

## RESEARCH / WHITEPAPER

11 May 2017

---

### Authors

**Peter Sallerson**

Senior Director

[peter.sallerson@moodys.com](mailto:peter.sallerson@moodys.com)

+1.212.553.9447

**Haicheng Lu**

Software Engineer

[haicheng.lu@moodys.com](mailto:haicheng.lu@moodys.com)

+1.212.553.8919

---

### Contact Us

**Americas**

+1.212.553.1653

[clientservices@moodys.com](mailto:clientservices@moodys.com)

**Europe**

+44.20.7772.5454

[clientservices.emea@moodys.com](mailto:clientservices.emea@moodys.com)

**Asia (Excluding Japan)**

+85.2.2916.1121

[clientservices.asia@moodys.com](mailto:clientservices.asia@moodys.com)

**Japan**

+81.3.5408.4100

[clientservices.japan@moodys.com](mailto:clientservices.japan@moodys.com)

---

# CLO Rankings by Vintage (updated as of April 30, 2017)

Any ranking system of structured finance instruments is generally open to some level of subjectivity. When ranking CLO's, for example, does one look primarily to equity performance, performance of the notes or performance of the collateral? If the methodology is a blend, how does one weigh the various measures? Any attempt to "rank" CLO's is just one of many alternative methods to provide such scoring. Alternative methods would generally yield different results. Given the nature of any ranking system, the results should be interpreted accordingly.

In this report, Moody's Analytics has updated the prior deal rankings of the non-terminated 2006–2016 CLO's by vintage using a variety of scoring factors. CLO's that have had at least two payment periods are included.<sup>1</sup> The ranking is a function of equity returns (with a slight emphasis on recent returns), the standard deviation of those returns, junior overcollateralization test cushion, the number of collateral quality tests that are failing, the ratio of the market value of the collateral to the par value of the tranches, the difference between Suspected Defaults<sup>2</sup> and current defaults, par building and the average cushion of the Diversity Score, Moody's WARF, Weighted Average Life and Weighted Average Recovery Rate tests.<sup>3</sup> About ½ of the ranking is determined by equity return measurements.

These multiple factors are the basis of the ranking to better balance the debt and equity performance. (The Moody's Analytics MESR<sup>4</sup> is an equity based ranking of CLO's.) The analysis includes about 750 US CLO's and 175 European deals. The frequency with which a manager shows up is a function of the performance and the number of CLO's they manage as well as which CLO's have not been redeemed. Strong performing CLO's may have been redeemed which is more likely to affect CLO 1.0's. We list the top CLO's for each vintage alphabetically.

---

1 2016 CLO's are included to the extent they meet the criteria.

2 See "[Collateral Defaults vs Issuer Defaults](#)" 6-19-15.

3 The cushions were normalized to reflect the typical numerical difference between a Diversity Cushion and a WARF Cushion, for example. In order to mitigate any unusual results from highly amortized CLO's, the deal factor was incorporated into the analysis.

4 Moody's Analytics Equity Score Report is produced quarterly.

## US BSL CLO's

US CLO's from 2008 - 2011 are not included in the analysis because of the limited number of outstanding CLO's from those vintages. Some of the manager ranking changes are a result of fewer deals displayed from these vintages. The most frequently ranked managers of US broadly syndicated loan ("BSL") CLO's are Apollo, MJX, Marathon and Symphony. Only Apollo has three CLO's ranked in the top group in any vintage. Nine managers have two ranked CLO's in the same vintage with Apollo doing it twice. MJX has the most vintages with a ranking at four. Five managers have at least 1/3 of their deals ranked. Two managers have only 1.0 CLO's ranked and two different managers have three CLO's from the last two vintages.

Zais and Marathon have over 75% of their applicable CLO's ranked. There are 32 ranked managers out of 117 with CLO's outstanding in the indicated vintages which slightly more concentrated than the last ranking. 13 managers are no longer in the top groups and nine have been added since the last report. This change could be due to CLO performance or CLO redemption. Additionally, with the reduction of the deals outstanding from 2006 and 2007 (and the corresponding limit of five ranked deals), there are ten less deals ranked this period.

