



EM-61.3

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Overview

The *Derivatives* topic provides guidance on evaluating derivatives at Farm Credit System (System) institutions. This evaluation includes assessing the risks related to derivative activities and processes for managing risks. This guidance applies to all banks, associations, and service corporations that engage in derivative activities.

For purposes of this guidance, a derivative is a financial instrument or contract that meets the definition in the [Accounting Standards Codification](#) (ASC) 815-10-15-83 through 15-139 and contains all the following characteristics:

- Has one or more underlying variable and notional amount or payment provision. The underlying and the notional amount or payment provision determine how much must be paid to settle the derivative.
 - An underlying is a variable, not an asset, that either: (1) is multiplied by the notational amount to determine how much is to be paid at settlement or (2) triggers a payment provision. For example, the underlying may be an interest rate, exchange rate, index, security or commodity price, or the occurrence or nonoccurrence of a specified event. The underlying and either the notional amount or payment provision work in tandem to determine the settlement amount in a derivative. (ASC 815-10-15-88)
 - The notional amount is the factor by which an underlying is multiplied to determine the settlement amount. The notional amount may be a number of currency units, shares, bushels, pounds, or any other unit of measurement specified in the derivative. The notional amount may be referred to as the face amount or another term. (ASC 815-10-15-92)
 - A payment provision specifies a fixed or determinable settlement to be made if some specified event occurs. (ASC 815-10-15-93)
- Requires no initial net investment or an initial net investment that is smaller than the notional amount. In either case, the net investment is smaller than would be required for other contract types (e.g., cash market contracts) that would have a similar response to the same changes in market factors. For example, a swap either does not require an initial net investment or requires a net investment much lower than the notional amount if the terms favor one party over the other.

- Requires or permits net settlement. Net settlement is generally defined as a one-way transfer of an asset, usually cash, from the counterparty in a loss position to the counterparty in a gain position.

Examples of derivative instruments include swaps, options, futures, and forward contracts. Examples of financial instruments that are not derivatives include regular-way security trades, normal purchases and sales, loan commitments, and financial guarantees. For example, a regular-way purchase of a mortgage-backed security is not considered a derivative.

Examination Procedures and Guidance

Derivatives Risk

1. Portfolio Characteristics & Trends:

Evaluate characteristics and trends in derivatives, including composition and purposes.

Guidance:

A general understanding of the derivative portfolio's characteristics and trends is necessary to evaluate the level of risk exposure and the impact on the institution's overall risk profile. Although several factors may be considered when evaluating overall portfolio characteristics and trends, the primary factors are derivative volume, composition, and purposes.

Evaluative questions and items to consider when examining derivative portfolio characteristics and trends include:

- **Derivative Volume: What is the overall volume (notional amount) of derivatives and are volumes in compliance with policy limits?** While the net investment in derivatives is typically much lower than the notional amount, the overall notional amount of derivatives is a reasonable reflection of business activity and should be considered when evaluating the adequacy of derivative risk management and operational management practices. For example, a small derivative portfolio as a percentage of assets or debt may not materially affect the institution's overall risk profile or financial performance (assuming no leveraging in derivative structure). However, a larger portfolio or a portfolio that is increasing in size, could expose the institution to greater risks and require stronger oversight, internal controls, and management systems. The overall level of derivative activity should be consistent with board policy limitations and any management sub-limits detailed in procedures.
- **Derivative Composition: What is the composition of the derivative portfolio? Do the types and categories of derivatives held comply with policy direction?** Analyzing the derivative portfolio's composition is an essential step in understanding and examining derivative risks. This analysis should address derivative types, complexities (plain vanilla versus exotic), leveraged structures, maturities, and any other significant characteristics including what portion of the portfolio is in designated hedge relationships for hedge accounting purposes. The analysis should also consider the impact of recent transactions on overall derivative composition. Derivatives are broadly categorized by derivative type (swaps, options, futures, forward contracts), underlying variable (interest rate, foreign exchange, credit, commodity contracts), and the method of transaction (cleared or exchange-traded versus noncleared or over-the-counter). The Farm Credit Administration (FCA) Call Report schedule RC-I.2

provides information on portfolio composition, derivative types, counterparty exposure, and maturity profile. However, the institution's internal and shareholder reports should provide additional insight into the characteristics, composition, and trends in the derivative portfolio. Generally Accepted Accounting Principles require disclosures in the annual report that provide a significant amount of information about an institution's derivative activities.

- **Derivative Purposes: Are derivatives used to mitigate risks or for other appropriate purposes in accordance with approved board strategies and policy direction?** Derivative purposes should be consistent with overall business and risk management strategies and comply with approved purposes as defined in board policy. System institutions use derivatives for managing and hedging risks (liquidity, interest rate, and credit), lowering funding costs, and offering financial management services to customers. When used for such purposes, derivatives can be an effective risk management tool. However, when used improperly or for speculation, derivatives can increase risk exposures. As discussed in FCA Bookletter [BL-023](#), using derivatives for speculative purposes is considered an unsafe and unsound practice. Additionally, using derivatives in a manner that increases risks is also generally considered an unsafe and unsound practice.

2. Risk Exposure:

Evaluate risks from derivatives.

Guidance:

Derivatives expose the institution to various risks that can impact financial performance and pose a safety and soundness concern if not effectively managed. Identifying and understanding each risk is essential to establishing effective risk management processes. Derivatives primarily expose the institution to counterparty credit risk (CCR), market risk, and liquidity risk. Other risks in derivative activities generally relate to operational risk, which is examined in the *Monitoring and Controls* procedure.

Note: This procedure focuses on evaluating and identifying risks in derivatives. The examination of processes for managing and measuring risks in derivatives is addressed in the *Risk Management* procedure.

