Rate Sensitivity

Examiners should evaluate the above-captioned function against the following control and performance standards. The Standards represent control and performance objectives that should be implemented to help ensure the bank operates in a safe and sound manner, and that the entity's objectives are carried out. Associated Risks represent potential threats to the bank if the standards are not achieved and maintained. The Standards are intended to assist examiners in analyzing important functions that may warrant additional review. All of the following Standards may NOT need to be considered at every bank. Conversely, these do NOT represent all of the control and performance standards needed for every bank. Examiners should continue to use their judgement when assessing risk.

Standards	Associated Risks
MANAGEMENT AND CONTROL	
The board and management understand the bank's interest rate risk (IRR) exposure and how these risks affect current operations and strategic plans.	The board is unable to effectively oversee IRR management. Mismanagement of IRR may expose the bank to unacceptable levels of risk. Excessive IRR may threaten the bank's earnings, capital, and liquidity.
The board ensures that management effectively identifies, measures, monitors, and controls IRR. The board adopts an adequate IRR management program and policies that are appropriate for the bank's complexity and risk profile.	Excessive IRR exposure may go undetected or be misinterpreted. Inadequate analysis may result in management taking inappropriate actions. Management may be forced to react to market conditions at disadvantageous times with little or no opportunity to formulate and implement IRR control strategies.
The board establishes reasonable IRR strategies. The board documents and approves prudent risk limits that guide management's activities and are consistent with the bank's complexity and capital strength.	Management may lack the necessary guidance to adequately and proactively control IRR. Management may accept risk tolerance levels that exceed the board's guidelines. Excessive tolerance levels may significantly impair earnings and capital levels during periods of adverse interest rate movements.
The board provides adequate IRR management resources.	The potential for an inadequate IRR management program increases.
The board subjects its IRR management program to periodic independent review. The board ensures that management establishes effective and clear internal controls.	Weaknesses in the IRR management program may not be detected. The opportunity for management impropriety increases.
The board reviews all policy and risk limit exceptions.	The bank may be exposed to unacceptable levels of IRR for a prolonged period of time. Management may lose proactive opportunities to mitigate excessive IRR exposure.

Standards	Associated Risks
	Management may ignore policy and limit requirements.
PERFORMANCE	
Management implements procedures that translate the board's policies and risk limits into clear operating standards. Management develops strategies that address the board's policies and risk limits.	The bank fails to achieve its IRR management goals and may be exposed to excessive risk. Management may be forced to take less effective and more costly reactive measures to achieve IRR management goals.
Management maintains IRR exposure within the established limits.	Volatile interest rates may have a significant adverse effect on earnings, liquidity, and capital.
Management prepares reasonable and supportable assumptions as part of the IRR management program with respect to assets, liabilities, off-balance sheet instruments, and the interest rate environment. The assumptions are periodically updated and reported to the board.	The results of the IRR measurement analysis will be meaningless. Management's IRR strategies may become suspect.
The board and management review IRR reports at least quarterly. Banks that engage in complex activities or display significant IRR assess interest rate risk more frequently.	Management may not detect and correct problems in a timely manner.
IRR reports clearly quantify IRR levels and illustrate compliance with established risk limits.	The board may be unable to measure management's ability to manage IRR consistent with policy parameters and strategies.
The board reviews independent findings at least annually.	Deficiencies in the IRR management program may continue. Recommendations for program improvement may not be implemented.

Rate Sensitivity

Core Analysis Decision Factors

Examiners should evaluate Core Analysis in this section for significance and to determine if an Expanded Analysis is necessary. Negative responses to Core Analysis Decision Factors may not require proceeding to the Expanded Analysis. Conversely, positive responses to Core Analysis Decision factors do not preclude examiners from proceeding to the Expanded Analysis if deemed appropriate.

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

Core Answer: General Comment:(If any)

Core Analysis Decision Factors

C.1. Are policies, procedures, and risk limits adequate?

C.2. Are internal controls adequate?

C.3. Are the audit or independent review functions adequate?

C.4. Are information and communication systems adequate and accurate?

C.5. Do the characteristics of the bank's assets, funding sources, and financial derivative contracts indicate a low IRR profile?

C.6. Is the level of risk reasonable relative to capital and earnings levels?

C.7. Do the board and senior management effectively supervise this area?

