S&P Global Ratings

Research

Presale:

Voya CLO 2016-3 Ltd./Voya CLO 2016-3 LLC (Refinancing And Extension)

October 25, 2018

This presale report is based on information as of Oct. 25, 2018. The ratings shown are preliminary. This report does not constitute a recommendation to buy, hold, or sell securities. Subsequent information may result in the assignment of final ratings that differ from the preliminary ratings.

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Preliminary Ratings

Class	Preliminary rating(i)	Balance (mil. $)	Overcollateralization (%)	Subordination (%)	Par subordination (%)	Interest rate (%)
X-R	AAA (sf)	3.00	N/A	N/A	N/A	Three-month LIBOR + 0.70
A-1-R	AAA (sf)	360.00	166.89	40.79	40.14	Three-month LIBOR + 1.19
A-2-R	NR	30.00	154.06	35.86	35.14	Three-month LIBOR + 1.40
A-3-R	AA (sf)	66.00	131.76	25.00	24.14	Three-month LIBOR + 1.75
B-R	A (sf)	36.00	122.12	19.08	18.14	Three-month LIBOR + 2.20
C-R	BBB- (sf)	36.00	113.79	13.16	12.14	Three-month LIBOR + 3.25
D-R	BB- (sf)	24.00	108.84	9.21	8.14	Three-month LIBOR + 6.08
Subordinated notes	NR	56.00	N/A	N/A	N/A	Residual

(i)The rating on each class of securities is preliminary and subject to change at any time. NR--Not rated. N/A--Not applicable.

Executive Summary

Voya CLO 2016-3 Ltd. is a $611.00 million broadly syndicated loan collateralized loan obligation (CLO) managed by Voya Alternative Asset Management LLC. This is a proposed refinancing of its September 2016 transaction.

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Based on provisions in the supplemental indenture:

- The replacement class A-1-R, A-2-R, B-R, C-R, and D-R notes are expected to be issued at a lower spread than the original notes.
- The additional class X-R and A-3-R notes are expected to be issued.
- The reinvestment period will be extended two years and the stated maturity will be extended four years.
- The transaction now has the ability to hold a limited amount of long dated securities.
- 100.00% of the underlying collateral obligations have credit ratings assigned by S&P Global Ratings.
- 97.94% of the underlying collateral obligations have recovery ratings issued by S&P Global Ratings.

After analyzing the changes to the transaction, we assigned our preliminary ratings to the replacement class X-R, A-1-R, A-2-R, A-3-R, B-R, C-R, and D-R notes. The original class A-1, A-2, B, C, and D notes are expected to be fully redeemed with the proceeds from the replacement note issuance on the Oct. 29, 2018, refinancing date. On the refinancing date, we anticipate withdrawing the ratings on the original notes and assigning ratings to the new notes.

Key Credit Metrics

Selected Credit Metrics

	Voya CLO 2016-3 Ltd.	Three-month average(i)
Total leverage (x)(ii)	9.86	9.16
Subordination ('AAA'/'BBB') (%)	40.79/13.16	41.00/14.49
Weighted average cost of debt (%)(iii)	1.68	1.68
Portfolio WAS (excluding LIBOR floors) (%)	3.36	3.43
Excess spread (%)(iv)	1.68	1.62
SDR ('AAA'/'BBB') (%)	65.62/47.11	67.23/45.37
WA portfolio recovery ('AAA'/'BBB') (%)	44.05/65.24	45.24/66.46
Obligor diversity measure(v)	312.17	154.25

(i)Three-month average comprises S&P Global Ratings-rated deals. (ii)Total debt/equity (excluding any class X notes, if applicable). (iii)Spread over LIBOR for all classes, excluding the subordinated notes and, if applicable, any class X notes (if there is a fixed-rate tranche, LIBOR is subtracted from the fixed coupon in the calculation). (iv)WAS minus the weighted average cost of debt. (v)The effective number of obligors in the underlying collateral, obtained by squaring the result for each obligor and taking the reciprocal of the sum of these squares [i.e., 1/sum()^2]. WA--Weighted average. WAS--Weighted average spread. SDR--Scenario default rate.

Deal comparison

Compared to other broadly syndicated loan CLOs that were issued preliminary ratings by S&P Global Ratings for the three months ended September 2018, Voya CLO 2016-3 Ltd. has:

- Higher total leverage and lower subordination.
- A standard weighted average cost of debt.

