SECURITIES AND DERIVATIVES EXAMINATION PROCEDURES

Core Analysis Decision Factors

Examiners should evaluate the Core Analysis in this section to determine if an Expanded Analysis is necessary. Click on the hyperlinks found within each of the Core Analysis Decision Factors to reference the applicable Core Analysis Procedures.

Do Core Analysis and Decision Factors indicate that risks are adequately identified, measured, monitored, and controlled?

C.1. Are policies, procedures, and risk limits adequate? *Refer to Core Analysis Procedures #8-11*.

C.2. Are internal controls adequate? *Refer to Core Analysis Procedures #12-19*.

C.3. Are the audit or independent review functions adequate? *Refer to Core Analysis Procedures #20-22*.

C.4. Are information and communication systems adequate and accurate? *Refer to Core Analysis Procedures #39-40, Procedures #43-44, & Procedure #55*.

C.5. Are portfolio risks appropriately identified and measured? *Refer to Core Analysis Procedures #23-47, Procedure #51*.

C.6. Do the board and management effectively oversee securities and derivatives activities? *Refer to Core Analysis Procedures #19-20, Procedure #24, & Procedures #49-60*.

SECURITIES AND DERIVATIVES EXAMINATION PROCEDURES

Core Analysis Procedures

Examiners are to consider the following procedures but are not expected to perform every procedure at every bank. Examiners should complete only the procedures relevant for the bank's activities, business model, risk profile, and complexity. If needed, based on other identified risks, examiners can complete additional procedures. References to laws, regulations, supervisory guidance, and other resources are not all-inclusive.

Preliminary Review

1. Review prior examination reports, pre-examination memorandum, and file correspondence for an overview of any previously identified investment deficiencies.

2. Review internal and external audit reports and other independent reviews.
(Note: If the institution is subject to the Sarbanes-Oxley Act (SOX), review the SOX information pertaining to the investment portfolio, such as SOX narratives, flow charts, and internal control matrices.)

3. Review remedial actions taken by management to correct audit and examination recommendations.

4. Analyze the level and trend of the bank's security and derivative activities in the Uniform Bank Performance Report (UBPR) or Interest Rate Risk Standard Analysis (IRRSA - FDIC), and assess risks in the portfolio(s).

5. Review the securities portfolio, certificates of deposit held for investment purposes, and end-use derivative contracts.

- **Review transactions implemented since the last examination.**
- **Identify securities that may require further analysis, such as instruments that have unusual, leveraged, or highly variable cash flows, such as, mortgage-backed securities (MBS), collateralized debt obligations (CDOs), and asset-backed securities (ABS). The process may involve reviewing bank-prepared reports, investment prospectus, trade confirmations, and accounting methods.**

6. Discuss with management the institution's investment philosophy, portfolio composition, and underlying business purpose for investment activities.

7. Review investment committee minutes and other relevant committee minutes (such as ALCO minutes) that discuss investment activities. Ensure that all substantive investment activities are sufficiently discussed including changes in strategy, philosophy, and responsibilities.

Policies, Procedures, and Risk Limits

8. Determine whether policies are appropriate for security and derivative activities. Effective policies are generally tailored to the bank's unique needs and address items such as:

- **The board's investment goals and objectives;**
- **Delegations of investment authority;**
- **Duties and responsibilities of individuals involved in the investment process;**
- **Transaction authorizations and trade limits for individuals responsible for initiating trades;**
- **Authorized activities and instruments;**
- **Unacceptable investment activities;**
- **Credit quality and ongoing monitoring guidelines;**
- **Investment guidelines/limits (portfolio composition, maturities, etc.);**
- **Required pre- and post-purchase analysis, including due diligence for more complex securities;**
- **Off-balance sheet investments;**
- **Portfolio valuations and frequency requirements;**
- **Pledging requirements;**
- **Safekeeping procedures;**
- **Internal controls;**
- **Audit and independent reviews;**
- **Reporting requirements;**
- **Broker/dealer selection and ongoing monitoring;**
- **Accounting and taxation considerations, including other than temporary impairment (OTTI) guidelines;**
- **Conflicts of interest;**
- **Exception reporting; and**
- **Frequencies of policy reviews.**

