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Aviation Finance

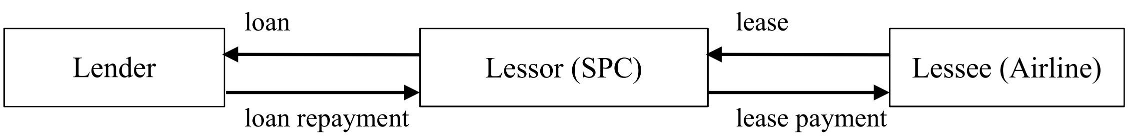
1. Aviation Finance

The Aviation Finance is a financial transaction specially invented for the use of airline carrier companies to procure aircrafts. Technically it is categorized largely as either loan or lease, which includes types of corporate loans to the airline company, official guarantee schemes provided by an export-import bank of government establishment, and loans to an aircraft leasing company. This report shows JCR's credit rating methodology for the Aviation Finance, assuming the finance is carried out by a SPC in a form of leasing transaction on the back of cash flow generation on a given aircraft and/or its asset value. Ratable objects are loans, bonds and a variety of other financial instruments, to which the tranching by cash flow or collateral is often applicable.

The Aviation Finance has commonality in characteristics with the Ship Finance, the Project Finance or the Whole Business Securitization (WBS) in the sense that the fund is raised on a cash flow basis. It also has its uniqueness that requires particular analytical attention, in which the airline industry peculiarity comes to play.

2. General Scheme

Subject to some case-by-case variation, the basic scheme of the leasing transaction is as bellows,



The Lessor raises fund by a loan and then purchases a given aircraft, owns and lets it out to the Lessee. The Lessee pays a lease fee to the Lessor which in turn pays interest and principal amounts of the loan out of the fees received from the Lessee.

It is often the case in which the Lessor is a SPC of mere ownership purpose and its actual ownership cum management/operational control belongs to a lease company.

3. Analytical Points

The required analyses for the Aviation Finance are largely classified into (1) grasping the project scheme, (2) analysis of the airline carrier company, (3) analysis of the cash flow, and (4) analysis of the project structure. The core source of the debt payment is the lease fee, for which it is important to establish a correct view on the specifics of a given aircraft and the project as a whole, as well as credit analysis on the airline company as payer of the lease. The next is analysis of cash flow, in which it is checked, among others, if its level is sufficient to cover debt payment and what measures are in place against the risk of possible cash flow fluctuation. Then comes analysis of project structure, especially the contractual relationship to see how certainly the generated cash flow is earmarked and appropriated for the debt payment and, if and when there is a problem in the payment, how surely and swiftly the security right as provided.

The result of factored analyses in the above, i.e. among others, analysis of creditworthiness of the airline carrier company and that of cash flow, are passed to an overall assessment process for the determination of credit rating to be issued.

(1) Grasping Project Scheme

The aircraft as object of given finance is scrutinized from multiple factors such as its specs, manufacturers and maintenance, together with relevant market conditions and laws and regulations, so that JCR knows all matters that could affect the debt payment at source.

(2) Analysis of Lessee (Airline Carrier Company)

Lessee's creditworthiness is duly analyzed following JCR "Rating Methodology (Corporate)".

When the Lessee is a SPC owned by the given airline carrier company, the carrier is often requested to issue guaranty on the lease payment.

(3) Analysis of Cash Flow

The payment of interest and principal of the loan in regular cases of Aviation Finance is made out of lease fees received, as long as the lease itself is performing without trouble. In the case in which some amount of the loan remains unpaid at the date of maturity, which is called "balloon portion", the loan payment is completed either by refinance or by disposition of the aircraft. If some repayment trouble occurs in the midst of lease period, there could be an action of discretionary sale of aircrafts or exercise of the security right to make up the payment.

(i) Cash Flow of Lease

In the analysis of cash flow of the Lease, the following points are examined: the levels of cash-in and cash-out; their fluctuation risks; and the measures to mitigate such risks. In addition to a standard case, the quantitative analysis is applied to other cases under various stress scenarios for the assessment of the capacity of debt payment.

As to cash-in, the lease fees is the most important subject of analysis. In the analysis of the level of fees and its fluctuation risks, the following points are taken in consultation with the lease agreement, etc.

- Whether or not the lease period covers the entire period of the loan?
- Whether or not the level of fees is fixed for the entire period of the lease and how its alteration

against interest of the Lessor is restrained?

