table 1

Global CLO Transition And Default Summary (cont.)

2017 vs. one-year average

	2017					One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Overall	4,350	90.9	8.2	0.9	0.2	7	76.6	15.1	8.3	0.1
2008	15	46.7	53.3	0.0	0.0	0	65.7	20.3	13.9	0.4
2009	1	100.0	0.0	0.0	0.0	0	64.4	28.7	6.9	0.0
2010	1	100.0	0.0	0.0	0.0	0	87.0	13.0	0.0	0.0
2011	12	33.3	66.7	0.0	0.0	0	84.6	15.4	0.0	0.0
2012	213	79.8	20.2	0.0	0.0	0	92.5	7.5	0.0	0.0
2013	896	97.3	2.6	0.1	0.0	0	95.2	4.6	0.2	0.0
2014	783	96.3	3.3	0.4	0.0	0	97.2	2.5	0.3	0.0
2015	555	95.9	4.1	0.0	0.0	0	97.4	2.6	0.0	0.0
2016	764	98.7	1.3	0.0	0.0	0	98.7	1.3	0.0	0.0
Rating category										
AAA	1,227	100.0	N/A	0.0	0.0	0	90.3	N/A	9.7	0.0
AA	918	84.3	15.7	0.0	0.0	0	70.9	23.6	5.5	0.0
A	662	87.0	12.7	0.3	0.0	0	72.0	19.7	8.3	0.0
BBB	609	89.0	10.5	0.5	0.0	0	73.4	16.9	9.7	0.0
BB	612	89.5	7.4	3.1	0.0	0	75.7	14.9	9.4	0.0
B	284	94.0	3.9	2.1	0.4	1	71.3	21.9	6.9	0.1
CCC	35	54.3	25.7	20.0	11.4	4	59.9	35.1	5.0	1.0
CC	3	33.3	0.0	66.7	66.7	2	66.0	5.2	28.9	28.9
Rating grade										
Investment-grade	3,416	91.3	8.5	0.1	0.0	0	77.8	13.9	8.3	0.0
Speculative-grade	934	89.4	7.0	3.6	0.7	7	72.1	19.6	8.3	0.4

*Including defaults. 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.

CLO Ratings Have Differentiated Default Rates Over Time

Looking back further, global CLOs have historically exhibited strong credit performance, with few defaults. At the end of June 2018, we had issued over 12,500 ratings on CLO securities. The majority of these tranches have since been paid in full and the ratings on them have been withdrawn. Fewer than 0.5% of the tranches have defaulted and had ratings lowered to 'D' (see table 2). (Further details of CLO tranches with ratings that we lowered to 'D' are listed in table 8 of Appendix II, and tranches with ratings of 'CC' as of mid-2018 are shown in table 9.)

Table 2

Global CLO Lifetime Transition And Default Summary

1996-Q2 2018

	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Withdrawals (%)
Overall	12,514	68.3	23.7	8.0	0.5	57	72.1
Region							
U.S.	10,048	70.2	24.4	5.4	0.4	38	73.0
Europe	2,466	60.5	21.1	18.4	0.8	19	68.8
Generation							
1.0	5,765	41.3	41.7	17.0	1.0	57	97.6
2.0	6,749	91.4	8.3	0.3	0.0	0	50.3
Vintage							
Pre-2005	1,669	56.9	24.7	18.4	2.2	37	97.7
2005	744	36.2	47.7	16.1	0.4	3	99.6
2006	1,505	35.7	48.8	15.5	0.7	10	96.7
2007	1,521	33.9	51.6	14.5	0.1	2	97.9
2008	298	34.2	33.9	31.9	1.7	5	95.6
2009	28	21.4	64.3	14.3	0.0	0	100.0
2010	33	60.6	39.4	0.0	0.0	0	100.0
2011	154	51.9	48.1	0.0	0.0	0	100.0
2012	629	75.4	24.6	0.0	0.0	0	97.6
2013	1,105	80.5	18.6	0.8	0.0	0	88.7
2014	887	92.1	7.1	0.8	0.0	0	80.3
2015	586	94.9	5.1	0.0	0.0	0	81.2
2016	767	97.8	2.1	0.1	0.0	0	32.6
2017	1,691	99.7	0.3	0.0	0.0	0	10.6
2018 H1	897	100.0	0.0	0.0	0.0	0	0.0
Rating category							
AAA	3,807	93.6	N/A	6.4	0.0	0	77.5
AA	2,296	58.4	38.7	3.0	0.0	1	70.9
A	2,221	53.5	42.5	4.0	0.2	5	73.5
BBB	2,096	51.8	35.0	13.3	0.6	12	73.5
BB	1,689	59.5	22.9	17.6	2.1	35	66.3
B	405	90.4	4.2	5.4	1.0	4	39.3
CCC	0	N/A	N/A	N/A	N/A	N/A	N/A
CC	0	N/A	N/A	N/A	N/A	N/A	N/A
Rating grade							
Investment-grade	10,420	68.9	24.6	6.5	0.2	18	74.4

Table 2

Global CLO Lifetime Transition And Default Summary (cont.)

1996-Q2 2018

	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Withdrawals (%)
Overall	12,514	68.3	23.7	8.0	0.5	57	72.1
Speculative-grade	2,094	65.5	19.3	15.2	1.9	39	61.0

*Including defaults. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR' when determining stable, upgrade, downgrade, and default rates. N/A--Not applicable. Source: S&P Global Fixed Income Research.

In order to explore the extent to which our ratings have successfully rank-ordered securities' creditworthiness over time, we can calculate cumulative default rates by rating category for various time horizons as we do in our corporate default and transition studies. This approach constructs average multiyear 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 multiyear 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 annual data history--from the beginning of 1997 to the end of 2017--show that lower ratings have generally been associated with higher default rates and vice versa (see table 3). In other words, ratings appear to have successfully rank-ordered creditworthiness over each time horizon.

Table 3

Global CLO Cumulative Default Rates, Conditional On Survival, 1997-2017 (%)

	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	0.00	0.00	0.00	0.00
AA	0.00	0.01	0.02	0.03	0.04	0.06	0.08	0.11	0.11	0.11
A	0.00	0.01	0.02	0.04	0.05	0.05	0.05	0.05	0.05	0.05
BBB	0.01	0.01	0.02	0.08	0.12	0.22	0.37	0.55	0.79	1.07
BB	0.03	0.14	0.26	0.36	0.53	0.75	1.14	1.79	2.67	3.95
B	0.07	0.19	0.37	0.59	0.99	1.60	1.87	2.76	5.13	8.03
CCC	1.04	2.25	3.66	5.28	6.81	7.86	9.16	10.95	64.38	64.38
CC	28.87	43.51	51.26	53.48	54.70	54.70	54.70	54.70	54.70	N/A
IG	0.00	0.01	0.01	0.03	0.05	0.07	0.11	0.16	0.21	0.27
SG	0.42	0.83	1.26	1.69	2.18	2.62	3.15	3.90	4.94	6.27
Overall	0.09	0.19	0.28	0.39	0.51	0.62	0.75	0.91	1.11	1.35

IG--Investment-grade. SG--Speculative-grade. Source: S&P Global Fixed Income Research.

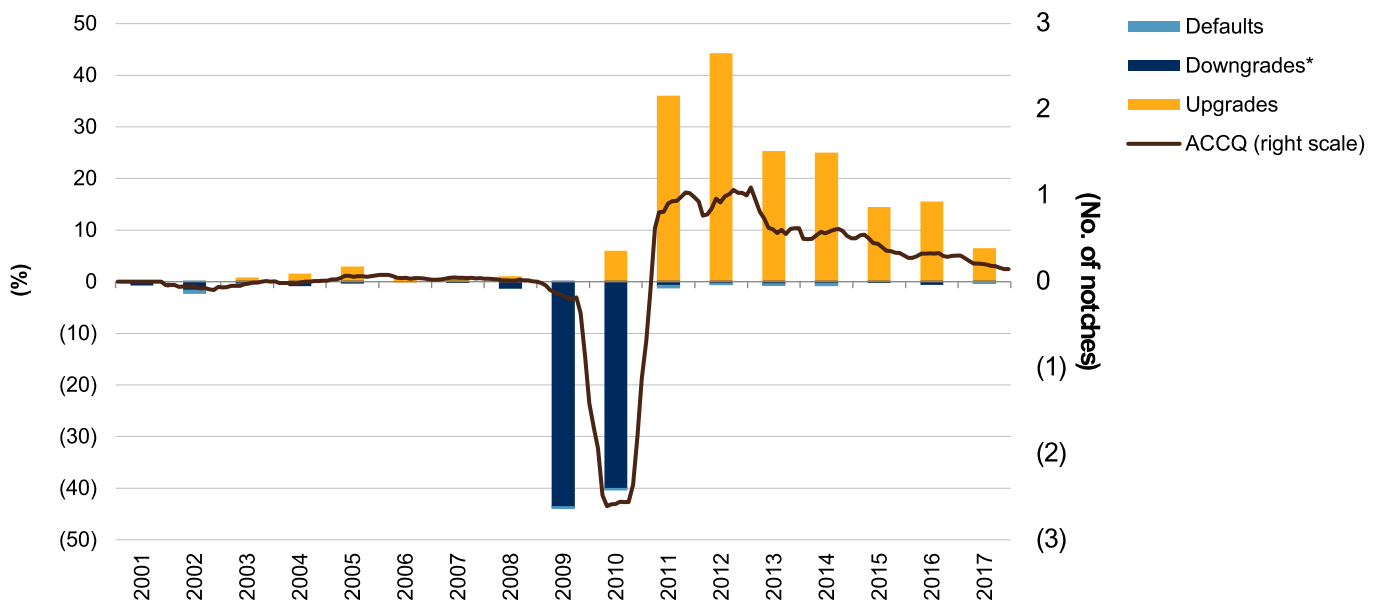
Regions In Detail

U.S. CLOs

Between 2011 and 2016, the upgrade rate in the U.S. CLO sector consistently exceeded 10% per year. Upgrades have slowed in recent years, however, as CLO resets become more common and fewer transactions enter their amortization period. In 2017, we raised 6.3% of our U.S. CLO ratings that were outstanding at the beginning of the year. This figure was down from 15.3% the previous year and a high of 44.1% in 2012 (see chart 5). At the same time, the U.S. CLO downgrade rate has generally been low in most years and was only 0.2% in 2017. Widespread downgrades in 2009 and 2010 were largely a result of changes in our rating methodology, rather than due to performance deterioration.

Chart 5

U.S. CLO Transition Rates And Average Change In Credit Quality



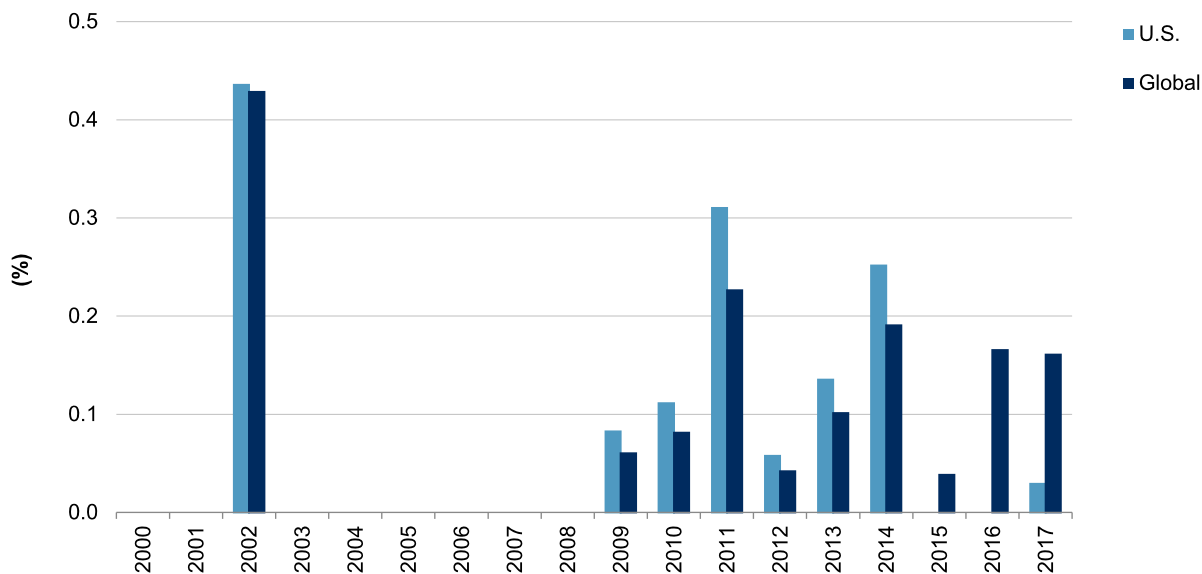
*Excluding defaults. ACCQ--Average change in credit quality. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research. Copyright © 2018 by Standard & Poor's Financial Services LLC. All rights reserved.

Incorporating both the magnitude and frequency of rating actions, the overall average change in credit quality for U.S. CLOs was +0.15 notches for the year, continuing the longstanding trend of net positive rating migration in the sector.

There have historically been very few defaults among U.S. CLOs, with the annual default rate never exceeding 0.5% (see chart 6). There was only one further default in the sector in 2017.

Chart 6

U.S. CLO Default Rates



Source: S&P Global Fixed Income Research.
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Upgrade rates were generally high across older transaction vintages that had a significant number of ratings outstanding at the beginning of 2017. For the 2013-2016 vintages, lower transaction seasoning limited the scope for upgrades, leading to only single-digit upgrade rates (see table 4).

Table 4

U.S. CLO Transition And Default Summary

2017 vs. one-year average

	2017					One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Overall	3,423	93.5	6.3	0.2	0.0	1	78.5	14.3	7.2	0.1
Generation										
1.0	607	85.8	13.5	0.7	0.2	1	73.5	17.1	9.4	0.1
2.0	2,816	95.1	4.7	0.1	0.0	0	94.6	5.3	0.2	0.0
Vintage										
Pre-2005	2	100.0	0.0	0.0	0.0	0	84.1	9.1	6.8	0.2
2005	9	100.0	0.0	0.0	0.0	0	71.6	18.1	10.3	0.0
2006	167	83.8	15.0	1.2	0.6	1	69.5	20.2	10.4	0.1
2007	413	87.7	11.9	0.5	0.0	0	68.0	21.7	10.3	0.0

Table 4

U.S. CLO Transition And Default Summary (cont.)

