End-User Derivatives and Trading Activities

Supplemental Examination Procedures

The following procedures apply to any national bank, federal branch or agency, or federal savings association (collectively, banks) that is an active end-user of derivatives or has significant trading activity. Examiners should perform the minimum scope procedures at least annually and the ongoing monitoring procedures as frequently as indicated. The minimum scope procedures inform the OCC's core assessment of the consolidated company. Based on the minimum scope procedures and the ongoing monitoring procedures, examiners select and perform procedures for tier I dealers, tier II dealers, or active position-takers, as appropriate.

Various procedures reference requirements in the market risk capital rule (MRR).[1] Although the MRR requirements do not by their terms apply to all end-user activities, examiners should treat relevant MRR requirements as minimum standards for market risk management of end-user derivatives.

Minimum Scope Procedures

Objective: To determine whether the bank provides the OCC, the board of directors, and senior management with accurate and timely information regarding end-user derivatives and trading activities.

1. Evaluate the bank's market risk management information system (MIS). Determine whether the

   - MIS produces timely, accurate, consistent, complete, and relevant information.
   - MIS captures all trading activity and all end-user derivatives.[2]
   - risks and other parameters the MIS measures, monitors, and reports are appropriate for the bank and permit effective supervision of end-user derivatives and trading activity.
   - MIS can generate daily reports on the risks and other parameters at the portfolio level, the line-of-business level, and any other level appropriate for effective management or supervision.

[1] 12 CFR 3, appendix B, or 12 CFR 3, subpart F, as appropriate.

[2] For a description of trading positions, see the general instructions to schedule RC-D of the call report and the definition of *trading account* in the call report glossary. End-user positions are positions taken for a purpose other than trading.

2. Obtain copies of reports summarizing and assessing the risks of trading and end-user derivatives activities provided to the board, its risk committee, and its audit committee. Evaluate their adequacy, completeness, and accuracy.

3. Determine whether the bank's processes and systems for identifying, measuring, monitoring, and controlling concentrations and other trading- and derivatives-related risks cover the entire company and are appropriate.

Objective: To determine whether the bank's internal audit function is appropriate for the bank's end-user derivatives and trading activities.

1. Determine whether internal audit effectively challenges business units that enter into end-user derivatives or engage in trading activities. Consider the

   - resolution of deficiencies, weaknesses, and other problems that internal audit has identified.
   - extent to which business units self-identify and correct deficiencies, weaknesses, and other problems before the internal audit unit or regulators identify them.
   - internal audit unit's stature and expertise, particularly expertise in trading activities and derivatives.

2. Evaluate the appropriateness of internal audit coverage of regulatory financial reporting, management of counterparty credit risk, market risk management, valuation control, and model governance functions. In particular, determine whether the internal audit unit

   - at least annually assesses the effectiveness of the bank's internal controls over regulatory financial reporting (for example, the call report), including valuation control functions and controls related to classifying instruments as held for trading or other than trading purposes.
   - at least annually assesses the effectiveness of the controls supporting the bank's systems to measure market risk. This assessment includes the activities of the business trading units and independent risk control unit. In particular, determine whether the internal audit unit reviews the limit-setting process, limit breaches, and responses to breaches.
   - at least annually assesses the calculation of the bank's measures for market risk under the MRR, including any model changes.
   - adequately reviews areas involving end-user derivatives and trading activities that it considers low risk.
   - at least annually reports its findings related to end-user derivatives and trading activities to the bank's board of directors.

If the scope of the internal audit unit's coverage of risks and controls for trading and end-user derivatives activities appears inadequate, or raises questions about the internal audit unit's effectiveness, inform examiners assigned to internal and external audits. These examiners may consider expanding their review of the audit function to determine its effectiveness.

Objective: To evaluate the bank's board of directors' ability to understand and oversee risks related to end-user derivatives and trading activities.

1. Evaluate the competence of the board's risk committee to oversee risks arising from end-user derivatives and trading activity. Consider

    - expertise in risk management of end-user derivatives and trading activity in a complex financial institution (the risk committee should have risk management expertise commensurate with the bank's complexity, activities, size, risk profile, capital, and other risk-related factors).
    - independence from management, considering the factors in 12 CFR 363, appendix A, item 28.

