Methodology

Rating U.S. Auto Lease Securitizations

DECEMBER 2014
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# Rating U.S. Auto Lease Securitizations

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Scope and Limitations

DBRS evaluates both qualitative and quantitative factors when assigning ratings to a U.S. structured finance transaction. This methodology represents the current DBRS approach for rating auto lease securitizations issued in the United States with auto lease collateral originated in the United States. It describes the DBRS approach to analysis, which includes: (1) a focus on the quality of the sponsor/servicer, (2) evaluation of the collateral pool and (3) utilization of historically employed credit evaluation techniques. This report also outlines the asset class and discusses the methods DBRS typically employs when assessing a transaction and assigning a rating. It is important to note that the methods described herein may not be applicable in all cases. Further, this methodology is meant to provide guidance regarding the DBRS methods used in the sector and should not be interpreted as prescribing a rigid template, but understood in the context of the dynamic environment in which it is intended to be applied.

Executive Summary

This report details the DBRS methodology for rating U.S. auto lease asset-backed securities (ABS) transactions. DBRS analyzes factors for U.S. auto lease ABS transactions which generally include:
- Operational Risk review;
- Collateral quality analysis;
- Residual value analysis;
- Capital structure, target ratings and credit enhancement;
- Cash flow scenario analysis; and
- Legal structure and opinions.

DBRS typically performs an operational risk assessment of the originator and servicer that serves to provide insight into the manner in which the origination and servicing processes have impacted past pool performance and to assist in establishing expectations for future performance.

For each target rating, DBRS typically analyzes cash flow assumptions to test the financial viability of the transaction. The factors considered in the cash flows usually include: lease defaults, turn-in rates, residual losses, timing of lease defaults and residual losses, recovery rates, recovery timing and other pool-related assumptions, such as subvention, prepayments and delinquencies. The cash flow scenarios also typically reflect the priority of payments to investors as set forth in the transaction’s governing legal documents.

Based on the analysis of the aforementioned factors, DBRS normally evaluates the available credit enhancement for each target rating in the capital structure and the ability of the transaction to repay investors according to the terms in which they have invested. These terms typically include payment of timely interest and ultimate principal in accordance with the transaction documents.
Overview of the Leasing Sector

Auto leases can be either closed-end or open-end. A closed-end lease has a residual value established at the inception of the lease, which is stipulated in the contract. In an open-end lease, the residual value of the leased vehicle is established at the end of the lease, based on the then market value. U.S. auto lease ABS transactions are usually collateralized by closed-end leases.

Typically, the major players in the U.S. auto lease market are the manufacturer captive finance subsidiaries, and to a lesser extent, independent finance companies, banks and other depository institutions. Captive finance companies can enhance their respective manufacturer’s sales through the use of subvention techniques, such as low finance charges or subsidized residual values to reduce the borrower’s monthly payments. While artificially high residual values can lead to end-of-term residual losses for the finance company subsidiary, the risk of loss may be offset by the increased sales and actual losses can be mitigated by the captive finance company’s efficient disposition of off-lease vehicles.

Chart 1

CLOSED-END LEASE MECHANICS

A closed-end lease differs from an auto loan with respect to the ownership of the vehicle. In an auto loan, the vehicle is purchased and owned by the financing party. The financing party owner of the vehicle is referred to as a lessor, while the end-user of the vehicle is a lessee. The lessor enters into a leasing agreement with the consumer to rent the vehicle for a pre-determined period of time. In a closed-end lease, the ownership of the vehicle resides with the lessor throughout the term of the lease.

At the end of the closed-end lease term, the end-user typically has an option to purchase the vehicle from the lessor for a predetermined amount. At this point, the end-user is likely to consider the value of the vehicle versus the cost of buying that vehicle. If the value of the vehicle is less than the purchase price, the end-user is likely to forfeit the option. If the end-user forfeits the option, a dealer may purchase the vehicle. If neither the end-user nor the dealer chooses to purchase the vehicle, the lessor will continue to own the vehicle until the vehicle is sold (or if not sold they may seek a lease to a different end-user).

During the term of the closed-end lease, the end-user will pay the owner a monthly lease payment for the right to use the vehicle during the term of the lease. The monthly lease payment is normally based on: (1) the term of the lease, (2) the net capitalized cost of the vehicle, (3) the residual value of the vehicle and (4) the money factor (described further below).

The term of a closed-end lease is the number of months during which an end-user pays for the right to use a leased vehicle. Closed-end lease terms are typically between 12 months and 60 months in duration, with 36-month to 48-month leases accounting for the majority of closed-end leases outstanding.
The net capitalized cost refers to the amount that is being financed with a lease. The net capitalized cost usually includes the negotiated price of the vehicle plus any add-on fees or taxes less any dealer participation, manufacturer discounts and down payment made from the end-user. Net capitalized cost may also include the pay-off balance of a previous loan related to a trade-in vehicle. The treatment of taxes on each lease transaction is normally state specific. In some states, sales tax is charged up-front and is added to the net capitalized cost, while in other states, sales tax is charged on the monthly payment amount and is included in the total monthly payment owed.