2017 vs. one-year average

	2017						One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	
Overall	3,423	93.5	6.3	0.2	0.0	1	78.5	14.3	7.2	0.1	
2008	15	46.7	53.3	0.0	0.0	0	68.7	20.3	11.1	0.5	
2009	1	100.0	0.0	0.0	0.0	0	70.7	21.3	8.0	0.0	
2010	1	100.0	0.0	0.0	0.0	0	87.0	13.0	0.0	0.0	
2011	12	33.3	66.7	0.0	0.0	0	84.6	15.4	0.0	0.0	
2012	213	79.8	20.2	0.0	0.0	0	92.5	7.5	0.0	0.0	
2013	816	97.1	2.8	0.1	0.0	0	94.9	4.9	0.2	0.0	
2014	736	96.1	3.5	0.4	0.0	0	97.0	2.7	0.3	0.0	
2015	450	94.9	5.1	0.0	0.0	0	97.0	3.0	0.0	0.0	
2016	588	98.3	1.7	0.0	0.0	0	98.3	1.7	0.0	0.0	
Rating category											
AAA	977	100.0	N/A	0.0	0.0	0	91.7	N/A	8.3	0.0	
AA	724	88.8	11.2	0.0	0.0	0	71.8	23.5	4.7	0.0	
A	544	88.8	11.2	0.0	0.0	0	74.0	18.4	7.6	0.0	
BBB	495	90.5	9.1	0.4	0.0	0	74.8	16.4	8.8	0.0	
BB	484	94.4	5.2	0.4	0.0	0	77.9	13.9	8.2	0.0	
B	194	96.4	1.5	2.1	0.5	1	75.7	21.1	3.2	0.1	
CCC	5	100.0	0.0	0.0	0.0	0	58.2	38.8	3.0	0.8	
CC	0	N/A	N/A	N/A	N/A	N/A	59.2	7.0	33.8	33.8	
Rating grade											
Investment-grade	2,740	93.1	6.8	0.1	0.0	0	79.4	13.3	7.3	0.0	
Speculative-grade	683	95.0	4.1	0.9	0.1	1	74.7	18.6	6.7	0.4	

*Including defaults. 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.

Aggregating across vintages into the 1.0 and 2.0 generations, the upgrade rate for 1.0 transactions was 13.5%, compared with 4.7% for 2.0 transactions. By contrast, the downgrade rate was less than 1.0% for both 1.0 and 2.0 transactions (see table 4).

Table 5

U.S. CLO Lifetime Transition And Default Summary

1996-Q2 2018

	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Withdrawals (%)
Overall	10,048	70.2	24.4	5.4	0.4	38	73.0
Generation							
1.0	4,322	44.0	43.8	12.2	0.9	38	98.1
2.0	5,726	90.1	9.6	0.3	0.0	0	54.0
Vintage							
Pre-2005	1,381	59.4	26.6	14.0	1.7	24	98.3
2005	601	37.4	51.2	11.3	0.0	0	100.0
2006	1,090	36.8	51.5	11.7	0.7	8	97.1
2007	1,021	36.0	54.7	9.3	0.1	1	98.5
2008	207	38.6	42.5	18.8	2.4	5	93.7
2009	22	27.3	54.5	18.2	0.0	0	100.0
2010	33	60.6	39.4	0.0	0.0	0	100.0
2011	154	51.9	48.1	0.0	0.0	0	100.0
2012	629	75.4	24.6	0.0	0.0	0	97.6
2013	988	79.0	20.0	0.9	0.0	0	87.6
2014	840	91.7	7.5	0.8	0.0	0	80.1
2015	481	94.2	5.8	0.0	0.0	0	80.7
2016	591	97.3	2.7	0.0	0.0	0	33.8
2017	1,268	99.6	0.4	0.0	0.0	0	13.1
2018 H1	742	100.0	0.0	0.0	0.0	0	0.0
Rating category							
AAA	3,112	95.8	N/A	4.2	0.0	0	77.3
AA	1,836	59.1	39.1	1.8	0.1	1	72.7
A	1,823	55.3	42.3	2.4	0.3	5	73.9
BBB	1,656	53.8	36.9	9.3	0.5	9	73.4
BB	1,347	62.8	24.7	12.5	1.5	20	66.9
B	274	89.8	4.7	5.5	1.1	3	46.4
CCC	0	N/A	N/A	N/A	N/A	N/A	N/A
CC	0	N/A	N/A	N/A	N/A	N/A	N/A
Rating grade							
Investment-grade	8,427	70.8	24.9	4.3	0.2	15	74.8
Speculative-grade	1,621	67.4	21.3	11.3	1.4	23	63.4

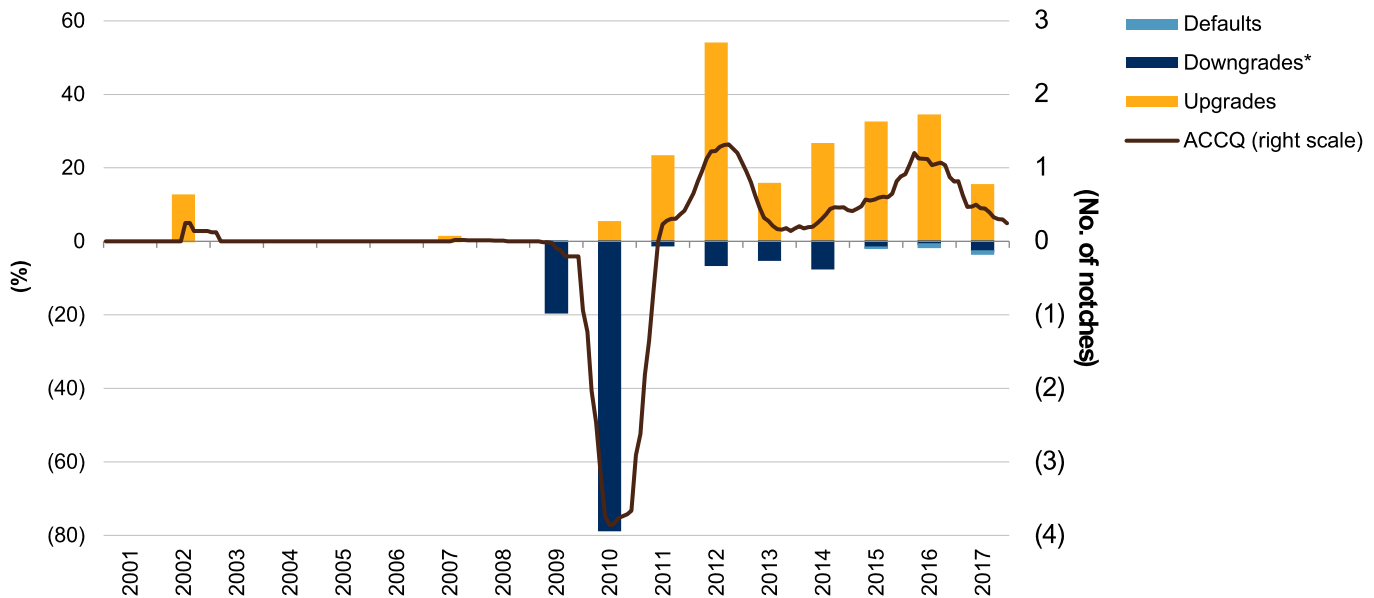
*Including defaults. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR' when determining stable, upgrade, downgrade, and default rates. N/A--Not applicable. Source: S&P Global Fixed Income Research.

European CLOs

Annual upgrade rates for European CLOs have exceeded 15% in each of the past seven years. In 2017, the European CLO upgrade rate was 15.3%, down from 34.3% the previous year (see chart 7). By contrast, the downgrade rate has been much lower, although it rose to 3.3% in 2017 from 1.5% a year earlier.

Chart 7

European CLO Transition Rates And Average Change In Credit Quality



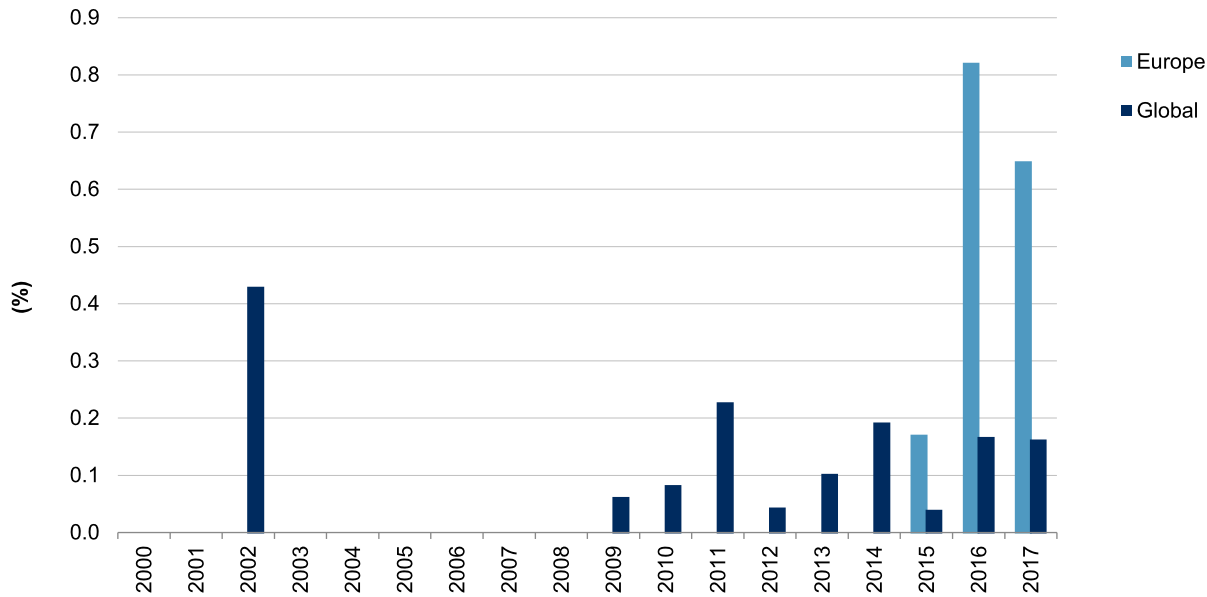
*Excluding defaults. ACCQ--Average change in credit quality. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Fixed Income Research. Copyright © 2018 by Standard & Poor's Financial Services LLC. All rights reserved.

The average change in credit quality continued to be positive in 2017, ending the year at +0.25 notches, although this was down from +0.81 notches a year earlier. European CLO ratings have consistently been trending higher on this 12-month trailing basis since mid-2011.

However, the European CLO sector has seen its first defaults in the past few years. In 2017, the default rate was 0.6%, down from 0.8% a year earlier (see chart 8).

Chart 8

European CLO Default Rates



Source: S&P Global Fixed Income Research.
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Unlike in the U.S., the majority of the outstanding universe of European CLO ratings at the beginning of 2017 was still from legacy CLO 1.0 transactions, given somewhat slower post-crisis issuance growth and the fact that new CLO issuance in the European market only restarted as recently as 2013. At the beginning of 2017, CLO 1.0 ratings still accounted for 56% of the European CLO universe.

Unsurprisingly, upgrades in 2017 were focused in this group, with the CLO 1.0 upgrade rate as high as 27.4%, while there were no upgrades for the 2.0 generation. Likewise, all the downgrades and defaults in 2017 were in 1.0 transactions, with the majority of downgrades (and all defaults) in transactions from the 2006 and earlier vintages.

Finally, all the 2017 defaults in European CLOs were on securities that we rated in the 'CCC' or 'CC' categories at the beginning of the year (see table 6).

Default, Transition, and Recovery: 2017 Annual Global Leveraged Loan CLO Default Study And Rating Transitions

Table 6

European CLO Transition And Default Summary

2017 vs. one-year average

	2017					One-year average				
	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)
Overall	927	81.3	15.3	3.3	0.6	6	70.4	17.8	11.8	0.1
Generation										
1.0	519	66.7	27.4	6.0	1.2	6	68.4	19.0	12.6	0.1
2.0	408	100.0	0.0	0.0	0.0	0	98.9	1.1	0.0	0.0
Vintage										
Pre-2005	8	50.0	0.0	50.0	37.5	3	78.2	10.0	11.9	0.5
2005	40	62.5	15.0	22.5	7.5	3	72.4	15.6	12.1	0.2
2006	143	76.2	20.3	3.5	0.0	0	67.2	20.0	12.8	0.0
2007	328	63.4	32.6	4.0	0.0	0	63.8	23.8	12.4	0.0
2008	0	N/A	N/A	N/A	N/A	N/A	59.9	20.5	19.6	0.0
2009	0	N/A	N/A	N/A	N/A	N/A	25.0	75.0	0.0	0.0
2010	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2011	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2012	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2013	80	100.0	0.0	0.0	0.0	0	98.1	1.9	0.0	0.0
2014	47	100.0	0.0	0.0	0.0	0	100.0	0.0	0.0	0.0
2015	105	100.0	0.0	0.0	0.0	0	99.0	1.0	0.0	0.0
2016	176	100.0	0.0	0.0	0.0	0	100.0	0.0	0.0	0.0
Rating category										
AAA	250	100.0	N/A	0.0	0.0	0	84.3	N/A	15.7	0.0
AA	194	67.5	32.5	0.0	0.0	0	68.1	23.7	8.2	0.0
A	118	78.8	19.5	1.7	0.0	0	65.4	24.1	10.5	0.0
BBB	114	82.5	16.7	0.9	0.0	0	68.9	18.5	12.6	0.0
BB	128	71.1	15.6	13.3	0.0	0	69.5	17.7	12.7	0.0
B	90	88.9	8.9	2.2	0.0	0	62.7	23.4	13.9	0.0
CCC	30	46.7	30.0	23.3	13.3	4	62.2	30.2	7.6	1.4
CC	3	33.3	0.0	66.7	66.7	2	84.6	0.0	15.4	15.4
Rating grade										
Investment-grade	676	84.0	15.5	0.4	0.0	0	72.1	16.2	11.7	0.0
Speculative-grade	251	74.1	14.7	11.2	2.4	6	66.3	21.8	11.9	0.4

*Including defaults. 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.

Table 7

European CLO Lifetime Transition And Default Summary

1997-Q2 2018

	Ratings (no.)	Stable (%)	Upgrades (%)	Downgrades* (%)	Defaults (%)	Defaults (no.)	Withdrawals (%)
Overall	2,466	60.5	21.1	18.4	0.8	19	68.8
Generation							
1.0	1,443	33.3	35.4	31.3	1.3	19	96.4
2.0	1,023	98.9	1.0	0.1	0.0	0	29.8
Vintage							
Pre-2005	288	45.1	15.3	39.6	4.5	13	95.1
2005	143	30.8	32.9	36.4	2.1	3	97.9
2006	415	32.8	41.9	25.3	0.5	2	95.7
2007	500	29.6	45.4	25.0	0.2	1	96.6
2008	91	24.2	14.3	61.5	0.0	0	100.0
2009	6	0.0	100.0	0.0	0.0	0	100.0
2010	0	N/A	N/A	N/A	N/A	N/A	N/A
2011	0	N/A	N/A	N/A	N/A	N/A	N/A
2012	0	N/A	N/A	N/A	N/A	N/A	N/A
2013	117	93.2	6.8	0.0	0.0	0	98.3
2014	47	100.0	0.0	0.0	0.0	0	83.0
2015	105	98.1	1.9	0.0	0.0	0	83.8
2016	176	99.4	0.0	0.6	0.0	0	28.4
2017	423	100.0	0.0	0.0	0.0	0	3.1
2018 H1	155	100.0	0.0	0.0	0.0	0	0.0
Rating category							
AAA	695	83.9	N/A	16.1	0.0	0	78.3
AA	460	55.4	37.0	7.6	0.0	0	63.5
A	398	45.5	43.0	11.6	0.0	0	71.4
BBB	440	44.1	27.7	28.2	0.7	3	74.1
BB	342	46.5	15.8	37.7	4.4	15	63.7
B	131	91.6	3.1	5.3	0.8	1	24.4
CCC	0	N/A	N/A	N/A	N/A	N/A	N/A
CC	0	N/A	N/A	N/A	N/A	N/A	N/A
Rating grade							
Investment-grade	1,993	60.9	23.2	15.9	0.2	3	72.6
Speculative-grade	473	59.0	12.3	28.8	3.4	16	52.9

*Including defaults. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR' when determining stable, upgrade, downgrade, and default rates. N/A--Not applicable. 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 global CLO 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. The analysis also excludes public information ('pi') ratings, issuer credit ratings, and short-term issue ratings.