- A lower weighted average spread (WAS), which shows a weaker underlying portfolio from a cash flow perspective.
- A lower scenario default rate which shows a stronger underlying portfolio from a credit perspective.
- A portfolio with a higher obligor diversity measure.

Transaction Timeline

Transaction Timeline

Expected closing date	Oct. 29. 2018.
Effective date	Not applicable.
Non-call period end date	Oct. 18, 2020.
Reinvestment period end date	July 18, 2023.
Stated maturity date	Oct. 18, 2031.
Note payment frequency	Quarterly, beginning Jan. 18, 2019.

Participants

Collateral manager	Voya Alternative Asset Management LLC.
Initial purchaser	Mizuho Securities USA LLC.
Trustee	State Street Bank And Trust Co.

Collateral Manager

Voya Alternative Asset Management LLC currently manages 20 CLOs and has $10.6 billion in total CLO assets under management (AUM). In all, including non-CLO assets, Voya Alternative Asset Management LLC has $227.0 billion in AUM.

Analysis of past CLO 2.0 transactions managed by Voya Alternative Asset Management LLC and rated by S&P Global Ratings reveals the following information:

- An average overlap in collateral composition of 66.72%. This is higher than the average of 51.92% for all CLO 2.0 transactions rated by S&P Global Ratings.
- An average portfolio turnover rate of 23.52% over the past 12 months.
- An average margin of 35.72% between the quantity of covenant-lite assets held versus the maximum allowable amount, as reported by the trustee.
- Industry concentration favors software, diversified financial services, media and hotels, and restaurants and leisure.
- Of the transactions that are still in the reinvestment period, 100.00% have a current par amount that is above the effective date target par.
- An average senior overcollateralization (O/C) cushion of 10.00% at the transaction's closing date.

Quantitative Analysis

The results shown in table 1 indicate that the rated notes have sufficient credit enhancement to withstand our projected default levels. The class D-R notes are passing with minimal cushion, but the weighted average life is likely to drop in the coming months, which will reduce the number of stressed default runs for the notes and result in much stronger cushion.

Table 1

Credit Enhancement

Class	Subordination	BDR (%)	SDR (%)	BDR Cushion (%)
X-R	N/A	84.07	65.62	15.85
A-1-R	40.79	69.12	65.62	3.50
A-3-R	25.00	62.58	58.39	4.19
B-R	19.08	56.18	52.97	3.21
C-R	13.16	47.08	44.37	2.72
D-R	9.21	38.46	38.40	0.07

BDR--Break-even default rate. SDR--Scenario default rate.

Supplemental tests

We also conduct a largest-industry default test and largest-obligor default test according to "Global Methodologies And Assumptions For Corporate Cash Flow And Synthetic CDOs," published Aug. 8, 2016. Under these assumptions, the notes can withstand the loss amounts indicated in table 2 at their preliminary rating levels.

Table 2

Supplemental Tests

Class	Preliminary rating	Preliminary amount (mil. $)	Largest industry default test loss amount (mil. $)	Largest obligor default test loss amount (mil. $)
X-R	AAA (sf)	3.00	N/A	N/A
A-1-R	AAA (sf)	360.00	37.06	35.01
A-3-R	AA (sf)	66.00	31.64	28.74
B-R	A (sf)	36.00	N/A	22.25
C-R	BBB- (sf)	36.00	N/A	16.54
D-R	BB- (sf)	24.00	N/A	12.22

N/A--Not applicable.

Sensitivity analysis

Finally, several of the assumptions specified in the CDO criteria are stressed to evaluate the sensitivity of the transaction's performance to those parameters. Such stresses include:

- A negative 10% adjustment to the proposed collateral pool's recovery rates relative to each tranche's WARR.
- Defaults on the underlying portfolio biased to include the highest spread and lowest base-case recoveries.
- Intra- and inter-industry correlation adjustments as described in table 3.

Table 3

Correlation

Scenario	Within industry (%)	Between industries (%)
Below base case	15.0	5.0
Base case equals preliminary rating	20.0	7.5
Above base case	25.0	10.0

Table 4 illustrates the rating migration that would occur under each of the aforementioned scenarios.

