

Financial Services Industry Spotlight — Special Edition

Fed Funds as a Benchmark Interest Rate

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The Bottom Line

In existing fair value hedges that use LIBOR-indexed swaps, ineffectiveness in long-haul hedging strategies will continue as a result of the application of one discount rate to value the hedging instrument and another to value the hedged item.

- Many financial institutions with large and diversified collateralized derivative portfolios have adjusted their valuation methods to reflect discounting that is consistent with the agreed collateral rate defined in the credit support annex (CSA)¹ of their International Swaps and Derivatives Association (ISDA) master agreement. For collateralized portfolios that are denominated in U.S. dollars, the most commonly agreed-on collateral rate is the Fed Funds effective swap rate — also known as the overnight index swap (OIS) rate — which is driving the move toward discounting that is based on the OIS curve.
- The recent shift in market preferences and the evolution of valuation techniques prompted the Emerging Issues Task Force (EITF or the “Task Force”) to deliberate, and the FASB to ultimately issue, [ASU 2013-10](#),² which prospectively includes the Fed Funds effective swap rate as an additional benchmark interest rate that may be used for hedge accounting under U.S. GAAP.
- ASU 2013-10 will not cure all instances of hedge ineffectiveness. For example, in existing fair value hedges that use LIBOR-indexed swaps, ineffectiveness in long-haul hedging strategies will continue as a result of the application of one discount rate to value the hedging instrument and another to value the hedged item.
- OIS discounting affects not only a financial institution’s accounting but also its trading, risk management, and operations (i.e., its front, middle, and back offices). The scale of the challenges those offices face will depend on the complexity of the portfolio and the size and sophistication of the financial institution.

¹ A CSA is a common contract between two counterparties that governs, among other things, the posting of collateral. The counterparties’ collateralized trades should be discounted at the agreed collateral rate. An institution may need to consider a CSA’s specific terms to ensure an accurate valuation of the counterparties’ derivative contracts.

² FASB Accounting Standards Update No. 2013-10, *Inclusion of the Fed Funds Effective Swap Rate (or Overnight Index Swap Rate) as a Benchmark Interest Rate for Hedge Accounting Purposes* — a consensus of the FASB Emerging Issues Task Force.

Beyond the Bottom Line

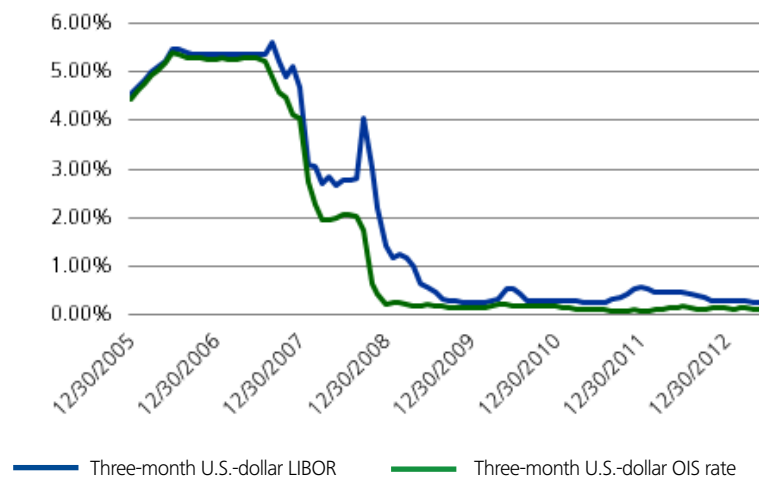
This *Financial Services Industry Spotlight* discusses ASU 2013-10 and its related hedge accounting challenges as well as the operational complexities entities may face as a result of the effects of the OIS rate on derivative valuation.