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

Issues included in this study

The study analyzes 12,514 rating histories of CLO securities that S&P Global Ratings first rated in the U.S. and Europe from 1996 until June 30, 2018. The term "CLO" in this report refers to cash flow collateralized loan obligations backed by loans to large corporates. Most transactions in this sector are overseen by a collateral manager and backed by a portfolio of broadly syndicated leveraged loans. We do not include transactions backed by loans to small and midsize enterprises (SMEs). We include the ratings on combination (or "combo") notes separately from, and in addition to, any ratings on these notes' underlying components.

Region definitions

This study presents rating transitions for global CLO transactions. In some analyses, we segment default and transition statistics by region. 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 the domicile(s) of the underlying assets.

Vintage definition

In this report, we classify a security's vintage based on the date on which we first assigned it 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.

We also segment CLO transactions into so-called "1.0" and "2.0" generations, generally referring to transactions originated before and after the 2008-2009 financial crisis, respectively. For these purposes, we consider CLO 2.0 transactions to be those issued since the beginning of 2010, designating those issued in 2009 or earlier as CLO 1.0 transactions.

When a CLO is restructured through a so-called "reset" or "refinancing", we treat it as a new transaction with a new ratings history, whose vintage is based on the year in which the restructuring took place.

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 calculated the 2017 transition rates by determining the ratings on each security outstanding at the start of 2017 and determining the ratings on those same securities at the end of 2017. We then calculate statistics such as upgrade, downgrade, and stability rates, equivalent to the proportion of securities in the static pool with ratings that moved up, down, or remained the 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 the rating on a given security 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, while 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, 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 in the relevant sector and/or region. This approach contrasts with the approach we used in some previous editions of our wider global structured finance default and transition studies. In those studies, we included the ratings history of all securities on which the original rating was below the 'AAA' level. However, for each structured finance transaction, we generally only included one of the securities that we originally rated 'AAA'.

Treatment of 'D' ratings

Counts of defaults and default rate statistics in this report are based on securities with ratings we lowered to 'D'. For the purposes of this report, when a security 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 with ratings that 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 region or 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 3 shows that the five-year average CDR for 'BBB' rated global CLOs has been 0.12% and the 10-year average has been 1.07%.

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 multiyear default and transition rates included elsewhere in this study (and as described above), where default rates are not conditional on survival.

Appendix II: List Of Global CLO Defaults And Near-Defaults

Tables 8 and 9 detail all the global CLO securities on which we have moved our ratings to 'D' and 'CC' respectively.

Table 8

Global CLO Tranches With Ratings Lowered To 'D', 1997-Q2 2018

Date rating lowered to 'D'	Transaction	Tranche	Region	Original Vintage	Original rating
Sept. 17, 2002	KBC - Orion Commercial Loan Master Trust 1999-1	D-1	U.S.	1999	BB
Sept. 17, 2002	KBC - Orion Commercial Loan Master Trust 1999-1	D-2	U.S.	1999	BB
Nov. 4, 2009	Pine CCS Ltd	A-1	U.S.	2008	A-
Nov. 4, 2009	Pine CCS Ltd	A-2	U.S.	2008	A-
Dec. 17, 2009	Kingfisher Capital CLO Ltd.	A	U.S.	2008	BBB+
Oct. 15, 2010	Landmark II CDO Ltd.	B	U.S.	2002	AA
Oct. 26, 2010	Verano CCS Ltd	Sr Notes	U.S.	2008	A-
Oct. 26, 2010	Spruce CCS Ltd	Sr Nts	U.S.	2008	A
Nov. 8, 2010	GE Commercial Loan Trust Series 2006-1	Pfd Tr Cert	U.S.	2006	BB
April 19, 2011	Sandelman Finance 2006-1 Ltd	E	U.S.	2006	BB
Oct. 25, 2011	Landmark II CDO Ltd.	C	U.S.	2002	BBB
Oct. 25, 2011	Landmark II CDO Ltd.	D	U.S.	2002	BB
Oct. 25, 2011	GE Commercial Loan Trust Series 2006-2	D	U.S.	2006	BBB-
Oct. 25, 2011	GE Commercial Loan Trust Series 2006-2	Pfd Trust	U.S.	2006	BB
Oct. 25, 2011	GE Commercial Loan Trust Series 2006-3	C	U.S.	2006	A
Oct. 25, 2011	GE Commercial Loan Trust Series 2006-3	D	U.S.	2006	BBB-
Oct. 25, 2011	GE Commercial Loan Trust Series 2006-3	Pfd Tr Cert	U.S.	2006	BB
May 29, 2012	Rosedale CLO II Ltd	E	U.S.	2007	BB
Nov. 27, 2013	Katonah V, Ltd	D	U.S.	2003	BB
Nov. 27, 2013	Longhorn CDO III Ltd	E	U.S.	2003	BB
April 2, 2014	Stanfield Carrera CLO, Ltd.	C-1	U.S.	2002	BBB
April 2, 2014	Stanfield Carrera CLO, Ltd.	C-2	U.S.	2002	BBB
April 2, 2014	Stanfield Carrera CLO, Ltd.	D-1	U.S.	2002	BB

Table 8

Global CLO Tranches With Ratings Lowered To 'D', 1997-Q2 2018 (cont.)

Date rating lowered to 'D'	Transaction	Tranche	Region	Vintage	Original rating
April 2, 2014	Stanfield Carrera CLO, Ltd.	D-2	U.S.	2002	BB
May 2, 2014	Premium Loan Trust I Ltd	C	U.S.	2004	BBB
May 2, 2014	Premium Loan Trust I Ltd	D	U.S.	2004	BB
July 18, 2014	Foxe Basin CLO 2003, Ltd.	D	U.S.	2003	BB
Aug. 12, 2014	Highland Loan Funding V Ltd.	C-1	U.S.	2001	BBB
Aug. 12, 2014	Highland Loan Funding V Ltd.	C-2	U.S.	2001	BBB
Aug. 12, 2014	Highland Loan Funding V Ltd.	D	U.S.	2001	BB+
Nov. 26, 2015	Leopard CLO I B.V.	E-1	Europe	2003	BB
Nov. 26, 2015	Leopard CLO I B.V.	E-2	Europe	2003	BB
Aug. 4, 2016	North Westerly CLO I B.V.	IV-A	Europe	2003	BB-
Aug. 4, 2016	North Westerly CLO I B.V.	IV-B	Europe	2003	BB-
Aug. 10, 2016	Avoca CLO II B.V.	C-1	Europe	2004	BBB
Aug. 10, 2016	Avoca CLO II B.V.	C-2	Europe	2004	BBB
Aug. 10, 2016	Avoca CLO II B.V.	D	Europe	2004	BB
Aug. 10, 2016	Avoca CLO II B.V.	R Combo	Europe	2004	BB
Aug. 10, 2016	Avoca CLO II B.V.	T Combo	Europe	2004	BB+
Oct. 13, 2016	Leopard CLO II B.V.	D	Europe	2004	BB
Feb. 13, 2017	Leveraged Finance Europe Capital III B.V.	D	Europe	2004	BBB-
March 22, 2017	Avoca CLO III PLC	E	Europe	2005	BB
May 15, 2017	Leopard CLO III B.V.	E1	Europe	2005	BB-
May 15, 2017	Leopard CLO III B.V.	E2	Europe	2005	BB-
Sept. 26, 2017	North Westerly CLO II B.V.	D-1	Europe	2004	BB-
Sept. 26, 2017	North Westerly CLO II B.V.	D-2	Europe	2004	BB-
Nov. 7, 2017	Airlie CLO 2006-II Ltd	D	U.S.	2006	BB
Feb. 13, 2018	BACCHUS 2007-1 PLC	E	Europe	2007	BB-
April 6, 2018	Avoca CLO IV PLC	E Def	Europe	2006	BB
April 6, 2018	Avoca CLO V PLC	F	Europe	2006	B

As of June 30, 2018. Excludes seven defaulting tranches that were rated confidentially. Source: S&P Global Fixed Income Research.

Table 9

Global CLO Tranches With Ratings At 'CC'*

Date rating lowered to 'CC'	Transaction	Tranche	Region	Vintage	Original rating
Oct. 2, 2015	Strawinsky I PLC	E	Europe	2007	BB+
Feb. 13, 2017	Leveraged Finance Europe Capital III B.V.	E	Europe	2004	BB-

*As of June 30, 2018. Source: S&P Global Fixed Income Research.

Appendix III: Detailed Default And Transition Statistics

Tables 10-30 provide various default and transition rate statistics for global CLOs segmented into different subsectors.

Global CLOs

Table 10

Global CLO Cumulative Default Rates, Conditional On Survival, 1997-2017 (%)

	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	0.00	0.00	0.00	0.00
AA	0.00	0.01	0.02	0.03	0.04	0.06	0.08	0.11	0.11	0.11
A	0.00	0.01	0.02	0.04	0.05	0.05	0.05	0.05	0.05	0.05
BBB	0.01	0.01	0.02	0.08	0.12	0.22	0.37	0.55	0.79	1.07
BB	0.03	0.14	0.26	0.36	0.53	0.75	1.14	1.79	2.67	3.95
B	0.07	0.19	0.37	0.59	0.99	1.60	1.87	2.76	5.13	8.03
CCC	1.04	2.25	3.66	5.28	6.81	7.86	9.16	10.95	64.38	64.38
CC	28.87	43.51	51.26	53.48	54.70	54.70	54.70	54.70	54.70	N/A
IG	0.00	0.01	0.01	0.03	0.05	0.07	0.11	0.16	0.21	0.27
SG	0.42	0.83	1.26	1.69	2.18	2.62	3.15	3.90	4.94	6.27
Overall	0.09	0.19	0.28	0.39	0.51	0.62	0.75	0.91	1.11	1.35

IG--Investment-grade. SG--Speculative-grade. N/A--Not applicable. Source: S&P Global Fixed Income Research.

Table 11

Global CLO Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	13.51	86.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	2.42	8.61	88.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	2.46	5.09	92.28	0.00	0.16	0.00	0.00	0.00	0.00
BB	0.16	0.00	0.49	3.27	94.77	1.31	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.35	2.11	97.18	0.00	0.00	0.00	0.35
CCC	0.00	0.00	0.00	0.00	0.00	17.14	68.57	2.86	0.00	11.43
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	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
One-year weighted-average										
AAA	90.29	7.60	1.91	0.15	0.03	0.00	0.01	0.00	0.00	0.00
AA	16.31	78.88	3.37	1.18	0.19	0.04	0.03	0.00	0.00	0.00

Table 11

Global CLO Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
A	2.38	12.71	77.46	4.63	2.20	0.40	0.20	0.01	0.00	0.00
BBB	0.43	2.39	9.29	79.10	4.30	2.25	2.20	0.02	0.00	0.01
BB	0.12	0.15	1.72	9.34	79.90	3.35	5.24	0.15	0.00	0.03
B	0.04	0.07	0.53	4.03	14.62	75.78	4.81	0.04	0.00	0.07
CCC	0.00	0.00	0.00	1.29	8.33	19.09	68.91	1.34	0.00	1.04
CC	0.00	0.00	0.00	0.00	2.06	2.06	1.03	65.98	0.00	28.87
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	79.93	16.08	3.59	0.27	0.11	0.00	0.01	0.00	0.00	0.00
AA	30.35	60.20	6.75	2.17	0.32	0.12	0.08	0.00	0.00	0.01
A	7.26	19.95	58.19	9.42	4.10	0.70	0.33	0.04	0.00	0.01
BBB	1.70	5.79	14.71	59.95	8.59	4.78	4.40	0.07	0.00	0.01
BB	0.49	0.97	3.98	15.91	61.57	6.24	10.40	0.29	0.00	0.14
B	0.12	0.40	1.94	9.29	24.60	55.83	7.62	0.04	0.00	0.16
CCC	0.00	0.00	0.35	3.83	15.14	30.22	46.37	2.02	0.00	2.07
CC	0.00	0.00	0.00	0.00	3.19	4.26	1.06	48.94	0.00	42.55
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	70.80	24.41	4.20	0.31	0.21	0.04	0.03	0.00	0.00	0.00
AA	41.28	46.38	9.17	2.47	0.38	0.19	0.12	0.00	0.00	0.02
A	13.36	21.29	46.07	13.04	4.84	0.85	0.43	0.08	0.00	0.02
BBB	3.82	9.19	15.14	46.96	12.42	6.50	5.78	0.17	0.00	0.02
BB	0.96	2.15	6.43	17.69	49.15	9.21	13.72	0.41	0.00	0.27
B	0.59	1.09	3.88	14.36	25.63	45.83	8.30	0.00	0.00	0.32
CCC	0.16	0.21	1.31	6.72	18.70	29.99	37.55	2.42	0.00	2.94
CC	0.00	0.00	0.00	0.00	4.49	5.62	1.12	38.20	0.00	50.56
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	65.71	29.77	3.88	0.25	0.26	0.07	0.06	0.00	0.00	0.00
AA	50.23	36.74	9.94	2.27	0.39	0.27	0.14	0.00	0.00	0.03
A	19.98	20.39	38.98	14.49	4.68	0.89	0.41	0.13	0.00	0.04
BBB	6.53	11.72	13.72	39.23	14.70	7.42	6.35	0.25	0.00	0.08
BB	1.54	3.66	8.86	17.20	41.08	11.47	15.20	0.58	0.00	0.41
B	1.04	2.02	6.12	18.59	24.88	37.83	8.80	0.16	0.00	0.55
CCC	0.40	0.57	2.38	9.52	20.06	28.78	32.24	2.15	0.00	3.91
CC	0.00	0.00	0.00	0.00	5.62	5.62	1.12	34.83	0.00	52.81