Rate Sensitivity

Expanded Analysis Decision Factors

This section evaluates the significance and materiality of deficiencies or other specific concerns identified in the Core and Expanded Analyses.

Do Expanded Analysis and Decision Factors indicate that risks are appropriately identified, measured, monitored, and controlled?

Expanded Answer: General Comment:(If any)

<u>Expanded Analysis Decision Factors</u>

E.1. Are management deficiencies immaterial to the oversight of the bank's IRR posture?

E.2. Is the level of IRR immaterial to the overall condition of the bank?

Rate Sensitivity

Consider the following procedures at each examination. Examiners are encouraged to exclude items deemed unnecessary. This procedural analysis does not represent every possible action to be taken during an examination. The references are not intended to be all-inclusive and additional guidance may exist. Many of these procedures will address more than one of the Standards and Associated Risks. For the examination process to be successful, examiners must maintain open communication with bank management and discuss relevant concerns as they arise.

PRELIMINARY REVIEW

1 Review prior examination reports and file correspondence for an overview of any previously identified rate sensitivity concerns.

2 Review available UBPR and other financial reports (FOCUS, IRRSA, etc.) to develop a preliminary assessment of rate sensitivity trends and risks by 1) identifying specific trends or changes which may require further analysis or clarification and 2) determining the extent to which the bank invests in products that are subject to increased Interest Rate Risk (IRR), such as:

Mortgage derivative products
Mortgage servicing assets
Structured Notes
Futures
Forwards
Interest Rate Swaps
Options

3 Review board or committee minutes for evidence of oversight, responsibility, routine management reports, and any identified rate sensitivity concerns.

4 Determine if there are any recent or planned changes in strategic direction and discuss with management the implications for rate sensitivity risks.

(Note: Assess the bank's policies and practices relative to the standards set forth in the 1996 Joint Agency Policy Statement on Interest Rate Risk.)

POLICIES, PROCEDURES, AND RISK LIMITS

5 Review Rate Sensitivity polices. Policy guidance may be incorporated within Liquidity, Loan, Investment, Interest Rate Risk (IRR) or other policies, but taken as a whole, should provide sufficient guidance to management relative to the board's risk tolerances and oversight responsibilities. Policy formality and sophistication will vary, depending upon the level of the bank's risk and the complexity of its holdings and activities, but should:

5 A Provide authority and responsibility to an individual(s) or committee for establishing and maintaining an effective IRR management program which identifies, measures, monitors, and controls IRR.

5 B Identify the types of instruments and activities that may be used to manage IRR exposure.

5 C Provide for a measurement system that is commensurate with the size and complexity of the institution.

5 D Set limits relative to earnings and capital that directly relate to the measurement system.

5 E Provide responsibility for authorizing policy exceptions.

6 Determine that the board approves and periodically reviews policies and procedures.

7 Discuss IRR management processes and practices with management. Consider attending an ALCO meeting to evaluate the process. Sample topics for discussion include:

7 A Development of IRR policies and practices.

7 B Development or choice of IRR measurement systems.

7 C Assumptions used by the IRR measurement system.

7 D Technical expertise of staff relative to the complexity of products used and the complexity of the IRR measurement system.

8 Determine that IRR is considered in any new strategic initiative or product.

9 Determine if procedures and risk limits are reasonable relative to management abilities, current economic conditions, and the overall condition of the bank.

INTERNAL CONTROLS

Note: When any of the following procedures have been conducted by the institution's independent review program, use all reliable, current work products for the examination.

10 Determine if sufficient separation of duties or comparable controls exist over the development and use of measurement systems and monitoring tools.

11 Determine that internal management reports used as a basis for IRR management decisions are prepared regularly and reviewed by senior management and the board of directors, at least quarterly.

12 Determine if management complies with policy parameters and documents the reasons for any variance.

AUDIT OR INDEPENDENT REVIEW

13 Determine that independence and scope of the audit or independent review is sufficient to identify policy, reporting, internal control, and compliance deficiencies.

14 Determine that the scope includes a review and validation of risk measurement calculations and tests for reasonableness and accuracy of assumptions and data inputs. The scope and formality of the review and validation should reflect the size and complexity of the bank.