Background

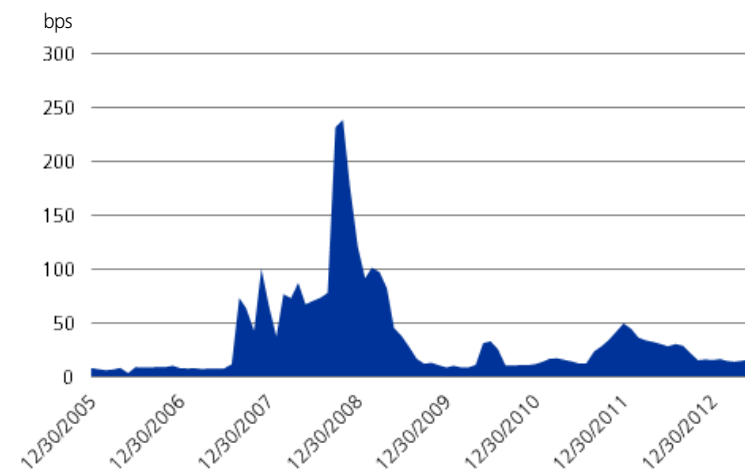
Historically, financial institutions with large and diversified collateralized derivatives portfolios have generally used the London Interbank Offered Rate (LIBOR)³ as (1) the referenced rate in derivative instruments hedging interest rate risk (e.g., fixed-for-floating interest rate swaps) and (2) the basis for discounting cash flows of various derivative instruments (e.g., “plain vanilla” instruments) to measure fair value. However, since the 2008 financial crisis, their practice has largely shifted to incorporating the collateral rate defined in the CSA of their ISDA master agreement (typically OIS) in the valuation of collateralized derivatives to acknowledge the spread differential between LIBOR and the OIS rate.

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Historical Three-Month U.S.-Dollar LIBOR and OIS Rate



Historical U.S.-Dollar LIBOR-OIS Spread



³ LIBOR represents the interest rate at which a bank can borrow funds on the interbank market. It is calculated each day by the British Bankers' Association (BBA), to which major financial institutions submit their cost of borrowing unsecured funds for 15 periods of set duration (e.g., three months or six months) in 10 currencies. Beginning in early 2014, NYSE Euronext will assume responsibility for the daily LIBOR calculation.

ASU 2013-10 is required to be applied prospectively for qualifying new or redesignated hedging relationships entered into on or after July 17, 2013.

This change in practice has resulted in the exposure of counterparties to OIS rates, even on collateralized derivatives that are LIBOR-based (i.e., indexed) instruments. Such exposure, in turn, has led to potential ineffectiveness in certain hedging relationships (see detailed discussion below). This trend is expected to continue in light of derivative clearing requirements introduced by the Dodd-Frank Wall Street Reform and Consumer Protection Act and the Basel III regulatory framework issued by the Basel Committee on Banking Supervision.

Given the potential shift of market preferences toward Fed Funds-indexed products and the shift of valuation techniques toward OIS discounting, the EITF engaged in a project to assess whether the OIS rate should be included as a benchmark interest rate for hedge accounting purposes under ASC 815.⁴ The FASB's issuance on July 17, 2013, of ASU 2013-10 ratified the Task Force's consensus to allow the Fed Funds effective swap rate to serve as a benchmark interest rate in the United States. Therefore, it is important for entities and their auditors to understand the financial reporting and accounting implications of derivatives that are referenced to, or affected by, the OIS rate.

Fed Funds as a Benchmark Interest Rate

Before the issuance of ASU 2013-10, entities were precluded under U.S. GAAP from using the Fed Funds effective swap rate as a "benchmark interest rate," which ASC 815 defined as either (1) a rate on direct obligations of the U.S. Department of the Treasury (UST) or (2) the LIBOR swap rate. The inclusion of the OIS rate as a third option is expected to give risk managers greater latitude in designating a benchmark interest rate risk component, which serves as a proxy for the theoretical risk-free rate under the hedge accounting guidance in ASC 815.

The ASU is required to be applied prospectively for qualifying new or redesignated hedging relationships entered into on or after July 17, 2013.

