Rating Methodology for EETC
(Enhanced Equipment Trust Certificate)

1. Enhanced Equipment Trust Certificate (EETC) - Overview

(1) Basic Scheme

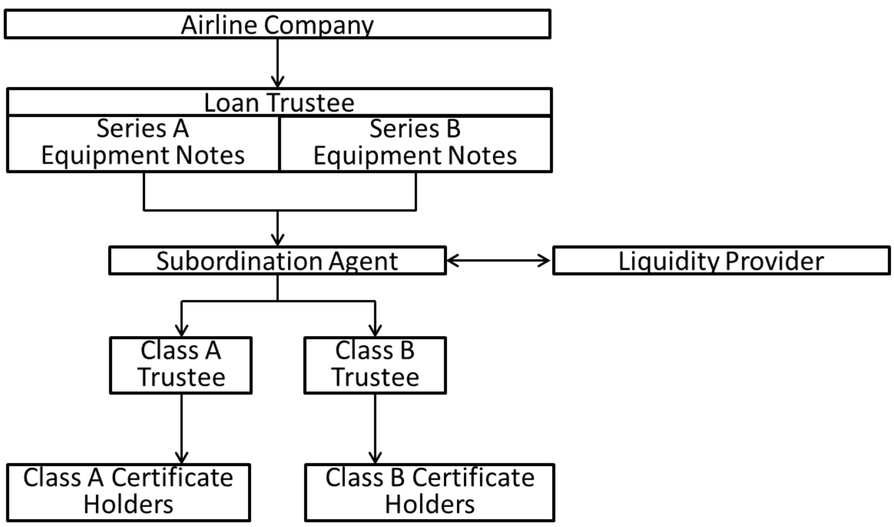
EETC is one of the aviation finance techniques. It is developed and being used in the United States for airline companies' aircraft procurement. Its use is started lately in other countries. EETC is characterized for its strength in creditor protection and hence prevailed in the US.

EETC has a structure of bundling multiple ETC (Equipment Trust Certificates). It raises the likelihood of credit collection by way of *tranching*, liquidity facility, cross-default and cross-collateralization covenants, etc.

ETC is an equipment trust established on an aircraft for lease, taking the aircraft as collateral. The trust investors expect debt payment to be made upon the lease payment made by the lessee (airliner).

Basic schematics and the post-issuance cash waterfalls are shown by Chart 1.

(Chart 1)



The following are an example of some schematic variations.

- The Chart 1 shows a case that holds two tranches of A and B. There actually are cases in which more than 3 tranches are set.
- Tranche A has a senior position to Tranche B. A balloon of debt at the time of maturity is usually observable.
- By way of holding multiple ETCs, EETC more often than not entails aircrafts of multiple counts and types.
- EETC usually entails an airline company or else's, investment of around 30% as equity under other tranches for financial investors.

(2) Characteristics of EETC

EETC has the following characteristics.

① Kinship with the corporate finance

i. An EETC serves for one debtor, i.e. an airline company, only.

ii. EETC investors have recourse to the airline company.
(The aircraft securitization (ABS), in contrast, assumes to serve for multiple airliners and assumes replacements/disposals of collateralized aircrafts prior to the maturity.)

② Kinship with the structured finance

i. In view of possible Chapter 11 of US Bankruptcy Code filings by the airline company, EETC is equipped with a mechanism to be able to fulfill its debt payment obligation nonetheless.
(EETC pays *interest* always as scheduled. *Principal* payment, on the other hand, has leeway that it legally is payable up to the maturity.)
(For senior tranches EETC is given a credit line, amounting to as much as 18 months of payable interest, to be tapped in case of airliner filing Chapter 11.)
(EETC enjoys strong legal protection, being, for example, eligible for US Bankruptcy Code, Section 1110.)
(More often than not EETC has cross-default and cross-collateralization covenants.)

ii. EETC has a senior-subordinated structure by *tranching*.