9. Determine whether management established risk limits appropriate for the institution. Appropriate risk limits address issues such as:

- **Credit risk,**
- **Concentration risk,**
- **Market risk,**
- **Liquidity risk,**
- **Price risk,**
- **Investment types, and**
- **Maturities and call features.**

10. When applicable, assess market-risk modification strategies (e.g. hedging). Effective policies generally address items such as:

- **Exposures needing modification,**
- **Accounting treatment,**
- **Monitoring requirements,**
- **Approved strategies and instruments,**
- **Counterparty credit risk requirements,**
- **Activity limits, and**
- **Analysis and documentation standards.**

11. Evaluate the frequency and timeliness of policy reviews and updates by the board.

Internal Controls

12. Assess the internal control program. Appropriate programs, at a minimum, generally include testing for:

- **Transactions conducted by authorized personnel;**
- **Delineation of responsibilities for joint custody and dual control; and**
- **Separation of duties (executing, posting, and reconciling).**

13. Determine whether internal control procedures are commensurate with the volume and complexity of investment activities. Adequate procedures should address items such as:

- **Portfolio valuations,**
- **Personnel,**
- **Settlement procedures,**
- **Physical controls and documentation,**
- **Conflicts of interest,**
- **Accounting (such as OTTI),**
- **Reporting,**
- **Independent review, and**
- **Validation of risk measurement techniques.**

14. Determine whether management performs activities that may reflect elevated risks or inadequate controls. This may be accomplished reviewing activities and/or file sampling for:

- **Gains trading, when-issued trading, pair-offs, extended settlements, repositioning repurchase**

agreements, short sales, or adjusted trading;

- **Incomplete transaction documentation;**
- **Contravention of policy limits for transaction amounts or types with individual dealers;**
- **Inaccurate reporting or accounting;**
- **Failure to monitor personal investment activities of staff with securities activities responsibilities;**
- **Transactions completed by unauthorized personnel;**
- **Inappropriate delegation of investment authorities;**
- **Inappropriately assigning due diligence responsibilities to third parties; and**
- **Exclusive reliance on credit rating agencies to assess credit risk.**

15. Assess management's procedures for payment, reconciliation, exceptions, and control of security and derivative positions.

16. Determine whether investment activities are accurately reported in the Consolidated Reports of Condition and Income and appropriately supported with bank-prepared work papers.

17. Determine whether transfers occur between the available-for-sale, held-to-maturity, or trading accounts.

18. Determine whether security sales from the held-to-maturity account are consistent with GAAP.

19. Determine, by sampling transactions, whether management uses one dealer or representative for substantially all activity. If so, determine whether management has safeguards to ensure the best prices and executions.

Audit or Independent Review

20. Determine whether audits or independent reviews provide sufficient coverage relative to the institution's size, scope of investment activities, and risk profile. The independent review should:

- **Assess separation of duties, internal controls, and supervision of investment activities;**
- **Compare actual risk levels to board-approved limits;**
- **Determine the adequacy and comprehensiveness of policies and procedures;**
- **Determine compliance with policies, procedures, and regulatory requirements;**
- **Assess the adequacy and accuracy of management's risk measurement systems, including critical**

assumptions;

- **Assess the adequacy, accuracy, and timeliness of reports to senior management and the board;**
- **Assess the accuracy and timeliness of management's price information, including underlying assumptions;**
- **Validate the accuracy of accounting and inventory reports;**
- **Assess management's procedures for identifying and calculating OTTI in the security portfolio.**
- **Verify correct accounting for securities and derivatives positions, including accrued interest; principal amortization, premium amortization, discount accretion, and valuation;**
- **Verify securities trial balance reconciliations to the general ledger and safekeeping reports (consider the frequency of reconciliations, disposition of reconciling amounts, and separation of duties when determining the adequacy of reconciliations);**
- **Ensure appropriate pre-purchase analysis and on-going due diligence is performed;**
- **Verify that appropriate on-going due diligence is conducted on brokers/brokerage firms used;**
- **Determine that off-balance sheet derivative transactions are properly documented;**
- **Recommend corrective action, when warranted;**
- **Verify that corrective action commitments have been implemented; and**
- **Review third party assessments of the securities portfolio for reasonableness.**

21. Confirm that audit or independent review results and management's responses are reported to the board or designated committee on a timely basis.