Accounting Challenges

Before ASU 2013-10, an entity's risk managers could use a Fed Funds-indexed derivative; however, the entity would be required to hedge the "total interest rate risk" and could not isolate the variability in the Fed Funds effective swap rate. Although the hedging relationship could be highly effective, it would most likely have some amount of ineffectiveness that would affect earnings. Some financial institutions were reluctant to enter into OIS-based derivatives because they would have to prove that under ASC 815 the hedges were highly effective (i.e., the changes in the value of a derivative closely matched the changes in the designated risk of a hedged item).

Even with the introduction of the OIS as a third benchmark interest rate, risk managers face numerous front-, middle-, and back-office challenges.

Hedge Ineffectiveness

Fair Value Hedges

Entities may have hedging relationships that use derivative instruments with LIBOR as the indexed rate. The Fed Funds rate, however, is usually the most appropriate discount rate for the fair value measurement of collateralized derivatives. Although ASC 815 does not prescribe a rate to use to discount the hedged item, it does contain two fair value hedge examples that use the designated benchmark interest rate as the basis for discounting. Accordingly, while it is permissible for entities to use OIS discounting for the *hedging instrument* in a fair value hedge of interest rate risk, it would not be permissible for them to do so for the *hedged item* if the hedged benchmark is something other than OIS (e.g., LIBOR). This use of different discount rates to value the hedging instrument and the hedged item may create additional ineffectiveness in the hedging relationship that will be recorded in earnings. Moreover, in some circumstances, it could cause a hedging relationship to be less than highly effective, thereby requiring the discontinuation of hedge accounting.

⁴ For titles of *FASB Accounting Standards Codification* (ASC) references, see Deloitte's "Titles of Topics and Subtopics in the *FASB Accounting Standards Codification*."

Example

Company ABC recently borrowed \$125 million from Bank Z. The note is due in full in 10 years, with interest payable each quarter at 4.5 percent per year. Bank Z executes a \$125 million pay-fixed-receive-floating interest rate swap (based on the three-month LIBOR) that is collateralized. Bank Z designates a fair value hedge on the full amount of the loan, with the three-month LIBOR as the referenced benchmark. Because the swap is collateralized, the most appropriate discount rate is the OIS rate.

After three months, the interest rate swap (using an OIS-based discount) has a fair value of \$227,000. However, the change in fair value of the loan (using a LIBOR-based discount) is -\$222,500. Because the swap is a fair value hedge, both the \$227,000 and the -\$222,500 will be recorded in current-period earnings (the \$4,500 of hedge ineffectiveness will be disclosed in accordance with ASC 815-25-50-1(a)(1)). If Bank Z changes its designated benchmark in a new hedging relationship to the OIS rate and the interest rate swap still references three-month LIBOR, ineffectiveness will continue. However, if financial institutions such as Bank Z begin to use Fed Funds-indexed swaps more often, this ineffectiveness would be mitigated if Fed Funds was (1) designated as the hedged risk, (2) the referenced floating rate on the hedging instrument, and (3) the discount rate on the hedging instrument.

Cash Flow Hedges

The issuance of ASU 2013-10 will generally not affect cash flow hedging relationships. As new financial instruments are developed, the number of OIS-referenced products in the marketplace may continue to increase. However, in cash flow hedges involving interest rate swaps that hedge interest rate risk, financial institutions would typically use a single discount rate to measure ineffectiveness on both a hedging instrument and a hedged item. Because the discount rate used for valuing the hedging instrument is also used to discount the hedged cash flows, the use of the OIS rate for discounting future cash flows would be unlikely to cause ineffectiveness or affect net investment hedges significantly.

