Special Considerations for Aircraft Loan Portfolios

Several different types of aircraft financing structures have been rated by Standard & Poor's. These transactions have been either corporate secured debt structures (ETCs and EETCs, primarily for U.S. airlines) or operating lease portfolio securitizations of internationally diversified pools of aircraft assets. Recently, proposals have been reviewed for aircraft financing structures where the underlying assets in the securitization would consist of a bank's interests in aircraft loans made in various forms of financing transactions. There are certain structural, credit and asset evaluation issues in these proposals that distinguish them from operating lease portfolio securitizations. The rating implications of these issues are discussed in the following section.

Securitization Structure

In operating lease securitizations, the originators typically are aircraft leasing companies or manufacturers. The assets transferred into the securitization structure consist, directly or indirectly, of their ownership interests in a portfolio of aircraft. These transfers are designed to effect a true sale in order to isolate the assets from the insolvency risk of the originator. Although there may be intermediate entities between the issuer and the aircraft assets in the resulting securitization structure, these entities are constituted to support the conclusion that they are bankruptcy-remote entities and that there are not insolvency risks between the issuer and the assets. Therefore, the analysis proceeds on the basis that the issuer will have effective rights to the aircraft and the corresponding lease payments upon an airline's default.

The originators of the aircraft loans generally are financial institutions, primarily Japanese and European banks, that have a history of providing significant loan financing to the aircraft sector. The assets that are transferred into the securitization structure consist of their interests in these loans. Loan portfolios have included direct loans where the bank is the sole lender and syndicated loans where the bank has a funding obligation. The loans generally are fully funded, although some loans include refunding obligations under certain circumstances.

If a direct or syndicated loan is freely assignable, the transfer ordinarily may be accomplished in accordance with true sale criteria for loan assets. In some instances, the loans may prohibit the outright sale of the loan to a third party but may permit the creation of a participation. Generally, a loan participation does not remove the insolvency risk of the transferor. In other cases, the bank may be able to create a trust for the assets that does not violate the prohibition on assignment. A request will be made for legal opinion and regulatory confirmation, as necessary, that transfers would not contravene the terms of the loans, that they would be unavoidable and recognized in the bank's insolvency, administration, or regulatory proceedings, and that the security over the interests could be realized without delay. For a more detailed discussion of these true sale issues for transfers of bank loans, see *Standard & Poor's Global CBO/CLO Criteria: Market Innovations*, May 1998.

The underlying aircraft financings in the loan portfolios also differ from operating lease securitizations. Although an aircraft loan portfolio may include secured loans to airlines and traditional USLLs, loan portfolios have been reviewed where the predominant forms of loans include more complex, tax-advantaged, and cross-border financing transactions that involve multiple parties, such as Japanese leveraged leases (JLLs), ownership foreign sales corporations (O-FSCs), and commission foreign sales corporations (C-FSCs).

Despite the complexities of these underlying financing transactions, they frequently are presented as loans in which the primary credit risk is the airline. A review of these transactions, however, indicates that some of the underlying financing transactions have characteristics that introduce risks which may impede access to the aircraft, and therefore would have an adverse impact on the recovery assumptions.

Credit Analysis

Aircraft asset value risk exists in both operating lease and loan portfolio deals. However, compared to operating lease portfolios, loan portfolios may have certain positive features affecting airline credit risk. There may be a significant difference, however, in the credit exposure. Operating lease deals do not have a defined list of airline credits for the term of the securitization. Since the securitization is typically designed to finance the aircraft through to the end of its economic life, for some aircraft as long as 25 years, but the term of an operating lease typically would be five years, the rating process involves taking a view as to the likely future airline obligors upon re-leasing.

In some loan portfolios, the terms of the loans are no longer than the terms of the corresponding leases to the airlines. For those loans, the likelihood that the original airline would be the obligor throughout the term of the financing would mitigate the uncertainty as to the airline credit inherent in operating leases. This increased certainty as to the airline credits is a positive feature for those loan portfolios.

Generally, the aircraft loan portfolios reviewed have included better quality airlines, including several flag carriers. Operating lease deals generally have had non-investment grade lessees. Another positive feature for loan portfolios that have been reviewed is the greater diversification regarding obligors and geographic concentrations. Finally, there is a significantly reduced reliance on the servicer. The bank originator acts merely as a collection agent and does not have an active role in remarketing, re-leasing, or repossessing the aircraft.