Deal Name	Vintage	Collateral Manager
ALM XIX, LTD.	2016	Apollo Credit Management LLC
ALM XVIII, Ltd.	2016	Apollo Credit Management LLC
Anchorage Credit Funding 2, Ltd.	2016	Anchorage Capital Group LLC
ARES XXXIX CLO LTD.	2016	Ares Management, LLC
JFIN CLO 2016 Ltd.	2016	Jefferies Finance LLC
KKR CLO 15 Ltd.	2016	KKR Financial Advisors LLC
LCM XXII Ltd.	2016	LCM Asset Management LLC
THL Credit Wind River 2016-1 CLO Ltd.	2016	THL Credit Senior Loan Strategies LLC
Venture XXII CLO, Limited	2016	MJX Asset Management LLC
Vibrant CLO IV, Ltd.	2016	DFG Investment Advisers Inc

Deal Name	Vintage	Collateral Manager
Fortress Credit BSL III Limited	2015	Fortress Investment Group LLC
Halcyon Loan Advisors Funding 2015-2 Ltd.	2015	Halcyon Loan Investors LP
Marathon CLO VIII Ltd.	2015	Marathon Asset Management LP
Shackleton 2015-VIII CLO, Ltd.	2015	Alcentra Inc.
Sound Point CLO IX, Ltd.	2015	Sound Point Capital Management LP
THL Credit Wind River 2015-1 CLO Ltd.	2015	THL Credit Senior Loan Strategies LLC
THL Credit Wind River 2015-2 CLO Ltd.	2015	THL Credit Senior Loan Strategies LLC
Venture XX CLO, Limited	2015	MJX Asset Management LLC
Venture XXI CLO, Limited	2015	MJX Asset Management LLC
ZAIS CLO 3, Limited	2015	ZAIS Group Inc.

Deal Name	Vintage	Collateral Manager
Cedar Funding IV CLO, Ltd.	2014	AEGON USA Investment Management, LLC
Highbridge Loan Management 3-2014, Ltd.	2014	Highbridge Principal Strategies LLC
Highbridge Loan Management 4-2014, Ltd.	2014	Highbridge Principal Strategies LLC
JFIN CLO 2014, Ltd.	2014	Jefferies Finance LLC
LCM XVI Limited Partnership	2014	LCM Asset Management LLC
Marathon CLO VI Ltd.	2014	Marathon Asset Management LP
Marathon CLO VII Ltd.	2014	Marathon Asset Management LP
Staniford Street CLO, Ltd.	2014	NewStar Financial
Zais CLO 1, Limited	2014	ZAIS Group Inc.
ZAIS CLO 2, Limited	2014	ZAIS Group Inc.

Deal Name	Vintage	Collateral Manager
Babson CLO Ltd. 2013-I	2013	Barings LLC
BlueMountain CLO 2013-2, Ltd	2013	BlueMountain Capital Management LLC
Catamaran CLO 2013-1 Ltd	2013	Trimaran Advisors LLC
CIFC Funding 2013-IV, Ltd.	2013	CIFC Asset Management LLC
Dryden 30 Senior Loan Fund	2013	PGIM
Dryden XXVIII Senior Loan Fund	2013	PGIM
Kingsland VI	2013	Kingsland Capital Management LLC
LCM XIV Limited Partnership	2013	LCM Asset Management LLC
Marathon CLO V Ltd.	2013	Marathon Asset Management LP
Regatta II Funding L.P.	2013	Napier Park Global Capital, LLC

Deal Name	Vintage	Collateral Manager
ALM V, Ltd.	2012	Apollo Credit Management LLC
ALM VI, Ltd.	2012	Apollo Credit Management LLC
ALM VII, LTD.	2012	Apollo Credit Management LLC
Benefit Street Partners CLO I, Ltd.	2012	Benefit Street Partners LLC
BlueMountain CLO 2012-2, Ltd.	2012	BlueMountain Capital Management LLC
California Street CLO IX Limited Partnership	2012	Symphony Asset Management LLC
Fortress Credit Funding V LP	2012	Fortress Investment Group LLC
Fraser Sullivan CLO VII Ltd.	2012	Investcorp B.S.C.
Madison Park Funding X, Ltd.	2012	Credit Suisse Asset Management
Voya CLO 2012-4, Ltd.	2012	Voya Investment Management (ING)