The vehicle’s residual value is typically the estimated wholesale value of a leased vehicle at the end of the scheduled lease term. In a closed-end lease, the end of term residual value is set up-front, as either a percent of the net capitalized cost or as a predetermined dollar amount.

The money factor is the finance rate for a lease and is similar to an interest rate on a loan. The money factor, which is sometimes called lease factor or factor, determines how much finance charge will be paid each month during the lease. To convert the money factor into an approximate interest rate equivalent, the money factor can be multiplied by 2,400.

The following table (Table 1) is a typical example of Net Capitalized Cost calculation for a closed-end lease.

<table>
<thead>
<tr>
<th>Table 1: Net Capitalized Cost</th>
<th></th>
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<tbody>
<tr>
<td>MSRP</td>
<td>27,568</td>
</tr>
<tr>
<td>Negotiated Purchase Price</td>
<td>26,500</td>
</tr>
<tr>
<td>Lesser of MSRP and Negotiate Purchase Price</td>
<td>26,500</td>
</tr>
<tr>
<td>Dealer Participation</td>
<td></td>
</tr>
<tr>
<td>-Manufacturer's Discounts</td>
<td>-1000</td>
</tr>
<tr>
<td>-Down Payment</td>
<td>-2000</td>
</tr>
<tr>
<td>+Add on Fees</td>
<td>350</td>
</tr>
<tr>
<td>+Upfront Taxes</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>-2650</td>
</tr>
<tr>
<td><strong>Net Capitalized Cost</strong></td>
<td><strong>23,850</strong></td>
</tr>
</tbody>
</table>

A closed-end lease payment usually considers three factors: (1) depreciation fee, (2) finance charge and (3) sales tax. The depreciation fee compensates the lessor for the loss in the value of the vehicle over time, which is spread over the duration of the lease. Typically, factored into the calculation of the depreciation fee are the annual expected miles driven and the duration of the lease contract. The finance charge normally represents the equivalent of the monthly interest amount charged and is the application of the money factor to the sum of the net capitalized cost and the residual value of the leased vehicle. The sales tax component is usually calculated by multiplying the sum of the monthly depreciation fee and the monthly finance charge times the sales tax rate, if not paid up-front.

The following table (Table 2) is an example of a typical monthly lease payment calculation for a closed-end lease whereby taxes are applied on each monthly payment.
Table 2: Monthly Lease Payment

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Lease Term (Months)</td>
<td>48</td>
</tr>
<tr>
<td>Money Factor</td>
<td>0.0025</td>
</tr>
<tr>
<td>State Sales Tax</td>
<td>8.60%</td>
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**Depreciation Fee**

- Net Capitalization Cost: 23,850
- Residual Value: 12,406
- Gross Depreciation Fee: 11,444
- Monthly Depreciation Fee: \((11,444/48) = 238.43\)

**Finance charge**

- Net Capitalization Cost: 23,850
- Residual Value: 12,406
- Total: 36,256
- Monthly Finance charge: \((36,256*0.0025) = 90.64\)

**Sales Tax**

- Monthly Depreciation Fee: 238.43
- Monthly Finance charge: 90.64
- Total Payment Net of Taxes: 329.06
- Monthly Sales Tax: \((329.06*0.086) = 28.30\)

**Total Payment**

- Monthly Depreciation Fee: 238.43
- Monthly Finance charge: 90.64
- Monthly Sales Tax: 28.30
- Monthly Lease Payment: 357.36

**LEASING CONSIDERATIONS**

A consumer may view the leasing of an automobile as having certain advantages versus buying an automobile. The principal benefit afforded to the consumer is the possibility of obtaining a new vehicle, often with a low or no down payment, with a lower monthly payment than that required on a loan. The lower monthly payment results from the scheduled lease payments being based on the portion of the vehicle value assumed used during the term of the lease. In addition, in states where a sales tax is levied monthly on the lease payments, an upfront sales tax payment is not required.

Leasing may provide for the added benefit of ease of upgrade for those consumers who look to change cars frequently. Given the wide variety of lease terms, consumers may be able to enter into a shorter-term lease, which can allow for more affordable monthly payments despite the shorter term. The shorter lease terms also allow consumers to avoid vehicle maintenance and turn-in the vehicle prior to any substantive maintenance being necessary. In addition, leasing helps eliminate the risk of loss related to declines in future used car values, which may be experienced when trying to sell a used vehicle.

While some consumers embrace the advantages of leasing, others prefer ownership. Vehicle ownership remains attractive to consumers who intend to use their vehicle for a period of time longer than offered by
typical lease terms. In some cases, leasing may be more expensive than financing the purchase of a vehicle, as finance charges may be higher. Higher finance charges may occur due to monthly rent payments being based on the capitalized cost of the vehicle over the life of the contract, whereas payments on an auto loan are typically based on an amortizing balance.

