Airline Generated Securitization Criteria

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This report is published in conjunction with "Aircraft Securitizations Fly Smoother with Appraisals," dated Sept. 12, 1997, which highlights the importance of aircraft appraisal analysis in Fitch's rating process.

Summary

As the market for Enhanced Equipment Trust Certificates (EETCs) expands, Fitch continues to refine its criteria related to these transactions. Criteria include a review of the value of the aircraft in addition to an analysis of the quality of the underlying airline. EETCs are commonly described as secured corporate bonds with ratings tied to the unsecured rating of the underlying airline. Depending on the legal structure, protection under Section 1110 of the U.S. Bankruptcy Code, and the characteristics of the aircraft, issuers have been able to receive ratings significantly higher than the unsecured corporate ratings of the airline. More than $4 billion of these securities have been issued over the past two years.

When analyzing these deals, Fitch's primary focus is the collateral value. Fitch applies a straight loan-to-value ratio (LTV) approach for each rating category. The LTVs were derived from a study analyzing the 1990–1993 airline recession, which Fitch deemed a 'BBB' scenario. Fitch's base case analysis assumes the airline's ratings range from 'B' to 'BB'. This reflects the current market, as most airlines are in the low to middle non-investment-grade categories. Under this scenario, the airline would probably be unable to satisfy its long-term lease payment obligations. As a result, the trust would be forced to rely on its security interest in the collateral and sell the aircraft to pay off the bonds.

Over the past five years, airline credit quality has generally improved, and Fitch expects continued improvement in the relatively near future. As a result, the methodology incorporates potential airline upgrades in addition to downgrades. The corporate rating will typically remain the floor on the most subordinate class. If an airline is upgraded during the life of the deal, Fitch will adjust the ratings on the EETC securities on a case-by-case basis, realizing that a higher rated airline has a lower probability of default. Fitch's ratings typically cover the timely payment of interest and ultimate payment of principal for all classes of securities issued.

Proceeds from EETCs are typically used to acquire new aircraft or refinance existing debt on relatively young planes. To date, all the aircraft that Fitch rates in transactions have complied with Stage 3 regulations. Fitch prefers aircraft that are still in production, because troubled airlines are more likely to continue making lease payments on newer, more valuable aircraft and allow their older planes to be repossessed first. This would affect the collateral value analysis. For domestic airlines, each plane must have Section 1110 bankruptcy protection.

In addition, at closing, each transaction should have a liquidity facility in place from an acceptable financial institution to cover 18 months of interest on investment-grade classes during the remarketing period. This enables timely interest to be paid during an orderly sale or liquidation, which will maximize values rather than cause a fire sale that may not generate sufficient proceeds to amortize the securities.

Since most of these transactions provide for credit tranching with classes ranging from below investment-grade to high investment-grade, the investor base broadens significantly for the airline generating the transaction. These structures enable issuers to access additional markets. Whereas traditional investors were money managers, insurance companies, and other corporate bond buyers, EETCs widen the investor arena to domestic banks, high yield funds, and asset-backed security purchasers.

Airline Industry Update

The airline industry has been experiencing healthy growth since 1994, and the upturn is expected to continue through 2000. During 1996, many airlines paid down debt, which has freed up capital to purchase additional aircraft. Unlike the late 1980s, airlines do not appear to have been over ordering aircraft during this upturn. Many airlines reported record earnings and profitability from 1994–1996.

Growth in Aircraft Securitizations

The issuance of aircraft securitizations continues to increase. This growth has been partially stimulated by banks lack of enough new capital for the industry. More than $40 billion of new aircraft are expected to be delivered in 1997, the equivalent of 600 aircraft, and traditional financing sources cannot support this growth. Securitization provides access to a newer and cheaper form of capital for most airlines. Many airlines are now looking to securitize lease payments on existing aircraft to refinance the more expensive outstanding mortgage debt.