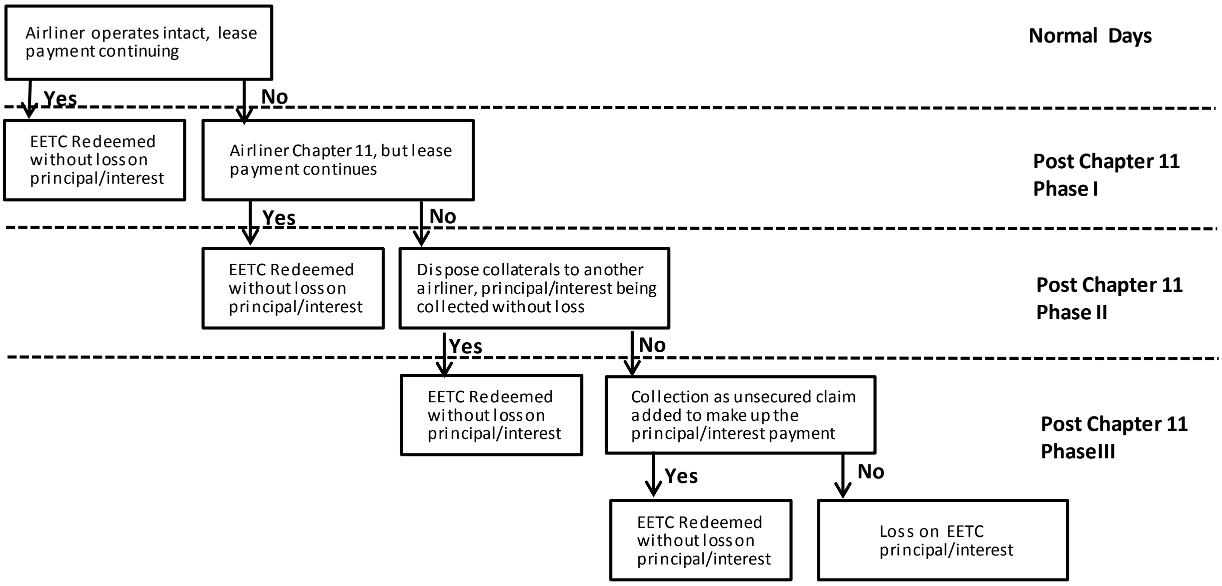
(3) Section 1110

A summary of Section 1110, which takes a significant role for EETC, is as follows.

US Bankruptcy Code Chapter 11 usually entails constraint over the collection/ exercise of debt/ collaterals until the procedure ends. Section 1110 forms an exception thereof and the aircraft collateral makes an applicable case thereto. If the airline company files a petition for Chapter 11, the EETC redemption is carried out as follows:

- The airline company upon Chapter 11 filing receives a 60-day Automatic Stay Period on its lease payment.
- At the time when 60 days elapse, the airline chooses either (a) to reaffirm the lease or (b) to terminate the lease and let the aircrafts repossessed as per prescribed return conditions.
- In the case (a), EETC resumes its payment of interest and principal upon receipt of lease payment.
- In the case (b), the creditors to EETC choose either to replace the airline company as lessee or to exercise collateral, having the airplanes disposed for an early redemption of EETC.
- If and when the claim recovery fails, by either way of airline replacement, aircraft sale or other means of collateral disposals, the creditors to EETC turns to seek collection as an unsecured creditor in the rehabilitation procedure.
- If and when all attempts of the claim recovery fail, the loss materializes on the EETC investors in their receivable interest and principal. See Chart 2.

(Chart 2)



In other words, loss would incurr on the principal and insterest receivable from EETC in such cases as follows:

① Airline company files a petition for Chapter 11, chooses to discontinue the lease agreement and thus return collaterilized aircrafts, of which disposal by the invstors, however, only generates insufficient cash, short of paying off thier would-have-been-receivable princial and interest, and therefore they attempt to recover the balance by claiming it as a claimant of unsecured debt, which again fails to pay off.