Nevertheless, particular loan portfolios may have negative features. Although the lease term and loan maturity terms may match for some loans, if there is minimal amortization during the term, as is often the case, then a large balloon payment at the end of the loan must be matched by a corresponding payment under the lease. This lease payment often is in the form of a purchase option. Since the purchase option price is unlikely to reflect current fair market value, there will be greater repayment risk. The airline also may be unable to make a large balloon payment. As noted above, loan portfolios ordinarily do not have a leasing company servicer on which the securitization issuer may rely for remarketing, re-leasing, and repossessing aircraft. Minimal amortization and the absence of an active servicer are negative features of these loans.

Further, where the lease term ends earlier than the loan matures, as is the case for many loans that for tax reasons must be disassociated from the airline's credit, typically the lessee must choose among a purchase option based on a large balloon payment under the loan, returning the aircraft and making a similarly large payment, or locating a substitute lessee and repricing the loan. These complex lease term options frequently rely on deemed incentives rather than legal obligations to compel a prepayment of the loan. The absence of a leasing company servicer, the mismatch in terms between the loan and the lease, and the lack of clear repayment obligations upon lease termination are negative features of these types of loans.

As mentioned above, credit risk may not be limited to the airline. Significant credit exposure may exist in that many of the underlying financing transactions are dependent on, and exposed to the credit risk of, interim borrowers and lessors and their respective owners. The default risk of these third parties must be factored into the rating analysis to determine if and how these risks may be addressed with additional liquidity, credit reserves, or other credit enhancements. In order to model the complexities inherent in certain underlying financing transactions, onerous assumptions related to losses and recoveries may need to be made. Some loans will have a zero recovery value; other loans will have a reduced recovery amount.

Some portfolios include syndicated loans where the originator would not be transferring a controlling interest in certain loans. For these portfolios, an analysis will be made of the loans where there is not a controlling interest. Determinations must be made as to whether the issuer would have access to the aircraft through the exercise of remedies and, if so, the amount of time it would take to arrive at a decision on a troubled loan. These determinations will affect the length of the recovery periods. Failure by a syndicate of lenders to come to an agreement on the enforcement procedure for defaulted airlines may result in sub-optimum decisions, leading to not only a delay in the recovery procedure but a possible reduction in recovery proceeds.

Rating Levels

Perhaps the most significant distinction between operating lease and loan portfolio financings is the maximum rating achievable. To date, the most senior tranches of operating lease securitizations have been rated no higher than 'AA'. Features which limit the maximum ratings are the uncertainty of the identity of subsequent airline lessees, small portfolios with little diversification, as well as the uncertainty of events relating to the long legal final maturities associated with the bonds. The absence of these key concerns in loan portfolios may make it possible for these transactions to be rated 'AAA' provided that the structural elements of the securitization support that rating level and that rating issues such as those discussed above are satisfactorily addressed at that rating level.

Many of the most problematic issues for 'AAA' rating levels arise from the type of aircraft financing transactions underlying the loans in a portfolio. One the one hand, secured loans and USLLs are included in some loans portfolios. As discussed above, when these financing forms are in compliance with the rating criteria they may support corporate enhanced ratings, in limited instances, even 'AAA' ratings. C-FSCs, if properly structured, are a variation on the USLL financing form and also may be a suitable support for 'AAA' loan portfolios.

On the other hand, the rating approach required to evaluate the multitude of risk and recovery assumptions that arise in traditional O-FSCs likely would result in their exclusion from portfolios supporting 'AAA' ratings. Single- and multiple-lessor JLLs are included in many loan portfolios. The traditional single-lessor JLL is similar is some respects to the traditional USLL. However, JLLs must be re-evaluated upon any new reorganization bankruptcy reform legislation that might be put in place in Japan. The initial assessment of single-lessor JLLs assumed that U.S.-style bankruptcy reorganization proceedings would not be available to the entities reviewed and that security over their assets could be enforced notwithstanding their bankruptcy. For JLLs where the lessor consists of multiple lessors, whether jointly or through another legal form, unresolved issues have been identified regarding the nature of the common ownership, property rights, and obligations in these forms, in addition to the bankruptcy reform legislation issue.