- Whether or not the cancellation clause in the lease agreement is deviated from standard ones?
- Whether or not the risk of nonpayment is adequately mitigated in light of relevant capability and experience of the airline carrier?
- Whether or not the cash flow is deemed readily available in any foreseeable situations, including a major operation for maintenance?

The level of resilience against the exchange rate fluctuation is examined, when the currency of payment differs between lease and loan. If Lessor receives lease fees in the US dollar or any other foreign currency and makes loan payment in the yen, which involves currency exchange in between, the exchange risk is incurred on the Lessor. Lessor in this example tends to have a diminished cash-in when the yen is on the appreciation. JCR then examines to which level of the yen's appreciation the adequacy of debt payment at source could sustain. If there is any measure availed of risk mitigation against appreciation of the yen, its effectiveness is also examined.

As to cash-out, the interest rate makes a focus of analytics. It is examined whether or not the rate is fixed by the loan agreement or the swap agreement. When the interest rate is variable, the attention is paid to the level of standard assumed interest rate, and the sensitivity against a general rise of interest rates.

(ii) Cash Flow of Aircraft Disposition

In the analysis of cash flow resulting from the sale of a given aircraft, it is important to establish the balance between the value of the aircraft and the outstanding amount of the loan (LTV). The value of an aircraft is estimated from its book value and evaluation values availed by specialists. Speaking from experience in the past, their oligopolistic structure of the market makes the price of newly manufactured and second-hand aircrafts of large sizes tend not to be volatile. Few cases are found in which the price changed much in a short period of time. Attention is required to be paid, nonetheless, to the fact it is usually quoted in the US dollar and hence the balance between the aircraft value after it is converted in Japanese yen and the outstanding amount of loan.

(iii) Main Indices to Be Used for Cash Flow Analysis

JCR regards certain indices as critical in the analysis of cash flow, as follows:

(The application of them is not mechanical, indifferent to individual cases. Rather, JCR considers distinct features of each case and selectively applies most appropriate ones thereto.)

- DSCR, IRR, LLCR
- Break-even of profit, Equilibrium point of the cash flow when business conditions deteriorate
- LTV

(iv) Evaluation of Other Material Risks

✧ Refinance risk Concerning Balloon Portion

When a substantial amount remains outstanding at the date of maturity of the loan, there are cases in which the payment of outstanding loan is made not by disposition of the aircraft but by refinancing. In such a case, it is necessary to examine regarding to the balance between the expected cash flow through the remaining life of the aircraft and the planned refinancing amount whether it would be maintained to such a level as satisfactory for the lenders. Major points of the analysis of refinance risk are specs and characteristics of the aircrafts, current status of the airline carrier company and the aviation markets, financial environment, etc.

(4) Analysis of the Structure

(i) Bankruptcy Remoteness from the Relevant Parties

There are some cases in which the bankruptcy remoteness from the rated parties (the entities including the one to exercise roles of Lessor in management/operation) is hardly considered to be established if the cash waterfall and/or the operation/management as Lessor's critical functionality are carefully examined. In such a case, the degree of expected adverse impact and the measures of mitigation would be scrutinized.

(ii) Collateral and Maintenance

In an Aviation Finance, in which the cash flow generated on a given aircraft is applied in its entirety to the loan payment, it is important that the creditor's entitlement is surely established to the cash flow and that, if and when the payment is troubled, his/her security right is surely and swiftly exercisable as per relevant agreements.

In a standard case, the following provisions are expected to be in place;

- The value of the aircraft is duly maintained as per the lease and/or loan agreement.
- SPC would not act against the creditor's interest on the loan as per covenants of the loan agreement, etc.
- Cash flow administration, including waterfall and accounts, is properly provided so as not to obstruct the loan payment.
- Proper insurance is provided.
- Principle collaterals (security right to the aircrafts, assignment of the lease fees, assignment of the insurance claims) are surely created.

4. Points for Monitoring

Aviation Finance is no exception in the principle that the credit rating is subject to constant monitoring and periodical reviews.

Analytical points for monitoring largely overlaps with the description so far made but the following are of particular interest to be monitored their changes:

- Voyage and maintenance records of the aircraft
- Operational capability and credit worthiness of the relevant parties
- Compliance to relevant agreements and the possibility of change
- Exchange rates, interest rates, etc. which would could affect cash flow
- Aviation markets, laws and regulations, taxations and other environmental issues

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