22. Determine whether management's responses to recent audits or independent reviews are timely and reasonable.

Risk Identification, Measurement, and Reporting Systems

DOCUMENTATION REVIEW

23. Review a sample of files that contain analysis of securities and derivatives positions entered since the last examination.

- **Determine whether management adequately identifies the risks associated with each security prior to acquisition and periodically thereafter, consistent with the bank's policies.**
- **Determine whether management has established an appropriate risk and performance measurement system, including pre-purchase analysis documentation requirements and periodic monitoring.**
- **Ensure management verifies that the security satisfies the investment grade standard.**
- **Determine whether management relies solely on credit ratings to assess credit risk.**
- **Determine whether management adequately assesses whether the instrument's cash flows, risks, and potential returns continue to fit within its investment strategy.**
- **Determine whether documentation is sufficient for management to make an informed investment decision.**

Note: Not all investment instruments require the same level of pre-purchase analysis. Noncomplex and standardized instruments, the risks of which are well known to the institution, generally require significantly less analysis than complex, nonstandard, or volatile instruments. For relatively complex instruments, less familiar instruments, and potentially volatile instruments, institutions often require detailed pre-purchase analysis and documentation.

24. Determine whether management's method of evaluating and selecting authorized securities dealers, investment bankers, and brokers is adequate. When selecting a dealer, investment banker, or broker, management should, at a minimum:

- **Review the firm's current financial information, such as annual reports and credit reports, and evaluate its ability to honor commitments;**
- **Inquire into the general reputation of the firm by contacting previous or current customers; and**
- **Review information from state or federal securities regulators and industry self-regulatory organizations such as FINRA concerning any formal enforcement actions against the dealer, its affiliates, or associated personnel.**

CREDIT RISK

25. Determine whether management's pre-purchase and ongoing credit analysis is commensurate with the instrument.

Note: The depth of the due diligence should reflect the security's credit quality, complexity, and size. For example, for structured instruments, pre-purchase and ongoing credit risk analysis should enable management to understand the characteristics of the underlying collateral, the securitization structure (such as its cash waterfall and performance triggers), and how the instrument may perform under stressed environments. If credit analysis is outsourced to third parties, management should verify the third party's independence, understand the credit analysis methodology, and confirm its adequacy.

26. Determine whether management's credit analysis and risk limits for repurchase agreements and counterparties are appropriate. *(Note: Refer to the FFIEC Policy Statement on Repurchase Agreements of Depository Institutions with Securities Dealers and Others.)*

27. Review and assess the institution's procedures, practices, and policies regarding the identification of OTTI in the investment portfolio.

- **Determine whether management ascertains, at least quarterly, whether a decline in an individual debt security's fair value below its amortized cost is temporary or other-than-temporary.**
- **If the current fair value of the security is lower than its amortized cost basis, ensure consistency with accounting rules under ASC 320-10-35.**
- **Determine whether management's OTTI analysis addresses the following:**

- **The length of time and the extent to which the fair value has been less than the amortized cost;**
- **Adverse conditions specifically related to the security, industry, or geographic area;**
- **The historical and implied volatility of the fair value of the security;**
- **The payment structure of the debt security and the likelihood of the issuer being able to make payments that increase in the future;**
- **Failure of the issuer of the security to make scheduled interest or principal payments;**
- **A significant deterioration in the earnings performance, risk profile, asset quality, or business prospects of the investee;**
- **Significant adverse change(s) in the regulatory, economic, or technological environment of the investee;**
- **Factors that raise material concern about the investee's financial capacity, such as negative cash flow from operations, working capital deficiencies, non-compliance with debt covenants, etc.**

28. Determine whether OTTI exists by considering whether the institution expects to recover the entire amortized cost basis of the security or not.