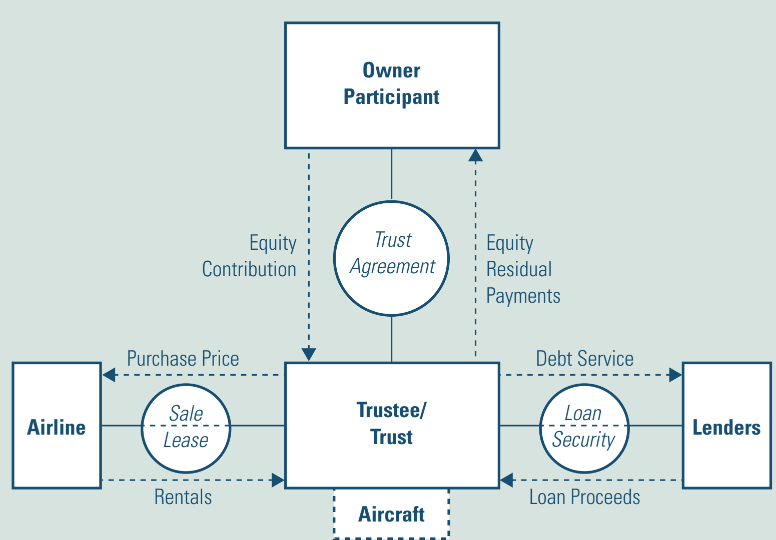
The lack of a controlling interest in a loan is a serious issue for all the underlying financing forms and likely would have an adverse impact on recovery values. The lack of a controlling interest undermines Standard & Poor's existing market value assumptions that the holders of the rated securities can control the exercise of remedies, including sale of the collateral.

The final outcome of the rating process will depend on the composition of the particular loan portfolio as well as the structure of the proposed securitization. Although it is possible that a particular loan portfolio may support a 'AAA' rating for a portion of the offering, it also is probable that a lesser total amount of debt would be rated as compared to an operating lease transaction.

Asset Evaluation

The starting point for a rating analysis of an aircraft loan portfolio is a legal review to determine the strengths and weakness of the forms of financing underlying the loans. Only then can the cash flows be properly stressed in determining a transaction's capital structure. In the succeeding paragraphs, basic descriptions of the most common structures that are expected to comprise a loan portfolio are presented. Accompanying each section is the approach Standard & Poor's expects to take in stressing the cash flows.

Chart 1
Traditional USLL Loan



Secured Loans and U.S. Leveraged Leases

Secured loans and debt issued in USLL transactions are discussed in the "Criteria for Airline Equipment Debt" section. For secured loans and USLL debt that are in compliance with rating criteria, no additional liquidity or credit stresses need be modeled in the cash flows. The only default risk factored into the analysis is the credit of the airline itself (*see chart 1*).

A loan portfolio may include USLLs that do not comply with Standard & Poor's criteria. For example, in certain USLLs, the owner participant may terminate the equipment trust voluntarily, or an acceptable owner trust legal opinion may not be provided. Should this be the case, analysts will consider the risk addressed by the criteria in question. An analysis would be made of the impact of the insolvency of the owner participant, and the likelihood of this occurring, and may seek relevant legal opinions. In this example, a legal opinion likely might be requested to the effect that the assets of the trust would not be consolidated with the owner participant in its insolvency and that the first priority security interest in the aircraft and the lease would be unaffected by the termination or consolidation of the trust. There is a strong likelihood that, for such non-complying USLLs, additional liquidity requirements would be incorporated in the cash flows.

Commission Foreign Sales Corporations

C-FSCs generally are USLLs designed to capture certain tax benefits available for U.S. products that are used predominantly outside of the U.S. A foreign sales corporation, which is a wholly-owned subsidiary of the equity participant, acts as an agent for the equity in arranging the USLL. The agent receives a commission for its services. If this is the only role of the agent, and the USLL otherwise is in compliance with the applicable criteria, the credit analysis of a C-FSC would be the same as a USLL.

Japanese Leveraged Leases

The form of JLL financing included in loan portfolios normally involves a loan made by a Japanese bank to a Japanese limited purpose company for the purpose of funding up to 80% of the purchase price of an aircraft. Typically, the Japanese borrower is a wholly-owned subsidiary of a Japanese leasing company or another Japanese bank (parent). In addition to the loan from the bank, the borrower enters into agreements, called Tokumei-Kumiai (TKs), with various investors (TK investors) to fund the balance of the purchase price of the aircraft.

After purchasing the aircraft, the borrower, as TK lessor, leases the aircraft, either directly or through a sub-lessor, to an airline. For tax reasons, the lease rentals are constant throughout the lease term, resulting in fixed-rate payments under the loan.

