MOODY'S INVESTORS SERVICE

RATING METHODOLOGY

Railcar Leasing Securitizations Surveillance Methodology

Table of Contents:

SCOPE 1
RATING APPROACH 2
ASSET LEVEL ANALYSIS AND RELATED MODELING 2
STRUCTURAL ANALYSIS AND LIABILITY MODELING 5
MOODY'S RELATED PUBLICATIONS 6

Analyst Contacts:

NEW YORK +1.212.553.1653

Jayesh Joseph +1.212.553.7412
Assistant Vice President - Analyst
jayesh.joseph@moodys.com

Benjamin Shih +1.212.553.2923
Vice President - Senior Credit Officer
benjamin.shih@moodys.com

Oktay Veliev +1.212.553.7467
Senior Vice President/Manager
oktay.veliev@moodys.com

MOODY'S CLIENT SERVICES:
New York: +1.212.553.1653
Tokyo: +81.3.5408.4100
London: +44.20.7772.5454
Hong Kong: +852.3551.3077
Sydney: +61.2.9270.8100
Singapore: +65.6398.8308

This Rating Methodology replaces "Moody's Approach to Rating Railcar Leasing ABS" published on November 15, 2018. The Rating Methodology has been converted to a surveillance methodology and clarifies the relevant analytical elements that reflect our current approach to monitoring railcar leasing ABS transactions.

Scope

This methodology describes our approach to monitoring ratings for asset-backed securities (ABS) backed by railcars and associated leases.

Railcar leasing securitizations are typically backed by pools of railcars and the lease payments that the pools generate. The securitization's underlying leases are typically operating leases. The leases may be "full-service" or "net" leases, the railcars may be either tank or freight cars, and the lessees may be domiciled in the US, Canada or Mexico.

Rating Approach

When monitoring railcar lease securitizations, we review the periodic information we receive and compare the observed performance against our expectations and assumptions based on current railcar leasing market conditions. More specifically, we review the following information:

» overall changes in the reported debt service coverage ratio

» conditions of the railcar leasing market

» pool's utilization rates and average monthly lease rates over time

» unexpected trends in operating expenses

» capital structure including outstanding balances of reserve accounts and debt

» qualitative factors regarding the transaction's manager and administrative functions

» credit worthiness of sponsor/manager

If we observe a material change in one of these parameters, we may perform an in-depth analysis to determine a potential impact on the corresponding rated securities. That analysis may include a remodeling of the transaction cash flows, using updated model inputs, updated qualitative factors or stress testing.[1]

Unanticipated macroeconomic changes as well as amendments to the regulatory environment which may affect the pool performance or the sponsor's credit worthiness may also lead to a review of the transaction and the rated securities.

During the monitoring process we will not review certain components of the analysis we undertake to derive initial ratings, such as the credit implications of the transaction's legal structure, unless a major market event, such as a widely publicized related legal ruling, indicates that a reconsideration is warranted.

As with all rating methodologies, in applying this methodology, where appropriate, we consider all factors that we deem relevant to our analysis. In addition to quantitative assessments, a rating committee also considers other qualitative and quantitative factors.

Asset Level Analysis and Related Modeling

Asset Level Analysis

Performance of a railcar lease securitization is strongly dependent on the capability of its sponsor or manager, such as their ability to re-lease the railcars when leases expire. As a result, our quantitative and qualitative considerations can vary across sponsors and transactions. In addition, the servicing practices, servicing strategies and transaction structure call for additional differentiation in the way we evaluate each transaction.