**Structural and Legal Matters**

Like securitizations in general, U.S. auto lease ABS transactions are conceptually reliant on the isolation of risk, particularly the isolation of the lease cash flows from the bankruptcy risk of the sponsor/originator. By legally separating the cash flows from the sponsor/originator for the purposes of a sponsor/originator bankruptcy analysis, the structure, at least in theory, is dependent on the performance of lessees and is no longer subject to a risk of the insolvency of the originator. Legal isolation of the cash flows is essential to justify the credit analysis based on portfolio losses and/or obligor defaults.

To accomplish the legal isolation of the cash flows, the assets are usually transferred so that in the event of the bankruptcy of a seller or originator, the assets would not be part of its bankruptcy estate or subject to an automatic stay under the U.S. Bankruptcy Code. The assets in a U.S. auto lease ABS transaction are typically both the lease contract and the residual interest of the underlying vehicles, and therefore, the lease contracts and the rights related to ownership of the residual interest in the leased vehicle are typically transferred to a bankruptcy-remote entity. Similar to auto loan transactions, the transfer of the lease contract and the interest in the residual values can be accomplished via a combination of legal transfers. To assist with this management of the lease assets and the ultimate transfer, the sponsor/originator typically uses a titling trust. A titling trust is a special-purpose entity (SPE) typically formed (and owned) by the lease originator or sponsoring entity, to avoid the administrative difficulty and expense associated with retitling leased vehicles. Upon the origination of the lease, the leased vehicle is titled in the name of the titling trust. Although the sponsor/originator is not named on the title, it possesses an undivided trust interest (UTI) in the trust for all leases and related vehicles in the titling trust.

If the sponsor/originator chooses to securitize a pool of lease contracts and the residual interests in the leased vehicles, the titling trust can allocate certain identified assets to a special unit beneficial interest (SUBI), represented by a SUBI certificate. A titling trust may issue one or more SUBI certificates, each of which represents interest in a specific pool of assets to be securitized. Assets that are not allocated to SUBI remain in the titling trust, represented by the UTI, and ABS investors with interests in a SUBI will have no claim against such assets. The SUBI certificate is then transferred and sold via a true sale (or a series of true sales) to an SPE. The SPE typically contributes the SUBI certificates to a special-purpose bankruptcy-remote entity. The transaction trust then normally issues ABS notes and the proceeds of such are used to purchase the SUBI certificate. The chart below (Chart 2) provides an example of an indicative structure:
While the titling trust facilitates a more efficient way for a sponsor/originator to own lease assets, there is greater certainty of legal isolation for newly originated leases.

When rating a transaction, DBRS typically assesses whether the proper legal steps have been taken to transfer the ownership interests in the lease assets, and that the titling trust’s rights and interest in the leased vehicles and associated contracts, to the SPE and that the trustee on behalf of noteholders has been granted a security interest in the associated SUBI certificates. DBRS typically reviews legal opinions that consider whether the ABS issuer or trustee has a first-priority perfected security in the related SUBI certificates. Additionally, DBRS usually reviews legal opinions to ascertain if the SPEs assets will not be consolidated with the estate of the transferor or the originator in the event of the originator’s or transferor’s bankruptcy.

**PENSION BENEFIT GUARANTY CORPORATION**

A titling trust, as noted above, helps to facilitate the transfer of ownership for the benefit of the transaction. While the titling trust is helpful in transferring ownership, the risk of a lien from the Pension Benefit Guaranty Corporation (PBGC) can be present. Under the *Employee Retirement Security Act of 1974* (ERISA), if the originator has unfunded pension liabilities, the PBGC has authority to put a lien on the originator’s assets, which could in theory, extend to the transaction trust. The claim would have priority over the interest of the securitized trust. The risk of a PBGC lien can typically be addressed if the transaction documentation contains representation and warranties that the originator will keep pension liabilities funded during the term of the transaction, or maintain an investment-grade rating. Additionally, transaction documents may also contain trigger mechanisms that cause credit enhancement to increase if the pension liability becomes unfunded or if the sponsor/originator is downgraded below an investment-grade rating. DBRS usually reviews whether legal opinions exist stating that the vehicles and leases, and/or proceeds thereof, would not be subject to liens that will have priority to the lien of ABS noteholders.
In cases where the originator does have an unfunded pension liability, DBRS may review the transaction structure to ascertain if it contains other legal protections to eliminate the risk of a PBGC lien. To reduce the risk of a PBGC lien, DBRS may review whether the originator has been established as a secured party in the SUBI rather than solely a holder of the equity interest. Additionally, DBRS usually reviews if the leased vehicles were titled at origination in the name of a titling trust. By accomplishing both of these, the originator would normally become the first-lien holder on all of the leased assets.