2. Evaluate the appropriateness of the risk committee's involvement in understanding and overseeing risks arising from end-user derivatives and trading activity. Consider

    - whether the internal audit unit reports adverse audit findings related to risk management of end-user derivatives and trading activity to the risk committee.
    - how frequently the risk committee reviews matters requiring attention related to risk management of end-user derivatives and trading activity.
    - the risk committee's working relationships with the bank's key risk managers supervising end-user derivatives and trading activity, such as the chief risk officer for the bank and the chief risk officer for each of its lines of business.
    - the size of the bank and complexity of the bank's risk profile.

3. Evaluate the board's effectiveness in implementing the bank's risk appetite framework (risk appetite statement, risk limits, and an outline of the roles and responsibilities of those overseeing the implementation and monitoring of the risk appetite framework) as it pertains to risks related to end-user derivatives and trading activities. In particular, determine whether the

    - framework allows the board to clearly communicate relevant risk appetites to senior management.
    - board's risk appetite statement clearly communicates the relevant risk appetites using qualitative statements and quantitative measures.

Objective: To determine whether the bank's market risk management policies, processes, and controls help identify risks related to end-user derivatives and trading activities.

1. Evaluate the chief risk officer's ability to monitor the bank's end-user derivatives and trading activities. Consider

    - the chief risk officer's knowledge of derivatives and trading activity in general and as it relates to the bank's activities.
    - the reporting structure of the chief risk officer's organization.

- whether the chief risk officer has an independent, clear communications path to the board of directors.

2. Determine whether the bank has a market risk management function that reports directly to the bank's chief risk officer (or an executive of comparable seniority) and is independent of business and treasury units.

3. Evaluate the effectiveness of the limit structure for each trading portfolio and each portfolio with end-user derivatives. Determine whether

   - the market risk management function establishes the portfolio's limits.[3]
   - senior management reassesses the limits at least annually.
   - the market risk management function monitors compliance with the limits daily.
   - the limits are appropriate for the portfolio, considering whether the limits appropriately detect daily changes and trends in risk (limits should be early-warning indicators, not absolute upper bounds).
   - all material risks are covered.
   - the risk limits are appropriate for the bank's capital position.
   - the market risk management function adequately documents all exceptions to limits and increases in limits.
   - the bank uses MRR risk management metrics (value-at-risk (VaR), stressed VaR, incremental risk charge, comprehensive risk measure) in its risk management process and integrates VaR into its day-to-day risk management.

4. Evaluate market risk management's reports to senior management. In particular

   - determine whether the market risk management function reports at least the following information to senior management daily:[4]
     - an assessment of the bank's ability to hedge position and portfolio risks and measure the extent of market liquidity.
     - business units' compliance with limits established by the risk management function.
   - review a sample of desk-level reports and determine whether they properly convey the desks' risk and performance. Review a corresponding sample of market risk management's reports to senior management and determine whether they properly reflect the desks' risks and performance.

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[3] MRR section 3(b)(1)(iii).

[4] MRR section 3(b)(1)(iv).

5. Evaluate whether the market risk management function effectively challenges business units. Consider

   - frequency of reductions in business unit risk required by risk managers.
   - resolution of disputes among risk managers and business units.
   - resolution of limit breaches.
   - market risk management's expertise and stature.

Objective: To determine whether the bank's valuation policies, processes, and controls produce consistent and reliable valuations of positions.

1. Determine whether the bank has a valuation control function that is independent of business units and is responsible for ensuring valuation of end-user derivatives and trading positions.[5]

2. Obtain the bank's valuation policies that apply to end-user derivatives and trading positions, including policies under MRR section 3(b)(2). Determine whether these policies

   - clearly define the responsibilities of the various areas involved in valuing positions.
   - state how business units should value, in compliance with ASC 820, end-user derivatives and trading positions. Generally, the OCC expects dealing positions to be marked to the middle of the bid/offer spread (before adjustments) and end-user positions to be marked to the less advantageous side of the bid/offer spread (that is, "bid" prices for long positions and "offered" prices for short positions). The OCC also generally expects entities to elect the portfolio exception of ASC 820-10-35-18D for all eligible portfolios and make appropriate fair value adjustments, such as concentration and liquidity adjustments, per MRR section 3(b)(2) and ASC 820-10-35-36B.[6]
   - require the independent valuation control unit to test and adjust, as appropriate, business unit marks.
   - require price-testing procedures to identify and correct systematic bias in the valuation of a given portfolio's positions.
   - describe processes for identifying and valuing thinly traded and mark-to-model positions.

