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General Methodology

1. Introduction

The following is a general methodology for structured finance rating, which replaces and updates "Outline and Rating Points of Structured Finance Products (or Underlying Assets) (General)" (date of last update: March 29, 2007; available only in Japanese).

2. Classification of Structured Finance Products

Structured finance is a financial transaction involving use of a "structure" such as an SPV (special purpose vehicle) or credit enhancement measures, a broad concept that includes securitization transactions. Whereas the definition of securitization transactions under Basel II regulations is characterized by the following two: (1) senior-subordinated structure and (2) transfer of credit risk to a third-party, structured finance is considered to cover a wider range of financial transactions.

JCR broadly classifies the structured finance products into the following two groups.

(1) Asset Securitization Products (according to the definition by the Cabinet Office Ordinance on Financial Instruments Business, etc. (Ordinance No. 52 of 2007) related to the Financial Instruments and Exchange Act)

- Securitization products backed by leases, automobile loans, shopping receivables, or loan receivables (narrowly defined ABS)
- Securitization products backed by housing loans (RMBS)
- Securitization products backed by real estates (CMBS)
- Synthetic CDOs
- Short-term securitization products backed by notes and accounts receivables, or medical remuneration receivables
- ABCP programs (with internal credit enhancement/ partially supported ABCP)
- Future Flow Securitization
- Other instruments similar to the above

(2) Other Structured Finance Products, etc.

- ABCP programs (fully supported)
- Repackaged instruments (single-credit financial instruments where the credit status of the underlying assets is the same in effect as that of the financial instruments in question)
- Financial instruments for project finance
- Financial instruments for Asset Finance (Ship finance, Aviation Finance, and ABL (Asset-based Lending))

- EETC
- J-REIT
- Infrastructure Funds (Listed Infrastructure Funds/Infrastructure Funds)
- Other instruments similar to the above

When determining a rating, JCR studies the structure and characteristics of each structured finance products, etc. from the viewpoint of whether the product can be deemed in effect a single-credit financial instrument and classifies it into either "Asset Securitization Products" or "Other Structured Finance Products, etc."

3. Symbols of Structured Finance Rating and Their Definition

The rating symbols and their definition of structured finance products, etc. conform to those for corporate and other credit ratings. More specifically, structured finance ratings are gradings that enable comparisons to be made of probability of the obligations in respect of a particular structured finance product, etc. performing as contracted. An "Issuer Rating" is not used for the credit rating of an asset securitization product.

Instead of attaching an additional symbol to the credit rating of an asset securitization product, such as "AAA-sf", to indicate that it is a structured finance rating, JCR explains the difference between such credit rating and corporate and other credit ratings in its press releases or reports on its website. JCR also assigns ratings to all types of asset securitization products in a consistent manner.

4. Types of Financial Instruments, to Which Structured Finance Rating is Assigned

Structured finance ratings are assigned to securities (including securities equivalents) under Financial Instruments and Exchange Act such as bonds, commercial paper, trust certificates (or trust beneficial rights) and electronically recorded monetary claims and claims pertaining to monetary loan as well as financial instruments defined individually by Rating Methodology for each asset class[1].

The programs, under which these securities (or loans) are issued repeatedly pursuant to the relevant agreements, are also included.

5. Structured Finance Rating Methodology

(1) Rating Methodology and Periodic Review

Structured finance rating methodology is established in accordance with JCR's rating policies and methodologies. JCR assigns individual structured finance ratings based on a thorough analysis of all information known to it, as is relevant to such analysis according to its structured finance rating methodology. JCR then implements objective validation of the resultant credit ratings based on historical experience.

[1] Included are trust bonds, for which liability to perform the obligations is limited to trust property only under Article 2, paragraph (3), item (xvii) of the Ordinance for Enforcement of the Companies Act, bond-type beneficial interests and special bond-type beneficial interests (Islamic bonds) under Act on Securitization of Assets, obligations with respect to loan participation and other related money obligations.