Table 4

Sensitivity Analysis Rating Migration

		Resulting rating transition			
Class	Preliminary rating	10% recovery decrease	Spread default bias	Recovery default bias	Correlation above base case
X-R	AAA (sf)	AAA (sf)	AAA (sf)	AAA (sf)	AAA (sf)
A-1-R	AAA (sf)	AA+ (sf)	AAA (sf)	AA+ (sf)	AA+ (sf)
A-3-R	AA (sf)	A+ (sf)	AA (sf)	A+ (sf)	AA- (sf)
B-R	A (sf)	BBB+ (sf)	A (sf)	BBB (sf)	A (sf)
C-R	BBB- (sf)	BB+ (sf)	BB+ (sf)	B+ (sf)	BB+ (sf)
D-R	BB- (sf)	CCC+ (sf)	B (sf)	CC (sf)	B+ (sf)

Collateral Quality Tests

In addition to the quantitative framework, we produce and review collateral quality metrics to assess specific risks inherent in a transaction. Results for the collateral quality tests based on the identified portfolio provided to us are shown in table 5.

Table 5

Collateral Quality Metrics – Performing Identified Collateral

Test	Weighted average	Covenant	Margin
Weighted average life (years)(i)	6.61	9.00	2.39
Weighted average spread (including LIBOR floors) (%)	3.36	3.00	0.36
Weighted average LIBOR floor (%)	0.96	N/A	N/A
Weighted average fixed coupon(ii)	N/A	7.50	N/A
Weighted average rating	B	N/A	N/A

(i) Calculated value that assumes collateral maturing during the reinvestment period is extended by the maximum weighted-average life covenant applicable on the reinvestment period end date. (ii)Calculated value does not give credit to excess spread, which may positively adjust the calculation when determining compliance with the covenant. N/A--Not applicable.

Portfolio Characteristics

Metrics based on the portfolio presented to S&P Global Ratings and the level of ramp-up completion are shown in tables 6A and 6B.

Table 6A

Target Collateral Obligations

Target par balance (mil. $)	600.00
Par balance of identified collateral (mil. $)	599.16
Par balance of collateral not yet identified (mil. $)	0.90
Ramp-up completion (% of target par balance)	99.86
S&P Global Ratings' rating (% of identified collateral)	100.00
S&P Global Ratings' implied rating (% of identified collateral)	0.00

Table 6B

Identified Collateral Obligations (Obligors)

No. of obligors	443
Avg. obligor holding (%)	0.23
Largest-obligor holding (%)	0.79
Smallest-obligor holding (%)	0.02

In the portfolio data referenced for this analysis, the issuer had identified approximately 100.00% of the portfolio's collateral. As the portfolio composition changes, the information and results presented in table 7 and charts 1-3 are also likely to change.

Obligor concentration

Table 7 shows the top five obligors holdings of the underlying portfolio presented to S&P Global Ratings.

Table 7

Top Five Obligor Holdings As Of Oct. 25, 2018

						Notional amount (mil. $)		Notional amount (%)	
Obligor reference	**Industry**	**Security type**	**S&P Global Ratings' credit rating**	**S&P Global Ratings' implied rating**	**CreditWatch/Outlook**	**Obligor**	**Cumulative**	**Obligor**	**Cumulative**
1	Capital markets	Senior secured	B	No	Stable	4.74	4.74	0.79	0.79
2	Insurance	Senior secured	B	No	Stable	4.04	8.78	0.67	1.46
3	Specialty retail	Senior secured	CCC+	No	Stable	3.92	12.70	0.65	2.11

Table 7

Top Five Obligor Holdings As Of Oct. 25, 2018 (cont.)

						Notional amount (mil. $)		Notional amount (%)	
Obligor reference	Industry	Security type	S&P Global Ratings' credit rating	S&P Global Ratings' implied rating	CreditWatch/Outlook	Obligor	Cumulative	Obligor	Cumulative
4	IT services	Senior secured	BB-	No	Stable	3.91	16.61	0.65	2.76
5	Electric utilities	Senior secured	No	Yes	N/A	3.89	20.50	0.65	3.41

N/A--Not applicable.

Industry and ratings distribution

Chart 1 shows the top five industry distribution in the portfolio. Chart 2 shows the ratings distribution in the portfolio.