The utilization rate, lease rate and residual value in railcar lease transactions are all sensitive to economic conditions. As there is considerable uncertainty and risk inherent in the future performance of these assets,

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

[1] For example, in methodologies where models are used, modeling is not relevant when it is determined that (1) a transaction is still revolving and performance has not changed from expectations, or (2) all tranches are at the highest achievable ratings and performance is at or better than expected performance, or (3) key model inputs are viewed as not having materially changed to the extent it would change outputs since the previous time a model was run, or (4) no new relevant information is available such that a model cannot be run in order to inform the rating, or (5) our analysis is limited to asset coverage ratios for transactions with undercollateralized tranches, or (6) a transaction has few remaining performing assets.

we would only consider assigning a high rating to a railcar lease securitization if it has a relatively high level of credit protection, amongst others, in case of a possibly substantial and prolonged economic crisis.

We assess the percentage of leases that are full-service leases versus those that are net leases. Under full-service leases, the issuer, as lessor, is responsible for the maintenance and repair of the railcars, modifications required to meet governmental or industry safety or other standards and taxes. In contrast, under net leases, the lessee retains responsibility for all costs associated with the railcar's operation. As a result, lease rates on net leases are lower than on full-service leases, everything else being comparable (e.g., railcar type, intended usage, expected wear and tear, and lease maturity).

Asset Modeling

Using a simulation-based modeling approach, we analyze a railcar lease securitization's cash flows and evaluate their sufficiency to make interest payments on the securities and repay the principal. We identify key drivers of the cash flows and estimate their impact to net revenue over the course of the transaction. We take two key model inputs, the utilization rate and lease rate under different economic scenarios and vary these values according to a probability distribution. Some of the model inputs are simulated using different probabilistic distributions. Other variables are static inputs reflecting either a base or stress case.

Railcar Related Information

Our simulation model uses railcar related information, such as railcar type, age and current retrofit status, as inputs to generate cash flows, testing in a variety of scenarios the sensitivities of the lease cash flows and their impact on the capital structure.

Lease Rate

Cash flows from lease payments are the primary source of repayment to investors. Analysis of the adequacy of the cash flow includes the impact of potential reductions in lease rates when railcars are re-leased.

When a lease expires and is subject to a new lease, the model simulates a future lease rate based on a distribution and applies it for the new lease. The lease rates also depend on the state of the economy.

Utilization Rate

In our model, the utilization rate is applied to the potential revenue that would be generated by the pool. We simulate the utilization rate and typically assume a lower rate during a recession period.

Economic Useful Life

The economic useful life of a railcar is the maximum number of years the railcar can be leased and may be affected by factors such as condition of the railcar, new or increased regulatory constraints on operations, and changes in market demand.

Lease Term

Lease term is critical to cash flow generation. Longer lease terms reduce the amount of remarketing time (when the railcars are not generating cash flow and incurring storage cost) and reduce exposure to lease rate volatility.

Retrofit, Maintenance, Remarketing and Storage Costs

In our analysis, we consider different costs associated with a railcar lease portfolio and stress them in our modeling. We typically derive a retrofit cost assumption for certain tank railcars and maintenance cost assumption for full-service leases from information we periodically receive.

Upon expiry of a lease, assuming no lease renewal, remarketing time is the number of months that it will take to re-lease the railcars. Remarketing cost includes the cost of marketing the railcars to a new lessee and executing a new lease contract. Additionally, off-lease railcars incur storage cost during the remarketing period.

Residual Value

When railcars reach the end of their economic useful life, we assume that they are converted into scrap metal. This generates some final income that we apply to the transaction's waterfall.

Lease Abatements and Write-offs

Lease abatements and write-offs reduce gross lease revenue. Lease abatements are paid to lessees under full-service leases to compensate them if railcars are out of service for operating repairs. Lease write-offs are the billed leasing revenue that is deemed uncollectible by the manager, either because of adversely resolved billing disputes or lessee defaults.

Debt Service Coverage Ratio

We also review the debt service coverage over time when monitoring a transaction. Debt service coverage is the ratio of net cash collections to principal and interest payments

Insurance Cost and Car Tax

In our modeling, insurance costs are applied to all railcars on a per railcar basis, while car taxes are only applied to full-service leased railcars on a per railcar basis. Both costs are held constant for the life of the railcar and are paid regardless of whether the cars are utilized.

