Supplemental Derivative Accounting Guidance

This Farm Credit Administration (FCA) document is a supplement to the EM-61.3 Derivatives Examination Manual section. It provides additional supporting information on the accounting for derivatives. This document is not intended to be a comprehensive guide to derivative accounting. Rather, this document is intended to provide examiners with a sufficient overview to evaluate related controls and processes.

Overview

Accounting Standards Codification (ASC) 815 requires that all derivatives be recognized on the balance sheet at fair value regardless of whether they are designated as a hedge for accounting purposes. Derivative instruments represent rights or obligations that meet the definitions of assets (expected future cash inflows due from another party) or liabilities (expected future cash outflows due to another party). They are reported on the balance sheet as a derivative asset if they have a positive fair value or as a derivative liability if they have a negative fair value. In addition, ASC 820-10-35 requires that fair values of derivatives reported on the balance sheet include a credit valuation adjustment (CVA) or a debit valuation adjustment (DVA) to reflect nonperformance risk.

The application of hedge accounting is elective. ACS 815 permits hedge accounting for hedges of interest rate, market price, credit, or foreign exchange risks. To qualify for hedge accounting, the hedge must be formally designated with supporting documentation establishing the link to a specific asset, liability, or commitment and evidencing the hedge is highly effective at offsetting risk both at inception and on an ongoing basis. The derivative must be designated as a hedge of changes in fair value, cash flow, or net investment in a foreign operation. These hedges, along with the general accounting treatment, are described as follows:

- *Fair Value Hedge (ASC 815-25)* – Derivatives designated as fair value hedges mitigate risks related to changes in the fair value of the hedged item. For example, a fixed-rate financial instrument exposes the institution to the risk of changes in the financial instrument's fair value because of its fixed terms. A swap that converts the instrument to a variable rate could be accounted for as a fair value hedge. Under this accounting method, changes in the fair value of the derivative and the investment are both recognized in current period earnings in the same income statement line item (e.g., interest income, interest expense). Since these valuation changes will largely offset each other, only the ineffective portion of the hedge (the extent that valuation gains and losses do not offset) actually affects earnings.

- *Cash Flow Hedge (ASC 815-30)* – Derivatives designated as cash flow hedges mitigate risks related to volatility in the hedged item's cash flows. For example, a variable-rate asset or liability exposes the institution to changes in interest payments because of its variable terms. A swap that converts the instrument to a fixed rate would be accounted for as a cash flow hedge. Under this accounting method, the goal is to link the income statement recognition of a derivative with the hedged item so that changes in cash flows are offsetting. To achieve this offset, the change in fair value of the derivative is initially reported as other comprehensive income and later reclassified into earnings in the same period(s) as the hedged items impact on earnings. This reclassification is reported in the same income statement line item that the hedged item is reported and assumes that cash flows on the hedge instrument offset cash flows from the hedged item.

- *Net Investment Hedge (ASC 815-35)* – A net investment hedge allows an institution to hedge its investment in a foreign operation or subsidiary. This option is not applicable to System institutions.

Foreign currency risk hedges may qualify for hedge accounting. Assets and liabilities denominated in foreign currencies must be reported on the balance sheet based on spot exchange rates. Gains and losses resulting from changes in exchange rates are generally reported in earnings. At System institutions, this risk may be hedged using either fair value or cash flow accounting methods. Accounting processes are largely the same as for hedges of other risks (e.g., interest rate risk). Foreign currency risk at System institutions primarily results from loans or commitments denominated in foreign currencies.

Establishing a Hedge Relationship

Documentation is a key requirement for hedge accounting. Without upfront supporting documentation, an institution could retroactively identify the hedged item, a hedged transaction, or a method of assessing effectiveness to achieve a desired accounting result (i.e., manipulate reported earnings). In general, documentation for hedges must identify the hedging instrument, hedged item, nature of risk hedged, and method for assessing hedge effectiveness. Documentation must be completed before the end of the quarter of hedge inception. Depending on the hedge accounting method used, ASC 815-20-25 outlines additional required documentation.

While macro hedges do not qualify for hedge accounting, hedging a portfolio may qualify under certain restrictive criteria. All instruments in the portfolio must be similar and share the same risk exposure that is hedged. For fair value hedges, hedge effectiveness is typically measured quantitatively. Changes in the fair value of individual instruments in the portfolio attributable to the hedged risk should respond proportionally to the average change in fair value of the overall portfolio (generally within an 80 to 125 percent range). If an instrument falls outside of this range, it must be excluded from the hedged portfolio. For cash flow hedges, hedge effectiveness is typically measured qualitatively (examples discussed below). Additional restrictions exist if the portfolio contains prepayable assets. Under the portfolio layer method, only the portfolio portion that is not affected by prepayments may be hedged (the fair value of the hedged item is measured as if it is not prepayable).

Hedge Effectiveness

Hedge accounting is permitted only if the hedging relationship is highly effective at offsetting the risk being hedged. The term "highly effective" is not defined in accounting standards but is generally interpreted to mean that the hedge is effective in offsetting 80 to 125 percent of the fair value or cash flows of the hedged item. If this criterion is not met, hedge accounting is not permitted. Hedge effectiveness assessments must be completed at hedge inception and updated at least quarterly thereafter. These periodic assessments must measure effectiveness prospectively (forward looking) and retrospectively (historically). If the hedge fails the effectiveness criteria, it must be removed from hedge accounting.