The asset-backed market is also attractive to many airlines because it provides a wider investor base. Various tranches in the transaction's structure target different types of buyers ranging from investment-grade to high-yield investors.

Rating Upgrade Examples

Senior unsecured airline rating upgraded two notches from 'B' to 'BB–.'

	Airline	Class A	Class B	Class C
Initial Ratings	'B'	'A'	'BB'	'B'
New Ratings	'BB–'	'A'	'BB+'	'BB–'

Senior unsecured airline rating upgraded three notches from 'B+' to 'BB+.'

	Airline	Class A	Class B	Class C
Initial Ratings	'B+'	'A'	'BB'	'B+'
New Ratings	'BB+'	'A+'	'BBB–'	'BB+'

Although Fitch was one of the first industry participants to focus on the value of the aircraft, a general movement toward a collateral value approach that is less tied to the airlines' corporate ratings is under way. This is evidenced by the many deals involving structures depending on the sale of aircraft to fully amortize the securities.

In 1996, Fitch completed a study of the 1990–1993 recession in the airline industry. The major causes of that recession included the extremely large amount of new orders in 1988 and 1989, the 1990–1992 economic recession, and the Persian Gulf War in 1991. Many airlines could not handle the orders they placed in the late 1980s because of strain from the national recession and Persian Gulf War. As a result, many orders were deferred or canceled, creating overcapacity and subsequent value declines. By studying the value declines of the many types, variants, and vintages of aircraft, Fitch found that, on average, values declined 30% during those three years. This drop was equated to a 'BBB' scenario, leading to a 70% LTV for a 'BBB' rating.

Credit Evaluation

Lessee Analysis

As mentioned, investment-grade ratings were not linked to the corporate rating of airlines. However, the lessee's rating always acted as a floor and therefore affected the ratings on the non-investment-grade securities. Given the potential for rating upgrades in the industry, the quality of the lessee will become a more significant factor in the requested rating upgrades of EETCs. However, ratings on all classes of the EETCs would not necessarily move in lockstep with the airline's rating. Rather, changes in the airline's rating would have a more pronounced effect on subordinate EETC class ratings and a diminished impact on senior class certificates *(see table above)*.

Fitch's analysis of the lessee begins by reviewing the number of years it has been in the commercial aviation business. The airline's scope of service is reviewed to determine the percentage of revenues generated from international travel, regional, or domestic travel. Type of service, whether it operates as a charter or scheduled service, is also considered. Fitch studies the fleet size to determine the strategic importance of the securitized planes, focusing on how critical they are to the airline's operation.

Fitch focuses on the country in which the airline is domiciled and registered. An airline must operate in and fly routes between countries acceptable to Fitch, because the trustee must be able to repossess the aircraft without political or legal barriers. Government assistance through ownership or funding of airlines is also considered *(see restricted country list, page 5)*.

Lease Analysis

An important part of the credit analysis process is an understanding of the type of lease or loan being securitized. Most contracts securitized are leverage leases and sale/leasebacks. Leveraged leases are the most common. However, this may in certain instances complicate the securitization process, because each aircraft is financed separately. As a result, cross-collateralization is difficult due to the different equity owners. With leveraged leases, the equipment notes, which represent the debt portion of each lease, are sold to a pass-through trust that issues the certificates. Sale/leasebacks have been used in several deals to refinance existing debt on aircraft. In these deals, the airline sells the aircraft to a bankruptcy-remote special purpose corporation that, in turn, leases the aircraft back to the airline.

Fitch evaluates the structure of the leases included in the transaction. The following lease attributes are viewed favorably by Fitch:

- Hell-or-high-water leases, which obligate the lessee to payments regardless of the default of the manufacturer or lessee or obsolescence or failure of the equipment.
- Noncancellable leases.
- Triple-net leases, which mandate responsibility for all maintenance, taxes, and insurance with the lessee.