Table 11

Global CLO Rating Transitions, 2017 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
Five-year weighted-average										
AAA	66.37	30.16	2.73	0.21	0.30	0.15	0.09	0.00	0.00	0.00
AA	56.19	31.81	9.25	1.84	0.38	0.31	0.17	0.00	0.00	0.05
A	25.77	19.56	35.52	13.82	3.79	0.91	0.40	0.18	0.00	0.06
BBB	9.46	12.45	12.08	35.87	15.22	7.86	6.60	0.33	0.00	0.13
BB	2.48	5.45	10.29	15.28	36.18	13.72	15.28	0.69	0.00	0.63
B	1.55	3.76	9.27	21.24	24.66	29.37	8.74	0.47	0.00	0.94
CCC	0.69	1.06	3.88	12.45	20.95	27.52	26.89	1.81	0.00	4.75
CC	0.00	0.00	0.00	0.00	6.41	6.41	1.28	33.33	0.00	52.56
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	89.98	8.52	0.57	0.06	0.33	0.26	0.28	0.00	0.00	0.00
AA	68.05	26.01	2.97	1.79	0.56	0.05	0.26	0.00	0.00	0.31
A	32.78	24.95	34.06	4.48	1.32	1.09	0.56	0.68	0.00	0.08
BBB	5.11	8.38	16.48	41.35	11.13	8.21	7.40	0.70	0.00	1.23
BB	0.51	2.24	5.26	11.07	42.35	17.96	14.18	2.24	0.00	4.18
B	0.00	7.21	0.00	3.60	6.31	55.86	11.71	0.90	0.00	14.41
CCC	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00	90.48
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. 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 12

Global CLO Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	29.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.82
AA	6.64	29.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.16
A	1.06	3.63	32.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.54
BBB	0.00	0.66	1.81	42.53	0.00	0.16	0.00	0.00	0.00	0.00	54.84
BB	0.00	0.00	0.33	1.80	52.12	1.31	0.00	0.00	0.00	0.00	44.44
B	0.00	0.00	0.00	0.00	1.76	59.51	0.00	0.00	0.00	0.35	38.38
CCC	0.00	0.00	0.00	0.00	0.00	14.29	28.57	2.86	0.00	11.43	42.86
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	66.67	0.00

Table 12

Global CLO Rating Transitions, 2017 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
One-year weighted-average											
AAA	69.27	7.55	1.89	0.14	0.03	0.00	0.01	0.00	0.00	0.00	21.09
AA	13.68	68.54	3.35	1.17	0.19	0.04	0.03	0.00	0.00	0.00	12.99
A	1.64	11.59	67.79	4.63	2.16	0.36	0.19	0.01	0.00	0.00	11.63
BBB	0.25	1.80	8.40	70.27	4.29	2.24	2.18	0.01	0.00	0.01	10.54
BB	0.01	0.09	1.46	8.54	71.29	3.31	5.24	0.14	0.00	0.03	9.89
B	0.00	0.04	0.39	3.42	13.73	65.94	4.67	0.04	0.00	0.07	11.70
CCC	0.00	0.00	0.00	0.94	8.03	18.24	62.22	1.34	0.00	1.04	8.18
CC	0.00	0.00	0.00	0.00	1.03	2.06	1.03	51.55	0.00	28.87	15.46
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	47.83	15.70	3.50	0.24	0.08	0.00	0.01	0.00	0.00	0.00	32.63
AA	19.32	45.70	6.68	2.12	0.30	0.09	0.06	0.00	0.00	0.01	25.71
A	4.30	15.97	44.08	9.36	4.03	0.64	0.29	0.04	0.00	0.01	21.27
BBB	0.76	3.69	11.62	46.38	8.49	4.75	4.28	0.04	0.00	0.01	19.98
BB	0.17	0.61	2.78	12.85	47.71	5.97	10.35	0.25	0.00	0.14	19.18
B	0.04	0.28	1.07	6.94	21.07	40.20	7.02	0.04	0.00	0.16	23.17
CCC	0.00	0.00	0.30	2.77	13.37	26.79	34.56	1.72	0.00	2.07	18.42
CC	0.00	0.00	0.00	0.00	1.06	4.26	1.06	26.60	0.00	42.55	24.47
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	33.66	23.29	3.99	0.25	0.14	0.04	0.03	0.00	0.00	0.00	38.60
AA	19.56	29.88	9.02	2.34	0.33	0.11	0.08	0.00	0.00	0.02	38.66
A	6.00	14.98	29.49	12.83	4.67	0.77	0.35	0.06	0.00	0.02	30.82
BBB	1.26	5.03	10.25	30.57	12.14	6.30	5.41	0.13	0.00	0.02	28.88
BB	0.30	1.04	3.69	12.26	31.73	8.63	13.55	0.34	0.00	0.27	28.19
B	0.09	0.55	1.32	8.76	18.74	26.81	6.61	0.00	0.00	0.32	36.80
CCC	0.00	0.11	0.95	4.25	14.39	22.43	22.27	1.89	0.00	2.94	30.78
CC	0.00	0.00	0.00	0.00	1.12	5.62	0.00	8.99	0.00	50.56	33.71
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	26.16	27.46	3.50	0.16	0.11	0.07	0.06	0.00	0.00	0.00	42.47
AA	17.87	20.45	9.62	2.04	0.29	0.12	0.08	0.00	0.00	0.03	49.50
A	7.39	12.02	21.57	14.02	4.40	0.74	0.25	0.08	0.00	0.04	39.47

Table 12

Global CLO Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
BBB	1.63	5.53	7.59	21.36	13.93	6.89	5.58	0.20	0.00	0.08	37.21
BB	0.37	1.54	4.33	9.72	21.38	10.45	14.66	0.48	0.00	0.41	36.66
B	0.16	0.66	1.59	9.19	15.04	16.84	5.58	0.16	0.00	0.55	50.25
CCC	0.00	0.28	1.08	5.16	13.26	17.51	15.01	1.53	0.00	3.91	42.27
CC	0.00	0.00	0.00	0.00	1.12	3.37	0.00	1.12	0.00	52.81	41.57
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	24.20	26.31	2.19	0.09	0.05	0.10	0.07	0.00	0.00	0.00	46.98
AA	15.76	16.69	8.65	1.47	0.23	0.13	0.04	0.00	0.00	0.05	56.97
A	7.57	9.45	18.54	12.92	3.37	0.73	0.16	0.09	0.00	0.06	47.10
BBB	2.25	4.78	5.14	17.94	13.57	6.70	5.26	0.25	0.00	0.13	43.98
BB	0.40	2.13	4.18	6.33	16.24	12.09	13.95	0.54	0.00	0.63	43.49
B	0.13	1.21	2.49	8.53	11.83	8.80	4.17	0.34	0.00	0.94	61.56
CCC	0.06	0.38	1.19	5.13	10.94	13.20	9.19	1.00	0.00	4.75	54.16
CC	0.00	0.00	0.00	0.00	1.28	1.28	0.00	0.00	0.00	52.56	44.87
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	3.09	0.55	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00	96.24
AA	4.56	1.84	0.41	0.20	0.20	0.00	0.00	0.00	0.00	0.31	92.47
A	1.77	2.45	2.11	0.90	0.34	0.30	0.11	0.08	0.00	0.08	91.87
BBB	0.21	0.63	1.37	2.40	1.97	1.59	1.94	0.35	0.00	1.23	88.31
BB	0.00	0.05	0.20	0.92	2.70	3.78	3.98	1.38	0.00	4.18	82.81
B	0.00	0.00	0.00	0.00	1.80	2.70	6.31	0.90	0.00	14.41	73.87
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.48	9.52
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. Source: S&P Global Fixed Income Research.

Table 13

Global CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	41.04	58.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	11.29	23.39	65.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 13

Global CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
BBB	0.00	10.17	17.80	71.19	0.00	0.85	0.00	0.00	0.00	0.00
BB	0.81	0.00	1.63	12.20	79.67	5.69	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	1.28	6.41	91.03	0.00	0.00	0.00	1.28
CCC	0.00	0.00	0.00	0.00	0.00	17.14	68.57	2.86	0.00	11.43
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	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
One-year weighted-average										
AAA	88.05	9.36	2.35	0.19	0.04	0.00	0.01	0.00	0.00	0.00
AA	19.71	74.23	4.24	1.49	0.24	0.05	0.04	0.00	0.00	0.00
A	2.93	15.07	72.60	5.84	2.79	0.51	0.25	0.01	0.00	0.00
BBB	0.53	2.85	10.95	74.82	5.31	2.78	2.72	0.03	0.00	0.01
BB	0.15	0.20	2.19	11.76	74.41	4.28	6.78	0.20	0.00	0.03
B	0.05	0.09	0.70	5.28	18.95	68.49	6.30	0.05	0.00	0.09
CCC	0.00	0.00	0.00	1.29	8.33	19.09	68.91	1.34	0.00	1.04
CC	0.00	0.00	0.00	0.00	2.06	2.06	1.03	65.98	0.00	28.87
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	76.53	18.81	4.20	0.32	0.13	0.00	0.02	0.00	0.00	0.00
AA	34.95	53.80	8.04	2.58	0.38	0.15	0.09	0.00	0.00	0.01
A	8.53	22.39	51.63	11.25	4.91	0.83	0.40	0.05	0.00	0.01
BBB	2.00	6.61	16.41	54.02	10.08	5.61	5.17	0.08	0.00	0.01
BB	0.59	1.19	4.79	18.79	53.91	7.53	12.67	0.36	0.00	0.17
B	0.15	0.48	2.37	11.34	29.75	46.37	9.30	0.05	0.00	0.19
CCC	0.00	0.00	0.35	3.83	15.14	30.22	46.37	2.02	0.00	2.07
CC	0.00	0.00	0.00	0.00	3.19	4.26	1.06	48.94	0.00	42.55
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	67.42	27.24	4.68	0.34	0.23	0.05	0.04	0.00	0.00	0.00
AA	45.43	40.66	10.34	2.79	0.43	0.21	0.13	0.00	0.00	0.02
A	15.02	22.63	40.51	14.77	5.50	0.97	0.49	0.10	0.00	0.03
BBB	4.26	10.11	16.03	41.76	13.89	7.26	6.47	0.19	0.00	0.03
BB	1.10	2.47	7.31	19.69	42.42	10.49	15.74	0.47	0.00	0.31
B	0.68	1.25	4.42	16.38	28.91	38.53	9.46	0.00	0.00	0.36
CCC	0.16	0.21	1.31	6.72	18.70	29.99	37.55	2.42	0.00	2.94
CC	0.00	0.00	0.00	0.00	4.49	5.62	1.12	38.20	0.00	50.56
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 13

Global CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
Four-year weighted-average										
AAA	63.45	31.73	4.13	0.27	0.28	0.08	0.06	0.00	0.00	0.00
AA	52.86	33.18	10.65	2.43	0.41	0.28	0.15	0.00	0.00	0.04
A	21.40	20.78	35.59	15.59	5.05	0.96	0.44	0.14	0.00	0.04
BBB	6.94	12.40	13.92	35.98	15.69	7.92	6.78	0.27	0.00	0.09
BB	1.67	3.97	9.50	18.13	36.81	12.40	16.46	0.62	0.00	0.44
B	1.11	2.16	6.55	19.87	26.30	33.84	9.41	0.18	0.00	0.58
CCC	0.40	0.57	2.38	9.52	20.06	28.78	32.24	2.15	0.00	3.91
CC	0.00	0.00	0.00	0.00	5.62	5.62	1.12	34.83	0.00	52.81
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	65.51	30.93	2.80	0.21	0.31	0.15	0.10	0.00	0.00	0.00
AA	56.99	30.68	9.50	1.89	0.39	0.32	0.17	0.00	0.00	0.05
A	26.44	19.39	34.43	14.24	3.90	0.94	0.41	0.18	0.00	0.06
BBB	9.69	12.69	11.88	34.77	15.64	8.08	6.78	0.34	0.00	0.14
BB	2.56	5.63	10.55	15.37	34.56	14.18	15.78	0.71	0.00	0.65
B	1.57	3.82	9.42	21.57	24.78	28.53	8.87	0.48	0.00	0.96
CCC	0.69	1.06	3.88	12.45	20.95	27.52	26.89	1.81	0.00	4.75
CC	0.00	0.00	0.00	0.00	6.41	6.41	1.28	33.33	0.00	52.56
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	89.98	8.52	0.57	0.06	0.33	0.26	0.28	0.00	0.00	0.00
AA	68.05	26.01	2.97	1.79	0.56	0.05	0.26	0.00	0.00	0.31
A	32.78	24.95	34.06	4.48	1.32	1.09	0.56	0.68	0.00	0.08
BBB	5.11	8.38	16.48	41.35	11.13	8.21	7.40	0.70	0.00	1.23
BB	0.51	2.24	5.26	11.07	42.35	17.96	14.18	2.24	0.00	4.18
B	0.00	7.21	0.00	3.60	6.31	55.86	11.71	0.90	0.00	14.41
CCC	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00	90.48
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. 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

Global CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	10.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	89.84
AA	20.75	12.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.98
A	4.84	11.29	13.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.16
BBB	0.00	2.54	7.63	22.03	0.00	0.85	0.00	0.00	0.00	0.00	66.95
BB	0.00	0.00	1.63	8.13	30.08	5.69	0.00	0.00	0.00	0.00	54.47
B	0.00	0.00	0.00	0.00	5.13	29.49	0.00	0.00	0.00	1.28	64.10
CCC	0.00	0.00	0.00	0.00	0.00	14.29	28.57	2.86	0.00	11.43	42.86
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	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
One-year weighted-average											
AAA	68.66	9.30	2.33	0.18	0.04	0.00	0.01	0.00	0.00	0.00	19.49
AA	16.73	67.52	4.22	1.47	0.24	0.05	0.04	0.00	0.00	0.00	9.73
A	2.04	13.98	66.44	5.84	2.73	0.46	0.23	0.01	0.00	0.00	8.25
BBB	0.31	2.19	10.01	68.68	5.30	2.77	2.69	0.01	0.00	0.01	8.03
BB	0.02	0.12	1.89	10.85	68.15	4.23	6.78	0.18	0.00	0.03	7.75
B	0.00	0.05	0.51	4.48	17.83	59.01	6.12	0.05	0.00	0.09	11.86
CCC	0.00	0.00	0.00	0.94	8.03	18.24	62.22	1.34	0.00	1.04	8.18
CC	0.00	0.00	0.00	0.00	1.03	2.06	1.03	51.55	0.00	28.87	15.46
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	47.06	18.37	4.10	0.28	0.10	0.00	0.02	0.00	0.00	0.00	30.08
AA	22.50	44.21	7.95	2.52	0.36	0.11	0.07	0.00	0.00	0.01	22.27
A	5.12	18.34	42.42	11.18	4.83	0.77	0.34	0.05	0.00	0.01	16.94
BBB	0.89	4.29	13.20	44.23	9.97	5.57	5.02	0.05	0.00	0.01	16.76
BB	0.20	0.75	3.39	15.41	43.45	7.20	12.60	0.30	0.00	0.17	16.54
B	0.05	0.34	1.31	8.48	25.63	31.49	8.58	0.05	0.00	0.19	23.89
CCC	0.00	0.00	0.30	2.77	13.37	26.79	34.56	1.72	0.00	2.07	18.42
CC	0.00	0.00	0.00	0.00	1.06	4.26	1.06	26.60	0.00	42.55	24.47
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	33.74	25.98	4.45	0.28	0.16	0.05	0.04	0.00	0.00	0.00	35.30
AA	21.64	29.33	10.17	2.64	0.37	0.12	0.09	0.00	0.00	0.02	35.60
A	6.79	16.30	29.09	14.55	5.31	0.87	0.40	0.07	0.00	0.03	26.60
BBB	1.41	5.61	11.09	29.37	13.58	7.05	6.04	0.15	0.00	0.03	25.67
BB	0.35	1.19	4.23	13.88	28.78	9.83	15.54	0.38	0.00	0.31	25.49