ASC 815 does not prescribe a specific method for assessing hedge effectiveness but requires a reasonable method based on risk management objectives and the nature of the hedging relationship. To reduce the operational burden of quantitative (long-haul) assessments, ASC 815-20-25 permits the institution to replace quantitative assessments with qualitative assessments if certain conditions are met. A qualitative method may be used both at hedge inception and on an ongoing basis when the critical terms of the hedging instrument and hedged item are perfectly aligned as it relates to the

hedged risk. If not perfectly aligned, the institution must perform an initial quantitative assessment. The subsequent ongoing tests may be qualitative if (1) the initial quantitative test demonstrates the hedge is highly effective and (2) at hedge inception, the institution can reasonably support an expectation of high effectiveness on a qualitative basis in subsequent periods. Subsequent qualitative assessments must be conducted at least quarterly to verify and document that facts and circumstances have not changed, and the hedging relationship remains highly effective. Hedge effectiveness measures should consider CVA and DVA impacts.

Various quantitative and qualitative methods exist for measuring hedge effectiveness. As previously addressed, hedge documentation must identify the method that will be used to assess hedge effectiveness. Examples of methods include the following:

- *Regression* – This quantitative method statistically measures the correlation between changes in the value of the hedge versus the hedged item. This is the most common method and may be used in both cash flow and fair value hedges. The hedge is considered highly effective if the:

    - R-squared value is greater than 0.8,
    - Slope is between 80 and 125 percent,
    - T or F statistic is significant at the 95-percent confidence level, and
    - Regression uses at least 30 data points.

- *Dollar Offset* – This quantitative method measures effectiveness by dividing the change in fair value (or cash flows) of the hedging instrument by the change in fair value (or cash flows) of the hedged item or vice versa. The hedge is considered highly effective if this ratio is between 80 and 125 percent. This approach is simple, but when the change in value or cash flows of the denominator are small, it will more frequently yield a non-highly effective result compared to the regression method. This method may be used in both cash flow and fair value hedges.

- *Shortcut* – The shortcut method is a qualitative method of measuring effectiveness that may be used on interest rate swaps considered perfectly effective. This method eliminates the requirement to conduct a quantitative analysis of hedge effectiveness and requires the institution to only document the derivative and hedged item terms. At hedge inception, the institution must formally document how each of the applicable shortcut criteria listed below are met. Per ASC 815-20-25, this method may be used in both cash flow and fair value hedges. For a hedge to qualify for the shortcut method, it generally must meet the following criteria:

    - Hedge instrument is an interest rate swap.
    - Swap purpose is to hedge interest rate risk.
    - Swap notional amount matches the hedged item's principal.
    - Fair value of the swap at its inception is zero.
    - Swap has a consistent formula for computing net settlements each period.
    - Hedged item is not prepayable.
    - All other terms are typical and do not invalidate the assumption of perfect effectiveness (additional conditions exist).

- *Change in Variable Cash Flows* – A plain vanilla interest rate swap that does not qualify for the shortcut method could qualify for the change in variable cash flows quantitative method if it meets certain criteria. This option is allowed only when the fair value of a swap is zero at hedge inception. Effectiveness is measured by comparing the present value of the cumulative changes

in expected future cash flows on the variable leg of the interest rate swap with the expected future interest cash flows on the variable-rate asset or liability. This method also allows an institution to qualitatively assess hedge effectiveness if the conditions in ASC 815-30-35-22 are met. This method may be used in cash flow hedges but not fair value hedges.

- *Critical Terms Match* – This qualitative option is allowed for forward and futures contracts in hedges of commodity risk or foreign currency risk but not interest rate risk. Under this method, the institution may qualitatively conclude the hedge is highly effective if all critical terms in the hedging instrument and hedged item match. This must be assessed at least quarterly and proven over the life of the hedge. This method may be used in both cash flow and fair value hedges.

- *Terminal Value* – This option, which includes both qualitative and quantitative elements, is allowed for purchased options, net purchased options, and zero cost collars. Effectiveness focuses on the terminal value (i.e., expected payoff at maturity). This method may be used in cash flow hedges but not fair value hedges. In general, the hedge would be considered perfectly effective if:

    - Critical terms match,
    - The strike price matches a specified level beyond which exposure is hedged,
    - Hedging instrument inflows at maturity completely offset transactions cash outflows for hedged risk, and
    - The hedging instrument can be exercised only at contractual maturity.

Discontinuation of Hedge Accounting

For cash flow and net investment hedges that fail hedge effectiveness testing, hedge accounting is generally terminated prospectively as of the date that the relationship last demonstrated high effectiveness. Amounts previously recorded in accumulated other comprehensive income or the cumulative translation account remain there until the forecasted transaction impacts earnings (in the case of a cash flow hedge) or until the net investment position is sold or liquidated (in the case of a net investment hedge). See ASC 815-25-40, 815-30-40, and 815-35-40 for further guidance on the discontinuation of hedge accounting.