Collateral Value

Since the key to Fitch's rating methodology is the collateral value, a detailed review of the underlying aircraft is completed, focusing on the airframes and engines (number, type, age, and compliance with regulatory standards), the remarketability of the planes (number of operators and market depth), and protection under Section 1110 (which does not apply to international carriers). Each aircraft normally must comply with Stage 3 regulations. While a Stage 2 plane can be securitized, the "hushkit" must be purchased and pledged to the trust at the onset of the deal, or a cash reserve for the purchase and installment of a hushkit must be in the trust at closing. However, if the issuer chooses the cash reserve option and the owners of aircraft wait to purchase hushkits at a later date, as the year 2000 approaches (when Stage 3 is in full effect), the reserve may not be enough. As hushkit prices increase, airlines will be forced to comply and demand for hushkits will rise dramatically.

Fitch uses appraisals in its analysis, because the ratings are primarily based on an aircraft LTV approach. *(For more information, see Fitch Research "Aircraft Securitizations Fly Smoother with Appraisals," dated Sept. 12, 1997.)* Fitch determines collateral values predominantly based on the results of a review of the three appraisals. The LTV ranges for the various ratings are based on Fitch's aircraft value study and the three appraisals. The ranges below relate to relatively new aircraft.

Loan-to-Value Ratio Ranges

'AA'	40%–45%
'A'	55%–60%
'BBB'	65%–70%
'BB'	75%–82%

Fitch typically requires three desktop and one physical appraisal from recognized International Society of Transport Aircraft Trading appraisers. Senior appraisers, who normally have five or more years of experience, are preferred. Fitch examines the appraisals to ensure consistency. Appraisers can use varied report types and value definitions, and appraisal assumptions can differ. Fitch calls the three appraisers to discuss their reports and calls other appraisers to get their opinions on the aircraft.

These efforts lead to an understanding of the varying assumptions and inputs used in their value determinations. Adjustments are made to offset inconsistent assumptions. Once consistent values are determined, Fitch examines the dispersion of the values. If the dispersion is greater than 10%, Fitch uses the lower of mean or median. If the dispersion is less than or equal to 10%, the average of the values is used.

Values can be defined four basic ways — base, market, distressed, and liquidation. Base values do not reflect current market conditions, but an open, unrestricted stable market with a balance of supply and demand. Aircraft are valued for their highest and best use — where the sellers and buyers are willing, able, prudent, and not under duress to purchase or sell the aircraft. The sale or remarketing process typically takes 12–18 months. Current market values reflect the most likely trading price, based on current conditions in the airline industry and economy, and recent sales are used as a comparison.

Distressed values reflect the sale of an aircraft under duress, in which case the seller's bargaining leverage is reduced. An oversupplied market is assumed when looking at distressed values. Fitch prefers distressed sale values, since it is highly probable that if a lessee is unable to stay current with its lease payments on one plane, it will probably be unable to continue making payments on its other planes, leading to oversupply. Liquidation values reflect an immediate sale in which the seller has no bargaining power.

Fitch has rated securitizations where the following companies have provided appraisals — BK Associates, Inc., Morten Beyer and Agnew, Inc., AVMARK Services Ltd., Airclaims Ltd., Simat, Helliesen & Eichner, and Aircraft Information Services. Updated appraisals are required every 12–18 months.

Cash Flow Evaluation

Payment Terms

For EETC transactions, Fitch's ratings typically address the timely payment of interest and ultimate payment of principal by the legal final maturity date. The legal final maturity is normally set 18 months beyond the expected maturity to allow the aircraft to be remarketed in an orderly manner if needed.

The value of the collateral is depreciated to a 20% residual using the depreciation assumptions of 2% for years one–15, 4% for years 16–20, and 6% for years 21–25. Fitch compares the bond amortization schedule with the market value of the collateral throughout the life of the deal to see how the LTV changes, focusing on its highest LTV level.