② Airline company files petition not for Chapter 11 but Chapter 7 with intention of being liquidated, or else, and the responding creditors fail to recover the whole loss on principal and interest after they attempt collection by disposposal of the collateralized aircrafts and even after claiming the balance as unsecured debt.

Note that the slimilar legal protection is available in other countiries that ratify the Capetown Treaty.

(4) Examples

Under the condition where Section 1110 is at work, there are only few examples in which EETC creditors failed to collect whole principal and interest if the airline filed a petition for Chapter 11. In 2002 when United Airline went bankrupt, it took to court against Section 1110. It lost the case, however, and complied with scheduled procedure. More recently, when American Airline failed, it was quick to follow the procedure as Section 1110 stipulated. Thanks to such a record, American Airline was able to organize a new EETC for a new funding in 2013, despite its parent company AMR Corporation was under the rehabilitation procedure up until the end of the same year.

2. Analytical Points

JCR considers EETC to be a financial vehicle that is, on the basis of corporate finance, equipped with raised likelihood of the debt payment taking advantage of its legal framework. Hence the credit rating of EETC requires to see both the credit standing of the airline company and the structure of the financial vehicle. To be specific, JCR, in view of the whole picture as depicted by Chart 2, makes assessment of a given case according to the following criteria, each and every one from (1) to (6) in parallel.

JCR will refer to legal opinion as for the legal framework and hear from experts and assessment companies for the post-airline-default procedures and the valuation of given aircrafts.

(1) Creditworthiness of Airline Company

Airline company is examined in its credit standing to see how it could sustainably keep paying the given lease. Airline's credit rating is important also for a factor to enable refinance if necessary and when the EETC has a balloon at the time of its maturity.

(2) Structural Strength of the EETC

JCR sees how the given EETC is installed with structural mechanisms that are expected as such, which include liquidity facility, legal protection such as Section 1110, cross-default/ -collateralization covenants. JCR presumes the ratable EETC should have them all to present herewith this rating methodology, considering a case of certain EETC in the past which had no cross-collateralization provision and defaulted.

(3) Likelihood of Lease Being Reaffirmed After the Airline Filed Chapter 11

Section 1110 is not applicable to the cases in which the airline company files a petition for Chapter 7 procedure, with intention to be liquidated, or else other than Chapter 11. In order to evaluate the likelihood of given lease agreement being reaffirmed pursuant to Section 1110 procedure, it is required to see (a) the probability of defaulted airline choosing *rehabilitation* rather than *liquidation*, and (b) the merit of reaffirming the lease and the collateralized aircrafts.

JCR judges on (a) the probability of given airline of choosing *rehabilitatio*n rather than *liquidation* depends on the name, business size and characteristics of the airline company. If the airline has a certain size of business presence and flight networks and well established as an indispensable infrastructure of life, JCR would consider it to be highly likely that *rehabilitation* is chosen.

It depends on the positioning of given aircrafts seen from the airline company if they have (b) the merit in their continued utilization rather than being *repossessed* as collateral. If the collateralized aircrafts are of new model and of high fuel efficiency, it is deemed highly likely that the lease is reaffirmed. Also taken into consideration is that airline companies tend to want holding the same model of aircrafts in certain large numbers because it helps secure adequate number of pilots, aircraft parts for replacement and the ease of maintenance. As a rule, the more likely the lease should be maintained, the greater the extent to which the collateralized aircrafts are important as the core of given airliner's fleet organization, in such a way that the airline company holds a great number of the same aircraft as the collateralized ones.

(4) Asset Liquidity of Aircraft

Asset liquidity of given aircrafts, i.e. demand/supply balance, is assessed to see how readily and properly the collateralized aircrafts are disposable by sale in the market or for lease to another airline company. Those models that fly many in the world, with small number out-of-service, with many name of airlines, with long waiting lists for delivery are supposed to be easy to sell in the market or lease to another airline company.

