Determining an appropriate lessee discount rate for a lease becomes more important under Topic 842. Frequently, it will be neither a straightforward exercise nor the same as under Topic 840.

**Key impacts**

Most leases under current US GAAP (Topic 840) were operating leases, and therefore not recognized on-balance sheet. Under Topic 842, companies will recognize those leases (other than short-term leases) on-balance sheet. Consequently, the lessee’s discount rate has added importance because that rate can materially affect the amount of the lease liability and right-of-use (ROU) asset recognized.

While the guidance still includes familiar terms such as ‘rate implicit in the lease’ and ‘incremental borrowing rate,’ there are important differences in how lessees apply those terms under Topic 842.

**Rate implicit in the lease**

Topic 842 requires a lessee to discount the unpaid lease payments using the rate implicit in the lease when that rate can be ‘readily determined’. ‘Readily determinable’ is not defined in Topic 842, but the term is used elsewhere in US GAAP; a readily determinable fair value, for example, requires a security’s fair value to be obtained from published market quotes or published determined prices. We believe this definition means that a readily determinable measurement should be more accessible and apparent than a measurement derived from an estimate. That is, readily *estimable* is not the same as readily *determinable*. [842 Glossary]

Topic 840, like Topic 842, required the lessee to use the rate implicit in the lease if it was ‘practicable’ to do so, but *only* if that rate did not exceed the lessee’s incremental borrowing rate. There is no such cap on the implicit rate under Topic 842. In theory, this could result in smaller ROU assets and lease

1. See the definition of ‘readily determinable fair value’ in Section 820-10-20.
liabilities and even affect lease classification – i.e. a higher discount rate could change the outcome of the present value test.\(^2\) However, this difference is not expected to have a significant effect in practice because a lessee’s use of the rate implicit in the lease is expected to be rare. [840-10-25-31]

We expect that it will be rare that a lessee will be able to readily determine the rate implicit in the lease. This is because the implicit rate is an internal measure, specific to the lessor. To determine this rate, the lessee must know both (1) the lessor’s estimate of the residual value of the underlying asset (consistent with Topic 840) and (2) the amount of ‘initial direct costs’ that the lessor will defer for the lease.

The lessor’s estimate of the residual value of the underlying asset will typically not be readily determinable because it is based on the lessor’s specific expectations about the future. However, it may be readily determinable for some finance leases if the lease includes a provision to convey the asset to the lessee at the end of the lease term through an automatic transfer of title or a bargain purchase option. In that case, the lessor’s estimated residual value would typically be zero.

Additionally, a lessee will generally not know the deferrable initial direct costs incurred by the lessor because the lessor will incur those costs from a third party (e.g. a broker) unrelated to the lessee. However, it is possible the lessee may be able to conclude that any reasonable estimate of those costs could not materially affect the implicit rate.

It is also possible that a lessee would be able to obtain relevant information about the residual value and/or the lessor’s deferrable initial direct costs directly from the lessor. However, those situations are likely to be rare given the sensitivity of that information to the lessor. And even when the lessor provides relevant information, the lessee must assess whether this information is reliable and sufficient to determine the rate implicit in the lease.

Outside of the narrow fact patterns outlined above, we believe that the lessor’s implicit rate is not readily determinable for lessees and, as a result, lessees will use their incremental borrowing rate for nearly all leases.

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### Differences from Topic 840

The Topic 840 definition of ‘incremental borrowing rate’ referred to the rate that the lessee would have incurred to borrow the funds necessary to purchase the underlying asset. Conversely, Topic 842 states that the incremental borrowing rate (IBR) is that which the lessee would pay to borrow on a collateralized basis over a similar term an amount equal to the lease payments. In making this change, the FASB considered that the amount capitalized by lessees for lease payments frequently will be far less than the purchase price of the underlying asset – e.g. a 5-year lease of an underlying asset with an economic life of 40 years. [840 Glossary; 842 Glossary]

Topic 840 also did not require that lessees use a purely secured rate; rather, it allowed them to consider both secured and unsecured funding sources when determining their IBR. Under Topic 840, lessees could use a weighted average rate that considered secured and unsecured funding sources when they concluded that secured funding would be limited by a loan-to-value ratio of less than 100 percent. In contrast, Topic 842 requires a lessee to use a secured (i.e. collateralized) rate. [842 Glossary]

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\(^2\)See section 6.2 on the present value test in KPMG’s Handbook, Leases.
Secured vs. unsecured rate

Some lessees have identified concerns about the cost and complexity of calculating a secured (i.e. collateralized) incremental borrowing rate when all, or nearly all, of their funding is on an unsecured (i.e. non-collateralized) basis. Lessees in those circumstances have indicated that it may be difficult to derive a secured rate, and that it could be costly to obtain such a rate if required to obtain a quote from a bank. Despite these considerations, because of the explicit requirements of Topic 842, while a lessee may use its unsecured funding sources as an input to determine its IBR, its IBR for a lease must reflect the effect of providing collateral specifically to secure its future lease payments under that lease.