Deal Name	Vintage	Collateral Manager
California Street CLO III, Ltd.	2007	Symphony Asset Management LLC
California Street CLO V, Ltd.	2007	Symphony Asset Management LLC
Madison Park Funding V, Ltd.	2007	Credit Suisse Asset Management
Madison Park Funding VI, Ltd.	2007	Credit Suisse Asset Management
Venture VIII CDO, Limited	2007	MJX Asset Management LLC

Deal Name	Vintage	Collateral Manager
Blue Mountain CLO II Ltd.	2006	BlueMountain Capital Management LLC
California Street CLO II, Ltd.	2006	Symphony Asset Management LLC
Eaton Vance CDO VIII, Ltd.	2006	Eaton Vance Management
Venture VII CDO Limited	2006	MJX Asset Management LLC
Wasatch CLO Ltd.	2006	Invesco Inc.

Note: Unpriced loans are assumed to have a market price equal to the average of that type of loan in the market. Unpriced bonds are priced based upon seniority and if they are performing while equity is essentially valued at zero. Outlying values for certain factors have been capped or floored. Reasonable approximations have been used where selected data fields are not reported.

### Manager Frequency for US\$ CLO's by Vintage

Manager	2006	2007	2012	2013	2014	2015	2016	Grand Total
MJX Asset Management LLC	1	1				2	1	5
Apollo Credit Management LLC			3				2	5
Marathon Asset Management LP				1	2	1		4
Symphony Asset Management LLC	1	2	1					4
THL Credit Senior Loan Strategies LLC						2	1	3
BlueMountain Capital Management LLC	1		1	1				3
LCM Asset Management LLC				1	1		1	3
Credit Suisse Asset Management		2	1					3
ZAIS Group Inc.					2	1		3
Fortress Investment Group LLC			1			1		2
Jefferies Finance LLC					1		1	2
PGIM				2				2
Highbridge Principal Strategies LLC					2			2
Ares Management, LLC							1	1
NewStar Financial					1			1
Alcentra Inc.						1		1
Voya Investment Management (ING)			1					1
Sound Point Capital Management LP						1		1
Barings LLC				1				1
Halcyon Loan Investors LP						1		1
Investcorp B.S.C.			1					1
Napier Park Global Capital, LLC				1				1
Benefit Street Partners LLC			1					1
DFG Investment Advisers Inc							1	1
Kingsland Capital Management LLC				1				1
Eaton Vance Management	1							1
KKR Financial Advisors LLC							1	1
Trimaran Advisors LLC				1				1
Anchorage Capital Group LLC							1	1
CIFC Asset Management LLC				1				1
AEGON USA Investment Management, LLC					1			1
Invesco Inc.	1							1
<b>Grand Total</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>60</b>

## Euro CLO's

The same updated analysis was completed for Euro denominated CLO's. Since that market is much smaller than its US counterpart, only the top five within each vintage are displayed. Several vintages were excluded given the limited number of issues in those years (2008- 2012). I added 2016 to this ranking given the additional issuance. Barings (formerly Babson) has the most ranked deals at six which represents 85% of its European CLO's from these vintages. PGIM (Prudential) and GSO/Blackstone are the only other managers with two CLO's in the top five in one vintage. As a proportion of CLO's outstanding from the selected vintages, six managers have at least 50% of their deals included. Of the managers with multiple deals within these vintages, Barings, PGIM and Spire have at least 80% of theirs included. There are 13 different managers in the ranking out of the 30 positions (vs 25 positions in the last ranking) which is more concentrated than the US ranking. It is also noteworthy that only one manager in the top five rankings exclusively issues in the European market. About half of the managers in the European top ranking are also in the US top ranking. Four of the managers from this ranking were not in the prior one and six from the last ranking are not in this one. The larger reduction is mildly surprising given the larger number of ranked CLO's this period.

Deal Name	Vintage	Collateral Manager
Aurium CLO II DAC	2016	Spire Partners LLP
Babson Euro CLO 2016-1 B.V.	2016	Barings LLC
Cadogan Square CLO VII B.V.	2016	Credit Suisse Asset Management
Elm Park CLO DAC	2016	GSO / Blackstone Debt Funds Management
Harvest CLO XV DAC	2016	Investcorp B.S.C.