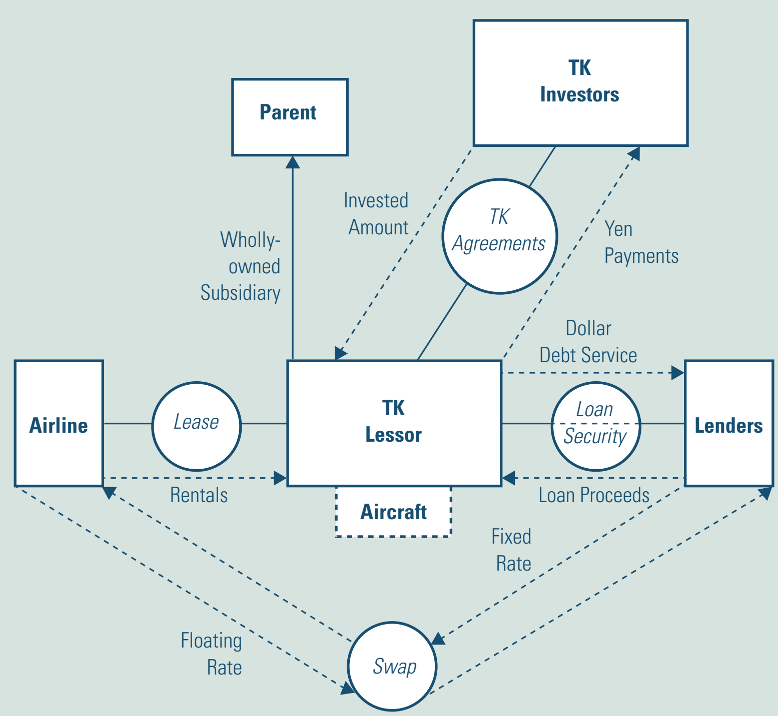
The airline enters into an interest rate swap with the lenders to provide them with a floating-rate return. The parent provides an agreement, usually in the form of a comfort letter, to maintain the TK lessor's solvency and its limited purpose status (*see chart 2)* . Tax benefits are passed on to the TK Investors and the airline in the form of deferred tax on profits and lower lease rentals.

A portion of the lease rentals will be allocated to make loan payments (dollar payments) and a portion will be available for payments to the TK investors (yen payments). Large balloon dollar payments and yen payments are due upon the termination of the lease. The security for the loan may vary with the jurisdiction of the airline. Typically, the security includes the following: a mortgage over the aircraft in the jurisdiction of registry; an assignment of the TK lessor's rights under the lease, excluding the yen payments; and a pledge over the TK lessor's bank account in Japan that receives the dollar payments from the airline.

In order to conclude that the relevant rating for evaluating a JLL loan would be the rating of the airline only, as in the case of complying USLLs, all entities in the financing that do not satisfy the bankruptcy-remoteness criteria are assumed to

Chart 2

Example of a JLL Loan



become insolvent. The potential effect of these insolvencies on the cash flows and timely access to the collateral is reviewed to determine whether liquidity or credit reserves may be necessary for the ratings sought on the securities.

As discussed above, it is expected that the analysis of the TK lessor itself will be affected by proposed reorganization bankruptcy reform legislation in Japan. Since the TK lessor is the borrower under the loan, the owner of the aircraft, the grantor of the security ,and the counterparty to the lease, it is very unlikely that these traditional JLLs could be included in loan portfolios until this uncertainty is resolved.

Even prior to the legislative proposal, many issues were identified in the JLLs that presented rating concerns. These issues broadly fall into four areas: bankruptcy-remoteness issues, including the TK lessor's relationship with its parent and the TK investors; property rights and security interests; lease termination; and swap agreement issues.