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[5] MRR section 3(b)(2).

[6] ASC 820-10-35-36B prohibits valuation adjustments for level 1 instruments. For level 2 and level 3 instruments, any adjustment (for example, a concentration adjustment) must be based on assumptions that other market participants would use in similar circumstances and must be consistent with the unit of account of the instrument. The unit of account of a financial instrument would be the individual instrument unless the bank has elected the portfolio exception of ASC 820-10-35-18D. The portfolio exception permits a bank to measure, as a single net position, the fair value of a group of financial assets and financial liabilities that the bank manages together on a net basis. In this circumstance, the bank may make a concentration adjustment, based on the size of the net position, to better reflect the value of the net position to the bank.

- describe in detail how the bank treats circumstances in which market data are not believed to be reliable or are otherwise considered non-determinative.
- provide for consistent valuation methodologies and inputs across business units, regions, and asset classes.
- require annual assessment of the quality of market inputs to the valuation process, the soundness of key assumptions, the reliability of parameter estimation in pricing models, and the stability and accuracy of model calibration under alternative market scenarios, per MRR section 3(b)(1)(vi).
- require the use of appropriate valuation inputs. When a price for an identical asset or liability is not observable (that is, for level 2 or level 3 instruments), the policy must require maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs, per ASC 820-10-35-36.

3. Evaluate the valuation control function's effectiveness at ensuring the accuracy of marks transferred to the bank's general ledger. Consider whether the unit

   - verifies market prices and model inputs at least monthly.
   - reports errors and bias in business unit marks.
   - tests business unit marks against the most objective data possible. For example, the valuation control function should prefer independent pricing services to broker quotes.
   - periodically verifies, for each position that the business unit marks to model, that the business unit uses the approved valuation model and not a variation of the approved model or a different model.
   - has sufficient stature and resources to challenge effectively the business unit (in particular, examiners should look for evidence of valuation control marks replacing inaccurate trader marks in the bank's official books and records).

Objective: To determine whether the bank's model governance helps identify risks related to end-user derivatives and trading activities.

1. Determine whether the bank has an independent model control function that reports directly to appropriate senior management and is independent of business units.[7]

2. Determine whether the bank has an official company-wide model inventory and keeps it current. In addition to the information described in OCC Bulletin 2011-12, "Sound Practices for Model Risk Management: Supervisory Guidance on Model Risk Management," the inventory should document

   - for each model, any supervisory approvals that the bank needs, is seeking, or has obtained.

[7] MRR section 3(d)(2).

- for models the bank uses to calculate risk-based capital requirements under the market risk rule, notifications to the OCC regarding
  - extending a model to a new business or product type,[8]
  - any change to a model that would materially change the risk-weighted asset amount for a portfolio, [9] and
  - any material change to the bank's modeling assumptions.[10]

3. For models requiring OCC approval, document, via supervisory letters and a summary list, OCC approvals of each model by business unit and product type. Periodically compare this examiner-generated list to the bank's model inventory, identify differences, and discuss with bank management.

4. Determine whether the model control function documents the bank's compliance with the market risk rule's requirements to obtain OCC approval before using models to calculate risk-based capital requirements.[11]

5. Determine whether the model control function either validates the bank's internal models or reviews business units' validations.

6. Assess whether the model control function effectively challenges business units. Consider the resolution of disputes among model control and business units and the model control unit's expertise and stature.

Objective: To determine whether the bank properly makes the market risk rule's required disclosures.

1. Obtain the disclosures the bank made pursuant to MRR section 12. Determine whether the disclosures

   - contain a senior officer's attestation that the disclosures satisfy MRR section 12.
   - state that the board of directors and senior management are responsible for establishing and maintaining an effective internal control structure over financial reporting, including the disclosures required by MRR section 12.

2. Obtain the bank's policies and procedures regarding disclosures under MRR section 12. Determine whether the policy

   - received approval from the bank's board of directors.