This comparison will show break-even sales amounts at all times, or the minimum sales price that must be attained to fully pay off all classes of bonds. Fitch prefers to see stable or declining LTVs throughout the life of the transaction. However, if the aircraft are being depreciated at a rate greater than that of the securities, LTVs could increase at various times during the deal.

Liquidity Facility

A liquidity facility is needed for each investment-grade class to ensure full and timely interest payments in case the airline fails to make a lease payment. This facility also allows for an orderly remarketing period, with the assurance that timely interest payments will continue. It may take the form of an irrevocable letter of credit or a revolving credit facility. The initial amount typically covers at least 18 consecutive months of interest on the investment-grade securities. Generally, the liquidity facility does not cover principal or premium, and the amount of the liquidity facility may decline as the debt amortizes. Typically, the liquidity facility can be drawn upon for any of the three following reasons:

- Insufficient funds to pay interest on any investment-grade class.
- Downgrade of the liquidity provider's rating.
- Non-extension of a liquidity facility.

If the facility is drawn, the provider has first priority on cash flows from the disposition of aircraft, effectively increasing the LTV. At times, Fitch caps the LTVs, including the effects of the liquidity facility. Normally, the facility can be reinstated once the provider is reimbursed for past borrowings plus interest. In addition, other occurrences might prohibit the facility from being reinstated, such as the acceleration of all outstanding equipment notes.

Payment Priorities

On the stated interest payment date, the subordination or payment agent distributes the funds to the trust. The distribution of collections normally occurs in the following order:

- Accrued and unpaid liquidity fees.
- Liquidity interest.
- Replenish liquidity facility.
- Expected interest and principal to the classes in order of seniority.
- Fees and expenses for the trustee and other agents.

Transaction and Documentation Structural Provisions

Most airline generated securitizations have multiple classes of securities. As a result, the typical structure includes more than one trust, with each trust issuing a single class of certificates. The certificates are secured by the trust property, which usually consists of equipment notes (representing the debt portion of each lease), funds available under the liquidity facility for each trust, and moneys in various trust accounts. Each series of equipment notes for each aircraft is issued under its own individual trust indenture between the aircraft's owner trustee (the actual lessor), as trustee for the benefit of the owner participant (the owner of the aircraft) and the related loan trustee. The lease payments must be assigned by the owner trustee to the pass-through trust. The certificateholders, through their interest in the equipment notes, will have a first-perfected security interest in the underlying aircraft. They will also have an assignment of many of the owner trustee's rights under the leases.

In addition, Fitch reviews the various parties to the transactions, the commencement date, and lease expiration date, because the longest lease must mature on or after the longest maturity date of equipment notes issued from related lease indentures. Fitch reviews the governing law to gain knowledge of the corresponding legal aspects. If a another party is guaranteeing the lease payments, a complete analysis of that entity is completed.

The type of lease receivables being securitized is also considered. There is typically less risk with full payout leases, in which the total lease payments cover 100% of the cost of the aircraft, and finance leases, in which the total amount of the lease payments are greater than 90% of the cost of the aircraft. With those two types of lease receivables, the lease payments from the airlines fully amortize the bonds with no residual dependence. However, there is more risk associated with operating leases, which have larger residual dependence, and the aircraft may have to be sold for a certain percentage of the current market value at the end of the transaction to pay off the securities in full. Some leases may contain purchase options, allowing the airline to buy the aircraft. If this option exists prior to the deal termination, the amount must be sufficient to retire the outstanding securities relating to that aircraft.

Fitch studies the maintenance obligations of the lessee to ensure that they uphold the collateral value and meet Federal Aviation Administration (FAA) and other regulatory standards. Fitch examines lessee insurance and registration obligations, including public liability and property damage, as well as all risk hull insurance. The owner trustee and loan trustee must be named additional insured, and the loan trustee should be designated loss payee. Political risk insurance would be required for all carriers operating in countries rated less than ‘A–’.