JCR periodically reviews the structured finance rating methodology and assesses whether the existing rating policies and methodologies as well as their significant detailed rules (including models employed) for assigning credit ratings of asset securitization products are appropriate when the risk characteristics of the assets underlying the asset securitization products change materially.

When assigning a credit rating for an asset securitization product, JCR discloses sufficient information regarding analysis of loss, cash flow and sensitivity for changes in assumptions for credit rating on such asset securitization product so that investors intending to purchase the product can learn the grounds for the credit rating. However, short-term asset securitization products (less than one year) are not subject to the sensitivity analysis unless such analysis is deemed appropriate.

JCR's structured finance rating is not statements of opinion regarding price fluctuation risk, liquidity risk and other risks. It does not take into consideration unforeseeable risks including undetermined modifications to legal or taxation system.

(2) Basic Analytical Methodology

While designs of structured finance products, etc. differ from product to product, points to be considered in assessment of structured finance products, etc. can be summed up in three key concepts: "Bankruptcy Remoteness," "Cash Flow Analysis," and "Operational Risk of Transaction Parties." It is necessary to look at quantitative and qualitative aspects in order to assess these three key concepts comprehensively, and the structured finance rating is determined through analysis of quantitative and qualitative assessment. Therefore, even when a structured finance product, etc. is considered to deserve a AAA rating from a quantitative perspective only, the rating may become lower as a result of the qualitative assessment.

JCR's rating represents a comprehensive decision on an assessment of the probability of default with respect to a debt being rated and the likelihood of recovery after default, but is basically an assessment of the probability of falling into debt default. Although structured finance rating also indicates basically the probability of debt default, when assigning a rating that takes into account the likelihood of recovery after debt default under certain conditions, JCR includes an explanation for investors to understand the fact. So it does by its news release or report to make clear the whole implication and limitation of given ratings, if and when JCR assigns ratings to structured finance products, etc. that allow debt payment in kind by way of making delivery out of the underlying assets as they are, in such a form as monetary assets or financial instruments, providing that the assets' creditworthiness is at a certain level or higher.[2]

Rating methodology for each of the following underlying assets or products has been released

[2] For structure finance products, etc., of which the accumulated amount of negative interest rates is adjusted for principal reduction on the maturity date with zero interest payments on the interest payment dates, if contracted interest rates become negative during period, this principal reduction is not considered default. JCR describes explanations on this point in reports for each rating.

individually.[3]

- Leases
- Automobile Loans
- Automobile Leases
- Installment Receivables and Card Shopping Receivables
- Consumer Loans
- Notes and Accounts Receivables
- Medical Remuneration Receivables
- Housing Loans
- Synthetic CDOs
- CLOs
- Real Estate
- Real Estate Development Projects
- Future Flow Securitization
- Whole Business Securitization
- Credit-Linked Products
- Repackaged Financial Instruments
- ABCP Programs
- Project Finance
- Ship Finance
- Aviation Finance
- ABL (Asset-based Lending)
- EETC
- J-REIT
- Listed Infrastructure Funds
- Infrastructure Funds

[Key Analytical Points]

(i) Bankruptcy Remoteness

Under a structured finance where an originator assigns assets to an SPV, legal structure that separates assets or receivables from the credit risk of the originator is necessary. Such SPV is required to be isolated from parties to the scheme so that it is unlikely to become the subject of bankruptcy proceedings owing to factors except for factors of its owning receivables and assets securitized. These arrangements, called Bankruptcy Remoteness, are prerequisites for cash flow

[3] Among underlying assets and products listed here, from "Leases" down to "Credit-Linked Products" in general fall under the above 2. (1) Asset Securitization Products and from "Repackaged Financial Instruments" down to "Listed Infrastructure Funds" fall under 2. (2) Other Structured Finance Products, etc. However, there are not a few exceptions. As one example, some repackaged financial instruments are categorized as an asset securitization product.

analysis.