In the area of bankruptcy-remoteness issues and the TK Lessor's relationship with its parent and the TK investors, some of the issues include the following:

- Under Japanese law, certain bankruptcy-remoteness criteria requirements would not be enforceable and, consequently, analysts would not conclude that a wholly-owned subsidiary of an operating company, such as the TK lessor, could be bankruptcy-remote;
- Usually the TK investor agreements do not comply with additional debt criteria and the TK lessor lacks one or more other feature of bankruptcy-remoteness, such as an independent director as well as legal and economic independence from the parent;
- If the parent's rating is to be imputed to the TK lessor, the support agreement must be the equivalent of a guaranty in compliance with Standard & Poor's guaranty criteria;
- The parent support agreement may be avoided, rejected, or unenforceable in its insolvency, affecting any recovery based on the parent's creditworthiness;
- In a parent insolvency, the TK lessor may be voluntarily or involuntarily joined in the insolvency proceeding or consolidated with the parent;
- A parent or TK lessor insolvency, as a default under the loan, may result in a termination of the lease and the swap, even if the airline were performing; timely or ultimate access to the aircraft may be affected by the insolvency proceedings or by the airline contesting repossession;
- In its insolvency, a TK investor may assert a proprietary interest in the aircraft that could affect the timeliness of payments or, if successful, loss of collateral value;
- Upon a TK investor insolvency, TK lessor could be required to repay its investment interest under the TK agreement, which could render TK lessor insolvent; if its

claim is not satisfied, the TK investor may assert a lien against the aircraft that may result in the sale of the aircraft; and

- Other parties to a subleasing arrangement may not be bankruptcy-remote entities, thereby introducing additional default risks dependent on credits other than those reflected in the rating.

In the area of property rights and security interests, many issues arise in these multi-jurisdictional transactions, to the extent that the following may occur:

- The security over the aircraft may not be perfected against the TK lessor in Japan; security created in the jurisdiction of registry may not be enforceable against the TK lessor in Japan; or the aircraft may be subject to claims prior to this unperfected security through the parent or the TK lessor.
- Security over the Japanese accounts may not be perfected; the lenders' interests then may be subject to prior claims through the parent or the TK lessor.
- Dollar payments may be subject to Japanese legal proceedings in the TK lessor's insolvency that could affect the timeliness of payments or result in the loss of cash flows.
- If the lease were characterized as a rental lease in the TK lessor's insolvency, the assignee of the dollar payments would be entitled to only a limited number of payments rather than the expected cash flows.
- If the lease were characterized as a finance lease, repossession of the aircraft may be delayed, hindered or prevented entirely in the airline's insolvency.

Lease termination, particularly in the context of a loan with a large bullet payment, raises issues such as the following:

- The airline may be unwilling or unable to exercise its purchase option for the aircraft or to make a termination payment when returning the aircraft at the end of the lease term; the repayment of the loan then would depend on the sale of the aircraft.
- A parent or TK lessor insolvency, as a default under the loan, may result in termination of the lease requiring the airline to make termination payments when it may be unwilling or unable to do so.
- Where the airline does not exercise its purchase option upon lease termination, its termination payment may be considered an unenforceable penalty; the repayment of the loan then would depend on the sale of the aircraft.
- The securitization issuer, as successor to the originator, may have refunding obligations in the event of certain termination events under the lease; any refunding obligations would be unfunded at the issuer level.

Among other swap agreement issues are the following:

- The rating addresses swapped cash flows. If the airline defaults in its swap payments while it is still performing under the lease, the airline may not be able to be dispossessed of the aircraft.

- The securitization issuer, as successor to the originator, may have payment obligations under the swap agreement that would be unfunded at the issuer level.

The parent's and the TK investors' relationships with the TK lessor raise concerns as to whose credit risk, in addition to the airline's, must be reflected in assessing the loan. The TK lessor's failure to qualify as a bankruptcy-remote entity, its legal status in insolvency and the multi-jurisdictional property rights and security arrangements, raise concerns as to the effects of the insolvency of the airline, and each of these other parties, on the lenders' ability to look to the aircraft assets on a timely basis, if at all.

For JLL loans, transaction counsel should present surveys of the relevant legal jurisdictions and a review of the credit terms and legal issues. Only by understanding the risks to repayment of these loans, including realization on the aircraft assets, will Standard & Poor's be able to determine whether the risks are quantifiable and capable of being addressed through liquidity or credit enhancements for that rating level.

For other JLLs, the lessor may consist of multiple lessors, either jointly or through another legal form. As noted in the "Rating Levels" section, a number of unresolved issues exist regarding the nature of the common ownership, property rights, and obligations in these forms, in addition to the bankruptcy reform legislation issue. Further legal analysis would be required for any of these loans to be included in a rated portfolio.

Ownership Foreign Sales Corporations

O-FSCs are forms of aircraft financing that provide tax benefits to certain owners of U.S. manufactured aircraft that are used predominantly outside of the U.S. The O-FSCs often have a greater variety of terms and features than other types of loans. These variations have a similar core of transaction participants and tend to have similar general categories of risks and rating issues, although these vary on a loan by loan basis.