Topic 842 does not specify what collateral may be considered when a lessee evaluates what its collateralized borrowing rate would be, but it is not limited to the underlying asset. It can be any fully secured rate based on any form of collateral available to the lessee, assuming the rate is for a similar term as the lease and for an amount commensurate with the 'lease payments'.

A lessee is not limited by factors such as a loan-to-value ratio that might apply if it were purchasing the underlying asset. Lessees should assume their borrowing of the ‘lease payments’ is 100 percent collateralized. This may lead to an incremental borrowing rate lower than that used under Topic 840, potentially resulting in a larger lease liability and affecting lease classification.

Estimating the incremental borrowing rate

Effect of collateral (security)

In some cases, a lessee may determine that any difference between an unsecured rate and a secured rate is insignificant. For example, this may be true when the lessee’s credit quality is such that a lending institution would not be expected to charge a materially lower rate to the lessee if specific collateral were designated. A lessee asserting that the effect of collateral on its incremental borrowing rate is insignificant would need to provide adequate support for that assertion.

Adjustments to an IBR from an unsecured starting point

If a lessee does not have secured borrowings, it may use its unsecured borrowings as an input to derive an appropriate IBR (and, in general, should do so if its unsecured borrowings are publicly traded because those borrowings will provide relevant, current market indications). For example, the rate a lessee is charged on one or more relevant unsecured borrowings may serve as a starting point for determining its IBR.

From the starting point of an unsecured borrowing (reference borrowing) – i.e. because the lessee does not have secured borrowings, the lessee should adjust for differences between the reference borrowing and the lease, assuming they have a material effect on the IBR. Necessary adjustments may include all of the following (not exhaustive). It is possible a lessee will not need to make all of these adjustments to achieve a materially appropriate IBR, even if each item is a difference between the reference borrowing and the lease.

— Effect of collateral. In general, adding collateral (or security) to an unsecured borrowing rate will decrease the IBR being estimated for the lease because it reduces the risk to the lender (i.e. the lessor in a lease context). The effect of the adjustment may be affected by the quality of the lessee’s collateral.

— Payment structure. The payment structure of the reference borrowing may differ from that of the lease. For example, a reference borrowing may require interest-only payments until maturity (when all of the principal must be repaid), while the lease payments repay principal throughout the lease term. Because the payment structure of the lease in this case returns capital to the lender sooner, reducing its risk, the lender would typically require a lower rate of interest on the borrowing.

3. An existing borrowing may not provide relevant information to estimating the IBR for a lease. For example, a borrowing with a term vastly different from the lease term may not provide a logical starting point for estimating the IBR for the lease.
Therefore, all other things being equal, the IBR estimated for the lease should be lower than the interest rate on the note.

**Prepayment features.** If the reference borrowing includes lessee and/or lessor prepayment options and the lease does not, the effect of those prepayment options on the interest rate of the borrowing should be removed from the estimated IBR. The effect of prepayment options can often be obtained from third-party financial data providers.

**The lease term.** If the lease term differs from the term of the reference borrowing (e.g. a 3-year lease term compared to a 7- or 10-year note, or vice versa), the IBR should be adjusted to reflect the effect on the rate of the different term. It may frequently be the case that a shorter term lowers the applicable interest rate because of the decreased risk to the lender.

**Economic environment.** Both of the following reflect example economic environment considerations:

- *Changes from passage of time.* If the reference borrowing was entered into significantly before the lease commencement date, changes in the economic environment (e.g. changes in the overall interest rate environment) during the intervening period generally need to be considered and adjusted for.

- *Different economic environment.* The discount rate for a lease must consider the economic environment in which it was entered into. If there are differences between the economic environment in which the lease is entered into and the economic environment of the market in which the lessee entered into its reference borrowing, those economic differences must be accounted for. For example, prevailing interest rates or other borrowing costs in one country or region may not be the same as those in another country or region.

**Foreign currency.** Consistent with the requirements in Topic 840 for leases that will be paid in a foreign currency, a lessee should use an IBR that reflects the interest rate at which it could borrow in that foreign currency. If the interest rate it would pay to borrow in the currency of the lease differs from the rate at which it could borrow in the currency of the reference borrowing, an adjustment generally needs to be made.