Evaluative questions and items to consider when examining derivative risk exposure include:

- **CCR: What is the amount of CCR in derivatives? Is the amount consistent with approved derivative risk management strategies and in compliance with risk limits in board policy and management procedures?** CCR is the risk that the counterparty will default or fail to fully perform on its obligations under the derivative contract when the derivative is in-the-money and thus, has a positive market value. Derivatives with a positive market value are reported as assets subject to loss if the counterparty defaults. To a lesser extent, derivatives with a negative market value may also pose a risk of loss. For example, if market volatility causes the market value of collateral pledged to the counterparty to exceed the negative market value of the derivative at the time of counterparty default, the institution may not recover the excess collateral. CCR primarily exists on noncleared (over-the-counter) derivatives. CCR on cleared derivatives is generally much lower. CCR indicators include the institution's internal CCR analysis, each counterparty's credit ratings and credit default swap (CDS) spreads, counterparty concentrations, net secured and unsecured exposures to each

counterparty, and CCR stress test results. Key considerations in the analysis of CCR include the following:

- CCR is a function of both current and potential future credit exposure.
 - Current credit exposure represents the loss that would be incurred if the counterparty defaults today. It equals the replacement cost or positive market value of the derivative, including consideration of the impacts of any netting agreements and collateral held. If the market value is positive, then current credit exposure equals that market value net of any margin posted by the counterparty. If the market value is negative, then current credit exposure is zero. For a derivative portfolio, total current credit exposure equals the sum of the positive market values net of margin postings and factoring in any netting of offsetting positions (i.e., derivative assets net of any offsetting liability positions included in the netting set under applicable netting agreements).
 - Potential future exposure represents the loss that could be incurred if the counterparty defaults at some future point. Derivatives currently out-of-the-money still have potential exposure because of the possibility they may go in-the-money in the future. Credit exposure can significantly fluctuate over time due to derivative type, time remaining to maturity, cash flows, and volatility of the price, rate, or underlying variable. Thus, potential future exposure is an important credit exposure component.
- Any netting agreements should be considered when analyzing CCR. Netting refers to determining the net value of all trades with a counterparty. Such agreements will reduce CCR when the derivatives included in each agreement are offsetting.
- Margin requirements and collateral posted by counterparties should be factored into CCR measures. The examination of margin protection should consider the collateral types and discount (haircut) requirements. With noncleared derivatives, the credit support annex regulates the collateral requirements. This annex, which is part of the International Swaps and Derivatives Association (ISDA) Master Agreement, is voluntary and subject to negotiation between the institution and counterparty. With cleared derivatives, the exchange (e.g., Chicago Mercantile Exchange) establishes margin requirements for clearing members. Margin requirements between clearing members and their clients (including System institutions) are established in account agreements and related addendums.
- For cleared derivatives, the risk of default by a central clearinghouse is very low due to multiple safeguards (e.g., daily margin calls, liquidation of open positions when a member defaults, guarantor support, liquidity reserves, capital, and other lines of defense). The primary risk to a clearinghouse is unusually large unmet margin calls, which can occur after major unexpected market events. If clearing members default on a large amount of margin calls and those defaults exceed the clearinghouse's other safeguards, it could cause the clearinghouse to default. Nonetheless, relative to the market structure for noncleared derivatives, clearinghouses create a market infrastructure that is much more resilient to market crises.

- **Market (Price) Risk: What is the amount of market risk in derivatives? Is the amount consistent with approved derivative risk management strategies and in compliance with risk limits in board policy and management procedures?** Market risk is the risk related to changes in the market value of the derivative. The primary market risk types in the derivatives used by System institutions are interest rate, currency, and commodity price risks. These are the risks that the market value of the derivative will fluctuate due to changes in the underlying market interest rates, exchange rates, or commodity prices. For interest rate swaps, the primary market risk is that the derivative's value will fluctuate due to changes in the level of market interest rates or in the spread relationship between various market rates (i.e., the basis). For credit derivatives, the primary market risk is that the derivative's value will fluctuate due to changes in the underlying reference asset's credit quality or in the overall sector's credit spreads. Market risk is magnified if the derivative contains a leveraged structure that applies a multiple to the underlying benchmark. A key consideration is the derivative's effectiveness in hedging and mitigating risks. For example, high market risk in derivatives may be acceptable if used to effectively offset other market risks in the balance sheet. Hedges may be exposed to market risk to the extent they are ineffective and do not fully offset risks in the hedged items. The extent that earnings or capital may be impacted by market risk in derivatives will depend, in part, on the accounting treatment specific to the hedge relationship. Derivatives in hedges that are not designated or do not qualify for hedge accounting can expose earnings to significant market risk regardless of their effectiveness. The *Financial Impact* procedure and [Supplemental Derivative Accounting Guidance](#) discuss hedge accounting and the potential impacts of market risk in derivatives on earnings and capital.
- **Liquidity Risk: What is the amount of liquidity risk presented by derivatives? Is the amount consistent with approved risk management strategies and in compliance with risk limits in board policy and management procedures?** As it relates to System derivative activities, liquidity risk is the potential demand that derivative activities may put on the institution's liquidity resources. This typically arises from margin calls and early termination of derivative contracts. In addition, an inability to terminate or unwind derivative contracts due to a lack of market liquidity could pose a risk to the institution in certain scenarios. The following are examples of the types of liquidity demands and risks presented by holding derivative instruments:

 - Margin calls require the institution to pledge cash or securities to cover credit exposure on both cleared and noncleared derivatives. If the institution is required to pledge cash or securities, it can create a cash outflow demand that must be immediately funded. Pledging cash or securities could also adversely affect a bank's liquidity reserve and days of liquidity or an association's borrowing base.
 - For noncleared derivatives, increased margin requirements may be triggered by bilateral credit rating thresholds. If the institution's credit rating declines, it could increase margin requirements at a time when liquidity risks have increased.
 - Derivatives may include bilateral early termination clauses that can be triggered by a default, credit rating downgrade, bankruptcy, or other factors. Although such clauses reduce CCR, they can trigger a liquidity demand at a time when the institution can least afford it.

- If hedge positions are temporary or risk positions change and the institution needs to terminate or unwind a derivative, it may not be cancelable unless the counterparty agrees or the contract is assigned to another party, which can be difficult and costly. Alternatively, the institution may need to enter into another offsetting derivative. If the derivative is a customized over-the-counter contract, the primary and secondary markets for such contracts may be limited, making it difficult to efficiently offset the position.

Examination Procedures and Guidance

Derivatives Management

1. Policy & Procedures:

Determine if policies and procedures addressing derivatives provide adequate guidance and risk parameters.

Guidance:

Policies and procedures establish the framework for derivative operations. Policies and procedures must comply with regulatory requirements and should ensure that derivative activities are consistent with the institution's strategic business objectives, risk appetite, risk-bearing capacity, and risk measurement and management capabilities.

Evaluative questions and items to consider when examining derivative policy and procedures include:

- **Minimum Requirements: Do derivative policies and procedures comply with regulatory requirements and adhere to the sound practices described in FCA guidance?** FCA Regulations [615.5180\(c\)\(8\)](#) (for banks) and [615.5182](#) (for associations) require policies and procedures that address the nature and purpose of derivatives and establish counterparty risk thresholds and limits. FCA Bookletter [BL-023](#) outlines the expectation that the board be actively involved in establishing and formally approving these policies. The booklet provides additional guidelines and expectations for addressing safety and soundness risks for all institutions that use derivatives. The booklet lists the following areas that policies are expected to address:
 - Scope of the institution's planned involvement in derivatives and the authorized purposes for using derivatives.
 - A clear delineation of the responsibilities for managing the derivative program and associated risks.
 - Expectations for risk management processes and measurement techniques consistent with the nature, size, and complexity of the derivative portfolio.
 - Limits for portfolio makeup, instrument maturities, CCR, and the level of earnings and capital at risk.
 - Controls, monitoring, and reporting requirements needed to achieve compliance with approved policies.