Deal Name	Vintage	Collateral Manager
Aurium CLO I DAC	2015	Spire Partners LLP
Babson Euro CLO 2015-1 B.V.	2015	Barings LLC
Cadogan Square CLO VI B.V.	2015	Credit Suisse Asset Management
Dryden 35 Euro CLO 2014 B.V.	2015	PGIM
Dryden 39 Euro CLO 2015 B.V.	2015	PGIM

Deal Name	Vintage	Collateral Manager
BABSON EURO CLO 2014-1 B.V.	2014	Barings LLC
BABSON EURO CLO 2014-2 B.V.	2014	Barings LLC
Carlyle Global Market Strategies Euro CLO 2014-3	2014	Carlyle Investment Management LLC
Dryden 32 Euro CLO 2014 B.V.	2014	PGIM
Harvest CLO IX Limited	2014	Investcorp B.S.C.

Deal Name	Vintage	Collateral Manager
Ares European CLO VI B.V.	2013	Ares Management, LLC
Cadogan Square CLO V B.V.	2013	Credit Suisse Asset Management
Dryden 29 Euro CLO 2013 B.V.	2013	PGIM
Jubilee CLO 2013-X B.V.	2013	Alcentra Inc.
St. Paul's CLO II Limited	2013	Intermediate Capital Group plc

Deal Name	Vintage	Collateral Manager
Cordatus Loan Fund II P.L.C.	2007	CVC Credit Partners LLC
Harbourmaster CLO 9 B.V.	2007	GSO / Blackstone Debt Funds Management
Harbourmaster Pro-Rata CLO 3 B.V.	2007	GSO / Blackstone Debt Funds Management
OAK HILL EUROPEAN CREDIT PARTNERS II P.L.C.	2007	Oak Hill Advisors LP
Wood Street CLO VI B.V.	2007	Alcentra Inc.

Deal Name	Vintage	Collateral Manager
ADAGIO III CLO P.L.C.	2006	AXA Investment Managers
Duchess VI CLO B.V.	2006	Barings LLC
Duchess VII CLO B.V.	2006	Barings LLC
Jubilee CDO VI B.V.	2006	Alcentra Inc.
OAK HILL EUROPEAN CREDIT PARTNERS I P.L.C.	2006	Oak Hill Advisors LP

Note: Unpriced loans are assumed to have a market price equal to the average of that type of loan in the market. Unpriced bonds are priced based upon seniority and if they are performing while equity is essentially valued at zero. Outlying values for certain factors have been capped or floored. Reasonable approximations have been used where selected data fields are not reported.

### Manager Frequency for Euro CLO's by Vintage

Manager	2006	2007	2013	2014	2015	2016	Grand Total
Barings LLC	2			2	1	1	6
PGIM			1	1	2		4
GSO / Blackstone Debt Funds Management		2				1	3
Alcentra Inc.	1	1	1				3
Credit Suisse Asset Management			1		1	1	3
Spire Partners LLP					1	1	2
Oak Hill Advisors LP	1	1					2
Investcorp B.S.C.				1		1	2
AXA Investment Managers	1						1
Carlyle Investment Management LLC				1			1
Ares Management, LLC			1				1
Intermediate Capital Group plc			1				1
CVC Credit Partners LLC		1					1
<b>Grand Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>30</b>

### Conclusion

Although no ranking system is, by definition, perfect, we offer a possible approach to viewing CLO performance that incorporates both the debt and the equity. In our analysis, the CLO's are ranked by a variety of factors beyond their equity returns in an effort to balance the interests of the equity with that of the debt investors. As a result, deals that ranked moderately in regard to equity returns, may jump up to make the above tables given their strength in other factors. Conversely, CLO's that ranked high solely based upon their equity returns, may drop out of the table through a combination of other issues. When analyzing CLO performance, the factors selected and relative weight one gives to the factors will cause differing CLO's to be more attractive as buy or sell opportunities. Careful and complete analysis will highlight these differences.

© 2017 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody's.com](http://www.moody's.com) under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.