- **If an institution is unable to assert that it will recover its amortized cost basis, an OTTI shall be considered to have occurred.**
- **In assessing whether the entire amortized cost basis of the security will be recovered, an institution may compare the present value of cash flows expected to be collected from the security with the amortized cost.**
- **If the present value of cash flows expected to be collected is less than the amortized cost basis of the security, a credit loss exists and an OTTI shall be considered to have occurred.**

29. Determine whether the bank intends to sell the security or if it is more likely than not that the organization will be required to sell the security before recovery of its amortized costs basis. Ensure any impact to earnings is appropriately reflected.

- **If the bank intends to sell the debt security, or it is more likely than not the bank will be required to sell the debt security before recovery of its amortized cost basis, an other-than-temporary impairment has occurred and the difference between the security's amortized cost basis and its fair value at the balance sheet date must be recognized in earnings.**
- **If the bank does not intend to sell the security and it is *not* more likely than not that the bank will be required to sell the debt security before recovery of its amortized cost basis, less any current-period credit loss, an other-than-temporary impairment has occurred. The amount of the total other-than-temporary impairment related to the credit loss must be recognized in earnings, but the amount of the total impairment related to other factors must be recognized in other comprehensive income, net of applicable taxes.**

30. Determine whether management uses discounted cash flow analysis to identify credit impairment. *(Note: A credit loss exists when the present value of the cash flows expected to be collected on a debt security is less than its amortized cost.)* Verify the following:

- **The interest rate used to discount the cash flows is the effective interest rate on the security when it**

was acquired (at inception) or current accretable yield; and

- **Forecasts of future cash flows, such as:**
    - **The financial and operating condition of the issuer,**
    - **Reasonableness of estimates of expected default and recovery rates,**
    - **The value and characteristics of any underlying collateral securing the debt security, and**
    - **Remaining payment terms of the security.**

31. Determine whether OTTI occurred on equity securities. If so, verify that the entire impairment is recognized in earnings (i.e. difference between amortized cost basis and fair value).

32. Determine whether management's counterparty credit analysis is adequate for off-balance sheet derivatives. The analysis should include:

- **Identification of counterparties with material credit risk,**
- **Review of counterparty compliance with collateral agreements, and**
- **Review of netting agreements for capital calculations.**

33. Determine whether the process for setting credit limits for issuers and counterparties is appropriate.

34. Determine whether the process for monitoring ongoing credit risk exposure is appropriate.

35. Determine whether concentrations of credit exist.

36. Determine whether credit risk exposure is significant relative to earnings, capital, and risk limits.

Note: Market, liquidity, and legal risk may also be addressed by other examination team members with those findings documented in other ED Modules. If that is the case, completion of the Market, Liquidity, and Legal Risk sections below should be coordinated with those other reviews.

MARKET RISK

37. Assess current appreciation or depreciation relative to risk limits, earnings, and capital.

38. Determine whether market risks are significant relative to risk limits, earnings, and capital. Consult with the examiner in charge of market risk.

39. Determine whether management's market risk measurement system properly identifies and measures all material risks. Appropriate systems generally:

- **Identify and measure the price sensitivity of high duration, structured, or otherwise complex securities, including those with embedded options.**
- **Include use of stress testing with interest rate shocks large enough to measure realistic potential market movements and risk.**
- **Include adjustments to accurately measure price changes when interest rate movements exceed 100 basis points, to account for the effect of convexity.**
- **Subject instruments to nonparallel interest rate shocks when those instruments (e.g. dual index bonds) are exposed to risk from changes in the yield curve's shape.**

40. Determine whether management has assessed the effectiveness of risk reduction strategies (e.g. hedging.)

LIQUIDITY RISK

41. Determine whether the cash flows from periodic payments and maturing securities are consistent with the institution's liquidity objectives and projections.

42. Determine whether liquidity risk from investment activities is significant relative to the board's risk limits, earnings, and capital.