(a) True Sale

One of the requisites for bankruptcy remoteness is separation of receivables or assets securitized from the originator in economic and legal terms. The assignment should be structured so that the transaction is not recharacterized as a secured financing and so that the validity of the assignment is denied in the event of an originator's bankruptcy under any bankruptcy law ('true sale'). As principal and interest payments of structured finance products rely on cash flows generated from assets or receivables or their values, denial of true sale or change in schedules for principal and interest payments would adversely affect the transaction. Therefore, it is essential to structure the transaction so that the assignment is a true sale and not a transfer that serves merely as collateral security. A judgment on whether the transaction is a true sale or not is made by taking a look at the content of receivables or assets securitized and the entire structure in a comprehensive manner. Another point to keep in mind is that the transfer of receivables or assets should not be subject to fraudulent act, preference or repudiation.

(b) Perfection

In the event of an originator's bankruptcy, creditors such as banks or suppliers would claim their rights to preserve or collect their claims and take various steps (which are not limited to legal measures). In bankruptcy proceedings, the court may impose significant restrictions on exercise of the owner's rights. For this reason, the assignment needs to be perfected against third parties so that the owner of these receivables or assets securitized can claim that he or she is an owner legally and so that the transfer of such receivables or assets to an SPV is not affected by the originator's bankruptcy in addition to the requirement that assets or receivables are validly transferred to the SPV.

Dilution risk that the amount of the initial receivables decreases due to cancellations and discounts, and offsetting risk that the amount of the initial receivables decreases when the obligor offsets the securitized receivables against the receivables owed by the originator are a problem in the securitization of the receivable to a single debtor in particular. In order for the rating of such securitization products to exceed the rating of the originator, the assignment needs to be perfected against the obligor upon the transfer of the receivable by way of notifying the obligor by the originator or obtaining the consent of the obligor. In addition, it is necessary to take measures against the above risks, such as by obtaining a document waiving the rights of defense from the obligor.

(c) Structure of SPV

In the event of an originator's bankruptcy, an SPV itself needs to be unlikely to become the subject of bankruptcy proceedings and the transfer of assets or receivables to the SPV needs to be unlikely to be affected by the bankruptcy proceedings. JCR considers the following the

criteria for structuring a bankruptcy remote SPC.[4]

- Restriction on business
- Neutral and independent director(s)
- Separation of capital relationship with the originator (avoidance of unjust exercise of shareholders' rights)
  - In the case of an SPC incorporated in the Cayman Islands, it is necessary to establish a charitable trust with the SPC's voting shares as a trust property estate and a local charitable organization as a beneficiary. In the case of an SPC incorporated in Japan, it is necessary for parties to the transaction not to have voting rights in the SPC by way of the entire capital contribution being held by a Cayman SPC, *Ippan Shadan Houjin* (general corporate judicial person) or *Tokutei Mokuteki Shintaku* (specified equity trust).
- Prohibition of bankruptcy petition by creditors

(ii) Cash Flow Analysis

Levels of credit enhancement and liquidity support are examined based on legal risk analysis of a structure, performance evaluation of assets or receivables or asset valuation, and other considerations. These levels are primarily determined in light of the following:

- Characteristics of assets or receivables (level of excess spread, treatment of cancellation and prepayment, marketability)
- Historical Performance (default rate, delinquency rate, and eligibility criteria for securitized receivables)
- Considerations on legal risks, fraud risks, etc. (resultant risks of the interest rate lowered, the paid proceeds returned, etc.)
- Cash flow generation capacity and stability of project or business (feasibility of business and operator's capability)
- Cash flow distribution method (sequential pay, fast pay, etc.)
- Redemption method of structured products (pass through or bullet redemption)
- Other (substitution of servicer, interest rate movements, operational cost during period)

<Example of the Case of Securitization of Monetary Assets>

(a) Credit Risk of Obligors

First, underlying asset or reference entity can be classified as "single-obligor" or "multi-obligor".