Table 14

Global CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
B	0.10	0.62	1.51	9.98	21.32	21.06	7.54	0.00	0.00	0.36	37.49
CCC	0.00	0.11	0.95	4.25	14.39	22.43	22.27	1.89	0.00	2.94	30.78
CC	0.00	0.00	0.00	0.00	1.12	5.62	0.00	8.99	0.00	50.56	33.71
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	26.91	29.28	3.73	0.17	0.12	0.08	0.06	0.00	0.00	0.00	39.65
AA	18.88	20.88	10.30	2.19	0.31	0.13	0.08	0.00	0.00	0.04	47.19
A	7.95	12.58	22.18	15.11	4.75	0.80	0.27	0.09	0.00	0.04	36.23
BBB	1.74	5.90	7.91	21.53	14.88	7.35	5.96	0.21	0.00	0.09	34.43
BB	0.40	1.67	4.68	10.45	20.68	11.30	15.87	0.51	0.00	0.44	33.98
B	0.18	0.70	1.69	9.82	16.07	15.14	5.96	0.18	0.00	0.58	49.68
CCC	0.00	0.28	1.08	5.16	13.26	17.51	15.01	1.53	0.00	3.91	42.27
CC	0.00	0.00	0.00	0.00	1.12	3.37	0.00	1.12	0.00	52.81	41.57
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	24.76	26.98	2.24	0.10	0.05	0.11	0.07	0.00	0.00	0.00	45.69
AA	16.09	17.12	8.89	1.51	0.24	0.13	0.04	0.00	0.00	0.05	55.92
A	7.79	9.65	19.07	13.32	3.47	0.75	0.17	0.09	0.00	0.06	45.63
BBB	2.31	4.91	5.23	18.35	13.94	6.89	5.40	0.26	0.00	0.14	42.56
BB	0.42	2.20	4.32	6.54	16.54	12.49	14.42	0.56	0.00	0.65	41.86
B	0.14	1.23	2.53	8.67	12.01	8.87	4.23	0.34	0.00	0.96	61.02
CCC	0.06	0.38	1.19	5.13	10.94	13.20	9.19	1.00	0.00	4.75	54.16
CC	0.00	0.00	0.00	0.00	1.28	1.28	0.00	0.00	0.00	52.56	44.87
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	3.09	0.55	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00	96.24
AA	4.56	1.84	0.41	0.20	0.20	0.00	0.00	0.00	0.00	0.31	92.47
A	1.77	2.45	2.11	0.90	0.34	0.30	0.11	0.08	0.00	0.08	91.87
BBB	0.21	0.63	1.37	2.40	1.97	1.59	1.94	0.35	0.00	1.23	88.31
BB	0.00	0.05	0.20	0.92	2.70	3.78	3.98	1.38	0.00	4.18	82.81
B	0.00	0.00	0.00	0.00	1.80	2.70	6.31	0.90	0.00	14.41	73.87
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.48	9.52
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. Source: S&P Global Fixed Income Research.

Table 15

Global CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	5.24	94.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.37	5.20	94.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.61	2.04	97.35	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.20	1.02	98.57	0.20	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.49	99.51	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	3.15	96.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.30	3.75	95.91	0.05	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.44	2.21	97.35	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.11	1.13	98.59	0.17	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.60	99.40	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Two-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	6.16	93.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.81	7.59	91.47	0.13	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	1.06	4.92	94.02	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.23	2.65	96.81	0.31	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	1.32	98.68	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Three-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	8.80	91.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	1.11	11.41	87.27	0.20	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.11	1.37	7.56	90.95	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.48	4.05	95.00	0.48	0.00	0.00	0.00	0.00

Table 15

Global CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
B	0.00	0.00	0.00	0.00	2.22	97.78	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Four-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	13.55	86.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	1.66	15.34	82.81	0.18	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.42	1.68	10.74	87.16	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	1.11	6.00	92.67	0.22	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	4.24	95.76	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Five-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	27.40	72.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	4.00	25.00	71.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	1.10	3.87	19.34	75.69	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	2.40	12.57	85.03	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	17.39	82.61	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. 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 16

Global CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	39.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.45
AA	2.41	34.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.31
A	0.19	1.86	37.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.78
BBB	0.00	0.20	0.41	47.45	0.00	0.00	0.00	0.00	0.00	0.00	51.93
BB	0.00	0.00	0.00	0.20	57.67	0.20	0.00	0.00	0.00	0.00	41.92

Table 16

Global CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
B	0.00	0.00	0.00	0.00	0.49	70.87	0.00	0.00	0.00	0.00	28.64
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	71.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.06
AA	1.91	72.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.59
A	0.10	2.52	72.92	0.05	0.00	0.00	0.00	0.00	0.00	0.00	24.42
BBB	0.00	0.17	1.54	77.05	0.00	0.00	0.00	0.00	0.00	0.00	21.24
BB	0.00	0.00	0.00	0.68	81.95	0.17	0.00	0.00	0.00	0.00	17.20
B	0.00	0.00	0.00	0.00	0.45	88.37	0.00	0.00	0.00	0.00	11.18
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Two-year weighted-average											
AAA	52.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.65
AA	2.61	53.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.82
A	0.13	3.96	52.52	0.13	0.00	0.00	0.00	0.00	0.00	0.00	43.25
BBB	0.00	0.23	2.50	58.77	0.00	0.00	0.00	0.00	0.00	0.00	38.50
BB	0.00	0.00	0.00	1.09	67.29	0.31	0.00	0.00	0.00	0.00	31.31
B	0.00	0.00	0.00	0.00	0.44	79.61	0.00	0.00	0.00	0.00	19.96
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Three-year weighted-average											
AAA	32.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.07
AA	3.19	34.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.64
A	0.10	5.25	32.42	0.10	0.00	0.00	0.00	0.00	0.00	0.00	62.12
BBB	0.00	0.11	3.21	40.66	0.00	0.00	0.00	0.00	0.00	0.00	56.01
BB	0.00	0.00	0.00	1.19	51.79	0.48	0.00	0.00	0.00	0.00	46.55
B	0.00	0.00	0.00	0.00	0.37	67.78	0.00	0.00	0.00	0.00	31.85
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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

Table 16

Global CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
Four-year weighted-average											
AAA	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.20
AA	3.80	14.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.82
A	0.18	4.81	13.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.33
BBB	0.00	0.00	2.95	18.74	0.00	0.00	0.00	0.00	0.00	0.00	78.32
BB	0.00	0.00	0.00	0.89	29.78	0.22	0.00	0.00	0.00	0.00	69.11
B	0.00	0.00	0.00	0.00	0.00	41.53	0.00	0.00	0.00	0.00	58.47
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Five-year weighted-average											
AAA	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.49
AA	3.85	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.71
A	0.50	3.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.00
BBB	0.00	0.00	1.66	3.31	0.00	0.00	0.00	0.00	0.00	0.00	95.03
BB	0.00	0.00	0.00	0.00	7.19	0.00	0.00	0.00	0.00	0.00	92.81
B	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00	95.65
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. Source: S&P Global Fixed Income Research.

U.S. CLOs

Table 17

U.S. CLO Cumulative Default Rates, Conditional On Survival, 1997-2017 (%)

	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	0.00	0.00	0.00	0.00
AA	0.00	0.01	0.02	0.04	0.06	0.08	0.10	0.14	0.14	0.14
A	0.00	0.01	0.03	0.05	0.07	0.07	0.07	0.07	0.07	0.07
BBB	0.01	0.01	0.03	0.10	0.16	0.30	0.45	0.62	0.84	1.07
BB	0.03	0.19	0.35	0.50	0.74	0.98	1.30	1.72	2.23	3.04
B	0.11	0.29	0.57	0.82	1.13	1.51	1.88	2.61	5.59	8.96
CCC	0.79	1.50	2.49	3.76	4.90	5.42	6.14	7.68	63.07	63.07

Table 17

U.S. CLO Cumulative Default Rates, Conditional On Survival, 1997-2017 (%) (cont.)

	Time horizon (years)									
	1	2	3	4	5	6	7	8	9	10
CC	33.80	53.52	63.38	66.20	67.61	67.61	67.61	67.61	67.61	N/A
IG	0.00	0.01	0.02	0.04	0.06	0.10	0.13	0.18	0.22	0.27
SG	0.42	0.83	1.23	1.61	2.04	2.36	2.75	3.29	4.06	4.99
Overall	0.08	0.17	0.26	0.35	0.45	0.54	0.64	0.76	0.91	1.08

IG--Investment-grade. SG--Speculative-grade. N/A--Not applicable. Source: S&P Global Fixed Income Research.

Table 18

U.S. CLO Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	9.53	90.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	1.84	7.90	90.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	1.82	3.84	94.14	0.00	0.20	0.00	0.00	0.00	0.00
BB	0.21	0.00	0.21	1.86	97.31	0.41	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.52	0.52	98.45	0.00	0.00	0.00	0.52
CCC	0.00	0.00	0.00	0.00	0.00	0.00	100.00	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
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	91.65	7.13	1.11	0.08	0.03	0.00	0.01	0.00	0.00	0.00
AA	16.61	79.35	3.26	0.63	0.05	0.05	0.04	0.00	0.00	0.00
A	2.07	12.07	79.18	4.83	1.36	0.33	0.13	0.01	0.00	0.00
BBB	0.45	2.32	8.83	80.64	3.99	1.73	2.01	0.01	0.00	0.01
BB	0.10	0.12	1.79	8.54	81.85	2.64	4.74	0.19	0.00	0.03
B	0.05	0.11	0.70	4.97	13.46	78.38	2.16	0.05	0.00	0.11
CCC	0.00	0.00	0.00	1.94	12.18	19.06	64.87	1.15	0.00	0.79
CC	0.00	0.00	0.00	0.00	2.82	2.82	1.41	59.15	0.00	33.80
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	82.94	14.78	2.03	0.15	0.08	0.00	0.02	0.00	0.00	0.00
AA	31.13	61.01	6.35	1.16	0.09	0.16	0.09	0.00	0.00	0.01
A	6.80	18.69	61.54	9.76	2.36	0.58	0.24	0.01	0.00	0.01
BBB	1.77	5.81	13.95	62.65	8.06	3.69	4.03	0.03	0.00	0.01

Table 18

U.S. CLO Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
BB	0.51	1.00	4.07	14.30	65.08	5.08	9.42	0.34	0.00	0.19
B	0.18	0.54	2.72	11.35	22.52	59.60	2.78	0.06	0.00	0.24
CCC	0.00	0.00	0.53	6.03	21.10	30.14	38.65	2.04	0.00	1.51
CC	0.00	0.00	0.00	0.00	4.23	5.63	1.41	35.21	0.00	53.52
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	75.61	21.73	2.23	0.18	0.15	0.05	0.04	0.00	0.00	0.00
AA	43.28	47.05	7.83	1.31	0.14	0.23	0.14	0.00	0.00	0.03
A	12.67	20.59	50.50	12.52	2.60	0.71	0.36	0.02	0.00	0.03
BBB	3.92	9.14	14.70	50.74	11.36	4.87	5.14	0.11	0.00	0.03
BB	1.07	2.20	6.54	16.31	53.41	7.40	12.22	0.46	0.00	0.38
B	0.91	1.47	5.18	16.81	23.81	48.60	2.73	0.00	0.00	0.49
CCC	0.27	0.36	2.06	10.01	24.58	30.56	27.35	2.32	0.00	2.50
CC	0.00	0.00	0.00	0.00	5.63	7.04	1.41	22.54	0.00	63.38
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	71.70	25.78	1.96	0.19	0.21	0.09	0.07	0.00	0.00	0.00
AA	53.59	36.98	7.49	1.20	0.19	0.32	0.19	0.00	0.00	0.04
A	20.00	20.12	43.61	12.61	2.44	0.75	0.40	0.02	0.00	0.05
BBB	6.47	11.93	13.85	43.77	12.82	5.41	5.46	0.18	0.00	0.11
BB	1.72	3.87	8.93	16.07	45.98	9.38	12.82	0.66	0.00	0.57
B	1.60	2.44	8.24	22.10	23.36	38.49	2.94	0.08	0.00	0.76
CCC	0.64	0.91	3.55	13.36	24.27	28.64	23.00	1.82	0.00	3.82
CC	0.00	0.00	0.00	0.00	7.04	7.04	1.41	18.31	0.00	66.20
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	73.11	24.92	1.24	0.18	0.25	0.18	0.12	0.00	0.00	0.00
AA	60.86	31.44	5.78	1.08	0.19	0.37	0.22	0.00	0.00	0.07
A	26.52	20.49	39.46	10.46	1.86	0.70	0.43	0.00	0.00	0.08
BBB	9.47	13.06	13.22	40.43	12.70	5.44	5.28	0.22	0.00	0.18
BB	2.57	5.48	10.40	15.37	41.50	11.36	11.68	0.77	0.00	0.88
B	2.26	4.41	12.00	24.62	23.08	29.13	3.28	0.10	0.00	1.13
CCC	1.04	1.52	5.59	15.45	23.32	26.92	19.91	1.42	0.00	4.83
CC	0.00	0.00	0.00	0.00	7.81	7.81	1.56	18.75	0.00	64.06
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 18

U.S. CLO Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
10-year weighted-average										
AAA	92.50	6.18	0.31	0.05	0.31	0.31	0.34	0.00	0.00	0.00
AA	71.74	23.94	1.53	1.66	0.40	0.00	0.33	0.00	0.00	0.40
A	36.01	25.40	34.53	2.67	0.18	0.46	0.65	0.00	0.00	0.09
BBB	6.32	10.06	18.73	42.48	10.29	5.67	4.75	0.32	0.00	1.38
BB	0.67	2.93	6.85	12.44	47.11	15.30	9.12	1.66	0.00	3.93
B	0.00	8.25	0.00	4.12	3.09	60.82	6.19	1.03	0.00	16.49
CCC	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00	90.48
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. 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 19

U.S. CLO Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	30.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.70
AA	4.42	29.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.44
A	0.74	3.31	32.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.79
BBB	0.00	0.40	1.01	42.42	0.00	0.20	0.00	0.00	0.00	0.00	55.96
BB	0.00	0.00	0.00	0.62	53.31	0.41	0.00	0.00	0.00	0.00	45.66
B	0.00	0.00	0.00	0.00	0.52	62.89	0.00	0.00	0.00	0.52	36.08
CCC	0.00	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	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	69.78	7.11	1.09	0.07	0.03	0.00	0.01	0.00	0.00	0.00	21.92
AA	13.96	68.62	3.24	0.62	0.05	0.05	0.04	0.00	0.00	0.00	13.42
A	1.35	10.79	68.50	4.83	1.31	0.28	0.12	0.01	0.00	0.00	12.81
BBB	0.30	1.62	7.89	71.09	3.97	1.72	1.99	0.01	0.00	0.01	11.37
BB	0.02	0.10	1.44	7.65	72.21	2.64	4.74	0.19	0.00	0.03	10.97
B	0.00	0.05	0.49	4.27	12.49	68.54	2.11	0.05	0.00	0.11	11.89
CCC	0.00	0.00	0.00	1.41	11.74	18.18	58.34	1.15	0.00	0.79	8.38
CC	0.00	0.00	0.00	0.00	1.41	2.82	1.41	50.70	0.00	33.80	9.86
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 19