The common transaction participants typically include an equity investor (parent), its special purpose or leasing company subsidiary (equity intermediary, or EI), a special purpose company or trust established by the equity intermediary (borrower), and a company wholly owned by the borrower in a qualified jurisdiction (foreign sales corporation, or FSC lessor).

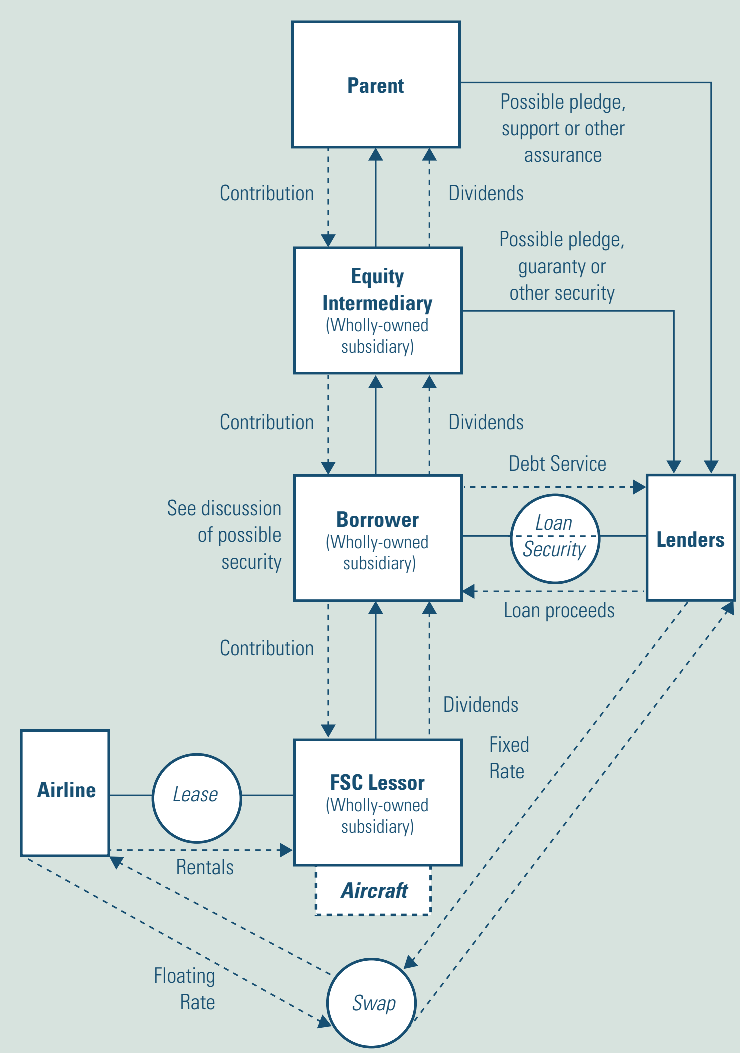
The lenders make a loan to the borrower, which contributes the loan proceeds, together with an amount received from the equity intermediary (or indirectly from the parent), to the FSC lessor for the purpose of funding the purchase of an aircraft. The FSC lessor purchases the aircraft and leases the aircraft to an airline outside of the U.S.

There may be various intermediaries between the FSC lessor and the airline, including sub-lessors, conditional purchasers, and nominee owners, and the airline itself may be a conditional purchaser. Some O-FSC loans may have embedded Japanese leveraged leases or other hybrid characteristics. In addition, the airline enters into an interest rate swap with the lenders. Chart 3 provides a diagram of an example of the transaction participants in a basic O-FSC loan.

In order to realize the desired tax benefits in an O-FSC financing, the loan must not be characterized as indebtedness of the FSC lessor. In response to this requirement, originators designed O-FSC financings where the debt is disassociated from the owner of the aircraft, and the credit and performance of participants other than the airline may affect timely repayment of the loan. In the O-FSC loans reviewed by

Chart 2

Example of O-FSC Loan



Standard & Poor's, common features include a mismatch of the lease and loan obligations, lack of security over the aircraft assets, and reliance on the parent and equity intermediary. Although these features, among others, may achieve the desired result from a tax perspective, the evaluation of the relevant credits and likely recoveries must reflect these more complex arrangements and the resulting risks.