[4] In some jurisdictions, directors are obligated to initiate bankruptcy proceedings against the company in certain circumstances. In the case of an SPV established in such a jurisdiction, JCR examines the details of measures to prevent the SPV from becoming insolvent and the prospect of recovery in the event of bankruptcy proceedings against the SPV (Are there bankruptcy laws that allows the creditor who has mortgage rights on all or substantially all of the SPV's property to collect their claims without being involved in the bankruptcy procedure?) and then judges the adequacy of protection of securitized assets in accordance with the circumstances in such jurisdiction.

They are then classified into whether they are subject to "law of large numbers approach" or "CDO approach" depending on the number of obligors. As a general rule, when the number of obligors who constitute the receivables pool is more than 300 and ratio of each obligor's amount to the overall amount (obligor concentration) is below a certain level, JCR adopts law of large numbers approach and makes analysis based on this approach and adopts CDO approach in other cases. In the case of multi-obligor assets, analysis focuses on how the risk of obligor default and delinquency can be quantitatively figured out and then how such risk can be absorbed or avoided. Credit enhancements such as overcollateralization or senior-subordinated structure are often taken against these risks.

Law of large numbers approach assumes that all of the small obligors who constitute the receivables pool have the same attributes. JCR then estimates attributes of the receivables pool from the historical data, securitization period, etc. and calculates the required subordination ratio.

In law of large numbers approach, the base case default rate for obligors in the pool of receivables is determined by examining the historical data. Next, JCR conducts stress testing by applying stress scenarios with respect to the rates of default, delinquency and prepayment to the expected cash flows during period, and calculates a required subordination amount. The rate of stress to be loaded is determined on the assumption of a standard case subject to the attributes and credit standing of a given obligor. Load is added if the credit standing of transferred claims deemed, from the attributes and historical data, to be lower than that of the originator's entire claims, or the amplitude of change in the default rate is expected to be greater than usual judging from the obligors' attributes or economic/business environment at the resident country of underlying assets.

In cases where the number of obligors in the pool of receivables to be securitized is small, or in cases where obligor concentration is high, JCR adopts CDO approach. In CDO approach, JCR allocates a default probability to each obligor unlike in the case of law of large numbers approach, and carries out Monte Carlo simulations based on this probability in order to calculate a subordination level.

(b) Commingling Risk

Funds collected from the securitized receivables are remitted to the SPV after staying at the servicer for a certain period. Should the servicer go into bankrupt, there could be a risk of commingling of the collected money with assets of the servicer and consequently failing to remit the money as scheduled. As a general rule, JCR sets the largest amount to be expected to become uncollectible due to the servicer default at any time after commencement of securitization as a required credit enhancement amount for commingling risk.

(c) Cash Reserve (Liquidity Support)

It is necessary in light of rating to reserve funds as cash reserve as required during the period until the servicer hands over the collection operations to the backup servicer and collected

proceeds are credited again to the SPV when the servicer falls into such situations that disable implementation of normal collection operations due to bankruptcy and any other reasons.

<Example of the Case of Securitization of Real Estates>

(a) Valuation of Real Estates

In the case of real estate securitization, as sale of the real property is vital for redemption (exit strategy), it is important to assess the values (the present values and future values) of real estates to be securitized.

JCR determines real estate values after making analyses on general and individual factors for the real estates based on the following points:

- Market Analysis
- Quality of Real Estates
- Property Management Capability
- Tenant Statuses (Quality of Tenants and Degree of Their Diversification)

(b) LTV

LTV (Loan To Value) is a rate of “principal amount of bonds or loans” to “asset value” of the securitized real estate. LTV is a means to make a judgment on how much can the bonds or loans withstand the risk of changes in asset value through maturity. For this reason, LTV becomes a significantly important index in assigning credit rating corresponding to the probability of the payment of principal and interest of bonds or loans. JCR therefore assigns ratings taking into consideration various risks assumed to arise for the securitized real estate (fall of land price, decline in rent income, deterioration of buildings, etc.), and the possibility that “net operating income” and “future sales price” will fluctuate (decrease) before maturity date.