“Shortcut Method” Implications

The shortcut method described in ASC 815-20-25-102 through 25-111 allows entities to assume no ineffectiveness in a hedging relationship of interest rate risk that uses an interest rate swap, provided that specific criteria are met. This method is most often used when the terms of the swap exactly mirror those of the hedged item and when the hedged item is easily identified (i.e., in a simple hedging relationship). The assumption of no ineffectiveness distinguishes the shortcut method from the “long-haul” approach (i.e., the approach discussed above under which ineffectiveness may result when one discount rate is used on the hedging instrument and another discount rate is used on the hedged item). An assumption of no ineffectiveness minimizes the operational burden of hedge accounting when an entity would otherwise be required to assess hedge effectiveness quantitatively and measure how much ineffectiveness should be recorded in current-period earnings.

Use of the Shortcut Method for a LIBOR-Referenced Swap, Discounted at the OIS Rate, in a LIBOR Benchmark Hedge Before the Issuance of ASU 2013-10

Collateralization in general, and thus using the OIS rate as the discount, does not preclude an entity from applying the shortcut method as long as all other required criteria are satisfied. Further, there is no requirement that an entity assess whether a derivative is collateralized or uncollateralized, or whether a LIBOR or an OIS curve was used to discount it, in determining whether the hedging relationship qualifies for the shortcut method. As a result, the rate that an entity uses to discount the cash flows of the hedging instrument, or the fact that the hedging instrument is collateralized, would not affect the entity’s eligibility to use the shortcut method. The assumption of no ineffectiveness is one of the key differences between the shortcut and long-haul methods of hedge accounting and is unaffected by the issuance of ASU 2013-10.

The issuance of ASU 2013-10 will generally not affect cash flow hedging relationships.

Although ASC 815 generally does not permit hedge accounting for net exposures, it allows such hedge accounting when a subsidiary in a consolidated entity uses an internal derivative to hedge the foreign currency exposure arising from a forecasted borrowing, purchase, or sale or an unrecognized firm commitment.

Use of the Shortcut Method for a LIBOR-Referenced Swap, Discounted at the OIS Rate, in a Fed Funds Benchmark Hedge After the Issuance of ASU 2013-10

Although Fed Funds is now considered a benchmark interest rate and therefore an identifiable hedged risk under ASC 815, the variable cash flows of the hedging instrument are still affected by changes in LIBOR (in this example). Moreover, ASC 815-20-25-104(f) states that one of the criteria for using the shortcut method is that the “index on which the variable leg of the interest rate swap is based [must match] the benchmark interest rate designated as the interest rate risk being hedged for that hedging relationship.” Accordingly, the shortcut method would not apply to a Fed Funds benchmark hedge that uses a LIBOR-referenced swap. Financial institutions could designate this hedging relationship by using the long-haul method; however, doing so would require them to perform the quantitative effectiveness assessment and ineffectiveness measurement discussed in [Fair Value Hedges](#) above.

Use of the Shortcut Method for an OIS-Referenced Swap, Discounted at the OIS Rate, in a Fed Funds Benchmark Hedge After the Issuance of ASU 2013-10

Provided that all of the criteria in ASC 815-20-25-102 through 25-111 have been met, an OIS-referenced swap, discounted at the OIS rate, in a Fed Funds (i.e., OIS) benchmark hedge is eligible for the shortcut method. Thus, the introduction of Fed Funds as a benchmark interest rate may increase the liquidity of OIS-referenced interest rate swaps because financial institutions are more likely to use them in their risk management activities. Entities should evaluate the specific terms of financial instruments related to swaps and hedged items, including the settlement terms, as the financial instruments market continues to evolve.

Central Treasury and Intercompany Hedges

Many consolidated entities use a central risk management or a central treasury function to enter into hedging relationships with their subsidiaries. Although ASC 815 generally does not permit hedge accounting for net exposures, it allows such hedge accounting when a subsidiary in a consolidated entity uses an internal derivative to hedge the foreign currency exposure arising from a forecasted borrowing, purchase, or sale or an unrecognized firm commitment. To achieve hedge accounting at the consolidated entity level, central treasury would enter into a derivative with a third party on behalf of the subsidiary. Simultaneously, central treasury would execute an “offsetting” derivative with the subsidiary as the counterparty — in effect, passing the exposure to the external transaction from central treasury to the subsidiary.