Chart 1

Top Five Industry Distribution

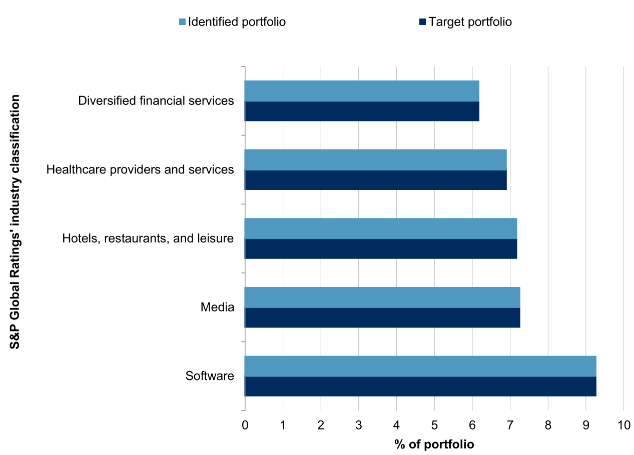
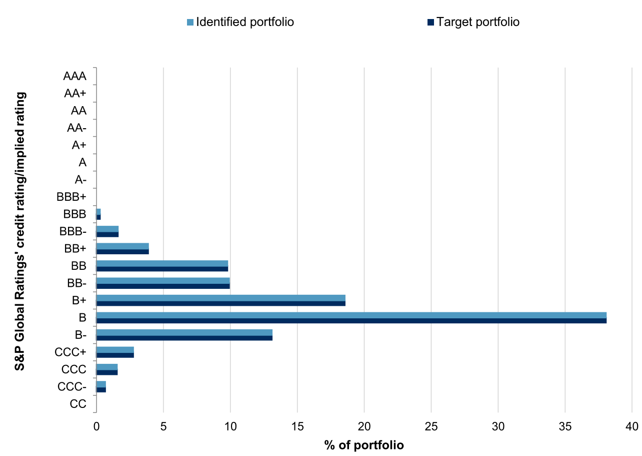


Chart 2

Rating Distribution



Recovery rating and maturity distribution

Table 8 and chart 3 below presents a summary of identified portfolio S&P Global Ratings' loan recovery rates. Chart 4 shows the maturity distribution in the identified portfolio.

Table 8

Performing Identified Collateral Modeled WARR

Liability rating	WARR (%)	Min. covenanted WARR (%)
AAA (sf)	44.05	41.00
AA (sf)	53.61	49.70
A (sf)	59.13	55.10
BBB (sf)	65.24	60.90
BB (sf)	70.12	65.50
B (sf)	71.63	66.90

WARR--Weighted average recovery rate.

Chart 3

Recovery Rating Distribution

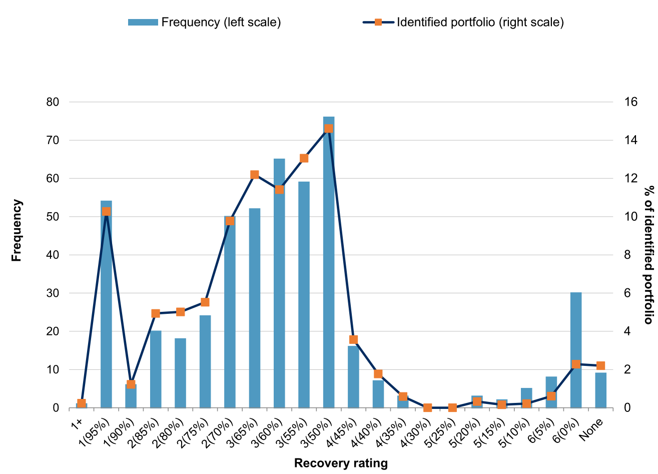
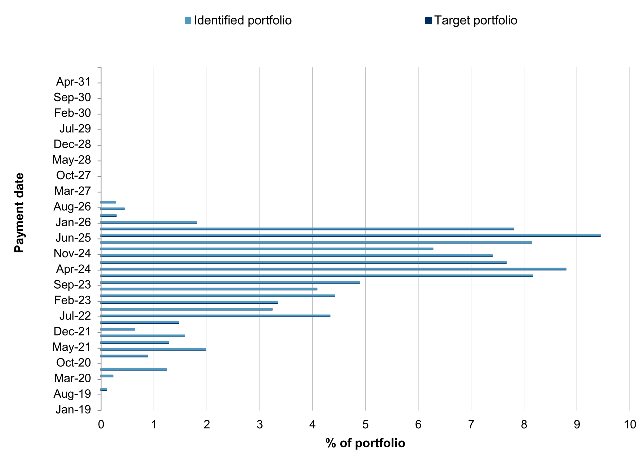


Chart 4

Maturity Distribution
Based on the legal final maturity date



Note Payment Considerations

O/C, interest coverage, and reinvestment O/C tests

The rated notes benefit from certain structural features that require sequential mandatory redemption upon a breach of any O/C or interest coverage test. Additionally, during the reinvestment period, the rated notes benefit from the reinvestment of up to a certain amount of the excess interest proceeds, captured upon breach of the transaction's reinvestment O/C test (see table 9).