(5) Collateral Value

The following factors are considered in the evaluation of collateral value at a point of selling aircrafts, as they tend to have a significant impact on the price. Information for the evaluation is collected from the *offering memorandum* of given EETC, evaluation reports of an assessment company, and other reports.

- Model name

- Aircraft age
- Engine
- Condition/ maintenance records
- Supply and demand
- Fuel price; its level and trend

Obtain/determine the following prices at first and then consider the above factors to come up with an estimated collateral value.

- Appraisal value
- (Price at the time of new delivery) – ((New delivery price) x 5% x (Number of used years))
  (Assuming 20 years taken before the aircraft value becomes zero.)

(6) LTV

LTV is important when the EETC is considered for refinance or, as the worst scenario, for early redemption by the proceeds from the disposal of collateralized aircrafts. Assess the balance between the amount of outstanding debt and the collateral value at the time of credit rating, and calculate LTV. The rating of EETC may be changed later when LTV changes along with redemption of the principal, etc.

Chart 3 shows a table of rough guidelines for the decision of a credit rating for given EETC by notching up from the airline's corporate rating. The table takes into consideration such factors as: the degree of discrepancy between recorded aircraft price in the normal-day transactions and the valuation thereof; the cost of EETC principal/interest collection by aircraft disposals (legal and brokerage fees, etc.); the estimated magnitude of other debts that are senior to EETC principal/interests (interest paid from the liquidity facility, etc.)

JCR considers it possible for certain EETC to deserve a greater notch-ups, such as for instance those with high composition of the aircraft types of exceptionally limited price dropping risk at the point of sales, thanks to their asset liquidity is high and/or aircraft age is young, well-maintained, etc.

(Chart 3)

LTV Level	Notch-up Differentials	
	EETC on aircrafts mostly of common-types	EETC on aircrafts with a high-share of exceptionally small price dropping risk at a point of sale
60% - 50%	Around 1 – 3	Around 4 - 6
50% - 30%	Around 4-6	Around 7 - 9
30% and Lower	Around 7-9	Around 7 - 9

(Reference) Relations between Analytical Points and Chart 2

Analytical Points	Phases Anticipatable in Chart 2
1) Airline creditworthiness	Normal time
2) Structural strength of EETC	Post Chapter 11 filing Phase I
3) Probability of the lease reaffirmed after Chapter 11 thanks to 1110	Post Chapter 11 filing Phase I
4) Asset liquidity of aircrafts	Post Chapter 11 filing Phase II & III
5) Collateral value	Post Chapter 11 filing Phase II & III
6) LTV	Post Chapter 11 filing Phase II & III

3. Reflection of Analytical Points in the Rating

Starting from the airline's creditworthiness JCR determines the rating of given EETC by way of notch-up, of which differential depends on the assessment of its structural strength, specification of the collateralized aircrafts, LTV, etc. and judgment in totality.

Chart 3 provides reference points for the determination of notch-up differential. For the cases in which the asset share of certain aircrafts with extraordinary small price dropping risk at a point of sale, where collateralized aircrafts make a focal point for the analysis, JCR would consider notch-up reachable to a level within A range or its proximity if the collateral is deemed excellent. Depending on the asset quality of collateral, the notch-up ends lower. JCR recognizes the strength of EETC as structure. It also is aware that a degree of conservative stance is required, since the aircraft as collateral thereof holds technical obsolescence risk, the expected service life for the passenger air carriers is as limited as around 25 years, and the last aircraft user is limited to some airline company, etc.

When the airline creditworthiness changes, it is possible EETC follows suit, of which rating is hence changed. On the other hand, EETC would not necessarily be rated D, if the airline filed a petition for Chapter 11 and thus its corporate rating dropped to D. EETC could possibly stay, depending on the cases, in the BBB rage.

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