VICARIOUS TORT LIABILITY

Vicarious liability is a legal doctrine that allows an exception to the rule providing that those suffering damages due to the negligence of another can look only to the negligent party for compensation. Under the doctrine of vicarious liability, the negligent party can be held to be an agent of a principal, and those suffering loss may also look to the principal for damages. Vicarious liability can be relevant to claims for damages arising from a motor vehicle accident. Owners of motor vehicles can be held liable for damages caused by the negligent operation of the vehicle, if the operator of the vehicle possessed the vehicle with the consent of the owner. Consequently, it could be possible for this doctrine to inure liability to the titling trust for claims for damages arising from a motor vehicle accident, should such claims occur.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005 (the Act) addresses the issue of vicarious tort liability by prohibiting imposition of liability against vehicle leasing and rental companies and extends to cover assets included in transaction trusts. The Act preempts individual state law liability schemes that previously governed liability and exposed rental and leasing companies and transactions trusts. However, Supreme Court Justice Thomas V. Polizzi’s holding in Graham v. Dunkley, reopened the debate in the New York State. Supreme Court Justice Polizzi ruled that a federal law barring New York from imposing vicarious liability on those who lease or rent motor vehicles intrudes on state powers and cannot be enforced. In 2008, the New York State Appellate Division reversed Justice Polizzi’s decision and upheld the Act that provides vehicle renters and lessors with a statutory basis for dismissing vicarious liability claims in motor vehicle accident lawsuits.

Operational Risk Review

ORIGINATOR REVIEW

The originator review process evaluates the quality of the parties that originate the leases that are about to be securitized in a transaction rated by DBRS. While DBRS does not assign formal ratings to these processes, it typically conducts operational risk reviews to assess if an originator is acceptable and incorporates the results of the review into the rating process.

DBRS typically begins the initial originator review process by sending a questionnaire to the company that outlines the topics to be covered during the discussion with management and includes a list of documents to be provided such as organizational charts, financial statements and underwriting guidelines. In instances where DBRS determines that the originator is below average, issuers may incorporate certain structural enhancements into a proposed transaction such as additional credit support or a third-party firm to provide the requisite representations and warranties so that DBRS can rate the transaction. In the event that DBRS determines that an originator is unacceptable, it may refuse to rate the deal.
The originator review process typically involves a review and analysis of the following:
(1) Company and management
(2) Financial condition
(3) Controls and compliance
(4) Origination and sourcing
(5) Underwriting guidelines
(6) Technology

For details on the originator review process, please refer to the DBRS methodology Operational Risk Assessment for U.S. ABS Originators.

SERVICER REVIEW
The servicer review process evaluates the quality of the parties that service or may conduct backup servicing on the leases that are about to be securitized in a transaction rated by DBRS. While DBRS does not assign formal ratings to these processes, it typically conducts operational risk reviews to assess if a servicer is acceptable and incorporates the results of the review into the rating process.

DBRS typically begins the initial servicer review process by sending a questionnaire to the company that outlines the topics to be covered during the discussion with management and includes a list of documents to be provided such as organizational charts, financial statements and performance statistics. In instances where DBRS determines that the servicer is below average, issuers may incorporate certain structural enhancements into a proposed transaction such as additional credit support, dynamic triggers or the presence of a warm or hot backup servicer so that DBRS can rate the transaction.

The servicer review process typically involves an analysis of the following:
1. Company and management
2. Financial condition
3. Controls and compliance
4. Lease administration
5. Customer service
6. Account maintenance
7. Default management
   • Collections
   • Loss mitigation
   • Bankruptcy
   • Fraud
8. Investor reporting
9. Technology

For details on the servicing review process, please refer to the DBRS methodology Operational Risk Assessment for U.S. ABS Servicers.

Credit Enhancement

TYPES OF CREDIT ENHANCEMENT
Credit enhancement can typically be classified as hard, which are enhancements directly available to support the transaction obligations, or soft, which are enhancements that support the transaction obligations, if and when they are available. Typical forms of credit enhancement in U.S. auto lease transactions include overcollateralization, subordination, reserve accounts and excess spread.
EXCESS SPREAD

Excess spread in U.S. auto lease ABS transactions is generally excess collections available on a monthly basis after distributions pursuant to the prescribed transaction structure. Excess spread is typically equal to the financing charge applied to leasing contracts net of transaction expenses, such as servicing, trustee, professional fees and note interest. However, many captive financing companies offer leases with rates that are less than market rates (subvented). Transactions with subvented leases commonly include a cash reserve dedicated for supplementing yield shortfalls or rely on the creation of excess spread. Excess spread is typically created by discounting a pool's projected cash flow, at a predetermined discount rate, to create additional monthly cash flows. Excess spread may be sized to ensure the asset yield covers at least all funding costs through the life of the transaction. Excess spread is created by allocating a portion of cash flows resulting from lease payments to act as interest collections. In general, excess spread is available on a monthly basis to absorb credit and residual losses. After all of the obligations are satisfied, as prescribed by the transaction structure, excess collections may be released to the sponsoring entity.