15 Determine that results are reported to the board on a timely basis.

16 If recent reviews disclosed any deficiencies, determine if management responses are reasonable.

INFORMATION AND COMMUNICATION SYSTEMS

17 Determine if internal management reports provide sufficient information for ongoing interest rate risk management decisions and for monitoring the results of those decisions. Reports should contain sufficient detail for the board or committee and senior management to:

17A Identify IRR levels and trends and measure effects on earnings and capital.

17B Evaluate key assumptions, including interest rate forecasts, deposit behavior, and loan prepayments.

17C Assist management in pricing decisions.

17D Verify compliance with risk limits and policy guidelines, including exception reporting.

18 Determine if interest rate risks are effectively communicated to all areas affected.

19 Consider testing reports for accuracy by comparing with regulatory reporting schedules and subsidiary records.

RATE SENSITIVITY MEASUREMENT CONSIDERATIONS

20 Review IRRSA (FDIC) and/or other available data such as FOCUS (FRB), UBPR, Reports of Condition, and internal bank reports. Determine the extent which the failure of any of the below tests results from the complexity of the interest rate risk profile:

20 A CAMELS ratings at last examination for management, market risk, and composite were no worse than 2.

20 B No material IRR criticisms were noted at the last examination.

20 C Mortgage servicing assets less than 50% of Tier 1 capital.

20 D Structured notes less than 25% of Tier 1 Capital.

20 E No financial derivative contracts are held.

20 F Earning assets maturing or repricing beyond 5 years comprise less than 30% of total assets.

20 G Capital and earnings meet the following criteria:

Tier 1 Leverage Capital		3-year Average Return on Average Assets
6.00% to 6.99%	and	1.50% or greater
7.00% to 7.99%	and	1.25% or greater
8.00% to 8.99%	and	1.00% or greater
9.00% to 9.99%	and	0.75% or greater
10.00% or more	and	0.50% or greater

21 Determine whether recent or anticipated structural changes or trends in balance sheet composition alter the IRR profile relative to historical data. When significant structural changes have or are expected to occur, de-emphasize historical analysis and focus on current and forecasted balance sheet composition. Significant structural changes may include:

21 A Major shift in the maturity (repricing) characteristics of the investment portfolio, loans, borrowings, or deposit accounts.

21 B Increased holdings of financial instruments such as mortgage securities, callable securities, fixed-rate residential loans, and structured notes.

21 C Fundamental change in liability mix between core deposits and other funding sources.

21 D Unexpected change in level or trend of securities appreciation and depreciation.

22 Analyze the historical volatility of the net interest margin (NIM) and net operating income (NOI) relative to:

22 A Correlation with market interest rate fluctuations.

22 B Management strategies to minimize the effect on earnings and capital.

22 C Ability of earnings to absorb reductions in net interest margin resulting from market volatility.

23 Determine the level of IRR from the results of the internal measurement system.

BOARD AND SENIOR MANAGEMENT OVERSIGHT

24 Determine whether the board provides adequate IRR management resources. Consider the following items:

24 A Sufficient staff to operate measurement systems, including back-up personnel.

24 B Technical expertise consistent with the bank's complexity, risk profile, and measurement system.

24 C Adequate training and staff development.

25 Determine if historical performance indicates adequate board and senior management oversight.

26 Determine if the board and senior management can effectively oversee planned initiatives.

Rate Sensitivity

Generally, procedures used in the Expanded Analysis should target concerns identified in the Core Analysis and Decision Factors. Expanded procedures associated with Core Analysis and Decision Factors of no concern need not be used. The flexible guidelines specified for the Core Analysis also apply here.

The procedures in the Expanded Analysis section focus on identifying risk exposures, verifying significant risks, and determining the capabilities and reliability of the internal measurement system.

MANAGEMENT AND CONTROL CONSIDERATIONS

1 Identify IRR exposures using all available information.
IRRSA.
Balance sheet and account data.
Bank IRR analysis.
Strategic and business plans.
Product pricing guidelines.
Hedging or derivative activity.
All other examination findings.

2 Evaluate the effect on IRR from the following sources:

2 A Long-term, fixed-rate assets.

2 B Embedded options.
1. Callable bonds.
2. Mortgage-backed securities.
3. Structured notes.
4. Mortgage loans.
5. Nonmaturity deposits.
6. Derivatives.