**Lessee renewal options.** If a lessee elects an accounting policy to consider its ability to renew/extend the lease in determining its discount rate for the lease, unless the reference borrowing also includes similar renewal/extension options, the lessee will need to consider that difference between the reference borrowing and the lease when making adjustments to the IBR.

**Credit spread added to a risk-free rate**

The preceding section describes how and why the IBR used as the discount rate for a lease may differ from the interest rate on an outstanding lessee borrowing. The process of estimating the IBR is frequently considered in that manner.

However, procedurally, a lessee may not start from a reference borrowing and adjust that rate up or down to arrive at an appropriate IBR. As illustrated in the Example, it may instead be that the lessee will use relevant market and other indications to arrive at a credit spread, which it will then add to an appropriate risk-free rate. The appropriate risk-free rate plus the calculated credit spread will equal the IBR to be used as the discount rate for the lease.

**Lessee’s debt is not publicly traded or lessee has no outstanding debt**

The Example includes scenarios where (1) the lessee’s debt is not publicly traded and (2) the lessee has no outstanding debt. A lessee’s process for estimating its IBR in either of those scenarios will likely differ from that of a lessee whose outstanding debt is publicly traded.

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4. A credit spread is the difference in yield between a US Treasury bond and another debt security with the same maturity but of lesser quality.
Use of a parent or group incremental borrowing rate

In general, the IBR is that of the lessee in the lease, based on its own credit standing. However, it may be acceptable for a subsidiary that is the lessee in a lease to use the IBR of its parent (or consolidated group) as the discount rate for a lease.

The basis for conclusions to ASU 2016-02 states this might be appropriate when the subsidiary does not have its own treasury function (i.e. all funding for the group is managed centrally by the parent company) and the negotiations with the lessor result in the parent company providing a guarantee of the lease payments to the lessor. In that case, the pricing of the lease is more significantly influenced by the credit standing of the parent than that of the subsidiary. [ASU 2016-02.BC201]

However, we do not believe the parent must guarantee the lease payments for the subsidiary to use the parent (or group) IBR. Example 2 in Subtopic 842-20 concludes that the subsidiaries in the example should use the parent’s IBR because the treasury functions of the group are conducted centrally (i.e. by the parent, rather than by each subsidiary) such that the pricing of the lease was influenced by the group’s credit standing and profile, rather than that of the subsidiaries entering into the leases. [842-20-55-18 – 55-20]

Considering both the guidance in Topic 842 and the associated basis for conclusions to ASU 2016-02, we believe Topic 842 establishes a principle that use of the parent (or group) IBR is appropriate if the credit standing and profile of the parent (or group) more significantly affect the pricing of the lease than the credit standing and profile of the subsidiary entering into the lease.

Portfolio approach

In some circumstances, the discount rate guidance in Topic 842 can be applied to a portfolio of leases, rather than on a lease-by-lease basis. This approach was not specifically permitted under Topic 840, and the change may streamline the accounting for leases that qualify. [842-20-55-18 – 55-20; ASU 2016-02.BC120 – BC121]

Some entities will be able to use a portfolio approach in determining the discount rate for leases with similar characteristics if doing so would not materially affect the accounting for those leases to which the single discount rate is applied. This material effect assessment does not require a quantitative evaluation, but must be supported. Applying a portfolio approach in determining the discount rate may alleviate some of the concerns entities may have about determining (and documenting the basis for) a separate rate for every lease.

From a practical standpoint, a company may be able to document which discount rate to apply for certain portfolios of leases, considering characteristics such as underlying asset type, lease term and geographic location. It could then apply a discount rate to a portfolio of leases with similar characteristics. The company would need to design controls around portfolio discount rates to ensure that the portfolio discount rates are only applied to leases with similar characteristics and that the rates are updated periodically based on changes in the interest rate environment and other relevant factors.

Internal control considerations

The fully collateralized interest rate that a lessee could secure for the lease payments may not be reflected in actual rates used by a company to finance business transactions. This may result in the need to modify existing procedures or establish additional processes to derive a reasonable rate. Entities will need to establish internal controls over any new procedures, processes, estimates or judgments used by management to determine the appropriate IBR.

5. See section 5.8 on the portfolio approach in KPMG’s Handbook, Leases.
**Example**

Lessee estimation of incremental borrowing rate

Topic 842 does not provide specific guidance for estimating the incremental borrowing rate (IBR) for a lease. Therefore, the following example is not necessarily the only acceptable method for doing so, and the adjustments illustrated may not be the only adjustments that a lessee may need to consider.