The amount of monthly excess spread depends on the timing and magnitude credit losses, residual losses and principal prepayments over time. Compression of monthly excess spread amounts on U.S. auto lease pools may occur as a result of changes in the weighted-average money factor. The weighted-average money factor can decrease over the life of the pool, as leases to lower-quality obligors and higher financing charges default or refinance at a faster rate than other leases.

Once released, excess spread cannot be recaptured and uncertainty associated with its timing reduces its value as a credit enhancement tool. For these reasons, the amount of credit protection afforded by excess spread will depend upon various DBRS assumptions used in analysis for a transaction, such as losses, prepayments, delinquencies and potential delays in the repossession and sale of defaulted leases.

CASH RESERVE ACCOUNTS

A cash reserve account is a form of hard credit enhancement that is available to pay interest, and sometimes principal, on the transaction obligations. Reserve accounts are included in many U.S. auto lease ABS transactions as set dollar amounts or a percentage of the debt outstanding, and are funded either at the outset of a transaction or over time through the transaction cash flows. Cash reserves typically provide additional liquidity to a transaction and may be used to allow it to successfully perform under stressful scenarios. In U.S. auto lease ABS transactions where principal amortizes over time, reserve accounts may be permitted to decline over time (typically subject to a floor defined as percentage of the initial collateral balance) as the transaction reduces the outstanding note principal balance. Similarly, in revolving transactions, as the outstanding note principal balance of the transaction fluctuates, reserved amounts may be released or excess cash flow may be captured to fund required amounts as required by the transaction specifications.

OVERCOLLATERALIZATION

Overcollateralization is a form of hard credit enhancement that acts as the first loss piece, absorbing obligor default shocks before any payment shortfalls to transaction investors are realized. Overcollateralization is normally achieved by issuing ABS obligations in an amount less than the value of the balance of the collateral securing those obligations. The sufficiency of overcollateralization is typically evaluated through cash flow stresses to the proposed collateral pool evaluation and, when applicable, DBRS assesses the impact of the permitted release versus full turbo ABS principal repayment priority in a transaction. In permitted release transactions, DBRS usually reviews the effect of overcollateralization floors and the protection afforded, since overcollateralization may be diminished as amounts of collections may be released to an issuing SPE prior to the occurrence of cash retention event or a significant increase in the delinquencies or defaults in an ABS transaction.

SUBORDINATION

Subordination is a form of hard credit enhancement that creates an additional cushion for losses in the
collateral portfolio for more senior ABS tranches. Subordination is created by issuing a junior class of notes that is subordinate in right to a senior class with respect to amounts available for payment of ABS. The junior classes are available to absorb losses, and therefore act as additional overcollateralization for more senior classes. DBRS typically analyzes any mechanisms within a transaction that modify the availability of these junior classes to act as credit enhancement for senior classes. In particular, the impact of the priority of payments (i.e., (1) interest/principal/interest/principal versus (2) interest/interest/principal/principal versus (3) structures that allow for pro rata principal distributions between the senior and subordinated tranches until the occurrence of a trigger event) is generally analyzed to assess the effectiveness of subordination in providing additional protection.

Collateral Type

Analysis of a transaction’s collateral is typically a component of the assessment of the risk of a proposed transaction. DBRS usually analyzes the underlying collateral and assesses the characteristics of the leases to determine a proposed pool’s expected loss. Generally, DBRS may assess the following collateral characteristics:

- Original and remaining term,
- Lease maturity distribution,
- Finance charge,
- Vehicle age,
- Vehicle make and model,
- Geographic distribution,
- Obligor credit quality and
- Vehicle residual value.

LEASE TERM
U.S. auto leases offered to consumers usually range in term from 12 months to 60 months. The 12-month and 60-month leases are less commonly offered, while the majority of leases offered have terms of 24 months, 36 months and 48 months. In typical U.S. auto lease ABS transactions, lease terms generally range from 24 months to 48 months, with an average lease term often less than 36 months.

LEASE MATURITY DISTRIBUTION
The end of term maturity schedule of leases in a transaction pool is typically reviewed by DBRS. Concentrations of lease maturities may cause an increase in the risk of residual loss, as off-lease vehicles may be subject to fluctuations in the wholesale used vehicle market. Pools with more evenly distributed lease maturities may help reduce the risk of additional loss related to vehicles’ values over time.

FINANCE CHARGE
The monthly finance charge, as measured by the money factor charged on a lease, is normally a function of the auto market, prevailing interest rate environment at lease inception and the credit quality of the obligor. Leases that are characterized by the lessor as higher risk typically have higher finance charges versus lessees deemed less risky. Finance charges may also be influenced by available incentive programs offered by manufacturers. Manufacturers may try to increase sales by offering finance charge incentives. Such subsidies can result in a dramatic reduction of finance charges below market rates, known as subvented rates. It is not uncommon for manufacturers to offer subvented rate leases with finance charges as low as 0%.