- **General Direction: Do policies or procedures sufficiently address all significant derivative functions and operations?** Policies or procedures should address all significant aspects of governance, risk management, and internal controls in derivative operations (commensurate with the amounts, types, and risks in derivative operations). In addition to the minimum policy requirements discussed above, effective policies or procedures should address the following:
 - Management oversight and assignment of responsibilities.
 - Internal controls, including segregation of duties, delegations of authority, and prior approval requirements.
 - Processes for measuring the ongoing effectiveness of derivative strategies in achieving intended purposes (e.g., hedging or risk mitigation).
 - Derivative activities that are prohibited (e.g., speculative activities, any instrument that cannot be reliably valued or priced, certain leveraged or complex transactions, equity derivatives) or are unsuitable to the board's risk appetite or risk management objectives (e.g., derivatives that cannot meet a defined effectiveness threshold or be designated as hedging for accounting purposes).
 - Procedures for managing derivative risks, including counterparty credit, liquidity, market, operational, legal, and settlement risks as applicable.
 - Limits on maximum unsecured credit exposure to any single counterparty and maximum aggregate unsecured exposure to all counterparties.
 - Collateral management processes, including acceptable collateral types and processes in the event of collateral disputes.
 - Derivative pricing and fair market valuations, including requirements for pricing updates and independent validation. Thresholds should be established on variances between fair market valuations and independent validations, which if exceeded, trigger reporting and further evaluation.
 - Expectations for accounting treatment (e.g., whether management expects all derivatives to qualify for hedge accounting), including processes for when an instrument no longer qualifies for hedge accounting.
 - Processes regarding counterparty failure, such as legal review of rights and obligations, freezing and limiting exposure, accessing collateral, and managing the resolution (e.g., trade termination, hedge repositioning, accounting treatment, disclosure).
 - Due diligence, legal review, reporting, and approval required before expanding into new derivatives, products, activities, strategies, and purposes (including a definition or description of when a product or activity should be classified as new).
 - For new derivative products, the signoffs required from key stakeholders (e.g., front-office, back-office, legal, compliance, model validation, information technology, risk management) confirming the derivatives can be accurately booked

and reported and internal control and risk management processes have been established.

- Direction on exchanges that may be used for cleared transactions.
- Appropriate regulatory capital treatment in FCA Regulations [628.34](#) and [628.35](#).
- **Periodic Review: Are derivative policies and procedures periodically reviewed and updated?** Policies and procedures should be periodically reviewed and updated as needed. FCA Bookletter [BL-023](#) addresses expectations that the board review its derivative policy at least annually. During this review, the board and management should discuss the risks in derivatives and how each derivative product is used. As noted in FCA Bookletter [BL-072](#), the board and senior management should understand an institution's derivative strategies, including the potential risks and benefits.

2. Risk Management:

Evaluate processes for measuring and managing risks in derivatives.

Guidance:

The institution should have sound processes for managing derivative risks at both the individual instrument and portfolio levels. Processes should exist for conducting adequate due diligence as well as managing credit, market, and liquidity risks. Effective risk management also requires accurate risk measurement. Risk management and measurement processes should be commensurate with the nature, level, and complexity of risks in derivative activities.

General Due Diligence: Part of effective risk management is conducting sufficient due diligence before expanding into new derivative products, activities, strategies, and transactions. Note: If individual derivatives are examined, refer to the *Transaction Testing* procedure. Evaluative questions and items to consider when examining derivative due diligence processes include:

- **New Products, Activities, or Strategies: Are sufficient due diligence processes in place to evaluate new derivative products, activities, or strategies?** Processes should ensure the board and senior management comprehensively analyze and understand the product or activity and the intended outcomes before expanding into new derivative types or derivatives with different risk characteristics and purposes as noted in FCA Bookletter [BL-023](#). New products frequently require different pricing, processing, accounting, and risk measurement systems. Due diligence processes should ensure adequate operating systems, staffing, and expertise exist and the new products or activities are consistent with board-approved derivative purposes. New products, activities, or strategies that could significantly alter the institution's risk profile should be prior-approved by the board.
- **New Transactions: Are sufficient pre-trade due diligence processes in place to evaluate new derivative transactions?** Proper due diligence analysis cannot be eliminated due to the need for a quick decision on a new transaction. However, the analysis may vary depending on the derivative type, counterparty, complexity, and risk. Processes can be implemented to improve efficiency of the analysis. For example, management may complete a broad analysis of the derivative type or purpose that identifies the specific due diligence that should be completed when entering into individual contracts. Another option is using a standardized due diligence template tailored to the specific derivative type or counterparty.

Documentation should be maintained evidencing the completed due diligence before entering into new derivative transactions. Examples of areas that should be part of processes for conducting and documenting pre-trade due diligence include the following:

- Derivative purpose.
- Trade ticket and confirmation.
- Risk assessment, including counterparty risk and hedge effectiveness.
- Margin requirements.
- Evidence of approval consistent with delegations of authority.
- Legal review of contracts.
- Accounting treatment (if hedge accounting is used, additional documentation is required as described in the *Financial Impact* procedure and [Supplemental Derivative Accounting Guidance](#)).

CCR Management: As discussed in the *Risk Exposure* procedure, CCR is comprised of current credit exposure and potential future exposure. Current credit exposure is the immediate loss if the counterparty defaults and equals the current positive market value of the derivative (if any). In contrast, potential future exposure is the loss that may be realized over the remaining life of the derivative. Credit exposures should be monitored on an ongoing basis to identify changes in risks that may need to be managed throughout the life of the derivative. CCR is primarily managed by either clearing transactions through a central exchange or establishing relevant controls for noncleared transactions. Such controls include analyzing CCR, establishing counterparty exposure limits, controlling both current and potential exposures, netting, and requiring margin. Evaluative questions and items to consider when examining derivative CCR management include:

- **Clearing: Are derivatives cleared (traded) through a central exchange to mitigate CCR?** While the System is exempt from certain mandatory clearing requirements per FCA Regulation [624.1\(d\)](#), some eligible derivatives may be electively cleared (traded) through a central exchange to manage CCR. CCR is significantly lower for cleared derivatives due to multiple safeguards at central clearinghouses, as described in the *Risk Exposure* procedure.
- **Counterparty Analysis & Concentrations: Do sufficient processes exist to analyze CCR and prevent concentrations on noncleared derivatives?** Counterparties should be limited to those with adequate capacity to meet financial obligations. Key aspects of CCR analysis include the following:
 - A process that periodically assesses creditworthiness of each counterparty. The credit department should generally conduct this analysis and update it at least annually. While ratings from credit rating agencies should be considered, the internal credit analysis should be based on information from various sources (e.g., CDS spreads, counterparty financial statements).
 - Processes for applying appropriate exposure limits for each counterparty, as established in board policy or management procedures. These limits should apply to the institution's consolidated exposure across all products to each counterparty (e.g., aggregate derivative, investment, lending exposures). The limits should be differentiated based on counterparty creditworthiness and consider credit support arrangements (e.g., margin requirements, netting agreements) as well as the institution's risk-bearing capacity. The institution should consider potential future exposure when setting counterparty credit limits.