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[8] MRR section 3(c)(2)(i).

[9] MRR section 3(c)(2)(ii).

[10] MRR section3(c)(2)(iii).

[11] MRR section 3(c)(2).

- addresses the associated internal controls and disclosure controls and procedures to ensure that (1) appropriate verification of the disclosures takes place and (2) the bank maintains effective internal controls and disclosure controls and procedures.
- instructs management to make MRR section 12 disclosures in the appropriate U.S. Securities and Exchange Commission filings.
- discusses when an update to the qualitative disclosures under MRR section 12(d) is required (the bank must make these disclosures at least annually but must make more frequent updates for material changes).

Ongoing Monitoring Procedures

Objective: To identify end-user derivatives and trading activity.

1. Regularly identify all trading desks and all portfolios that contain end-user derivatives.

2. No less frequently than quarterly, meet with the management of all units that conduct trading activities or employ end-user derivatives to understand their activity, including

    - history.
    - purpose.
    - transaction types.
    - volumes.
    - risk limits, usage, and other key controls.
    - contribution to earnings.
    - supporting infrastructure.
    - reporting lines.

3. No less frequently than quarterly, identify units that have begun trading or using end-user derivatives. Promptly meet with the management of the relevant unit to understand the unit, including

    - history.
    - purpose.
    - transaction types.
    - volumes.
    - risk limits, usage, and other key controls.
    - contribution to earnings.
    - supporting infrastructure.
    - reporting lines.

4. Monitor the bank’s new product/business approval processes to identify risks from new products, variations of existing products, or from a business unit beginning to trade an established product.

Objective: To identify new or changing risks related to trading activity.

1. For each trading desk, obtain, on a regular basis, information sufficiently granular to review and evaluate the desk's performance and risk measures. Examiners should use judgment to determine the appropriate frequency of reviews, based upon the size and complexity of the trading desk and the bank's trading operations. For large, complex trading desks, daily review is generally appropriate for profit and loss (P&L) reports and limit breaches. Weekly reviews may be more appropriate for assessing risk measures, limit usage, and the results of stress tests. For desks with smaller, less complex portfolios, weekly or monthly reviews may be sufficient. Information examiners should review includes, for example, the following

    - the level and trend of price risk, interest rate risk, and credit risk.
    - trading P&L and P&L attribution.
    - results of stress tests.
    - valuation, including
        - identification of collateral disputes.
        - price-testing results.
        - fair value adjustments.
    - risk and position limits, including
        - the parameter and level of each limit.
        - limit usage.
    - limit breaches, including
        - length.
        - magnitude.
        - approval of the breach.
    - modifications to any limit in the last month.
    - list of approved instruments.
    - notional value of trading derivatives.
    - operational metrics, for example, outstanding confirmations and settlement breaks.

2. Using the information described in the preceding procedure and other relevant information, assess whether the trading activity is consistent with management's intent and risk appetite.

    - Identify and investigate sustained or large breaches of limits.
    - Identify and investigate inappropriate limits.
    - Identify and investigate other material changes or trends in the data, such as unusual gains or losses or large increases or decreases in derivatives positions.

3. Identify the models that the portfolio's trading activity uses, including price and risk models. Determine, by checking the bank's model inventory, if the portfolio is using new models or recently changed models. Investigate any change that materially affected valuation, measured risk, or risk-weighted assets.

    - Obtain the documentation approving the change.

- Obtain documentation explaining the change and the need for the change,
- Consider having examiners with appropriate expertise assess whether the change was reasonable, seeking assistance from other units within the OCC as necessary.
- If the model is subject to the MRR, determine that the bank received all necessary OCC approvals for the change.

4. Determine whether the bank reports trading positions as "trading" in the bank's call report and financial statements.

Objective: To identify new or changing risks related to end-user derivatives activity.