VEHICLE AGE
Leases are offered on new, certified pre-owned (CPO) and used vehicles. A majority of leases offered are for new automobiles, with leases for CPO gaining in popularity, especially with manufacturers of luxury
vehicles. CPO vehicles are typically off-lease vehicles that are three years old (or less) and that have been through an inspection by a manufacturer’s representative/dealer and are often covered by a manufacturer’s warranty for an additional period of time beyond the initial warranty. While used vehicles have flatter depreciation curves when compared to new vehicles, used vehicles have historically tended to experience higher losses generally because of the factors considered when estimating future vehicle value.

**VEHICLE MAKE AND MODEL**
The distribution of vehicle make and model in the transaction collateral pool is an important factor when assessing the risk of loss on the pool. Residual values typically vary by vehicle make and vehicle model. Residual values may also be influenced by prevailing market conditions and other factors. One such factor is the price of gasoline. High gasoline consumption vehicles can experience rapid price depreciation as the price of gasoline increases, exposing those vehicles to additional residual value risks at the end of the lease term. An additional factor potentially impacting vehicle residual values is discontinuation of a make or model or if a manufacturer’s ability to maintain warranty coverage becomes impaired (or is perceived to be impaired). Consequently, concentrations in any vehicle make or model may lead to higher risk of loss on a transaction pool.

**GEOGRAPHIC DISTRIBUTION**
Concentration of leases by geographic region is another potential risk to a transaction’s pool. Geography can pose a risk to a transaction when events like weather and regional economic downturn, including regional downturns in the used vehicle markets, affect portfolio performance. Concentrations for geography in U.S. auto lease ABS transactions are often limited due to the national footprint of many manufacturers and lessors. In the event that geographic concentrations exist, DBRS may assess the likelihood of additional risk of loss.

**OBLIGOR CREDIT QUALITY**
The credit characteristics of the obligors in a pool of U.S. auto leases can vary by transaction and pool. Credit scores provided by third-party credit agencies (e.g., Experian plc, TransUnion LLC) are widely used by auto lessors as a measure of an obligor’s creditworthiness. Additionally, many lessors in the auto leasing industry utilize proprietary models in their credit and underwriting decision process. The lessor models may consider additional (or different) variables versus those used by the credit agencies in the determination of the credit scores (such as prior payment history with the company and loan terms) and are typically tailored to originate leases that fit the originator’s target lease and desired demographics.

In contrast to U.S. auto loan transactions, U.S. auto lease ABS transactions are typically backed by leases to predominately prime-quality obligors. To assess the credit quality of a proposed pool, DBRS analyses loss performance data segmented by third-party credit score and/or internal credit score. The distribution of credit score and/or internal score is also assessed to avoid adverse concentrations that may impact expected loss.

**VEHICLE RESIDUAL VALUE**
The residual value is the purchase price necessary to be paid by lessee to buy a vehicle at the end of the lease term. The lease residual value is typically determined at lease inception by the lessor. Lessors may use proprietary models to approximate the future fair market value of each leased vehicle, or utilize residual values determined by third-party information providers. Residual setting policies of a lessor may be a tool used in its overall origination strategy. If a lessor uses a conservative approach to setting contractual residual values, the market value of the off-lease vehicles may be above the contractual residual value at the end of the lease term. Conversely, a more aggressive residual-setting policy may result in the contractual residual value being higher than the market value of the leased vehicle at the end of the lease term.

The determination of the contractual residual values may also impact the monthly lease payments, as well as the likelihood of the consumer to purchase the vehicle at the end of the lease term. Lessors may set residual values at higher levels to make vehicles more affordable to the consumer, thus driving sales
due to lower monthly payments. If the contractual residual value is at or below market value and the end of lease term, it may be more likely that the consumer will exercise the option to purchase the vehicle. Conversely, a consumer may be more likely to return the vehicle if the contracted residual value is higher than the market value of the vehicle at the end of the lease term. More aggressive residual setting policies may result in more returned vehicles. More returned vehicles due to aggressive residual setting policies can transfer greater risk of loss back to the lessor. Transactions with lessors with perceived aggressive residual value-setting policies may result in a greater possibility of residual risk exposure for a transaction. Conversely, more conservative residual value setting policies would likely reduce the residual risk exposure for a transaction.

In addition, lease subvention may be offered by a manufacturer’s captive finance company as a way to reduce the cost of the lease for the consumer. The reduction of cost comes via the offering of a subsidy, usually through an increase of the residual value or the decrease of the interest rate charged. These subsidies reduce the monthly payments required by a lessee during the life of the lease. DBRS typically reviews the residual value policy in its assessment of residual value exposure for a transaction.