- Processes for ongoing monitoring of changes in CCR. Examples of risk factors that could be monitored include credit ratings, CDS spreads, current credit exposure, potential future exposure, and other risk metrics. Processes should trigger or elevate a more comprehensive review if risk increases.
- **Margin and Collateral Requirements: Are margin and collateral requirements used to manage CCR on noncleared derivatives?** Margin and collateral requirements are an important sound practice that can significantly reduce CCR. Like cleared transactions, over-the-counter derivatives may be subject to both initial margin and variation margin requirements. Initial margin is generally collected at the onset of the contract and provides coverage of an instrument's estimated potential future exposure. Variation margin is exchanged periodically, as frequently as daily, and generally covers an instrument's current credit exposure. Margin and collateral requirements are established in a credit support annex, which is a schedule to the ISDA Master Agreement. Key considerations include the following:
 - Margin threshold requirements and required margin collection frequency should be commensurate with CCR and the risks in the derivative.
 - Collateral held as margin should be highly liquid, capable of holding its value in a time of financial stress, and subject to appropriate haircuts.
 - Sound processes should exist to accurately measure and monitor exposure and changes in margin requirements on an ongoing basis and ensure collateral is posted by or to the counterparty in accordance with agreements. Margin requirements vary based on changes in market valuations and may also be impacted by a credit event (e.g., credit rating downgrade).
- **Swap Margin Regulations: Do margin requirements on noncleared swaps comply with FCA regulations, if applicable?** FCA Regulations in Part 624 address margin requirements on noncleared swaps for covered swap entities as defined in FCA Regulation [624.2](#). System institutions are largely exempt from the margin requirements in FCA Regulations Part 624 due to the exemptions outlined in FCA Regulation [624.1\(d\)](#). Nonetheless, System institutions are strongly encouraged to apply requirements out of an abundance of caution when the applicability of exemptions outlined in FCA Regulation [624.1\(d\)](#) is not clear. Additionally, establishing margin requirements on noncleared derivatives is a sound practice as discussed previously.
- **Netting: Are master netting agreements used to mitigate CCR on noncleared derivatives?** When two or more transactions exist with the same counterparty, a master netting agreement should be established to mitigate risk. Such an agreement enables the two counterparties to net and offset payments and obligations across all derivatives. For example, if a counterparty files for bankruptcy, netting prevents the counterparty from seeking relief on transactions with negative values while attempting to force the institution to continue paying on transactions with positive values. Netting also enables the institution to reduce margin requirements and liquidity risk, particularly if new derivatives with the counterparty offset prior derivatives with the same counterparty.

- **CCR Measurement: Are processes sufficient to ensure current credit exposure and potential future exposure are accurately measured?** CCR must be accurately measured to be appropriately managed. As discussed in the *Risk Exposure* procedure, CCR is a function of both current and potential future credit exposure. Both types of exposure should be measured and monitored on an ongoing basis and can be compared to total regulatory capital to evaluate risk to capital. Measuring current credit exposure requires processes to accurately determine the fair market values of the derivative, any offsetting positions within netting agreements, and any collateral. Refer to the *Financial Impact* procedure and [Supplemental Derivative Accounting Guidance](#) for information on fair market valuations. Measuring potential future exposure is more complex and subjective. The method used to measure potential future exposure should be commensurate with the volume and complexity of derivative activities and factor in netting agreements and credit risk mitigants (e.g., margin agreements). For regulatory capital measurement purposes, potential future exposure must be calculated in accordance with FCA Regulation [628.34\(a\)\(1\)\(ii\)](#). Considerations for measuring potential future exposure include the following:
 - Sophisticated models such as Monte Carlo simulation, option pricing models, and other statistical techniques are used to measure potential future exposures at institutions with significant or complex derivatives and exposures. Such models use probability analysis with broad confidence intervals (e.g., 99 percent) to determine maximum exposures. The models analyze the volatility of the underlying variables (e.g., interest rates) and the effect of movements in these variables on the value of the derivative contract. These models are heavily influenced by assumptions. Management should fully understand and justify all significant assumptions used in the model. For example, the calibration of volatility assumptions should consider historical volatility over a period of several years (e.g., 3 or more years). In addition, if using a Monte Carlo model, management should periodically calibrate the number of paths run against a benchmark to ensure model accuracy.
 - A simpler approach to measuring potential future exposure is to apply a conversion or credit equivalent factor to the notional amount, where the factor is based on the volatility of the underlying variables and the time remaining to maturity. This methodology is required for risk-based regulatory capital computations (see Table 1 in FCA Regulation [628.34](#)). This approach may suffice for institutions that do not have significant or volatile derivative exposures, provided management periodically reviews these factors against their volatilities to determine continued appropriateness.
 - Stress tests may be used to measure potential future exposure under a defined scenario. For example, a stress test that assumes a predetermined shift in a yield curve could be used to measure exposure on interest rate swaps under that specific scenario. If the stress test represents a worst-case scenario as determined by the volatility of the underlying variables, it could be used to measure maximum potential future exposure.
 - The time frame used to measure potential future exposure should be fully supported. The time frame may be the life of the contract or, for positions covered by margin, the estimated time between when the counterparty defaults on a margin call until the institution can liquidate any collateral previously received (considering expected collateral recovery rates during periods of high market stress).