2 C Funding sources.

2 D Nonmaturity deposits.

2 E Off-balance sheet derivatives.
1. Interest rate swaps.
2. Futures.
3. Forwards.
4. Options.

2 F Mortgage banking (including mortgage servicing assets).

2 G Variable rate loans or securities with extended repricing intervals (more than two years).

2 H Large trading portfolio.

2 I Fee income.

2 J Product pricing strategies.

INTERNAL MEASUREMENT SYSTEM CAPABILITIES

3 Determine IRR measurement system capabilities.

3 A Review summary description of system capabilities, procedures manual for system, vendor updates on purchased systems, and other applicable documentation.

3 B Verify that the system contains the components and updates needed to generate accurate measurements.

3 C Discuss the system's capabilities, limitations, and assumptions with management.

INTERNAL MEASUREMENT SYSTEM DATA AND ASSUMPTIONS

4 Review the bank's internal control system relative to data and assumptions used by the IRR measurement system.

5 Evaluate objective data input to the IRR measurement system.

5 A Review the account data for larger and more complex account categories for the following information:

5 A 1. Contractual coupon rates and formulas.
2. Current balances.
3. Coupon reset dates.
4. Scheduled principal payments.
5. Scheduled interest payments.
6. Caps and floors.
7. Maturities.

5 B Review the data aggregation process and ensure that it reasonably portrays the bank's cash flow characteristics.

5 C Verify that the base case interest rates and market values are accurate.

6 Review available information regarding all key assumptions including supporting documentation, IRR management committee and board minutes, vendor's or consultant's reports, and independent reviews of the IRR program.

6 A Verify that projected interest rate forecasts are consistent with other forecasts used throughout the bank's planning processes and include increasing and decreasing rate environments that provide meaningful stress scenarios.

6 B Verify that driver rate relationships are supported and accurately applied.

6 C Verify that reinvestment rates are reasonable and consistent with other bank forecasts.

6 D Verify that nonmaturity deposit sensitivity factors are adequately supported with documented analysis. (IRRSA provides nonmaturity deposit analysis measures for examiner review.)

6 E Verify that prepayment forecasts reasonably estimate unscheduled principal cash flows from amortizing instruments.

6 F Verify that growth estimates reflect the strategic goals and forecasts used in the strategic planning process.

INTERNAL MEASUREMENT SYSTEM RESULTS AND VALIDATION

7 Determine if system reports contain the following information:

7 A Material risk exposures and sources.

7 B IRR level using measures that correspond to the board's risk limits.

7 C Deviations from the risk limits.

8 Review the results of the bank's IRR measurement system for the current period and a sample of prior periods. Pay particular attention to the following conditions:

8 A Results illustrate risks different from those identified by historical financial analysis.

8 B Results indicate risk exposures that exceed management's established risk limits.

8 C Results suggest that the system contains obvious deficiencies.

9 Determine if the system's prior forecasts reasonably estimated actual performance by reviewing the following internal control procedures:

9 A Comparison of past system results to actual results.

9 B Comparison of market value assumptions to observable market prices.

9 C Comparison of the bank's measurement system and results to internal or external auditors' measurement systems and results.

Rate Sensitivity

Impact Analysis reviews the impact that deficiencies identified in the Core and Expanded Analysis and Decision Factors have on the bank's overall condition. Impact Analysis also directs the examiner to consider possible supervisory options.

1 Determine the effect of IRR levels and management deficiencies on the bank's earnings, liquidity, and capital, and sensitivity to market risk, and assess the future impact on the bank if they continue.

2 Document the internal measurement system's deficiencies, which may include design flaws, quantitative errors, data inaccuracies, unreasonable assumptions, and reporting weaknesses. Attempt to resolve deficiencies with management during the examination.

3 Discuss IRR deficiencies with management and seek commitment to remedy the IRR exposure, management, and control deficiencies.

4 Consider recommending an accelerated IRR examination schedule if management's efforts to rectify deficiencies should be verified before the next regular safety and soundness examination.

5 Determine the need for administrative and enforcement actions, formulate specific recommendations, and advise the appropriate supervisors on the nature of the concerns. (FDIC: Field Office Supervisor and the Regional Office.)

6 Discuss the possibility of administrative and enforcement actions with executive management and the board of directors.

7 Investigate potential recommendations for civil money penalties or removal actions.