Cash Flow Analysis

In U.S. auto lease ABS transactions, losses are typically measured in both credit losses and residual value losses. The overall expected loss normally consists of the expected credit losses coupled with the expected residual value losses.

CREDIT LOSSES
DBRS usually analyzes the data provided by the originator in its development of an expected credit loss. DBRS typically assesses the collateral statistics for the historical static pools versus the collateral pool to be included in the transaction. As part of the analysis, DBRS normally assesses the degree to which the historical data is relevant as a performance indicator for the transaction pool. If the collateral parameters are considered to be similar, DBRS may use the information to project expected losses. In the event that the provided static pool information does not contain a curve or curves that have fully experienced 100% of losses, DBRS may use an industry comparable or an average of industry-wide data or other forecasting methods, as applicable.

DBRS typically reviews the trends in expected losses for the originator and any changes in the expected loss over time, as well as the reasons for those potential changes in the performance of the collateral. Since the volatility of losses can be more difficult to determine during the initial months following origination, DBRS may only consider static pools that have sufficient performance history, which is typically at least one year for most pools. DBRS usually aggregates each vintage’s projected expected loss based on the mix of vintages in the proposed pool.

For more information regarding the static pool analysis, constructing of the loss curves and the development of and the factors that affect an expected loss, please refer to the DBRS methodology Rating U.S. Retail Auto Loan Securitizations.

STRESS CASE CREDIT LOSSES
To evaluate available credit enhancement levels that support a target rating, the expected loss figure, as previously described, is stressed. The stress is typically applied as a multiple of the expected loss figure, which in turn, results in losses for each target rating’s cash flow scenario. DBRS normally evaluates the results of the stress analysis under a variety of scenarios. To achieve a requested rating, the cash flow results are typically expected to withstand DBRS stresses appropriate for the category. The multiples serve to protect the rated securities from more severe conditions than assumed within the base case cash flow
scenario. Table 3 indicates the typical range of multiples for U.S consumer loans securitizations. Multiples are designed to capture uncertainties and variables that may affect future transaction performance. The multiples in Table 3 are guidelines and may not be applicable in all transactions.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>4.00 – 6.00</td>
</tr>
<tr>
<td>AA</td>
<td>3.00 – 4.00</td>
</tr>
<tr>
<td>A</td>
<td>2.00 – 3.00</td>
</tr>
<tr>
<td>BBB</td>
<td>1.50 – 2.00</td>
</tr>
<tr>
<td>BB</td>
<td>1.25 – 1.50</td>
</tr>
</tbody>
</table>

**RESIDUAL VALUE LOSSES**

DBRS typically analyzes the data provided by the originator in its development of an expected residual value loss. A transaction pool’s residual value loss is driven by two main factors: (1) the vehicle turn-in rate, which is the percentage of vehicles returned to the lessor at the end of lease term, and (2) the market value of the leased vehicles in the collateral pool versus the contractual residual value of the leased vehicles at the end of the lease term.

**Turn-In Rates**

The turn-in rate is the percentage of vehicles returned to the lessor at the end of lease term and typically depends on the factors that would drive a lessee to purchase the vehicle at the end of the lease term. The greater the percentage of lessees that purchase the vehicles at the end of lease term the lower the turn-in rate and the lower the potential risk for residual value losses. Turn-in rates are also influenced by the amount of customer defaults and other factors, including proceeds from settlement of insurance claims related to accidents or other related issues. Turn-in rates typically increase during periods of adverse wholesale market conditions.

The overall turn-in rate of a lease pool can be largely dependent upon the value of the leased vehicles versus the contractual residual values. The historical turn-in rates of lease portfolios typically are dynamic and fluctuate with the conditions of the wholesale vehicle market and may be largely dependent of a vehicle’s make and model. The wholesale market value of the vehicle may be a major determinant of lessee’s decision to purchase the off-leased vehicle. If the market value is higher (actually or perceived) than the contractual residual value, there is a greater likelihood that a lessee will purchase the vehicle.

In the assessment of an expected turn-in rate, DBRS typically analyzes historical turn-in rates for non-defaulted obligors. In analyzing turn-in rates, a survival rate may be analyzed. The survival rate is the proportion of all leases on which all scheduled payments have been made and where the lessee must either return the vehicle or exercise the option to purchase the vehicle. Scenarios that cause early terminations may have an impact on the survival rate. Early terminations often occur in unstressed environments and may include default-triggered repossessions, written-off vehicles due to theft or underinsured or uninsured accidents or other scenarios that cause lessees to forfeit their vehicles early. In these cases, the lease may expire prior to its scheduled termination and create a loss. Early terminations related to repossession usually has the largest influence on the turn-ins or survivorship, especially during times of stress.
DBRS typically analyzes historical performance data in its assessment of expected turn-in rates. Where performance data is available, DBRS may use historical turn-in rates by vehicle make and model as an estimate of future turn-in rates for similar makes and models. DBRS may also consider future or scheduled turn-ins. Scheduled turn-ins represent the total number of vehicles in the transaction pool that may have an expected negative equity position at the end of the lease term. Negative equity is normally assessed by comparing each lease’s contractual residual value versus the lease’s residual value provided by a third-party information provider (e.g., Automotive Leasing Guide (ALG)).