Table 9

Overcollateralization, Interest Coverage, And Reinvestment Overcollateralization Tests

Class	Actual O/C (%)	Min. O/C required (%)	Actual I/C (%)	Min. I/C required (%)
A-3-R	154.06	120.00	N/A	117.50
B-R	122.12	113.00	N/A	112.50
C-R	113.79	108.50	N/A	107.50
D-R	108.84	104.20	N/A	102.50
Reinvestment O/C(i)	108.84	104.70	N/A	N/A

(i)The reinvestment O/C test will be satisfied when the class D-R O/C test is equal to or higher than the specified level.
O/C-–Overcollateralization. I/C-–Interest coverage. N/A--Not applicable.

Application Of Standard & Poor's CDO Monitor/Compliance With Standard & Poor's CDO Monitor Test

Standard & Poor's CDO Monitor is a tool that collateral managers use during the reinvestment period to determine if a particular trade or series of trades increases the risk to the rated liabilities.

The CDO Monitor test will be considered passing if the results indicate that the current portfolio produces a scenario default rate that is equal to or below the transaction's break-even default rate. There is no requirement that the CDO Monitor test be considered after the reinvestment period, or when reinvesting proceeds from the sale of a credit risk or defaulted obligation.

For this transaction, the non-model version of CDO Monitor may be used as an alternative to the model-based approach. This version of CDO Monitor is built on the foundation of six portfolio benchmarks, which are used to provide insight into the characteristics that inform the way S&P Global Ratings assesses credit quality. These benchmarks are meant to enhance transparency for investors and other CLO market participants by allowing them to compare metrics across transactions and assess changes within a given CLO over time (for details, see "Standard & Poor's Introduces Non-Model Version Of CDO Monitor," published Dec. 8, 2014).

Table 10 illustrates the benchmarks for Voya CLO 2016-3 Ltd. in the context of average values by vintage.

Table 10

CDO Monitor Metrics

	Voya CLO 2016-3 Ltd.	2017 vintage	Difference
Expected portfolio default rate (%)(i)	27.72	28.52	(0.80)
Default rate dispersion (%)(ii)	8.74	8.72	0.02
Obligor diversity measure(iii)	312.17	154.25	157.93
Industry diversity measure(iv)	24.16	21.85	2.31
Regional diversity measure(v)	1.13	1.18	(0.05)

Table 10

CDO Monitor Metrics (cont.)

	Voya CLO 2016-3 Ltd.	2017 vintage	Difference
Weighted average life (years)(vi)	5.26	5.14	0.12

(i)Expected portfolio default rate (EPDR)--The weighted average portfolio expected default rate expressed as a percentage of the par balance of the assets rated 'CCC-' or higher. (ii)Default rate dispersion (DRD)--The weighted average absolute deviation of the asset default rates from the EPDR. (iii)Obligor diversity measure (ODM)--The measure of effective number of obligors in the pool obtained by squaring the result for each obligor and taking the reciprocal of the sum of these squares [i.e., 1/sum()^2]. (iv)Industry diversity measure (IDM)--Effective number of industries in the pool obtained in the same way as ODM above. (v)Regional diversity measure (RDM)--Effective number of regions in the pool obtained the same way as ODM and IDM. (vi)Weighted average life (WAL)--The portfolio's weighted average life is based on the remaining number of years to maturity for each loan.

Surveillance

S&P Global Ratings will maintain active surveillance on the rated notes until the notes mature or are retired, or until S&P Global Ratings' credit ratings on the transaction have been withdrawn. The purpose of surveillance is to assess whether the rated notes are performing within the initial parameters and assumptions applied to each rating category. The issuer is required under the terms of the transaction documents to supply periodic reports and notices to S&P Global Ratings to maintain continuous surveillance on the rated notes. For more information on our CLO surveillance process, please see "CDO Spotlight: Standard & Poor's Surveillance Process For Monitoring U.S. Cash Flow CLO Transactions," Oct. 19, 2016.