1. For each material portfolio[12] with end-user derivatives activity,[13] obtain, on a regular basis, information sufficiently granular to review and evaluate the portfolio's results. The frequency of such reports varies based on the size and complexity of the bank's end-user derivatives activities. For banks with large, complex portfolios, daily reporting is generally appropriate. For banks with smaller, less complex portfolios, weekly or monthly reporting may be sufficient. Information examiners should review includes, for example, the following

   - the level and trend in price risk, interest rate risk, and credit risk.
   - P&L for end-user derivatives and P&L attribution.
   - valuation, including
     - identification of collateral disputes related to end-user derivatives.
     - price testing results.
     - fair value adjustments.
   - risk and position limits for end-user derivatives activity, including
     - parameter and level of each limit.
     - limit usage.
     - limit breaches, including
       - length.
       - magnitude.
       - approval of the breach.
     - modifications to any limit in the last month.
   - hedging strategy,[14] including
     - acceptable level of price risk for the portfolio.
     - the instruments, techniques, and strategies the bank uses to hedge the risk of the portfolio.

[12] Periodically establish bank-wide materiality thresholds based on notional amount, net exposure, and profit and loss. A portfolio is a material portfolio if it exceeds any one of these thresholds.

[13] For example, mortgage servicing rights, credit hedges, investment portfolios, and asset/liability management portfolios.

[14] As used in these procedures, *hedge* refers to an economic hedge. It is not limited to positions that qualify for hedge accounting.

  - identification of the underlying assets or liabilities hedged.
  - how the hedge lowers the risk of those assets or liabilities.
  - hedge effectiveness and frequency of tests for hedge effectiveness.
  - exit strategy and conditions under which the hedge is unwound.
  - bank personnel authorized to approve termination of the hedge.
- strategy for derivatives that are not hedges, including
  - expected holding period.
  - acceptable level of market and other risks.
  - business objective.
- notional value of end-user derivatives.

2. Using the information described in the preceding procedure and other relevant information, assess whether the end-user derivatives activity is consistent with management’s intent and risk appetite.

   - Identify and investigate large realized or unrealized revenues or losses, changes in notionals, and changes to risk measures attributable to end-user derivatives.
     - For hedges, assess concentrations, hedge effectiveness, consistency with the portfolio’s hedging strategy, integrity of the original hedge assessment, and reasons for realizing profits or losses on hedges.
     - For positions that are not hedges, assess concentrations and consistency with the portfolio’s business objectives.
   - Identify and investigate sustained or large breaches of limits.
   - Identify and investigate inappropriate limits, such as limits on the wrong parameters or limits that are too high.
   - Identify and investigate material changes or trends in the data, such as unusual gains or losses.

3. Identify the models that the portfolio’s end-user derivatives activity uses, including price and risk models. Determine, by checking the bank’s model inventory, if the portfolio is using new models or recently changed models. Investigate any change that materially affected valuation, measured risk, or risk-weighted assets.

   - Obtain the documentation approving the change.
   - Obtain documentation explaining the change and the need for the change, having examiners with appropriate expertise assess whether the change was reasonable, seeking assistance from other units within the OCC as necessary.
   - If the model is subject to the market risk rule, determine that the bank received all necessary OCC approvals for the change.

4. Determine whether the bank reports end-user derivatives as “other than trading” in the bank’s call report and financial statements.

Objective: To determine that the bank addresses promptly matters requiring attention (MRA) related to end-user derivatives or trading activity.

1. For each relevant MRA, assign a date by which the bank must resolve the MRA. The date must require resolution of the matter as soon as practical while providing sufficient time for the bank to resolve the OCC's concern.
2. At least once per quarter, ascertain the status of relevant MRAs. If the bank did not resolve an MRA by its due date, determine why. If the bank provides a persuasive justification, adjust the due date accordingly. Otherwise

   - reflect the failure in the core assessment ratings and the Management CAMELS rating.
   - consult PPM 5310-3 (REV), "Enforcement Action Policy," and take appropriate action.

Objective: To determine that the bank addresses promptly deficiencies and weaknesses related to end-user derivatives or trading activity that internal or external auditors have identified.

1. Determine whether the bank keeps a current list of all relevant deficiencies and weaknesses that internal or external auditors have identified.

2. For each deficiency or weakness, assess whether the bank has assigned a reasonable date by which it must address the deficiency or weakness.

3. At least once per supervisory cycle, ascertain the status of these deficiencies and weaknesses. If the bank did not resolve a deficiency or weakness by its due date, determine why and evaluate whether the failure to resolve the deficiency warrants a supervisory response.