Typically, the lease terminates much earlier than the loan matures and a substantial amount of debt remains outstanding upon termination. The swap also terminates upon lease termination. The airline typically has several alternatives at the end of the lease term, but it may not re-lease the aircraft. Among other alternatives, the airline may propose a replacement lessee, in which case the lenders may elect to re-price the loan, including a new swap, with the new lessee, or elect not to quote a rate for re-pricing, in which case the borrower must locate new lenders to refinance the loan. If the airline is willing and able to do so, it may also purchase the aircraft for an amount at least sufficient to prepay the loan. These typical alternatives raise issues as to the timing of repayment and the identity of the credit, if any, obligated to make the payments due at the end of the lease term. These issues are further complicated in a loan where the originator does not have a controlling interest and would not be able to direct the elections of the lenders.

The loan is an obligation of the borrower. The FSC lessor does not have a repayment obligation to the borrower or a debt owing to the lenders. So as not to risk characterization of the loan as the FSC lessor's debt, it does not grant security interests in the aircraft assets to the lender or the borrower. The importance of a first priority perfected security interest over assets that may be the source of the loan repayment, and the role of security interests in a bankruptcy-remoteness analysis, are discussed earlier under the legal considerations for other forms of aircraft financing. The absence of security interests over the aircraft assets significantly increases the difficulty of concluding that the financing structure is bankruptcy-remote from the interests of the parent and EI.

The borrower may grant, or agree to grant under certain circumstances, to the lenders a pledge of its shares in the FSC lessor. Certain originators, however, may not include this feature because, in their view, this too closely connects the FSC lessor to the debt for tax purposes. The EI may pledge its shares in the borrower to the lenders, or the parent may pledge its shares in the EI (particularly if it is a special purpose company), in each case to secure their respective obligations under any guaranties or assurances entered into for the benefit of the lenders. Many O-FSC loans, however, do not include either parent or EI pledges.

In addition to the absence of security interests over the aircraft assets and direct remedies against the airline, the lenders do not have the benefit of the airline's support for the financing structure that is characteristic of USLLs. For this, and for other aspects of the financing, the lenders must look to the EI or its parent. This support may be evidenced in a guaranty, indemnity, or other support agreement, through covenants in the loan documents, or through other assurances. Analysts will assess this support, the remedies for default under these obligations, and the alternatives to the performance of the obligations in connection with evaluating the credit dependencies of the O-FSC loan.

In the O-FSC loans reviewed by Standard & Poor's, the insolvency of members of the equity group could materially affect the timely payment in full of the borrower's loan obligations. Therefore, in analyzing the credit quality of O-FSC financings, consideration is given to the default probability not only of the airline, but also of the parent, the equity intermediary, the borrower and the FSC lessor as members of the equity group. Since the EI, or its parent, is not a bankruptcy-remote entity, analysts will review the possible effects on the entire equity group of the automatic stay, substantive consolidation, avoidable preference and fraudulent transfer, and other bankruptcy risks, as well as liabilities that may be attributable to the group of related entities. Concerns raised in this review are considered in modeling recoveries in a parent or EI default.

In analyzing an O-FSC portfolio with only airline and equity group risks, the aggregate frequency of default would be allocated between these risks. The overall credit quality the airlines and the equity groups would be considered in determining the percentage of defaults relating to airline risk and to equity group risk, respectively. For defaults relating to airline risk, aircraft sale values would be the main component in sizing recovery value. For defaults relating to equity group insolvency, the previously discussed review of the effects of insolvency on the equity group, including any claims or interests that may impede or burden recovery of the aircraft, would be considered. The severity of these assumptions may lead to reduced or zero recovery levels. Standard & Poor's will stress the portfolio's cash flows whereby equity group defaults, partial and total loss of lease revenues and aircraft are modeled into the capital structure.

Even if the equity investor group does not default, the credit risk of the loan may change as the Parent or EI may, for example, assume the debt as a direct obligation while releasing any pledges or other guaranties, transfer its interest to another investor, or provide substitute collateral in place of the borrower's obligations. This "assumption rating" may be lower than the rating of the original parent or EI or the airline itself. As part of the rating review, these risks may be factored into default risk and recovery assumptions.

O-FSC loans are complicated financings that often include many risks that need to be assessed in addition to those briefly discussed in this section. Although an assumed approach to modeling the risks of these structures is set out generally above, originators should expect that the total amount of debt rated for O-FSC loan portfolios would be significantly less than for portfolios of direct secured loans or USLLs.