Table 4 indicates the typical survival and turn-in rates U.S auto lease securitizations. The rates are designed to capture uncertainties and variables that may affect future transaction performance. Table 4 is a guideline and may not be applicable in all transactions.

**Table 4: Typical Survival and Turn-In Rates in U.S. Auto Lease Securitizations**

<table>
<thead>
<tr>
<th>Turn-In Rates</th>
<th>Survival Rate</th>
<th>Turn-In Rate on Survivors</th>
<th>Aggregate Turn-In Rate</th>
<th>Turn-In Rate Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>90.0%</td>
<td>100.0%</td>
<td>90.0%</td>
<td>85.0% - 90.0%</td>
</tr>
<tr>
<td>AA</td>
<td>90.0%</td>
<td>95.0%</td>
<td>85.5%</td>
<td>85.0% - 90.0%</td>
</tr>
<tr>
<td>A</td>
<td>90.0%</td>
<td>90.0%</td>
<td>81.0%</td>
<td>80.0% - 85.0%</td>
</tr>
<tr>
<td>BBB</td>
<td>90.0%</td>
<td>85.0%</td>
<td>76.5%</td>
<td>70.0% - 85.0%</td>
</tr>
</tbody>
</table>

To simulate turn-in rates during a stress period, DBRS typically assumes a maximum of 90% of leases survive to their full term. In the assessment of turn-in rates, DBRS usually analyzes issuer-specific historical data and may apply more conservative assumptions if the data warrants.

**Residual Values**

The residual value monetized in a typical U.S. auto lease transaction is usually referred to as the base residual value. As a result of the different lease origination strategies (e.g., use of subvention, lease subsidies, etc.), base residual value is commonly one of three values: (1) the contractual residual value determined at lease inception, (2) residual values provided by an independent third party at lease inception or (3) a vehicle’s expected end of term value as measured by the ALG at the time of a transaction (ALG mark-to-market value).

In its assessment of an expected residual value loss, DBRS typically assumes the lowest value of the base residual determinants. To the extent that the securitized value of the leases is above the expected case residual value (measured on a lease-by-lease basis), then the difference between the securitized value and the expected case residual value can be considered an embedded loss. In this case, DBRS may evaluate the transaction to assess if it incorporates enhancement to mitigate this risk.

To assess residual value realization rates, DBRS may compare each lease’s base residual value versus the historical values realized by the lease originator. The realization rate for each model may be determined by analyzing the difference of auction proceed statistics of off-lease vehicles with similar lease terms versus an ALG residual value provided at lease inception.

If the information is available, DBRS typically analyzes historical average losses versus initial ALG residual value by model for 24-month, 36-month and 48-month lease terms, as well as the variability of residual losses. The historical average loss for each model relative to ALG is usually used to adjust ALG residual value for their respective term buckets. This determination can then be used as a proxy for expected losses for each model and respective lease term.

DBRS may look to assess the volatility in the underlying market values of the leased vehicles included in a transaction. Volatility in market values may be caused by unanticipated market developments and result in a systematic overestimation of contract residual values. Given the difficulty in predicting future
market values, DBRS usually assumes that the neither ALG value predictions nor values produced by proprietary models truly reflect all of the potential factors driving vehicle residual devaluation. To address potential volatility, DBRS generally assumes stresses on expected case residual values that are applied by target rating. Table 5 indicates the typical market volatility stresses for U.S. auto lease securitizations. The stresses are designed to capture uncertainties and variables that may affect future transaction performance. Table 5 is a guideline and may not be applicable in all transactions.

<table>
<thead>
<tr>
<th>Residual Value Stress</th>
<th>AAA</th>
<th>AA</th>
<th>A</th>
<th>BBB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum</td>
<td>30.0%</td>
<td>25.0%</td>
<td>20.0%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Minimum</td>
<td>22.5%</td>
<td>20.0%</td>
<td>15.0%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

In circumstances where a transaction portfolio contains higher-than-typical concentrations or residual value realization rates demonstrate atypical volatility, DBRS may apply an additional haircut.

The following example demonstrates a typical calculation of a residual value stress.

Contractual residual value $12,000
ALG expected value at inception $11,000
Embedded loss $(1,000)
AAA stress (22.5%-30.0%) 25%
Stress ALG estimate [$11,000*(1-25%)] $8,250
Residual value stress($12,000-$8,250) $3,750
% residual value stress 31.25%

Surveillance/Monitoring

DBRS describes its approach to surveilling U.S. auto lease securitizations in the DBRS Master U.S. ABS Surveillance Methodology.