In documenting such a transaction, a financial institution must consider the impact of credit risk on the fair value of a designated hedging derivative when it assesses the effectiveness of its fair value hedges. Even if the financial institution performs a qualitative analysis that supports a conclusion that the effect of credit risk on hedge effectiveness is not significant, there may be circumstances in which the external transaction is collateralized and discounted at the OIS rate but the internal derivative is not collateralized and is discounted at, say, LIBOR. Such a situation may introduce earnings volatility for central treasury (i.e., in the stand-alone financial statements) since the change in fair value of the two derivative instruments will not exactly offset.

Even entities that do not use hedge accounting could be affected by the shift to the OIS rate for valuing collateralized derivatives. The magnitude of this effect would typically depend on the complexity of the portfolio and the size of the institution.

Required Disclosures

ASU 2013-10 does not add to the disclosure requirements in ASC 815-10-50, under which entities must provide extensive qualitative and quantitative information about derivatives and hedging activities, primarily regarding underlying risk and accounting designation. For example, qualitative disclosures include (1) how and why an entity uses derivative instruments, (2) how derivative instruments and related hedged items are accounted for under ASC 815, and (3) how derivative instruments and related hedged items affect the entity's financial position, financial performance, and cash flows. Quantitative disclosures, the requirements for which are fairly detailed, include a description of the volume of derivative activity. Although no specific format is prescribed and entities must tailor their disclosures to their specific situations, LIBOR-, UST-, and overnight-interest-based swaps could each be viewed as a different class of financial instrument that may therefore yield separate disclosures.

In addition, ASC 820 requires disclosures related to fair value. In particular, financial institutions may need to establish a process for determining the fair value hierarchy of derivatives when the OIS rate is an input. They should also adequately consider liquidity of the OIS curve in the currency of the derivative throughout the entire term structure. For example, management should consider whether the requirement to disclose a fair value measurement with OIS discounting extends to maturities longer than those for which OIS rates are actively quoted. In such cases, the fair value measurement may be a Level 3 measurement that requires additional disclosures.

Operational Challenges

Derivative Valuation

Even entities that do not use hedge accounting could be affected by the shift to the OIS rate for valuing collateralized derivatives. The magnitude of this effect would typically depend on the complexity of the portfolio and the size of the institution.

In making the transition to the OIS rate, an institution would typically start by categorizing the types of CSAs it has with its counterparties for various classes of derivatives. Under the "standard" CSA (on which quoted par swap rates are premised, for example), (1) bilateral cash-equivalent collateral is posted daily in U.S. dollars, (2) there is no threshold for posting, and (3) interest is paid to the party posting collateral at the OIS (Fed Funds) rate. This standard CSA is the base case for OIS discounting. However, the institution may have CSAs that deviate from the standard, such as those that offer a choice of collateral currency or permit securities-based collateral. Nonstandard CSAs may require the institution to develop discount curves for each generic CSA category (e.g., a unique, cheapest-to-deliver discount curve for situations in which cash collateral may be denominated in either U.S. dollars or euros). Alternatively, some CSAs may permit only unilateral collateral posting or have collateral thresholds, in which case the institution will need to consider credit value adjustments (CVAs) when valuing its derivatives.

Another important consideration in the valuation transition process is the complexity of the product type. Typically, single-currency swaps would occur in the initial phase of the institution's transition process and nonswap products in later phases. For example, for option products such as swaptions, institutions would need to consider potential changes in inputs, such as volatility.

Further, the CVA measurement for uncollateralized derivatives may also be changing such that the valuation based on OIS discounting would be considered the no-default valuation base and the CVA calculation would be layered on it.

Management should proactively engage in dialogue with third-party providers to (1) prepare for any wholesale changes to the providers' valuation method, (2) ensure an effective transition to OIS discounting, and (3) limit changes in valuation to specific derivative products, as desired.