**Background**

In January 20X9, Lessee (LE), a US public business entity, enters into an airplane lease with Lessor (LR), a Japanese entity. The lease has a non-cancellable term of 10 years with an option for LE to renew the lease for an additional 5 years. At lease commencement, it is not reasonably certain that LE will exercise the renewal option.¹ LE agrees to pay LR ¥40 million (Japanese Yen) per year in arrears for the right to use the airplane.

The rate implicit in the lease is not readily determinable. Therefore, LE needs to estimate and use its IBR as the discount rate for the lease.

**Effect of LE renewal options**

LE has made a policy election not to consider lessee options to extend the lease it is not reasonably certain to exercise when estimating the IBR for its leases. If LE were to do so, this would affect its IBR estimation. Additionally, this means that if the lease term subsequently changes for this lease with LR, LE’s discount rate for the lease will be updated when remeasuring the lease.²

**Observable starting points**

LE has a corporate BBB credit rating, and has had that same credit rating for the past 5 years.

In addition, LE has two borrowings outstanding:

- A short-term revolving credit facility with a maximum draw down of $45 million paying a floating interest rate of LIBOR plus 175 basis points, payable quarterly, secured by the receivables and inventory of LE.
- A 15-year $50 million senior, unsecured note, issued in February 20X6, with a fixed interest rate of 5.12% per annum. Interest is payable semi-annually and principal is repaid at maturity. The senior note is prepayable by LE without a penalty.³

**Note:**

a. It may be the case that an entity’s unsecured debt is or is not actively traded. This example considers cases where LE’s unsecured debt is and is not traded.

**Estimating LE’s incremental borrowing rate (IBR)**

In estimating the IBR for its airplane lease with LR, LE considers the ASC 842 definition of IBR and, correspondingly, estimates the rate of interest that it would have to pay on a fully-collateralized basis to borrow an amount equal to the total lease payments (¥400 million), repaid in equal payments over 10 years, as of the lease commencement date (Estimation Date).

In the absence of a borrowing that directly matches the requirements of the IBR definition, LE will use its own borrowings and market reference points to estimate the IBR. LE considers observable inputs as of the Estimation Date including its credit rating, existing borrowings and other relevant borrowing rates, such as risk-free rates like the US Treasury rate or the Japanese Government Bond rate.

LE notes that none of those observable inputs provide an appropriate IBR without adjustment. Use of an unadjusted risk-free rate is not appropriate as a practical expedient because LE is not a nonpublic entity.

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¹. See section 5.2 in KPMG’s Handbook, *Leases*.  
³. See section 5.2 in KPMG’s Handbook, *Leases*.
business entity. In addition, the risk-free rate is not an appropriate proxy for LE’s IBR because LE’s credit rating implies a substantially higher borrowing rate than the risk-free rate.

Common items for which adjustments to observable market reference points may be necessary include the following (not exhaustive):

— the effect of prepayment or other options in reference debt yields (when such options do not exist in the lease);
— the effect of security or collateral (e.g. when the market reference point is the pricing of an unsecured borrowing);
— level payment (amortizing) structure (versus a structure that repays all of the principal at maturity);
— lease term (e.g. if shorter or longer than the term(s) of the lessee’s existing borrowing(s)); and/or
— lease payments denominated in a currency different from the currency of the lessee’s existing borrowings or other market reference points.

For this lease, items for LE to consider include the following.

— LE’s senior unsecured borrowings:
  — have prepayment options; and
  — are not secured or collateralized.
— LE’s borrowings and the risk-free rates identified repay principal at the end of the borrowing period, rather than over the borrowing period.
— LE’s borrowings are for terms that differ from the 10-year lease term.
— None of LE’s borrowings are in Japanese Yen.
— LE’s borrowings (and the rates reflected in those borrowings) were obtained significantly before the lease commencement date.

Subject to materiality, LE must make an adjustment from one or more of its observable reference points to arrive at an appropriate IBR for each of the above items. Judgment will be needed in estimating the effect of each adjustment. LE may require assistance from qualified treasury or valuation specialists.

**Scenario 1 – LE unsecured debt is publicly traded**

After considering available observable market inputs, LE decides that information about its 15-year senior unsecured notes provides the best starting point (or basis) for estimating its IBR for the subject lease. If a traded market indication reflecting this LE unsecured debt is available as of the Estimation Date, it must be considered, as it will have a yield observation that reflects current market conditions (see Step 1 below).

LE concludes that its revolving credit facility reflects a borrowing that is too short-term to be adjusted to the lease term and may or may not reflect a current market spread over LIBOR for LE. Risk-free rates do not reflect LE’s borrowing rates.