Market and Liquidity Risk Management: Market and liquidity risks should be monitored on an ongoing basis to determine if actions need to be taken to help mitigate risk exposure. Evaluative questions and items to consider when examining derivative market and liquidity risk management include:

- **Market Risk Management: Do sound processes exist to measure and manage market risk in derivative activities?** As discussed in the *Risk Exposure* procedure, market risk is risk related to changes in the fair value of derivatives. Market risk is generally managed by establishing an effective hedge strategy in which changes in the values of a derivative and another balance sheet position offset each other. Changes in the fair value of derivatives that are not offset can cause significant earnings volatility. Financial accounting standards allow for the recognition of this offset in an institution's financial statements (i.e., hedge accounting) provided certain conditions are met. Ultimately, the impact of derivative market risk depends on the derivative type, the degree to which offsetting positions have been established, and whether the derivative is designated as an accounting hedge. Key considerations for market risk management include the following:
 - Regardless of whether derivatives are designated as an accounting hedge, processes should ensure derivatives offset risks in the hedged items. Prospective hedge effectiveness should be estimated at the time of execution. In addition, ongoing processes should exist that ensure hedges remain effective over time, with adjustments to positions made when needed to maintain an effective hedge.
 - Methods used to measure hedge effectiveness should be accurate and reasonable relative to the materiality and complexity of risks. Reliable estimates of how fair values would change in alternative scenarios are essential to measuring hedge effectiveness and market risk. The *Financial Impact* procedure discusses hedge accounting and the impacts of derivatives on earnings and capital. As discussed in that procedure and the [Supplemental Derivative Accounting Guidance](#), Generally Accepted Accounting Principles specify several possible methods to validate hedge effectiveness for the purpose of applying hedge accounting.
 - Specific controls should exist to manage market risk in derivatives not designated as accounting hedges. Such controls could include board risk parameters or Asset/Liability Management Committee (ALCO) approval requirements.
- **Liquidity Risk Management: Do sound processes exist to measure and manage liquidity risk in derivative activities?** As discussed in the *Risk Exposure* procedure, margin calls can have a material adverse impact on funding demands and liquidity position. Such calls can be triggered by changes in current credit exposure, credit rating thresholds, or other factors. In addition, individual derivative contracts that are illiquid and cannot be easily terminated or unwound can adversely affect risk management objectives. Liquidity risk is managed by ensuring sufficient liquidity is available to cover potential funding demands resulting from margin calls or other cash flow requirements. Processes should exist to accurately measure all cash flow and margin requirements under various market conditions, including the impact on liquidity. Management should use offsetting positions within netting agreements to limit potential margin calls and related liquidity demands and consider potential derivative-related liquidity demands in establishing broader liquidity risk management strategies (e.g., days coverage objectives, contingency funding plans). Note: Refer to the

Liquidity Management Examination Manual topic for examining overall liquidity management practices.

Other Derivative Risk Management: Evaluative question and items to consider when examining derivative services for customers include:

- **Derivative Services for Customers: Do sufficient processes exist to manage the risks related to derivatives offered to customers?** If derivatives are offered to customers, the related market risks should be hedged and substantially offset to protect against loss. Internal controls, including prior approval and reporting, should exist for managing any exceptions. Derivative services for customers should be limited to assisting customers in hedging or managing their risks and not for speculation. An assessment should be completed to ensure customers have the expertise and capability necessary to manage the related risks. Additionally, CCR mitigants should be established such as strong underwriting standards and collateral requirements (securing the derivative or related loan). Customer agreements and disclosures should be fully transparent and provide clear documentation of derivative transactions and risk management objectives.

3. Monitoring & Controls:

Evaluate monitoring, reporting, and other internal controls in derivative operations.

Guidance:

Effective internal controls are critical to safe and sound derivative operations. Internal control systems are the first line of defense in managing operational risk, which is the risk of loss resulting from a breakdown in internal processes, people, and systems. An effective system of internal controls in derivative operations should include effective management oversight and monitoring, reliable reporting, reasonable separation of duties, appropriate delegated authorities, adequate staffing, and reliable derivative models and information systems. In addition, internal controls should be sufficient to help detect and prevent loss, fraud, embezzlement, conflicts of interest, and unauthorized derivative transactions.

Evaluative questions and items to consider when examining derivative monitoring and control processes include:

- **Monitoring Effectiveness: Do sufficient processes exist to monitor ongoing derivative effectiveness?** Processes should exist to monitor derivatives and ensure they remain effective in achieving their intended purposes. Such processes should be commensurate with derivative purposes and complexities.
- **Senior Management Oversight: Do sufficient oversight processes exist for senior management to monitor and direct derivative activities?** Senior management has a responsibility to fully understand risks in derivative activities and ensure derivatives are consistent with regulations, policies, and authorized purposes. As noted in FCA Bookletter [BL-023](#), senior management must ensure all significant risks arising from derivative transactions are quantified, monitored, and controlled. Reporting is essential to effective management oversight, as discussed below. An institution with significant derivative activities may designate a committee to oversee derivative management (e.g., ALCO).

- **Reporting: Is reporting timely, accurate, and sufficient for the board and management to monitor derivatives and make informed decisions?** Reporting is the board and management’s primary method for understanding and monitoring the characteristics, risks, and effectiveness of derivatives and assuring derivative activities are consistent with policy and procedures. The type and frequency of board and management reporting should be commensurate with the nature and significance of derivative activities. At a minimum, the board should receive quarterly reports on current derivative activities as outlined in FCA Bookletter [BL-023](#). Management reporting may be more frequent depending on the risk exposure. In addition, reporting should be differentiated and tailored to the needs of each audience (e.g., board, ALCO, senior management). The following are examples of board and management reports:

 - *Board Reporting* – Compliance with policies and risk limits, fair market values, CCR exposures, derivative strategies and purposes, derivative risks and rewards, new derivative activities, and audit and consulting engagement results.
 - *Management Reporting* – Compliance with procedures and authorities; new transaction and positioning activity; counterparty exposure in relation to limits; and sufficient detailed reporting to assess risks, hedge positions and effectiveness, margin postings, and consistency with derivative purposes.

- **Legal Review: Do sufficient processes exist to manage legal risk?** In the context of this guidance, legal risk is the risk that contracts are not legally enforceable. It is the institution’s responsibility to manage its legal risk. Legal risk is primarily addressed by using standardized derivative contracts and agreements to govern noncleared transactions, such as the ISDA Master Agreement. This agreement is standard but is accompanied by customized schedules (e.g., a credit support annex defining margin and collateral requirements). Per FCA Bookletter [BL-023](#), legal counsel should review all master agreements prior to execution. Legal counsel may review all contracts before they are executed and should particularly review any nonstandard contracts or netting agreements, changes to standard contracts, and customized schedules. Counsel should ensure the contracts are legally enforceable and that counterparties have the regulatory and legal authority to enter into the transactions. Counsel should be familiar with the transaction’s purpose and applicable laws in all relevant jurisdictions. Regarding the credit support annex, counsel should ensure the institution’s rights to any margin or collateral received from counterparties are enforceable and that the margin or collateral can be accessed to offset losses upon counterparty default.