Related Criteria

- General Criteria: Guarantee Criteria, Oct. 21, 2016
- Criteria - Structured Finance - CDOs: Global Methodologies And Assumptions For Corporate Cash Flow And Synthetic CDOs, Aug. 8, 2016
- Criteria - Structured Finance - General: Ratings Above The Sovereign - Structured Finance: Methodology And Assumptions, Aug. 8, 2016
- General Criteria: Principles For Rating Debt Issues Based On Imputed Promises, Dec. 19, 2014
- Criteria - Structured Finance - CDOs: CDOs Of Project Finance Debt: Global Methodology And Assumptions, March 19, 2014
- General Criteria: Global Investment Criteria For Temporary Investments In Transaction Accounts, May 31, 2012
- Criteria - Structured Finance - CDOs: Global CDOs Of Pooled Structured Finance Assets: Methodology And Assumptions, Feb. 21, 2012
- Criteria - Structured Finance - CDOs: Surveillance Methodology For Global Cash Flow And Hybrid CDOs Subject To Acceleration Or Liquidation After An EOD, Sept. 2, 2009
- Criteria - Structured Finance - CDOs: Revised CDO Current-Pay Criteria Assumptions For Corporate Debt When Issuers Announce A Distressed Exchange Or Buyback, May 18, 2009
- Criteria - Structured Finance - CDOs: The Use Of Rating-Based Haircuts In Event Of Default Overcollateralization Tests For CDOs, March 19, 2008
- Criteria - Structured Finance - CDOs: Qualification And Treatment Of Current-Pay Obligations In

Global Cash Flow CLOs, July 11, 2007

- Legal Criteria: Legal Criteria For U.S. Structured Finance Transactions: Special-Purpose Entities, Oct. 1, 2006
- Legal Criteria: Legal Criteria For U.S. Structured Finance Transactions: Appendix III: Revised UCC Article 9 Criteria, Oct. 1, 2006
- Criteria - Structured Finance - General: Structured Finance Criteria Introduced For Cayman Islands Special-Purpose Entities, July 18, 2002

Related Research

- Global Structured Finance Scenario And Sensitivity Analysis 2016: The Effects Of The Top Five Macroeconomic Factors, Dec. 16, 2016
- S&P Global Ratings' Surveillance Process For Monitoring U.S. Cash Flow CLO Transactions, Oct. 19, 2016
- Presale: Voya CLO 2016-3 Ltd./Voya CLO 2016-3 LLC, Sept. 20, 2016
- New Version Of CDO Evaluator (7.1) Includes Updated Corporate Industry Codes, Sept. 13, 2016
- How Standard & Poor's Assesses Operational And Administrative Risks Of CLO Collateral Managers, April 19, 2016
- Global Corporate Rating Trends 2016: Largest Negative Swing Since 2009, Jan. 11, 2016
- Items Updated In Corporate CDO Criteria Used To Rate CLO Transactions, Sept. 17, 2015
- S&P Adds Transparency To Its Effective Date Process For CLOs, April 20, 2015
- CDO Monitor Non-Model Approach General Definitions, March 11, 2015
- Standard & Poor's Introduces Non-Model Version Of CDO Monitor, Dec. 8, 2014
- Use Of CDO Monitor Simplified, April 7, 2014
- How Typical CLO Document Provisions Affect Maintenance Of Collateral Characteristics For Managed CLOs, Nov. 6, 2013
- How Deferrable Assets In CLOs Are Treated Under Standard & Poor's Methodology, Oct. 1, 2012
- CDO Spotlight: The Relationship Between Long-Dated Assets And Market Value Risk In U.S. Cash Flow CLOs, April 26, 2012
- Credit FAQ: What Are Credit Estimates And How Do They Differ From Ratings? April 6, 2011
- CLO Collateral Managers' Treatment Of First-Lien-Last-Out Loans Could Affect Payments To Investors, Oct. 14, 2010
- Standard & Poor's Provides Guidance For Collateral Managers And Trustees Regarding CDO Monitor, Nov. 11, 2009

In addition to the criteria specific to this type of security (listed above), the following criteria articles, which are generally applicable to all ratings, may have affected this rating action: "Post-Default Ratings Methodology: When Does Standard & Poor's Raise A Rating From 'D' Or 'SD'?," March 23, 2015; "Global Framework For Assessing Operational Risk In Structured Finance Transactions," Oct. 9, 2014; "Methodology: Timeliness of Payments: Grace Periods, Guarantees, And Use of 'D' And 'SD' Ratings," Oct. 24, 2013; "Counterparty Risk Framework Methodology And

Assumptions," June 25, 2013; "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings," Oct. 1, 2012; "Methodology: Credit Stability Criteria," May 3, 2010; and "Use of CreditWatch And Outlooks," Sept. 14, 2009.