U.S. CLO Rating Transitions, 2017 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	48.58	14.53	1.95	0.13	0.05	0.00	0.02	0.00	0.00	0.00	34.74
AA	19.95	46.06	6.27	1.10	0.08	0.11	0.07	0.00	0.00	0.01	26.34
A	3.84	14.33	45.85	9.72	2.28	0.52	0.19	0.01	0.00	0.01	23.25
BBB	0.84	3.48	10.60	47.85	7.97	3.66	3.96	0.03	0.00	0.01	21.61
BB	0.21	0.72	2.65	11.10	49.26	4.95	9.38	0.32	0.00	0.19	21.22
B	0.06	0.36	1.39	8.39	18.66	43.42	2.42	0.06	0.00	0.24	25.00
CCC	0.00	0.00	0.44	4.43	18.88	26.60	27.13	1.86	0.00	1.51	19.15
CC	0.00	0.00	0.00	0.00	1.41	5.63	1.41	22.54	0.00	53.52	15.49
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	34.80	20.80	2.06	0.15	0.07	0.05	0.04	0.00	0.00	0.00	42.03
AA	20.71	30.37	7.67	1.18	0.11	0.13	0.09	0.00	0.00	0.03	39.71
A	5.26	13.85	31.94	12.33	2.47	0.63	0.25	0.02	0.00	0.03	33.22
BBB	1.27	4.48	9.40	32.59	11.03	4.71	4.90	0.11	0.00	0.03	31.48
BB	0.36	1.05	3.23	10.76	33.28	7.11	12.10	0.42	0.00	0.38	31.33
B	0.14	0.63	1.47	9.73	16.32	28.01	1.89	0.00	0.00	0.49	41.32
CCC	0.00	0.18	1.43	6.34	18.68	22.25	11.89	1.97	0.00	2.50	34.76
CC	0.00	0.00	0.00	0.00	1.41	7.04	0.00	5.63	0.00	63.38	22.54
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	27.25	23.76	1.69	0.13	0.07	0.09	0.07	0.00	0.00	0.00	46.94
AA	19.01	20.86	7.14	0.99	0.14	0.14	0.10	0.00	0.00	0.04	51.57
A	7.00	11.39	23.97	12.16	2.26	0.61	0.21	0.02	0.00	0.05	42.32
BBB	1.46	4.93	7.15	23.80	11.97	4.94	4.96	0.16	0.00	0.11	40.53
BB	0.35	1.46	3.58	8.39	22.79	8.65	12.23	0.59	0.00	0.57	41.39
B	0.25	0.59	1.85	9.92	12.52	15.38	1.34	0.08	0.00	0.76	57.31
CCC	0.00	0.45	1.45	7.09	15.18	16.27	5.64	1.36	0.00	3.82	48.73
CC	0.00	0.00	0.00	0.00	1.41	4.23	0.00	1.41	0.00	66.20	26.76
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	24.97	21.54	0.86	0.10	0.04	0.13	0.09	0.00	0.00	0.00	52.26
AA	17.02	16.82	5.21	0.74	0.12	0.17	0.05	0.00	0.00	0.07	59.81
A	7.22	10.07	20.16	9.66	1.62	0.57	0.16	0.00	0.00	0.08	50.47
BBB	1.95	4.39	5.42	20.33	10.85	4.41	4.33	0.18	0.00	0.18	47.97

Table 19

U.S. CLO Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
BB	0.29	1.52	3.37	5.93	17.74	9.86	10.29	0.64	0.00	0.88	49.47
B	0.10	1.44	2.77	8.31	9.74	7.08	1.23	0.10	0.00	1.13	68.10
CCC	0.09	0.47	1.61	6.07	10.33	11.94	2.37	0.95	0.00	4.83	61.33
CC	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	0.00	64.06	32.81
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	2.24	0.05	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	97.57
AA	2.33	0.86	0.07	0.13	0.27	0.00	0.00	0.00	0.00	0.40	95.94
A	1.20	1.24	1.06	0.14	0.00	0.00	0.14	0.00	0.00	0.09	96.13
BBB	0.23	0.60	0.92	1.20	0.83	0.42	0.42	0.28	0.00	1.38	93.73
BB	0.00	0.07	0.27	0.60	1.40	2.00	0.53	1.13	0.00	3.93	90.09
B	0.00	0.00	0.00	0.00	0.00	2.06	2.06	1.03	0.00	16.49	78.35
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.48	9.52
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. Source: S&P Global Fixed Income Research.

Table 20

U.S. CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	29.63	70.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	11.59	21.74	66.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	9.38	14.06	75.00	0.00	1.56	0.00	0.00	0.00	0.00
BB	1.85	0.00	0.00	7.41	88.89	1.85	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	2.86	0.00	94.29	0.00	0.00	0.00	2.86
CCC	0.00	0.00	0.00	0.00	0.00	0.00	100.00	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
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	89.40	9.05	1.41	0.10	0.03	0.00	0.01	0.00	0.00	0.00
AA	20.89	73.77	4.31	0.83	0.07	0.07	0.06	0.00	0.00	0.00
A	2.65	14.79	73.67	6.43	1.82	0.44	0.18	0.02	0.00	0.00
BBB	0.59	2.87	10.79	75.69	5.17	2.25	2.60	0.02	0.00	0.02

Table 20

U.S. CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
BB	0.15	0.17	2.45	11.46	75.25	3.61	6.61	0.27	0.00	0.05
B	0.08	0.16	1.02	7.19	19.14	69.06	3.13	0.08	0.00	0.16
CCC	0.00	0.00	0.00	1.94	12.18	19.06	64.87	1.15	0.00	0.79
CC	0.00	0.00	0.00	0.00	2.82	2.82	1.41	59.15	0.00	33.80
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	79.53	17.74	2.43	0.18	0.10	0.00	0.02	0.00	0.00	0.00
AA	37.05	53.19	7.88	1.44	0.11	0.20	0.11	0.00	0.00	0.01
A	8.29	21.45	54.06	12.18	2.96	0.72	0.31	0.02	0.00	0.02
BBB	2.16	6.86	15.97	55.67	9.85	4.51	4.93	0.04	0.00	0.02
BB	0.66	1.30	5.20	17.74	55.73	6.48	12.20	0.44	0.00	0.25
B	0.24	0.72	3.61	15.10	29.48	46.75	3.69	0.08	0.00	0.32
CCC	0.00	0.00	0.53	6.03	21.10	30.14	38.65	2.04	0.00	1.51
CC	0.00	0.00	0.00	0.00	4.23	5.63	1.41	35.21	0.00	53.52
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	72.24	24.73	2.54	0.21	0.17	0.06	0.05	0.00	0.00	0.00
AA	48.81	39.94	9.11	1.52	0.16	0.27	0.16	0.00	0.00	0.03
A	14.67	22.15	44.16	14.65	3.05	0.83	0.42	0.02	0.00	0.04
BBB	4.50	10.31	15.79	44.60	13.09	5.61	5.92	0.13	0.00	0.04
BB	1.28	2.64	7.75	18.78	45.07	8.79	14.68	0.55	0.00	0.45
B	1.10	1.78	6.29	20.39	28.38	38.15	3.31	0.00	0.00	0.59
CCC	0.27	0.36	2.06	10.01	24.58	30.56	27.35	2.32	0.00	2.50
CC	0.00	0.00	0.00	0.00	5.63	7.04	1.41	22.54	0.00	63.38
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	69.45	27.83	2.12	0.20	0.23	0.10	0.08	0.00	0.00	0.00
AA	57.18	32.54	8.17	1.31	0.20	0.34	0.20	0.00	0.00	0.05
A	21.82	20.57	39.73	13.85	2.68	0.82	0.44	0.02	0.00	0.06
BBB	7.00	12.83	14.13	39.96	13.95	5.88	5.94	0.19	0.00	0.12
BB	1.92	4.30	9.81	17.21	40.70	10.42	14.27	0.73	0.00	0.63
B	1.76	2.69	9.09	24.40	25.32	32.56	3.25	0.09	0.00	0.83
CCC	0.64	0.91	3.55	13.36	24.27	28.64	23.00	1.82	0.00	3.82
CC	0.00	0.00	0.00	0.00	7.04	7.04	1.41	18.31	0.00	66.20
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 20

U.S. CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
Five-year weighted-average										
AAA	72.24	25.72	1.28	0.19	0.26	0.19	0.12	0.00	0.00	0.00
AA	62.07	29.95	5.99	1.12	0.19	0.38	0.23	0.00	0.00	0.07
A	27.43	20.31	38.18	10.89	1.93	0.73	0.45	0.00	0.00	0.08
BBB	9.78	13.40	12.99	39.11	13.17	5.65	5.48	0.23	0.00	0.19
BB	2.69	5.73	10.77	15.50	39.47	11.89	12.22	0.81	0.00	0.92
B	2.31	4.52	12.29	25.21	23.21	27.84	3.36	0.11	0.00	1.16
CCC	1.04	1.52	5.59	15.45	23.32	26.92	19.91	1.42	0.00	4.83
CC	0.00	0.00	0.00	0.00	7.81	7.81	1.56	18.75	0.00	64.06
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	92.50	6.18	0.31	0.05	0.31	0.31	0.34	0.00	0.00	0.00
AA	71.74	23.94	1.53	1.66	0.40	0.00	0.33	0.00	0.00	0.40
A	36.01	25.40	34.53	2.67	0.18	0.46	0.65	0.00	0.00	0.09
BBB	6.32	10.06	18.73	42.48	10.29	5.67	4.75	0.32	0.00	1.38
BB	0.67	2.93	6.85	12.44	47.11	15.30	9.12	1.66	0.00	3.93
B	0.00	8.25	0.00	4.12	3.09	60.82	6.19	1.03	0.00	16.49
CCC	0.00	0.00	0.00	0.00	0.00	0.00	9.52	0.00	0.00	90.48
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. 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 21

U.S. CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	7.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.28
AA	13.89	6.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.63
A	4.35	11.59	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.36
BBB	0.00	1.56	4.69	14.06	0.00	1.56	0.00	0.00	0.00	0.00	78.13
BB	0.00	0.00	0.00	3.70	24.07	1.85	0.00	0.00	0.00	0.00	70.37
B	0.00	0.00	0.00	0.00	0.00	31.43	0.00	0.00	0.00	2.86	65.71
CCC	0.00	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	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

Table 21

U.S. CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
One-year weighted-average											
AAA	69.18	9.03	1.39	0.09	0.03	0.00	0.01	0.00	0.00	0.00	20.27
AA	17.81	67.31	4.29	0.82	0.07	0.07	0.06	0.00	0.00	0.00	9.59
A	1.76	13.53	67.03	6.43	1.74	0.37	0.16	0.02	0.00	0.00	8.95
BBB	0.39	2.05	9.79	69.27	5.15	2.23	2.59	0.02	0.00	0.02	8.49
BB	0.02	0.15	2.01	10.41	68.32	3.61	6.61	0.27	0.00	0.05	8.55
B	0.00	0.08	0.70	6.17	17.81	59.45	3.05	0.08	0.00	0.16	12.50
CCC	0.00	0.00	0.00	1.41	11.74	18.18	58.34	1.15	0.00	0.79	8.38
CC	0.00	0.00	0.00	0.00	1.41	2.82	1.41	50.70	0.00	33.80	9.86
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	47.75	17.44	2.34	0.15	0.06	0.00	0.02	0.00	0.00	0.00	32.23
AA	24.09	44.14	7.78	1.37	0.10	0.14	0.09	0.00	0.00	0.01	22.28
A	4.78	16.90	44.12	12.13	2.85	0.65	0.23	0.02	0.00	0.02	18.31
BBB	1.03	4.20	12.39	45.30	9.74	4.47	4.83	0.04	0.00	0.02	17.97
BB	0.27	0.93	3.44	14.06	43.80	6.31	12.15	0.42	0.00	0.25	18.38
B	0.08	0.48	1.85	11.16	24.66	30.92	3.21	0.08	0.00	0.32	27.23
CCC	0.00	0.00	0.44	4.43	18.88	26.60	27.13	1.86	0.00	1.51	19.15
CC	0.00	0.00	0.00	0.00	1.41	5.63	1.41	22.54	0.00	53.52	15.49
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	35.02	23.67	2.34	0.17	0.08	0.06	0.05	0.00	0.00	0.00	38.60
AA	23.53	29.71	8.92	1.37	0.13	0.15	0.10	0.00	0.00	0.03	36.05
A	6.15	15.34	31.84	14.45	2.90	0.74	0.30	0.02	0.00	0.04	28.23
BBB	1.46	5.15	10.35	31.29	12.72	5.42	5.65	0.13	0.00	0.04	27.79
BB	0.43	1.26	3.88	12.69	29.46	8.43	14.53	0.50	0.00	0.45	28.37
B	0.17	0.76	1.78	11.81	19.71	19.20	2.29	0.00	0.00	0.59	43.67
CCC	0.00	0.18	1.43	6.34	18.68	22.25	11.89	1.97	0.00	2.50	34.76
CC	0.00	0.00	0.00	0.00	1.41	7.04	0.00	5.63	0.00	63.38	22.54
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	28.19	25.66	1.82	0.14	0.08	0.10	0.08	0.00	0.00	0.00	43.94
AA	20.38	21.39	7.79	1.08	0.16	0.16	0.11	0.00	0.00	0.05	48.89
A	7.68	12.03	24.94	13.37	2.49	0.67	0.23	0.02	0.00	0.06	38.51
BBB	1.59	5.36	7.51	24.19	13.02	5.38	5.40	0.17	0.00	0.12	37.27

Table 21

U.S. CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
BB	0.39	1.63	3.99	9.24	21.91	9.60	13.62	0.66	0.00	0.63	38.34
B	0.28	0.65	2.04	10.95	13.82	12.62	1.48	0.09	0.00	0.83	57.24
CCC	0.00	0.45	1.45	7.09	15.18	16.27	5.64	1.36	0.00	3.82	48.73
CC	0.00	0.00	0.00	0.00	1.41	4.23	0.00	1.41	0.00	66.20	26.76
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	25.70	22.24	0.89	0.11	0.04	0.13	0.09	0.00	0.00	0.00	50.80
AA	17.50	17.37	5.40	0.77	0.12	0.17	0.05	0.00	0.00	0.07	58.55
A	7.49	10.36	20.92	10.05	1.69	0.59	0.16	0.00	0.00	0.08	48.66
BBB	2.03	4.55	5.56	20.97	11.25	4.57	4.49	0.19	0.00	0.19	46.20
BB	0.31	1.59	3.52	6.21	18.24	10.32	10.77	0.67	0.00	0.92	47.44
B	0.11	1.47	2.84	8.51	9.98	7.14	1.26	0.11	0.00	1.16	67.44
CCC	0.09	0.47	1.61	6.07	10.33	11.94	2.37	0.95	0.00	4.83	61.33
CC	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	0.00	64.06	32.81
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	2.24	0.05	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00	97.57
AA	2.33	0.86	0.07	0.13	0.27	0.00	0.00	0.00	0.00	0.40	95.94
A	1.20	1.24	1.06	0.14	0.00	0.00	0.14	0.00	0.00	0.09	96.13
BBB	0.23	0.60	0.92	1.20	0.83	0.42	0.42	0.28	0.00	1.38	93.73
BB	0.00	0.07	0.27	0.60	1.40	2.00	0.53	1.13	0.00	3.93	90.09
B	0.00	0.00	0.00	0.00	0.00	2.06	2.06	1.03	0.00	16.49	78.35
CCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.48	9.52
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. Source: S&P Global Fixed Income Research.