- **Separation of Duties: Are derivative duties and functions reasonably separated to help prevent error, fraud, unauthorized derivative transactions, and excessive concentration of derivative authorities?** The primary objective of separation of duties is to ensure that no single employee or function is in a position to perpetrate or conceal transactional errors or irregularities. As discussed in FCA Bookletter [BL-023](#), the institution should establish and maintain separation of duties between staff who supervise or execute derivative transactions and staff who supervise or engage in all other derivative-related functions. Derivative functions are typically separated into front-office and back-office operations to ensure independence between these functions. Front-office duties include executing and supervising derivative transactions. Back-office duties primarily include accounting, confirmation, reconciliation, settlement, and payment processing. Other back-office duties include valuation, analyzing CCR and establishing credit lines, managing collateral and margin calls, measuring risks and hedge positions, conducting legal reviews, and reporting.

Such back-office functions may cross over several departments (e.g., accounting, credit, legal, risk management, information technology). Separation of the less-critical duties may not always be practical from a cost-benefit perspective for small institutions with limited staffing and low derivative exposures. To the extent that separation of all duties is not practical, compensating controls should be implemented (e.g., periodic verification and validation by independent, qualified personnel). Separation of duties and compensating internal controls should be commensurate with the complexity and risks in derivatives.

- **Delegated Authorities: Are delegated derivative authorities clearly defined and sufficient to control risk?** The board and management should clearly define and document the delegations of authority for personnel and committees engaged in derivative activities. Effective delegated authorities should identify pre- and post-approval requirements. The authorities should be consistent with personnel expertise and typically differentiated by transaction amount, derivative type, and risk characteristics. Once established, processes should exist to monitor and ensure compliance with the authorities.
- **Staffing: Do the staff tasked with managing derivative activities have sufficient expertise, training, and backup?** As discussed in FCA Bookletter [BL-023](#), management should ensure staff have the requisite technical skills to understand the unique complexities and manage risks in the institution's derivatives. Experienced staff is especially important for derivative activities because of their complex nature and the losses that can result from improper use. Management should regularly review the knowledge, skills, and staffing levels needed to manage existing and new derivative activities. Highly qualified and well-trained staff are essential for both front- and back-office functions. When needed, the institution should seek advice and guidance from external consultants, particularly when expanding into new, unfamiliar derivative types. The institution should also have sufficient backup strategies and staffing depth (e.g., cross-training, succession planning) to provide for significant derivative function continuity. Overreliance on one employee for a critical derivative function is an unsound practice.
- **Compensation and Incentive Programs: Are compensation and incentive programs consistent with derivative objectives?** Compensation and incentive programs should not conflict with the approved objectives and purposes of derivative activities. As discussed in FCA Bookletter [BL-023](#), compensation programs should not incentivize risk-taking or speculative activity since System institutions should only use derivatives for the purpose of hedging and managing risks. To evaluate overall compensation programs, see the *Employee Compensation* procedure in the *Human Capital Management* Examination Manual topic.
- **Management Information Systems (MIS): Are MIS sufficient to support derivative operations?** MIS refers to the systems that generate the information and reports required to make informed decisions and support various front- and back-office derivative functions and internal control processes. As discussed in FCA Bookletter [BL-023](#), MIS should capture the necessary data to process transactions, measure and manage risks, and monitor performance and compliance with policy and procedures. MIS should enable staff to readily monitor hedge effectiveness, calculate and verify margin requirements, compute risk exposures, value derivatives, handle settlements, and determine if existing positions need adjusting. The derivative information in MIS should be current, meaningful, accurate, and easily accessible to management. In addition, MIS should be adequately safeguarded through appropriate access controls and disaster recovery plans. Refer to the *Information*

Technology & Security and Business Continuity Examination Manual topics for additional guidance.

- **Reconciliation: Do processes exist to reconcile and verify the various derivative records?** Processes should exist to reconcile and verify the various reports and records (e.g., general ledger, operational databases, trade tickets, trade confirmations, board and management reports). Reconciliation frequency may vary depending on the record type. For example, all trade confirmations should be reconciled to trade tickets at inception. Accounting records, operational databases, and reports should generally be reconciled at significant reporting periods. These reconciliation processes should be automated to the extent possible and outlined in procedures.
- **Models: Are the models used for derivatives managed in accordance with the institution's model risk management (MRM) framework and the guidance outlined in FCA's *Model Risk Management* procedure in the *Direction & Control of Operations Examination Manual* topic?** Various models may be used to manage derivatives and measure risks. For example, models may be used to determine derivative fair market values, conduct stress tests, and measure hedge effectiveness and potential future credit exposure, as discussed throughout this guidance. These models should be included in the institution's model inventory, which should accurately represent each model's risk, materiality, and validation status. Model validation, change controls, staffing, separation of duties, and new model development should be consistent with the guidance in the institution's MRM framework and FCA's *Model Risk Management* procedure, recognizing that application of this guidance varies based on model risk and materiality. *Note: Examiners completing this procedure should focus on the specific model(s) being used; the overall MRM framework is examined using the Model Risk Management procedure referenced above.*

4. Financial Impact:

Evaluate the impact of derivatives on financial performance, including derivative accounting treatment and processes for updating fair values.

Guidance:

Earnings and capital may be impacted by changes in the fair value of derivatives. The impact depends in large part on whether the derivative is designated and accounted for as a hedge. Therefore, the accounting approach is an important consideration in understanding and evaluating the benefits and risks of derivatives on the institution's financial condition and performance. Guidelines for derivative accounting and financial reporting are described in ASC 815 – Derivatives and Hedging and ASC 820-Fair Value Measurement. FCA's [Supplemental Derivative Accounting Guidance](#) summarizes accounting approaches and the impact of derivative instruments on institution performance and financial condition.

Evaluative questions and items to consider when examining the financial impact of derivatives include:

- **Financial Impact: Have derivatives significantly impacted financial condition and performance?** Derivatives can materially impact earnings and regulatory capital ratios. Earnings are impacted by changes in derivative fair values. Regulatory capital ratios are affected through the derivatives impact on earnings and retained earnings. (Note: The

impact of derivatives on accumulated other comprehensive income does not affect FCA's regulatory capital measures.) Considerations include the following:

- By their nature, the value of derivatives can fluctuate greatly, which may cause significant earnings volatility. However, the impact of derivatives on earnings depends in part on whether the derivative is designated and accounted for as a hedge. If a derivative is not designated as a hedge for accounting purposes, the entire change in its fair value is reported in current period earnings (typically in a subcategory of non-interest gains or losses). However, if qualifying criteria are met, hedge accounting may be used to reduce earnings volatility. For example, with fair value hedge accounting, changes in the fair value of the derivative and hedged item are both recognized as earnings in the same line item, in the same time periods, and are largely offsetting. As discussed in FCA's [Supplemental Derivative Accounting Guidance](#), the specific accounting treatment depends on the hedge type.
- The annual shareholder report footnotes typically provide much of the information needed to evaluate the impact of derivatives on financial condition and performance. ASC 815-10-15 requires that footnotes include extensive disclosures on how derivatives affect financial position and performance, including tabular disclosures on the impact of hedge accounting on each affected line item in the balance sheet and income statement.
- **Hedge Accounting: Is hedge accounting used effectively to reduce earnings volatility?** Hedge accounting, as discussed in the [Supplemental Derivative Accounting Guidance](#), should be used to the greatest extent possible to match the income statement hedge impact with the true economic impact. Hedge accounting allows the economic motivation of hedges to be transparently reflected in financial statements. If a derivative is not treated as a hedge for accounting purposes, the income statement will reflect the full volatility of changes in the derivative's fair value. Such volatility can result in poor earnings quality; earnings that do not represent true economic performance; and reputation risk resulting from the related concerns of members, investors, and rating agencies. Management should carefully consider such risks before electing not to use hedge accounting.
- **Hedge Termination: If any derivatives accounted for as hedges were terminated before expiration, did the terminations have a significant impact on financial performance or the intended purpose of the hedges?** Hedge accounting is elective and may be discontinued at any time. In addition, hedge accounting must be discontinued when the hedge criteria are no longer met or the derivative is terminated, expired, sold, or exercised. If the hedge relationship is discontinued because it is no longer highly effective, the institution does not need to restate past financial statements but must remove the hedge accounting going forward. The institution must perform a retrospective effectiveness assessment to determine when the hedge accounting should end. The specific requirements for discontinuing hedge accounting are addressed in ASC 815-25-40 and 815-30-40.
- **Fair Market Valuations: Do sufficient processes exist to determine and update the fair value of derivatives?** Accurate derivative valuation is a critical requirement for accurate financial reporting, risk measurement, and netting calculations. It is also essential for monitoring and reporting derivative effectiveness, hedge positions, margin requirements, and compliance with risk parameters in policies and procedures. Fair values should be updated at least monthly. In addition, measurements of fair value should maximize the use of observable market inputs obtained from independent sources. If values are obtained from

the originating dealer, they should be independently validated by obtaining values from other dealers, an independent pricing firm, or an internal model. Internal models typically use an income approach to valuation (which involves discounting cash flows) and incorporate observable market inputs such as benchmark interest rate curves and volatilities. Management should establish thresholds on variances among its valuation sources, which if exceeded, trigger reporting and further evaluation. These thresholds should apply to each contract. The institution should not enter into any derivative that cannot be reliably valued.

- **Credit Valuation Adjustment (CVA) and Debit Valuation Adjustment (DVA): Do sufficient processes exist to measure nonperformance risk and does this risk materially impact derivative fair values or hedge effectiveness?** The total fair value of a derivative includes its base value plus its CVA or DVA. Derivative assets include a CVA, and derivative liabilities include a DVA. CVA represents the counterparty's nonperformance risk and DVA represents the reporting institution's own nonperformance risk after factoring in credit enhancements (e.g., margin or collateral requirements, netting agreements). DVA is necessary because other market participants would consider the reporting institution's credit risk in measuring fair value. Considerations for CVA and DVA include the following:
 - CVA and DVA could be minimal for derivatives that are cleared or valued using a market approach where market value already incorporates nonperformance risk. However, the adjustments may be significant for noncleared derivatives not fully protected by margin or collateral requirements.
 - CVA and DVA may be established at various levels of aggregation, including each individual derivative, counterparty, or netting set.
 - Various methods exist for measuring CVA and DVA. The method used may be influenced by the derivatives materiality, extent to which derivatives are in-the-money, credit enhancements, pricing information availability, and other factors. As discussed in the *Risk Management* procedure, Monte Carlo models are typically used at financial institutions with significant derivative portfolios, though simpler approaches might also suffice (e.g., methods based on CDS spreads). Regardless of the process, the methodology and significant assumptions should be documented and supported commensurate with materiality. KPMG's [Fair Value Measurement Handbook](#) further addresses methods for measuring CVA and DVA.
 - Hedge effectiveness measures should consider the CVA and DVA impact. This is particularly important if measured effectiveness is close to the 80 percent or 125 percent thresholds (see [Supplemental Derivatives Accounting Guidance](#)) or the likelihood that the counterparty will not default ceases to be probable. The impact may vary depending on the hedge type (e.g., fair value versus cash flow), the hedged risk (e.g., whether it is a hedge of total change in fair value), and the method used to assess hedge effectiveness. If CVAs are established at the counterparty level under master netting agreements, the institution may need to allocate the CVAs to individual derivatives for measuring hedge effectiveness.

5. Audit:

Determine if the institution conducts an effective audit (scope, reporting, and followup) of derivative operations.

Guidance:

The internal audit and review program is a key mechanism for ensuring derivatives management is functioning effectively and in compliance with regulations and policies. The internal auditor or other qualified, independent party should review the adequacy of derivatives management to ensure compliance with applicable criteria. The audit risk assessment and scope should address derivatives management topics, and audit or review frequency should be commensurate with the complexity of the institution's operations and risk profile. A reliable audit program provides the board reasonable assurance that derivatives management is sound, and that derivatives reporting is complete and accurate.

Note: This procedure focuses on evaluating the reliability and effectiveness of internal audits and reviews in this topical area. Refer to the *Audit & Review Programs* topic in the Examination Manual for guidance on examining the overall internal audit and review program.

Evaluative questions and items to consider when examining the audit or review of derivatives management include:

- **Audit Coverage: Is there periodic audit or review coverage of derivatives management?** Audit or review coverage and frequency should be appropriate relative to risks, changes in the operating environment, regulatory requirements, and periodic testing needs. Coverage should also be consistent with the institution's risk assessment results and annual audit plan. At a minimum, derivative activities should be audited at least annually by qualified internal auditors as outlined in FCA Bookletter [BL-023](#).
- **Scope and Depth: Are audit or review scope and depth sufficient to conclude on the adequacy, completeness, and timeliness of derivatives management processes?** The scope and depth of work, including transaction testing, should cover the primary processes and controls within the area being audited or reviewed and be sufficient to determine if internal controls are functioning as intended and regulatory requirements are met. The scope and depth of coverage should be documented and consistent with the approved audit or review plan and engagement contract (if applicable). Audit or review workpapers should be examined to verify the actual scope and depth of work performed. The workpapers may indicate the scope and depth deviated from what was identified (or implied) in the audit plan. For example, workpapers may indicate the work performed was limited to evaluating the existence of policies and procedures and did not include reviewing other controls, such as training or reporting, or testing compliance with regulations or institution guidance. If the work deviated materially from the original planned scope, internal audit should notify the board (or Audit Committee, if so delegated) of the reasons for the change. Specific items that should be considered in the audit or review scope include:
 - Derivative-related policies and procedures.
 - Compliance with policies, procedures, FCA Regulations, and other FCA guidance.