43. Determine whether management's pricing process provides timely, accurate, and objective data by:

- **Confirming that periodic pricing is obtained from an independent source,**
- **Assessing whether management has a consistently applied approach to pricing illiquid or complex instruments, and**
- **Verifying whether management obtains valuation estimates for illiquid or complex securities from more than one source.**

44. Determine whether management periodically reviews the assumptions used to calculate fair values for instruments without readily observable market prices.
45. For off-balance sheet derivatives, determine whether management assesses market factors, such as the number of market makers, transaction volume, and contract liquidity before conducting transactions.
46. Determine whether the volume of pledged securities, depreciated securities, or securities with limited marketability affect the institution’s overall financial condition.
47. Determine the adequacy of management's process for periodically valuing derivatives positions.
LEGAL RISK
48. For off-balance sheet derivatives, determine whether management properly documents contracts and ensures through legal reviews that contracts are enforceable.
Securities and Derivatives Classifications
49. Determine whether the investment portfolio contains any sub-investment quality assets and classify as appropriate. Refer to the Uniform Agreement on the Classification and Appraisal of Securities Held by Financial Institutions (Financial Institution Letter 51-2013, and SR Letter 13-18).
50. Determine whether the institution has any instrument that is highly sensitive to changing interest rates, or subject to high prepayment risk, that may not return the initial principal investment (e.g., interest only stripped MBS and principal-linked structured notes) and classify as appropriate.
51. Determine whether there are any material accounting errors that warrant adverse classification.
52. Estimate the potential loss for all derivative contracts if counterparty performance is not well assured.

Board and Senior Management Oversight

GENERAL

53. Assess management's compliance with established board policies and risk limits.

54. Determine whether management's board reports appropriately identify and measure risk exposure and performance. Generally, management's reports to the board:

- **Summarize all investment activity,**
- **Illustrate investment portfolio risks and returns,**
- **Indicate management's compliance with the investment policy and all risk limits,**
- **List exceptions to internal policy and regulatory requirements, and**
- **Illustrate the effectiveness of derivatives that management employs as part of a market risk modification strategy.**

55. Determine whether board minutes and relevant committee minutes indicate appropriate oversight of security and derivative activities.

56. Through discussions with management, determine whether management has sufficient experience and expertise to understand, measure, monitor, and control risks in the investment portfolio and how those risks fit within the overall business strategy of the financial institution.

- **When applicable, assess management's understanding of tranche structures and performance triggers of structured securities, their monitoring of underlying collateral performance and their understanding of the impact that collateral deterioration may have on the security's performance.**

57. Determine whether current and planned investment strategies are consistent with the bank's overall strategic plan.

58. Determine whether the board or senior management has established an agreement delegating some aspects of the investment process to a third party. *(Note: Management cannot delegate complete investment authority to a third party and must provide adequate oversight over aspects it does delegate.)* Prior to establishing such an agreement, management should evaluate the third party's reputation, performance, creditworthiness, and regulatory background. If such an agreement exists, the following should be addressed:

- **Compensation,**
- **Approved broker/dealers,**

- **Investment goals,**
- **Approved activities and investments,**
- **Risk limits,**
- **Risk and performance measurements,**
- **Reporting requirements,**
- **Settlement practices, and**
- **Independent reviews.**

COMPLIANCE WITH LAWS AND ACCOUNTING STANDARDS

59. Determine whether management adheres to accounting standards. Issues include application of GAAP, interest accruals, principal amortization, premium amortization, and discount accretion.

- **Consider sampling trade tickets and validating purchase and sale price accuracy.**
- **Consider sampling interest accrual calculations or audits to validate accuracy.**
- **Consider sampling premium amortization and discount accretion, including procedures for periodic adjustments for amortizing investments.**

60. Determine whether management complies with applicable laws and regulations, which may include the following:

- **Code of Federal Regulations (12 CFR Part 1- Investment Securities and 12 CFR Part 160 – Lending and Investments)**
- **Government Securities Act of 1986 (in the Miscellaneous Statutes and Regulations), and regulations issued by the Department of Treasury. These regulations address requirements relating to financial responsibility, protection of customer securities and balances, and recordkeeping and reporting of brokers and dealers in government securities; and**
- **State laws and regulations.**

61. Determine whether management implemented appropriate accounting principles regarding securities. Consider the following:

- **Uniform Agreement on the Classification and Appraisal of Securities Held by Financial Institutions (Financial Institution Letter 51-2013 and SR Letter 13-18); and**
- **FFIEC Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities (Financial Institutions Letter 45-98 and SR Letter 98-12);**

End of Core Analysis. If needed, Continue to the Expanded and Impact Analyses.