Table 22

U.S. CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	6.01	93.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.42	5.89	93.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.70	2.32	96.98	0.00	0.00	0.00	0.00	0.00	0.00

Table 22

U.S. CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
BB	0.00	0.00	0.23	1.16	98.37	0.23	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.63	99.37	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	3.43	96.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.32	3.90	95.72	0.05	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.48	2.22	97.30	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.12	1.16	98.53	0.18	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.70	99.30	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Two-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	6.57	93.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.86	7.74	91.26	0.14	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	1.14	4.87	94.00	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.25	2.66	96.76	0.33	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	1.46	98.54	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Three-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	9.26	90.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	1.17	11.60	87.02	0.21	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.12	1.45	7.52	90.91	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.50	4.02	94.98	0.50	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	2.39	97.61	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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

Table 22

U.S. CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
Four-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	14.11	85.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	1.73	15.58	82.50	0.19	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.44	1.76	10.77	87.03	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	1.16	6.02	92.59	0.23	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	4.46	95.54	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Five-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	27.40	72.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	4.00	25.00	71.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	1.10	3.87	19.34	75.69	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	2.40	12.57	85.03	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	17.39	82.61	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. 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 23

U.S. CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	39.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.99
AA	2.76	33.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.12
A	0.21	2.11	35.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.11
BBB	0.00	0.23	0.46	46.64	0.00	0.00	0.00	0.00	0.00	0.00	52.67
BB	0.00	0.00	0.00	0.23	56.98	0.23	0.00	0.00	0.00	0.00	42.56
B	0.00	0.00	0.00	0.00	0.63	69.81	0.00	0.00	0.00	0.00	29.56
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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

Table 23

U.S. CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
One-year weighted-average											
AAA	71.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.01
AA	2.08	72.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.24
A	0.11	2.57	72.90	0.05	0.00	0.00	0.00	0.00	0.00	0.00	24.37
BBB	0.00	0.18	1.50	77.22	0.00	0.00	0.00	0.00	0.00	0.00	21.09
BB	0.00	0.00	0.00	0.67	82.06	0.18	0.00	0.00	0.00	0.00	17.09
B	0.00	0.00	0.00	0.00	0.53	88.95	0.00	0.00	0.00	0.00	10.53
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Two-year weighted-average											
AAA	52.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.28
AA	2.78	54.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.20
A	0.14	4.08	52.72	0.14	0.00	0.00	0.00	0.00	0.00	0.00	42.91
BBB	0.00	0.24	2.51	59.29	0.00	0.00	0.00	0.00	0.00	0.00	37.96
BB	0.00	0.00	0.00	1.08	67.75	0.33	0.00	0.00	0.00	0.00	30.84
B	0.00	0.00	0.00	0.00	0.49	81.27	0.00	0.00	0.00	0.00	18.25
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Three-year weighted-average											
AAA	33.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.84
AA	3.36	34.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.16
A	0.11	5.32	32.55	0.11	0.00	0.00	0.00	0.00	0.00	0.00	61.91
BBB	0.00	0.12	3.15	41.09	0.00	0.00	0.00	0.00	0.00	0.00	55.64
BB	0.00	0.00	0.00	1.13	52.32	0.50	0.00	0.00	0.00	0.00	46.05
B	0.00	0.00	0.00	0.00	0.40	69.32	0.00	0.00	0.00	0.00	30.28
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Four-year weighted-average											
AAA	15.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.54
AA	3.96	14.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.07
A	0.19	5.00	14.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.58
BBB	0.00	0.00	3.08	19.34	0.00	0.00	0.00	0.00	0.00	0.00	77.58

Table 23

U.S. CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
BB	0.00	0.00	0.00	0.93	30.56	0.23	0.00	0.00	0.00	0.00	68.29
B	0.00	0.00	0.00	0.00	0.00	41.96	0.00	0.00	0.00	0.00	58.04
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Five-year weighted-average											
AAA	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.49
AA	3.85	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.71
A	0.50	3.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.00
BBB	0.00	0.00	1.66	3.31	0.00	0.00	0.00	0.00	0.00	0.00	95.03
BB	0.00	0.00	0.00	0.00	7.19	0.00	0.00	0.00	0.00	0.00	92.81
B	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00	95.65
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. Source: S&P Global Fixed Income Research.

European CLOs

Table 24

European CLO Cumulative Default Rates, Conditional On Survival, 1998-2017 (%)

	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	0.00	0.00	0.00	0.00
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.32	0.64	1.08
BB	0.00	0.00	0.00	0.00	0.00	0.15	0.71	2.00	4.00	6.79
B	0.00	0.00	0.00	0.16	0.74	1.82	1.82	3.43	3.43	3.43
CCC	1.36	3.22	5.23	7.40	9.67	11.79	14.48	17.34	N/A	N/A
CC	15.38	15.38	15.38	15.38	15.38	15.38	15.38	N/A	N/A	N/A
IG	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.08	0.16	0.28
SG	0.41	0.85	1.32	1.85	2.48	3.22	4.09	5.48	7.33	9.95
Overall	0.12	0.24	0.37	0.52	0.69	0.88	1.11	1.39	1.75	2.28

IG--Investment-grade. SG--Speculative-grade. N/A--Not applicable. Source: S&P Global Fixed Income Research.

Table 25

European CLO Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	28.35	71.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	5.08	11.86	83.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	5.26	10.53	84.21	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	1.56	8.59	85.16	4.69	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	5.56	94.44	0.00	0.00	0.00	0.00
CCC	0.00	0.00	0.00	0.00	0.00	20.00	63.33	3.33	0.00	13.33
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	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
One-year weighted-average										
AAA	84.33	9.69	5.43	0.48	0.07	0.00	0.00	0.00	0.00	0.00
AA	15.27	77.29	3.74	3.05	0.65	0.00	0.00	0.00	0.00	0.00
A	3.42	14.86	71.67	3.96	5.05	0.63	0.41	0.00	0.00	0.00
BBB	0.35	2.60	10.77	74.18	5.30	3.93	2.82	0.04	0.00	0.00
BB	0.15	0.25	1.52	11.62	74.41	5.34	6.67	0.05	0.00	0.00
B	0.00	0.00	0.21	2.20	16.88	70.75	9.96	0.00	0.00	0.00
CCC	0.00	0.00	0.00	0.45	3.39	19.12	74.10	1.58	0.00	1.36
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.62	0.00	15.38
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	66.56	21.83	10.55	0.81	0.24	0.00	0.00	0.00	0.00	0.00
AA	27.73	57.47	8.11	5.56	1.08	0.00	0.04	0.00	0.00	0.00
A	8.80	24.12	47.10	8.28	9.85	1.09	0.62	0.14	0.00	0.00
BBB	1.49	5.72	17.10	51.44	10.27	8.22	5.58	0.19	0.00	0.00
BB	0.42	0.89	3.71	20.35	51.88	9.47	13.13	0.16	0.00	0.00
B	0.00	0.12	0.46	5.32	28.59	48.61	16.90	0.00	0.00	0.00
CCC	0.00	0.00	0.12	0.94	7.26	30.33	56.56	1.99	0.00	2.81
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.30	0.00	8.70
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	50.02	36.01	12.68	0.84	0.44	0.00	0.00	0.00	0.00	0.00
AA	34.64	44.15	13.60	6.34	1.18	0.04	0.04	0.00	0.00	0.00
A	15.58	23.55	31.78	14.72	12.08	1.32	0.66	0.30	0.00	0.00
BBB	3.51	9.33	16.49	35.36	15.70	11.51	7.75	0.35	0.00	0.00
BB	0.67	2.01	6.15	21.34	37.82	14.02	17.71	0.28	0.00	0.00

Table 25

European CLO Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
B	0.00	0.39	1.44	9.80	29.02	40.65	18.69	0.00	0.00	0.00
CCC	0.00	0.00	0.25	2.04	10.32	29.17	52.10	2.55	0.00	3.57
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	40.93	46.27	11.78	0.53	0.48	0.00	0.00	0.00	0.00	0.00
AA	38.95	35.92	18.15	5.83	1.06	0.10	0.00	0.00	0.00	0.00
A	19.92	21.26	24.21	20.48	11.85	1.34	0.45	0.50	0.00	0.00
BBB	6.69	11.08	13.32	25.58	20.33	13.48	9.04	0.48	0.00	0.00
BB	1.09	3.15	8.66	20.11	28.47	16.84	21.32	0.36	0.00	0.00
B	0.00	1.25	2.19	12.05	27.70	36.62	19.72	0.31	0.00	0.16
CCC	0.00	0.00	0.45	3.16	13.08	29.02	47.52	2.71	0.00	4.06
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	39.83	50.77	8.58	0.31	0.51	0.00	0.00	0.00	0.00	0.00
AA	40.31	33.08	21.04	4.42	1.03	0.11	0.00	0.00	0.00	0.00
A	23.39	16.55	22.88	24.58	9.97	1.57	0.31	0.75	0.00	0.00
BBB	9.42	10.65	8.71	22.42	22.66	15.01	10.48	0.65	0.00	0.00
BB	2.25	5.38	10.01	15.05	22.62	19.75	24.46	0.48	0.00	0.00
B	0.19	2.53	4.09	14.81	27.68	29.82	19.10	1.17	0.00	0.58
CCC	0.00	0.18	0.55	6.62	16.36	28.68	40.44	2.57	0.00	4.60
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	78.63	19.09	1.74	0.11	0.43	0.00	0.00	0.00	0.00	0.00
AA	55.68	32.96	7.80	2.23	1.11	0.22	0.00	0.00	0.00	0.00
A	18.44	22.95	31.97	12.50	6.35	3.89	0.20	3.69	0.00	0.00
BBB	1.19	2.98	9.24	37.70	13.86	16.39	15.95	1.94	0.00	0.75
BB	0.00	0.00	0.00	6.56	26.70	26.70	30.85	4.16	0.00	5.03
B	0.00	0.00	0.00	0.00	28.57	21.43	50.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. 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 CLO Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	24.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.20
AA	14.95	29.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.67
A	2.54	5.08	35.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.78
BBB	0.00	1.75	5.26	42.98	0.00	0.00	0.00	0.00	0.00	0.00	50.00
BB	0.00	0.00	1.56	6.25	47.66	4.69	0.00	0.00	0.00	0.00	39.84
B	0.00	0.00	0.00	0.00	4.44	52.22	0.00	0.00	0.00	0.00	43.33
CCC	0.00	0.00	0.00	0.00	0.00	16.67	33.33	3.33	0.00	13.33	33.33
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	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
One-year weighted-average											
AAA	67.06	9.50	5.40	0.48	0.07	0.00	0.00	0.00	0.00	0.00	17.49
AA	12.76	68.27	3.74	3.05	0.65	0.00	0.00	0.00	0.00	0.00	11.53
A	2.61	14.28	65.41	3.96	5.05	0.63	0.41	0.00	0.00	0.00	7.66
BBB	0.09	2.38	10.02	67.65	5.30	3.93	2.78	0.00	0.00	0.00	7.86
BB	0.00	0.05	1.52	11.03	68.68	5.20	6.67	0.00	0.00	0.00	6.86
B	0.00	0.00	0.21	1.78	16.14	60.90	9.64	0.00	0.00	0.00	11.32
CCC	0.00	0.00	0.00	0.34	3.28	18.33	67.19	1.58	0.00	1.36	7.92
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.85	0.00	15.38	30.77
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	44.48	20.90	10.39	0.73	0.24	0.00	0.00	0.00	0.00	0.00	23.26
AA	17.23	44.50	8.07	5.52	1.04	0.00	0.04	0.00	0.00	0.00	23.60
A	5.80	21.41	38.25	8.18	9.85	1.05	0.62	0.14	0.00	0.00	14.70
BBB	0.51	4.32	14.82	41.78	10.13	8.18	5.30	0.09	0.00	0.00	14.87
BB	0.05	0.31	3.14	17.68	43.41	8.79	13.02	0.05	0.00	0.00	13.55
B	0.00	0.12	0.46	4.17	25.69	34.03	15.86	0.00	0.00	0.00	19.68
CCC	0.00	0.00	0.12	0.59	6.09	27.05	44.38	1.52	0.00	2.81	17.45
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.13	0.00	8.70	52.17
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	28.74	34.06	12.33	0.67	0.44	0.00	0.00	0.00	0.00	0.00	23.77
AA	15.72	28.22	13.52	6.21	1.06	0.04	0.04	0.00	0.00	0.00	35.19
A	8.38	18.63	21.57	14.47	11.78	1.22	0.66	0.20	0.00	0.00	23.10
BBB	1.23	6.72	12.89	24.35	15.56	11.21	6.96	0.20	0.00	0.00	20.89
BB	0.17	1.01	4.92	16.26	27.60	12.68	17.43	0.11	0.00	0.00	19.83

Table 26

European CLO Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
B	0.00	0.39	1.05	6.93	23.27	24.58	15.42	0.00	0.00	0.00	28.37
CCC	0.00	0.00	0.25	1.27	8.28	22.68	37.07	1.78	0.00	3.57	25.10
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.22	0.00	0.00	77.78
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	21.65	42.76	11.01	0.29	0.29	0.00	0.00	0.00	0.00	0.00	24.00
AA	14.06	19.07	17.91	5.58	0.77	0.05	0.00	0.00	0.00	0.00	42.56
A	8.63	14.02	13.91	19.98	11.24	1.17	0.39	0.28	0.00	0.00	30.38
BBB	2.14	7.33	8.94	14.02	19.85	12.73	7.44	0.32	0.00	0.00	27.23
BB	0.42	1.76	6.24	13.14	17.75	15.08	20.90	0.18	0.00	0.00	24.53
B	0.00	0.78	1.10	7.82	19.72	19.56	13.46	0.31	0.00	0.16	37.09
CCC	0.00	0.00	0.45	1.95	10.08	19.55	30.53	1.80	0.00	4.06	31.58
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	21.17	45.07	7.40	0.05	0.10	0.00	0.00	0.00	0.00	0.00	26.21
AA	11.47	16.28	20.36	3.96	0.63	0.00	0.00	0.00	0.00	0.00	47.31
A	8.71	7.46	13.35	23.39	8.97	1.25	0.19	0.38	0.00	0.00	36.30
BBB	3.12	5.94	4.30	10.89	21.60	13.48	8.00	0.47	0.00	0.00	32.20
BB	0.68	3.68	6.27	7.36	12.40	17.78	23.30	0.27	0.00	0.00	28.27
B	0.19	0.78	1.95	8.97	15.79	12.09	9.75	0.78	0.00	0.58	49.12
CCC	0.00	0.18	0.37	3.31	12.13	15.63	22.43	1.10	0.00	4.60	40.26
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
10-year weighted-average											
AAA	6.94	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.24
AA	12.03	5.12	1.56	0.45	0.00	0.00	0.00	0.00	0.00	0.00	80.85
A	4.30	7.79	6.76	4.30	1.84	1.64	0.00	0.41	0.00	0.00	72.95
BBB	0.15	0.75	2.83	6.26	5.66	5.37	6.86	0.60	0.00	0.75	70.79
BB	0.00	0.00	0.00	1.97	7.00	9.63	15.32	2.19	0.00	5.03	58.86
B	0.00	0.00	0.00	0.00	14.29	7.14	35.71	0.00	0.00	0.00	42.86
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. Source: S&P Global Fixed Income Research.