At times, subleasing is permitted under the master lease. Fitch reviews the documents to ensure that the original lessee is still ultimately responsible for the lease payments. Any sublessee must maintain public liability and property damage insurance, as well as all-risk hull insurance. As with the original lease, the owner trustee and loan trustee for each aircraft should be named as additional insured. The loan trustee for each aircraft will be named as loss payee. A sublessee normally must meet the same country requirements as the master lessee. If any movement of engines or other parts are permitted, appropriate restrictions, documentation, tracking, and legal filings must be outlined in the documents.

Fitch examines the various lease provisions, with a detailed focus on the events of default and remedies. Lease events of default typically include:

- Failure to make a lease payment.
- Failure by the airline to perform under its covenants.
- Breach of representations and warranties.
- Bankruptcy, insolvency, or reorganization of the lessee.
- Failure by the lessee to maintain insurance.

*Unacceptable Countries Due to Political Instability**

Afghanistan	North Korea
Albania	Laos
Bosnia	Lebanon
Burma	Libya
Burundi	Montenegro
Cambodia	Nigeria
Cote d’Ivoire	Rwanda
Croatia	Serbia
Cuba	Certain Former Soviet Republics
Haiti	Syria
Herzegovina	Vietnam
Iran	Yemen
Iraq	Zaire

*Subject to change.

The trust indentures must contain provisions covering events of loss, in which case the trust must receive the stipulated loss value of the aircraft. Typically, when an event of loss occurs, mandatory redemption of the related notes at par for outstanding principal and accrued interest occurs if the aircraft is not replaced within a certain amount of time. The indenture must address substitution of assets, events of default, remedies, intercreditor rights, and other structural provisions. Common indenture defaults are as follows:

- Lease event of default.
- Failure to make any interest payment on any equipment note.
- Failure to make a scheduled principal payment on any equipment note.
- Failure to comply with covenants.

In most cases, the loan trustee for the most senior class noteholders (the controlling party) directs the trustee or collateral agent as to which actions to take when a default occurs, such as foreclosure and repossession. The controlling party may accelerate and sell all the equipment notes under the defaulted indenture. Note proceeds would then be distributed to the certificateholders.

If no cross-default provisions are included in the indentures or the leases and no cross-collateralization among equipment notes exists, then, if equipment notes related to one or more aircraft are in default and equipment notes issued from the remaining aircraft are not in default, no remedies will be exercisable under the indentures with respect to the remaining aircraft. All payments of principal and interest on equipment notes relating to indentures not in default will be made as scheduled. Any liquidation proceeds from the sale of an aircraft in excess of the principal amount of the equipment notes will not be available to cover losses relating to any other equipment notes.

Servicer Review

For most airline generated securitizations, a servicer evaluation is not required. An on-site due diligence is more relevant for lessor-generated transactions in which the monitoring and remarketing process is more complicated, yet essential for the performance of the transaction since there are usually varying types of aircraft on lease to numerous lessees that need to be monitored. As a result, a strong servicer/remarketer with both financial strength and appropriate expertise is critical.

Proper and timely servicing of a deal has a direct effect on the quality and

Servicer Review

I Business Overview

- Management
- Strategy
- Industry
- Competition
- Markets/marketing (relationships with industry participants)
- Operations (aircraft focus)
- Financial strength

II Lease Management/Monitoring Procedures

- Insurance
- Maintenance, reserves, aircraft reconfiguration
- Default/repossession
- Refurbishment
- Remarketing/valuation
- Re-leasing

III Credit Underwriting

- Organization and experience of underwriters
- Policies and procedures
- Collateral valuation
- Documentation requirements
- Sovereign legal requirements for documentation and collateral

IV Servicing, Systems, and Procedures

- Staffing
- Billing and collections
- Calculation and reporting of delinquencies, write-offs, and recoveries
- Quality control, scope and frequency of reviews
- File maintenance, internal and external audits
- Management information systems
- Disaster recovery plan
- Review of files
- Tour of facility

performance of the transaction. As part of its due diligence review, Fitch will examine the servicer's billing and collections process. All funds received should be directed to segregated lock box accounts to avoid commingling with the servicer's own funds.