- Management and control processes (e.g., reporting, management oversight, delegated authorities, separation of duties, staffing, management information systems).
 - Derivative planning and strategies.
 - Derivative risk management and measurement systems.
 - Accounting treatment for derivatives, including fair market valuations and processes for measuring hedge effectiveness.
 - Management of all significant derivatives models, including consistency with the institution's overall model risk management framework.
 - Sufficient transaction testing to ensure established criteria are followed.
 - Fraud-related threats and vulnerabilities, as well as anti-fraud controls.
- **Reliability of Results: Did FCA identify any concerns with audit or review reliability?** It is important to understand the scope and depth of the audit or review being examined, as discussed above, when evaluating audit or review reliability. With this understanding, the following are key considerations when evaluating the reliability of audit or review results:
 - *FCA Testing* – Evaluate the reliability of internal audit or review work by comparing the results to FCA's examination results in this area. This comparison often includes FCA testing transactions that were covered in the internal audit or review (transactions are often loans or loan applications, but may include other types of transactional activity, as well). In addition to the audit or review report, examiners should request and review the workpapers and hold discussions with the auditor to obtain a more thorough understanding of work completed. This can be especially important if the audit or review report is not sufficiently detailed or FCA's examination work and testing identifies potential concerns. Auditors and reviewers complete line sheets, flowcharts, control matrices, standard work programs, workpaper forms, or other relevant audit evidence when conducting and supporting their work. (IIA Standards 2240, 2300, 2310, and 2320) Workpapers should adequately document the work performed and support the final report. If FCA identifies weaknesses that were not identified in the audit or review, the cause for any discrepancy should be determined.
 - *Audit/Review Staffing* – Whether internal or outsourced, auditors and reviewers conducting the work need to be qualified, independent, and objective to ensure reliable results. They should have the right mix of knowledge, skills, and other competencies needed to perform the work. (IIA Standard 2230) Additionally, auditors and reviewers need to be independent of the activities they audit so they can carry out their work freely and objectively. (IIA Standards 1100, 1112, 1120, and 1130) For example, audit and review staff should not be involved in developing and installing procedures, preparing records, operating a system of internal controls, or engaging in any other activity that they would normally review. Examiners should evaluate the staffing on the individual audit or review being examined as part of determining the reliability of results.

- *Institution Review of Work Performed* – The institution should complete an independent review of the workpapers to ensure audit or review objectives and scope were met and the results and conclusions were reliable and supported. (IIA Standard 2340) Examples could include a supervisory review of in-house audit work by the Chief Audit Executive or other audit staff, or a review of outsourced work by the CAE or audit coordinator. Examiners should consider whether the institution completed these reviews, and if any concerns were identified, when concluding on audit or review reliability.
- **Reports: Does the internal audit or review report sufficiently communicate derivatives management review results and recommendations, if applicable?** Examiners should consider the following when evaluating the audit or review report:
 - Is the report prepared and communicated in accordance with the institution’s guidelines?
 - Is an executive summary or overview included to provide the board with a general conclusion on audit or review results?
 - Is the report accurate, concise, supported, and timely in communicating the audit or review objectives, scope, results, conclusions, and recommendations? (IIA Standards 2330, 2400, 2410, 2420, 2440, and 2450)
 - Are conclusions and recommendations realistic and reasonable, with material and higher risk issues clearly identified and prioritized?
 - Are conclusions and recommendations supported by convincing evidence and persuasive arguments (condition, criteria, cause, and effect)?
 - Do results in the workpapers align with report conclusions?
 - Does the report conclude whether the institution adheres to policies, procedures, and applicable laws or regulations, and whether operating processes and internal controls are effective?
 - Does the report address potential vulnerabilities to fraud, if applicable?
- **Corrective Action: Are management responses to audit or review findings in this area reasonable, complete, and timely? Have corrective actions been effective?** Audits and reviews are only effective if corrective action is taken to remedy the weaknesses identified. As such, there should be a reasonable, complete, and timely management response to the audit or review report. Management commitments and agreements or any areas of disagreement should be documented in the report or in a separate memo or tracking system. (IIA Standards 2500 and 2600) If corrective actions are not resolving the issues or concerns in a timely manner, examiners should further investigate the reasons. For example, this could indicate the audit or review did not sufficiently identify the underlying causes or materiality of weaknesses, sufficient resources are not being directed toward corrective actions, or weaknesses exist in the institution's corrective action process, including board oversight of the process.

6. Transaction Testing:

Examine a sample of derivatives, with a focus on risk identification, suitability, and documentation of due diligence.

Guidance:

The examination of derivatives should be supplemented, as needed, with an evaluation of individual derivative transactions. The primary objectives of transaction testing are to evaluate and ensure sufficient documentation for one or more of the following:

- Compliance with regulations, policies, procedures, delegated authorities, and prior approval requirements, as well as adherence to sound practice guidelines as outlined in FCA Bookletter [BL-023](#).
- Suitability in relation to derivative purposes.
- Due diligence, including:
 - Pre-trade analysis.
 - Hedge effectiveness measurement.
 - CCR evaluation, including compliance with exposure limits.
 - Margin and collateral requirements.
 - Legal review of contracts.
- Trade process and compliance with controls, including:
 - Front-office trade ticket and approval.
 - Back-office notification and process confirmation, accounting entry, and reconciliations.
 - Separation of duties.
 - Delegations of authority, including evidence of prior approval of trades where required.
- Valuation method and accounting treatment.
- Unconfirmed or disputed trades and their ultimate resolution.
- Reliability of internal audit findings.
- Validation of examination conclusions on other derivatives procedures.

The derivatives included in the sample should depend on the specific objectives of transaction testing. The sample could include a selection of derivatives across all major derivative categories or be more targeted. For example, if the institution expands into new derivative products, activities, or strategies, the sample may include these types of derivatives and focus on compliance, suitability, due diligence, valuation, and accounting treatment. The following should be considered when selecting the sample:

- The primary objective(s) of transaction testing.
- Previous examination findings.
- Changes in portfolio size, composition, purposes, risks, or impact on earnings.
- Derivative strategies.

- Derivatives complexity.
- The adequacy of policies, procedures, and risk management practices.
- Potential impact of economic and market conditions on derivatives and hedge effectiveness.
- Internal audit coverage.

The specific examination objectives should be clearly defined to ensure examiners understand what they should focus on for each derivative in the sample. If problems are identified during the examination, the examiner should determine if the scope should be expanded to evaluate whether it represents a pattern or practice.