Table 27

European CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	52.88	47.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	10.91	25.45	63.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	11.11	22.22	66.67	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	2.90	15.94	72.46	8.70	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	11.63	88.37	0.00	0.00	0.00	0.00
CCC	0.00	0.00	0.00	0.00	0.00	20.00	63.33	3.33	0.00	13.33
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	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
One-year weighted-average										
AAA	83.01	10.50	5.89	0.52	0.08	0.00	0.00	0.00	0.00	0.00
AA	16.47	75.50	4.03	3.29	0.70	0.00	0.00	0.00	0.00	0.00
A	3.68	15.84	69.67	4.26	5.43	0.68	0.44	0.00	0.00	0.00
BBB	0.38	2.79	11.38	72.51	5.67	4.20	3.02	0.05	0.00	0.00
BB	0.16	0.26	1.63	12.42	72.58	5.74	7.16	0.05	0.00	0.00
B	0.00	0.00	0.23	2.44	18.68	67.63	11.02	0.00	0.00	0.00
CCC	0.00	0.00	0.00	0.45	3.39	19.12	74.10	1.58	0.00	1.36
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84.62	0.00	15.38
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	64.84	22.96	11.09	0.86	0.26	0.00	0.00	0.00	0.00	0.00
AA	29.00	55.53	8.48	5.82	1.13	0.00	0.04	0.00	0.00	0.00
A	9.21	24.99	44.90	8.66	10.30	1.14	0.65	0.15	0.00	0.00
BBB	1.55	5.96	17.60	49.59	10.71	8.58	5.82	0.19	0.00	0.00
BB	0.44	0.93	3.88	21.14	49.86	9.89	13.71	0.16	0.00	0.00
B	0.00	0.12	0.49	5.62	30.16	45.79	17.83	0.00	0.00	0.00
CCC	0.00	0.00	0.12	0.94	7.26	30.33	56.56	1.99	0.00	2.81
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.30	0.00	8.70
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	48.59	37.04	13.05	0.87	0.46	0.00	0.00	0.00	0.00	0.00
AA	35.50	42.77	13.94	6.49	1.21	0.04	0.04	0.00	0.00	0.00
A	15.99	23.96	30.21	15.10	12.40	1.35	0.68	0.31	0.00	0.00
BBB	3.59	9.56	16.69	33.99	16.08	11.79	7.94	0.35	0.00	0.00

Table 27

European CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
BB	0.69	2.06	6.30	21.75	36.41	14.37	18.15	0.29	0.00	0.00
B	0.00	0.40	1.47	10.05	29.76	39.14	19.17	0.00	0.00	0.00
CCC	0.00	0.00	0.25	2.04	10.32	29.17	52.10	2.55	0.00	3.57
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	40.13	46.90	11.95	0.54	0.49	0.00	0.00	0.00	0.00	0.00
AA	39.41	35.17	18.36	5.89	1.07	0.10	0.00	0.00	0.00	0.00
A	20.16	21.40	23.42	20.72	11.99	1.35	0.45	0.51	0.00	0.00
BBB	6.76	11.20	13.36	24.88	20.55	13.63	9.14	0.49	0.00	0.00
BB	1.10	3.18	8.76	20.27	27.74	17.02	21.56	0.37	0.00	0.00
B	0.00	1.26	2.21	12.16	27.96	36.02	19.91	0.32	0.00	0.16
CCC	0.00	0.00	0.45	3.16	13.08	29.02	47.52	2.71	0.00	4.06
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	39.83	50.77	8.58	0.31	0.51	0.00	0.00	0.00	0.00	0.00
AA	40.31	33.08	21.04	4.42	1.03	0.11	0.00	0.00	0.00	0.00
A	23.39	16.55	22.88	24.58	9.97	1.57	0.31	0.75	0.00	0.00
BBB	9.42	10.65	8.71	22.42	22.66	15.01	10.48	0.65	0.00	0.00
BB	2.25	5.38	10.01	15.05	22.62	19.75	24.46	0.48	0.00	0.00
B	0.19	2.53	4.09	14.81	27.68	29.82	19.10	1.17	0.00	0.58
CCC	0.00	0.18	0.55	6.62	16.36	28.68	40.44	2.57	0.00	4.60
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	78.63	19.09	1.74	0.11	0.43	0.00	0.00	0.00	0.00	0.00
AA	55.68	32.96	7.80	2.23	1.11	0.22	0.00	0.00	0.00	0.00
A	18.44	22.95	31.97	12.50	6.35	3.89	0.20	3.69	0.00	0.00
BBB	1.19	2.98	9.24	37.70	13.86	16.39	15.95	1.94	0.00	0.75
BB	0.00	0.00	0.00	6.56	26.70	26.70	30.85	4.16	0.00	5.03
B	0.00	0.00	0.00	0.00	28.57	21.43	50.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 27

European CLO 1.0 Rating Transitions, 2017 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. 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 28

European CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	14.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.71
AA	27.88	18.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.85
A	5.45	10.91	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.64
BBB	0.00	3.70	11.11	31.48	0.00	0.00	0.00	0.00	0.00	0.00	53.70
BB	0.00	0.00	2.90	11.59	34.78	8.70	0.00	0.00	0.00	0.00	42.03
B	0.00	0.00	0.00	0.00	9.30	27.91	0.00	0.00	0.00	0.00	62.79
CCC	0.00	0.00	0.00	0.00	0.00	16.67	33.33	3.33	0.00	13.33	33.33
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	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
One-year weighted-average											
AAA	66.71	10.30	5.85	0.52	0.08	0.00	0.00	0.00	0.00	0.00	16.55
AA	13.76	68.10	4.03	3.29	0.70	0.00	0.00	0.00	0.00	0.00	10.12
A	2.81	15.21	64.83	4.26	5.43	0.68	0.44	0.00	0.00	0.00	6.35
BBB	0.09	2.55	10.58	67.12	5.67	4.20	2.98	0.00	0.00	0.00	6.80
BB	0.00	0.05	1.63	11.79	67.79	5.58	7.16	0.00	0.00	0.00	6.00
B	0.00	0.00	0.23	1.97	17.87	58.35	10.67	0.00	0.00	0.00	10.90
CCC	0.00	0.00	0.00	0.34	3.28	18.33	67.19	1.58	0.00	1.36	7.92
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.85	0.00	15.38	30.77
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	44.37	21.97	10.92	0.77	0.26	0.00	0.00	0.00	0.00	0.00	21.71
AA	18.01	44.39	8.44	5.78	1.09	0.00	0.04	0.00	0.00	0.00	22.25
A	6.07	22.30	37.73	8.56	10.30	1.10	0.65	0.15	0.00	0.00	13.14
BBB	0.53	4.51	15.37	41.35	10.57	8.53	5.53	0.10	0.00	0.00	13.52
BB	0.05	0.33	3.28	18.41	42.65	9.18	13.60	0.05	0.00	0.00	12.45
B	0.00	0.12	0.49	4.40	27.11	32.36	16.73	0.00	0.00	0.00	18.80
CCC	0.00	0.00	0.12	0.59	6.09	27.05	44.38	1.52	0.00	2.81	17.45

Table 28

European CLO 1.0 Rating Transitions, 2017 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	39.13	0.00	8.70	52.17
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	28.74	35.04	12.68	0.68	0.46	0.00	0.00	0.00	0.00	0.00	22.40
AA	16.10	28.23	13.85	6.36	1.08	0.04	0.04	0.00	0.00	0.00	34.29
A	8.59	19.01	21.35	14.84	12.08	1.25	0.68	0.21	0.00	0.00	21.98
BBB	1.26	6.88	13.10	24.13	15.93	11.48	7.13	0.20	0.00	0.00	19.88
BB	0.17	1.03	5.04	16.60	27.25	12.99	17.86	0.11	0.00	0.00	18.95
B	0.00	0.40	1.07	7.10	23.86	23.99	15.82	0.00	0.00	0.00	27.75
CCC	0.00	0.00	0.25	1.27	8.28	22.68	37.07	1.78	0.00	3.57	25.10
CC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.22	0.00	0.00	77.78
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	21.94	43.34	11.17	0.29	0.29	0.00	0.00	0.00	0.00	0.00	22.96
AA	14.22	19.29	18.12	5.65	0.78	0.05	0.00	0.00	0.00	0.00	41.89
A	8.73	14.19	14.08	20.21	11.37	1.18	0.39	0.28	0.00	0.00	29.56
BBB	2.16	7.41	9.03	14.12	20.06	12.87	7.52	0.32	0.00	0.00	26.50
BB	0.43	1.78	6.31	13.29	17.82	15.25	21.13	0.18	0.00	0.00	23.82
B	0.00	0.79	1.11	7.90	19.91	19.43	13.59	0.32	0.00	0.16	36.81
CCC	0.00	0.00	0.45	1.95	10.08	19.55	30.53	1.80	0.00	4.06	31.58
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	21.17	45.07	7.40	0.05	0.10	0.00	0.00	0.00	0.00	0.00	26.21
AA	11.47	16.28	20.36	3.96	0.63	0.00	0.00	0.00	0.00	0.00	47.31
A	8.71	7.46	13.35	23.39	8.97	1.25	0.19	0.38	0.00	0.00	36.30
BBB	3.12	5.94	4.30	10.89	21.60	13.48	8.00	0.47	0.00	0.00	32.20
BB	0.68	3.68	6.27	7.36	12.40	17.78	23.30	0.27	0.00	0.00	28.27
B	0.19	0.78	1.95	8.97	15.79	12.09	9.75	0.78	0.00	0.58	49.12
CCC	0.00	0.18	0.37	3.31	12.13	15.63	22.43	1.10	0.00	4.60	40.26
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
10-year weighted-average											
AAA	6.94	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.24
AA	12.03	5.12	1.56	0.45	0.00	0.00	0.00	0.00	0.00	0.00	80.85

Table 28

European CLO 1.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
A	4.30	7.79	6.76	4.30	1.84	1.64	0.00	0.41	0.00	0.00	72.95
BBB	0.15	0.75	2.83	6.26	5.66	5.37	6.86	0.60	0.00	0.75	70.79
BB	0.00	0.00	0.00	1.97	7.00	9.63	15.32	2.19	0.00	5.03	58.86
B	0.00	0.00	0.00	0.00	14.29	7.14	35.71	0.00	0.00	0.00	42.86
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. Source: S&P Global Fixed Income Research.

Table 29

European CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
2017										
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
A	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	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
A	0.00	1.92	98.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.00	2.01	97.99	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.00	0.71	99.29	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Two-year weighted-average										
AAA	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 29

European CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Adjusted (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D
AA	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A	0.00	5.38	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.00	5.62	94.38	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.00	2.47	97.53	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Three-year weighted-average										
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
A	0.00	8.00	92.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.00	8.33	91.67	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.00	4.65	95.35	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Four-year weighted-average										
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
A	0.00	9.52	90.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB	0.00	0.00	10.00	90.00	0.00	0.00	0.00	0.00	0.00	0.00
BB	0.00	0.00	0.00	5.56	94.44	0.00	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. 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 30

European CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
2017											
AAA	43.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.18

Table 30

European CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
AA	0.00	42.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.78
A	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.79
BBB	0.00	0.00	0.00	53.33	0.00	0.00	0.00	0.00	0.00	0.00	46.67
BB	0.00	0.00	0.00	0.00	62.71	0.00	0.00	0.00	0.00	0.00	37.29
B	0.00	0.00	0.00	0.00	0.00	74.47	0.00	0.00	0.00	0.00	25.53
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	71.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.71
AA	0.00	70.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.56
A	0.00	1.92	73.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00
BBB	0.00	0.00	2.01	75.17	0.00	0.00	0.00	0.00	0.00	0.00	22.82
BB	0.00	0.00	0.00	0.71	80.71	0.00	0.00	0.00	0.00	0.00	18.57
B	0.00	0.00	0.00	0.00	0.00	84.78	0.00	0.00	0.00	0.00	15.22
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Two-year weighted-average											
AAA	46.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.33
AA	0.00	46.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.10
A	0.00	2.15	49.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.39
BBB	0.00	0.00	2.25	51.69	0.00	0.00	0.00	0.00	0.00	0.00	46.07
BB	0.00	0.00	0.00	1.23	60.49	0.00	0.00	0.00	0.00	0.00	38.27
B	0.00	0.00	0.00	0.00	0.00	64.44	0.00	0.00	0.00	0.00	35.56
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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
Three-year weighted-average											
AAA	28.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.43
AA	0.00	28.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.93
A	0.00	4.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.00
BBB	0.00	0.00	4.17	33.33	0.00	0.00	0.00	0.00	0.00	0.00	62.50
BB	0.00	0.00	0.00	2.33	41.86	0.00	0.00	0.00	0.00	0.00	55.81
B	0.00	0.00	0.00	0.00	0.00	47.37	0.00	0.00	0.00	0.00	52.63
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 30

European CLO 2.0 Rating Transitions, 2017 And Multi-Year Averages, NR Included (%) (cont.)

From/to	AAA	AA	A	BBB	BB	B	CCC	CC	C	D	NR
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
Four-year weighted-average											
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
BBB	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	95.00
BB	0.00	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	88.89
B	0.00	0.00	0.00	0.00	0.00	33.33	0.00	0.00	0.00	0.00	66.67
CCC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. Source: S&P Global Fixed Income Research.

Related Criteria And Research

Related Criteria

- Global Methodologies And Assumptions For Corporate Cash Flow And Synthetic CDOs, Aug. 8, 2016
- Credit Stability Criteria, May 3, 2010
- Understanding S&P Global Ratings' Rating Definitions, June 3, 2009

Related Research

- Portfolio Overlap In European CLOs: Looking Beyond The Top Obligators, June 1, 2018
- Credit FAQ: What's Driving Recent Rating Pressure On Certain European CLO 2.0s?, March 22, 2018
- European CLO 2.0 Recovery Prospects Are Holding Steady, Nov. 1, 2017
- 2017 EMEA Structured Credit Scenario And Sensitivity Analysis, July 6, 2017

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