(iii) Operational Risk of Transaction Parties

Under securitization of granular monetary receivables, the originator usually serves as a servicer to whom collection services are entrusted from the SPV. In majority of such securitization transactions, an originator’s continuation of its services of collection from obligors is better than other ways for the reasons that the originator has know-how and experiences in collection fit for nature of the receivables and that it can maintain relations with its customers. Therefore, it is general that an originator serves as an initial servicer. However, it is necessary to appoint a backup servicer beforehand or define clearly procedures and framework to be required for servicer substitution in preparation for a situation where the servicer can no longer conduct collection services owing to bankruptcy and any other reasons.

(3) Structured Finance Products, etc. with Market Risk

Concerning a structured finance product, etc. with market risks whose interest or principal payments

are determined by a certain calculation formula depending on market prices or indexes such as stock price, interest rates, exchange rates, JCR analyzes in what way the market risk varies the interest and principal amounts and determines a rating based on the probability of the obligations in respect of such structured finance products, etc. performing as contracted. In the case where the market risk affects such probability, JCR determines a rating, factoring in the effects of the market risk. In the meantime, rating may become lower or may not be assigned at all as to a structured finance product, etc. if the market risk can cause a substantial principal loss.

(4) Structured Finance Products, etc. with Deferrable Interest or Dividend Clause

Some of ratings on structured finance products, etc. with deferrable interest or deferrable dividend clause for the bonds or trust certificates do not address timely payments of interests or dividends excluding cases where such structured finance products, etc. to be rated are the most senior tranche of publicly-offered multiclass securities. In this case, JCR describes explanations on this condition in reports for each rating in order for investors to understand this condition.

As for these structured finance products, etc. with deferrable interest or deferrable dividend clause, deferment of interest payments or dividend payments does not fall under default on contract. Thus, in the case of the ratings which do not address timely payment of interests or dividends, JCR does not rate these structured finance products, etc. at "D," with just the fact that the interest payment or dividend payment has been deferred.

(5) Structured Finance Products, etc. with Ratings for Principal Redemption or Interest Payment Only

As for structured finance products, etc. without predetermined amount of interest or dividend payments but with dividend payment based on actual results, rating addresses probability of principal redemption (repayment) only and does not address probability of payments of interest or dividend. JCR describes explanations on this condition in reports for each rating in order for investors to understand this condition.

In rating RMBS's or other securitization's tranches consisting entirely of cash flows of interest payment, JCR assesses certainty of contractual interest payment based on priority of payments and credit enhancement level for such tranches, assuming sufficient mitigating measures in interest rate risk have been taken.

(6) Sovereign Rating and Country Ceiling

The ratings on structured finance products, etc. are constrained by the sovereign rating of the resident country of their underlying assets. It is determined individually whether or not the rating of given structured finance products, etc. can exceed the sovereign rating. When the product is denominated by a currency foreign to the resident country, the ratings thereof are in principle equal or lower than the country ceiling that is determined in consideration of the likelihood that the government

authorities might impose a foreign exchange control.

6. Monitoring

JCR in principle monitors underlying assets' performance and reviews credit ratings as long as a rated debt is outstanding. JCR conducts monitoring on a constant basis to see whether or not there are unanticipated rapid changes or events. When conducting the review of credit ratings, JCR determines rating affirmation/changes or credit monitor placement after reconsidering as necessary the base rate and other prerequisite for credit ratings and analyzing losses/cash flows based on the prerequisite with consideration for the remaining periods of structured finance products, etc. Rating review is held on a regular basis, as well as on an ad hoc basis as necessary in case of a sudden change or event.

Japan Credit Rating Agency, Ltd.
Jiji Press Building, 5-15-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan
Tel. +81 3 3544 7013, Fax. +81 3 3544 7026

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