Fitch will also examine the servicer's policies and procedures for handling delinquent accounts. Lessees should be contacted immediately to work out a solution. The servicer's systems should track billings, receipts, nonpayments, and all borrower contact. The systems must also generate informative management reports regarding portfolio performance in addition to trustee/certificateholder reports. In the event a lease is deemed uncollectible, repossession should be initiated if cost effective and an asset disposition plan should be in place to ensure that recoveries are as high as possible.

Legal Considerations

In most cases, when an airline files a petition under the U.S. Bankruptcy Code, the result would be an immediate automatic stay of any action by a lessor or creditor to repossess or foreclose on any property held by a lessee or borrower. However, a limited exception exists for certain aircraft leases or financings that are secured by aircraft. Under Section 1110 of the bankruptcy code, the trust may not repossess any aircraft for 60 days beginning on the day the voluntary bankruptcy petition was filed, unless the trust agrees to a longer period. After that time, the trustee may take actions to repossess the aircraft, unless the airline cures the default and agrees to meet all of its future obligations. For all domestic airline generated transactions, Fitch requires legal opinions stating that this Section 1110 exception is applicable to the rights of the trust to repossess the airframes and engines. The owner trustee, as lessor, and the related loan trustee, as assignee of the owner trust's rights under each lease, are entitled to the benefits of Section 1110 with respect to the airframe and engines of the related aircraft. A similar opinion should be given as to any replacement aircraft at the time of replacement.

Any issuing trust must be a bankruptcy-remote entity that is not expected to become subject to bankruptcy proceedings, even if the airline enters into bankruptcy. In addition, Fitch must receive true sale legal opinions stating that the sale of the aircraft to the trusts are true sales, and as a result, the aircraft would not be part of the airline's bankruptcy estate. Fitch also requires standard FAA opinions stating that the trusts have a first perfected security interest in each airframe and engine.

Aircraft Documentation Checklist

I Term Sheet

II Lease

III Master Agreement
- Definitions
- Notice of closing, funding, postponement
- Conditions to closing
- Representations and warranties
- Covenants
- Fees and expenses
- Warranties and disclaimers
- Indemnities
- Bankruptcy issuer and others
- Termination
- Miscellaneous

IV Trust Indenture and Security Agreement
- Definitions
- Issue, execution, form, and registration of notes
- Covenants
- Noteholder lists
- Receipt, distribution, and application of income from indenture estate
- Prepayment of notes
- Indenture event of default, remedies
- Rights of the issuer
- Concerning the indenture trustee
- Concerning the holders of the notes and controlling party
- Indemnification of the indenture trustee by the issuer
- Successor indenture trustees
- Supplements and amendments to trust indenture
- Satisfaction and discharge of indenture
- Miscellaneous

V Pass-Through Trust Agreement
- Definitions
- Original issuance of certificates, acquisition of notes
- The certificates
- Distributions
- Default
- Pass-through trustee
- Lists and reports by pass-through trustee
- Supplemental agreements
- Amendments
- Termination of trusts
- Miscellaneous

VI Intercreditor Agreement
- Definitions
- Trust accounts — controlling party
- Receipt, distribution, and application of amounts received
- Exercise of remedies/duties of subordination agent
- The subordination agent
- Indemnification of subordination agent
- Successor subordination agent
- Supplements and amendments
- Miscellaneous

VII Servicing Agreement
- Definitions
- Appointment and services
- Standard of performance, conflicts of interest, and standard of liability
- List of aircraft
- Servicer undertakings
- Undertakings of company
- Company responsibility
- Effectiveness
- Servicing fees, expenses, and taxes
- Term, rights to terminate, resignation, consequences, and survival
- Indemnification
- Assignment and delegation
- Miscellaneous

VIII Liquidity Facility