Management and Administrative Fees

We model the fees to be paid by the issuer to third parties, such as those for the manager, administrator, and indenture trustee. In addition, we account for the risk that the expenses may increase if those parties need to be replaced at a higher cost. For example, we may simulate the need to replace a manager, based on its probability of default and, upon a simulated default, increase the manager fee.

We generally simulate a manager default based on a probability of default derived from its rating, or, if unavailable, we derive it either from a credit estimate[2] if the required information is available or from an assumption for the sponsor's creditworthiness. If the manager is also the licensor of the railmarks carried by the railcars, we typically would increase the manager fee even more, in the event of a simulated default, to account for the risk that a replacement licensor (or the manager's bankruptcy estate), would charge higher railmark licensing fees.

We may model higher fees if we believe the fees stipulated in the transaction documents would not be high enough to attract a qualified replacement.

Exposure to Mexican-Domiciled Lessees

Lessees domiciled in Mexico pose greater risks than those in the US and Canada, primarily because of the very high uncertainty of legal enforcement and the timing of, and costs to pursue, the SPV's repossession of a railcar from a bankrupt Mexican-domiciled lessee – if recovery is even possible. Consequently, we make more stressful assumptions for Mexican lessees than for US and Canadian lessees with respect to both the likelihood of lessee default and credit for recoveries, to take into account the SPV's probable inability to repossess and remarket railcars leased to bankrupt Mexican-domiciled lessees. In addition, as part of our analysis of the potential impact of Mexican-domiciled lessees, we assess the extent to which the loan pool is

[2] For more information, see our cross-sector methodology for using credit estimates: A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

likely to be concentrated in Mexican-domiciled lessees, including limits, if any, in the transaction documents on the portion of Mexican-domiciled lessees

Structural Analysis and Liability Modeling

Cash Flow Model

Coupled with the asset simulation model, we use a cash flow liability model for a transaction to evaluate any losses on the securities that investors would incur. Each simulated scenario will occur with a frequency consistent with the specific probabilistic distribution used. The model helps us assess the benefit of the various sources of credit enhancement and the different structural features of the transaction. The type of modeling depends on the complexity of the transaction's actual liability structure.

Loss Benchmarks

In evaluating the model output for railcar leasing ABS transactions which are originated in the US or Canada, we use an Internal Rate of Return (IRR) benchmark. Modeled IRR reductions are associated with benchmark ratings in Moody's IRR Reduction Rates table,[3] which indicates the internal rate of return reduction interval associated with each given rating level.

[3] For more information, see the discussion of Internal Rate of Return (IRR) Reduction in Rating, Symbols, and Definitions (a link can be found in the "Moody's Related Publications" section).

Moody's Related Publications

Credit ratings are primarily determined through the application of sector credit rating methodologies. Certain broad methodological considerations (described in one or more cross-sector rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments. A list of sector and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings, please click here.

For further information, please refer to *Rating Symbols and Definitions*, which includes a discussion of Internal Rate of Return Reduction, and which is available , and is available here.

Report Number: 1243198

ADDITIONAL CONTACTS:
Frankfurt: +49.69.2222.7847
Madrid: +34.91.414.3161
Milan: +39.02.3600.6333
Paris: +33.1.7070.2229

Website: www.moodys.com

© 2020 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/OR ITS CREDIT RATINGS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S INVESTORS SERVICE 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 OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S INVESTORS SERVICE CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER 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. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS 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, ASSESSMENTS, OTHER OPINIONS, AND 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, ASSESSMENTS, OTHER OPINIONS OR 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.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

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 its 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 CREDIT RATING, ASSESSMENT, 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 credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from $1,000 to approximately $2,700,000. MCO and Moody's investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.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.

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 credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

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

MOODY'S
INVESTORS SERVICE