There will most likely be significant changes to margin requirements and collateral management as financial institutions begin centrally clearing their derivatives, because many centrally cleared trades must be fully collateralized. Most central counterparty clearing houses (CCPs) have adopted the OIS rate in their valuation methods and therefore use it to calculate the margin requirements for their customers. Customers that have not yet switched to the OIS rate for their own valuations will need to address differences in the fair value measurement of counterparty statements and internally derived valuations used for financial reporting and hedge effectiveness. CCP customers are required to pay a periodic variation margin that is based on the clearing house invoices, and some entities have considered using the counterparty marks in their external reporting. However, other entities choose to continue using in-house valuations that refer to LIBOR while management monitors the impact of such variations by (1) benchmarking the results and (2) adopting a consistent approach to avoid inconsistencies in valuation between reporting periods.

When measuring fair values, financial institutions may need to reconsider their exit price under ASC 820 and determine whether to base it on the OIS rate as more and more brokers switch to using OIS as the reference interest rate index. Such an analysis could help those institutions decide when it is appropriate to change over to OIS for their internal valuations. Regulators, including the SEC, remain focused on fair value measurements and disclosures. Because these can be complex and may require the use of significant judgment, financial institutions may wish to engage professionals to help them determine whether (1) a given market has shifted from LIBOR discounting to OIS discounting for a particular collateralized derivative and (2) this analysis should be revisited in subsequent reporting periods.

Third-Party Vendor Pricing Considerations

Financial institutions that outsource derivative valuation to third-party vendors and rely on other third-party providers for hedge accounting effectiveness assessments and measurements must carefully consider the implications of a switch to OIS-based pricing throughout their portfolio. The third-party providers may be inclined to switch clients to the OIS rate for all derivative products (i.e., both collateralized and uncollateralized positions), and financial institutions may need to assess whether such a change aligns with their own risk management strategies (e.g., an OIS-based pricing for noncollateralized trades may not be appropriate). Further, OIS-based pricing provided by a third-party vendor may result in unforeseen difficulties for in-house pricing validation processes. Management should proactively engage in dialogue with third-party providers to (1) prepare for any wholesale changes to the providers' valuation method, (2) ensure an effective transition to OIS discounting, and (3) limit changes in valuation to specific derivative products, as desired.

Upon switching to the OIS rate for pricing complex derivative instruments (e.g., nonlinear interest rate structures with optionality, such as swaptions, caps, and floors), entities should be particularly vigilant in obtaining volatilities or pricing from brokers and vendors since it may not be clear whether the third party already adjusted the volatility for the OIS rate. The volatility will need to be adjusted in tandem with the change in the observable interest rate used in such valuation. Management will need to understand the extent to which dealer quotes are based on the OIS rate and adjust the valuation accordingly if the rate is not reflected in the valuations the vendors have provided.

Thinking Ahead

The effect of Fed Funds continues to expand as a result of both the release of ASU 2013-10 and the shift in valuation methods stemming from the collateralization of derivative instruments. In addition to accounting challenges, financial institutions will experience those related to their transactional, risk management, and operational approaches depending on (1) the complexity of their derivative portfolio and (2) the size and sophistication of the financial institution. They should therefore consider:

- Whether the availability of Fed Funds as a benchmark interest rate would affect the application of hedge accounting by causing the entities to elect the OIS rate as the referenced hedged risk. If ASU 2013-10 results in an increase in derivative products that use Fed Funds as the referenced interest rate, such a change could help entities by more closely mirroring their own cost of borrowing.
- Whether a move to OIS discounting for a portion of their entire derivative instrument portfolio should be made in light of (1) recent market shifts, (2) the need to procure new data sources, and (3) the potential need for changes in the processes and controls associated with the entities' internal financial reporting.
- Whether their accounting, valuation, and risk management information systems (and related internal controls and processes) are equipped to handle OIS discounting.
- Whether third-party vendors have changed their valuation methods to reflect OIS discounting, and what implications this may have on economic and accounting hedging relationships.

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