Given the choice of starting point, LE takes the following steps to estimate the IBR. In this case, LE decides it will estimate an appropriate credit spread (Steps 1-4) and add that to an appropriate risk-free rate (Step 5) to arrive at its IBR.
<table>
<thead>
<tr>
<th>Step</th>
<th>Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong>: Estimate a credit spread reflecting the credit worthiness of LE.</td>
<td>Because the senior unsecured debt is traded, an indication of the credit spread for the debt as of the Estimation Date that removes the effect of prepayment options can be obtained directly from third-party financial data providers.</td>
</tr>
<tr>
<td><strong>Step 2</strong>: Adjust the credit spread for payment structure.</td>
<td>The credit spread obtained from third-party financial data providers represents the spread appropriate for a series of interest payments over 12 years (the remaining life of the unsecured note given that it was issued in 20X6 and the Estimation Date is 20X9) and then repayment of the principal at the maturity date. The payment structure of the note does not reflect repayment of principal over its term; therefore the credit spread should be adjusted to reflect the credit worthiness of LE assuming this repayment structure. This adjustment lowers the credit spread, as payments returning cash to the lender sooner reduce lender risk.</td>
</tr>
<tr>
<td><strong>Step 3</strong>: Adjust the credit spread for the effect of security or collateral.</td>
<td>The duration-adjusted credit spread reflects an unsecured borrowing. An adjustment should be made to reflect security (or collateral). Adding security (or collateral) to an unsecured note decreases the credit spread, leading to a lower overall IBR when added to the risk-free rate in Step 5.</td>
</tr>
<tr>
<td><strong>Step 4</strong>: Adjust for the term of the lease.</td>
<td>The unsecured note credit spread, adjusted in Steps 1 through 3 must be further adjusted to reflect a maturity similar to the 10-year lease term.</td>
</tr>
<tr>
<td><strong>Step 5</strong>: Add risk-free rate.</td>
<td>The credit spread, adjusted for Steps 1 through 4, is added to a level payment adjusted risk-free rate with a 10-year tenor. Because the lease payments are in Japanese Yen, a Japanese sovereign yield is used in this step (i.e. rather than, for example, a US Treasury rate). The credit spread added to the level payment adjusted risk-free rate is the estimated IBR for the lease in this example.</td>
</tr>
</tbody>
</table>

Notes:

b. Quantifying the effect on the IBR (e.g. in terms of basis points to add or deduct from the rate being calculated) – will be specific to the facts and circumstances, and may require the assistance of qualified treasury/valuation specialists.

c. Although not the general case, in some markets there is evidence that translation of the spread may be warranted. This can be apparent when an issuer issues bonds with the same terms, on the same day in two different countries, but the par interest rate is different. In these cases, consultation with a specialist may be advisable.

**Scenario 2 – LE unsecured debt is not publicly traded**

It is common that entities estimating their IBR have privately-held debt or no debt. In this case, if the entity has a credit rating that is current as of the Estimation Date, the rating may be used to obtain generic market yields or spreads from third-party financial data providers to perform Step 1.

If no credit rating is available, it is possible to use the interest rate on LE’s debt as of the issuance date in 20X6 to imply a credit rating by obtaining the generic credit rating curve with a yield at the maturity of the unsecured debt that is closest to the interest rate of the unsecured note (5.12%). If it is reasonable to assume no changes to LE’s credit position, the generic rate available for this credit rating at the Estimation Date may be a good starting point for Step 1. If there is no way to determine whether there have been changes to LE’s credit profile, then establishing a synthetic (or shadow) credit rating may be required (see Scenario 3).

Once Step 1 has been completed, the remaining steps are substantially the same as those outlined in Scenario 1.
Scenario 3 – LE has no issued debt

If LE has no outstanding borrowings, a synthetic credit rating as of the Estimation Date will need to be developed. A synthetic credit rating is an internally generated rating based on factors that a credit rating agency (or similar) would typically analyze when establishing an entity’s credit rating. This synthetic credit rating may be estimated (e.g. by a third-party specialist) or potentially provided by a bank. Once a rating is estimated, it can be used to obtain relevant, comparable market information, such as market implied credit spreads for entities with a similar credit profile or yields at the Estimation Date. These observable market indications may be a good starting point for Step 1.

Consistent with Scenario 2, once Step 1 has been completed, the remaining steps are substantially the same as those outlined in Scenario 1.

For further information

For more information about the discount rate requirements and portfolio approach in Topic 842, see sections 5.6 and 5.8 of KPMG’s Handbook, Leases.

This document is part of a series to highlight implementation issues that are discussed in KPMG’s Handbook, Leases.