

AGENDA
Federal Savings Associations Teleconference
Monday, November 7, 2011
2:00 p.m. – 4:00 p.m. (Eastern)

Welcome	Timothy Ward Deputy Comptroller for Thrift Supervision Midsize and Community Bank Supervision
Supervisory Expectations for Interest Rate Risk Management	Kerri Corn Director for Market Risk, NBE Credit and Market Risk Policy
IRR Models Perspective	Marshall Osborne Risk Specialist, NBE Balance Sheet Management Group Credit and Market Risk Policy
Thrift Perspective	Kurt Kirch Bank Examiner/FTR Los Angeles, CA Russell Miyashiro Bank Examiner/FTR Santa Ana, CA
Questions	All



Comptroller of the Currency
Administrator of National Banks

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Biographies

Timothy T. Ward **Deputy Comptroller for Thrift Supervision**

Timothy T. Ward is Deputy Comptroller for Thrift Supervision at the Office of the Comptroller of the Currency (OCC).

In this role, Mr. Ward will report to the Senior Deputy Comptroller for Midsize and Community Bank Supervision and lead the planning process for integration of the Office of Thrift Supervision (OTS) examination and supervision functions and staff. Following the July 2011 transfer date, this position will continue in fulfillment of the Dodd-Frank Wall Street Reform and Consumer Protection Act requirement to establish a Deputy Comptroller position dedicated to thrift supervision. Mr. Ward assumed these responsibilities in November 2010.

Mr. Ward joined the OCC in February 2010 as a Deputy Comptroller and Senior Advisor to the Senior Deputy Comptroller for Midsize and Community Bank Supervision, where he was involved in a wide range of OCC bank supervision issues.

Prior to joining the OCC, Mr. Ward served at the OTS and its predecessor agency for more than 26 years, where he held a variety of thrift supervision and leadership roles. He was Deputy Director for Examinations, Supervision, and Consumer Protection from 2007 to 2009, overseeing OTS's four regional offices responsible for supervising approximately 800 savings associations and their parent holding companies. He was also responsible for establishing OTS policy in a number of other areas, including corporate applications, consumer affairs, international operations, economic analysis and research, interest rate risk management, and Basel II capital accord implementation. He also oversaw OTS's Chief Information Officer and the Chief Financial Officer.

Mr. Ward served in dual capacity as the OTS's Chief Financial Officer and Chief Information Officer (CIO) from January 2002 through April 2007, and as the agency's CIO from September 2000. He moved to OTS headquarters in 1998 to coordinate its regional information systems functions after transferring to the agency when it was created in 1989 by the Financial Institutions Reform, Recovery and Enforcement Act of 1989.

Mr. Ward began his public service career in 1983 when he joined the Federal Home Loan Bank of Atlanta. He graduated magna cum laude with a bachelor of science degree in Business Administration/Finance from Auburn University in 1982.





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Kerri R. Corn
Director for Market Risk Policy

Kerri R. Corn is the Director for Market Risk Policy at the Office of the Comptroller of the Currency (OCC).

In this role, Ms. Corn oversees the Balance Sheet Management Group, which is responsible primarily for liquidity, interest rate risk, and investment portfolio activities. She's also in charge of the Asset Management Group, which is responsible for fiduciary activities. Both groups are responsible for providing policy guidance, industry analysis, and support for the training and development of capital markets and asset management examiners within the OCC.

Prior to taking on this role in 2006, Ms. Corn was an Examiner-in-Charge in Large Bank Supervision. During her 28 years with the OCC, Ms. Corn has also worked in Midsize and Community Bank Supervision as a field examiner in Jacksonville, Florida, and as a capital markets examiner in Atlanta, Georgia.

Ms. Corn is a graduate of the Florida State University College of Business.



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Supervisory Expectations for Interest Rate Risk
Management
November 7, 2011



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ENSURING A SAFE AND SOUND
NATIONAL BANKING SYSTEM
FOR ALL AMERICANS



- Economic Background
- Interagency Interest Rate Risk (IRR) Advisory
- Thrift Bulletin 13a
- Regulatory Reporting Rule Change
- Risk Measurement Process
- Risk Management
 - Limits
 - Models
- Summary and Takeaways



- Sustained period of low rates
- Margins and earnings still below norm
- Higher deposit balances from “surge”
- Growth in securities portfolios
- Tenor of assets moving longer
- Options in mortgage-related assets
- Future behavior of deposit and loan customers
- Are past IRR model assumptions still relevant?



- Issued jointly by FRB, FDIC, NCUA, OCC, OTS, FFIEC's State Liaison Committee in January 2010
 - OCC Bulletin 2010-1; OTS CEO Memo #334
- Reminder of supervisory expectations regarding sound practices for managing IRR
- Advisory prompted by concerns about historically low rates, and the need to measure and mitigate exposure to potential increases in rates
- Effective IRR processes especially important for institutions under earnings and capital pressure due to lower credit quality and market illiquidity
- Reiterates several key IRR management principles, but emphasizes and clarifies some key expectations
- References more detailed guidance in the 1996 Interagency Policy Statement on IRR issued by OCC, FDIC, and Federal Reserve Board



- Well managed institutions consider earnings and economic capital perspectives (short- and long-term views)
- Processes should be commensurate with earnings and capital levels, complexity, business model, risk profile, and scope of operations
- Measurement methodologies
 - Technology has broken barriers; simulation at small companies
 - True impact of strategies and transactions captured over a longer time horizon; at least two years, perhaps longer
 - EVE is an effective way to capture embedded options risk
 - System should be robust enough to capture material on and off-balance sheet positions and incorporate stress testing to identify and quantify IRR exposure and potential problem areas
- Stress Testing
 - A meaningful range of scenarios to identify basis, yield curve, and embedded options risk should be used
- Assumptions
 - Document, monitor, back-test, and regularly update key assumptions (e.g., asset prepayments and non-maturity deposits)
- Internal Controls and Model Validation
 - Ensure integrity of overall IRR management process



- OTS CEO Memo #334, dated 1/7/10, released the Interagency IRR Advisory
- The Advisory supplemented the existing guidance in Thrift Bulletin 13a, but did not replace TB 13a. For many thrifts relying exclusively on the Net Portfolio Value (NPV) IRR model, certain aspects of the Advisory did not apply.
- The OTS CEO Memo stated the following:
 - Due to data collection limitations, in some cases the NPV Model may give an incomplete picture of a thrift's IRR profile. Specifically, it does not capture the potential impact of non-parallel shifts in the yield curve and the extent to which changes in interest rates affect short-term earnings. Well managed institutions should be able to quantify these specific risks.



Key Comparisons of TB 13a with OCC Policy

- **Requirement to measure earnings at risk.**
 - Although the OTS encouraged thrifts to conduct earnings sensitivity analysis in order to measure earnings at risk, it did not require the measurement of the short-term risk to earnings, nor did the OTS require thrifts to have board approved earnings at risk limits.
 - OCC requires all institutions to be able to measure both short- and long-term IRR, as well as create reasonable limit structures for monitoring such exposures.

- **Use of 5% threshold for sensitivity testing of complex securities (applied only to institutions with less than \$1B in assets).**
 - Smaller thrifts were required to independently measure the risk of a security deemed “complex” (e.g., structured cash flows) only when the investment exceeded 5% to total assets.
 - This guidance is inconsistent with OCC 98-20 which requires a price sensitivity analysis for all complex securities prior to purchase, regardless of institution size.



Key Comparisons of TB 13a with OCC Policy

- **Incremental analysis of significant transactions (applied only to institutions with assets greater than \$1B).**
 - Thrifts that engage in a transaction that might reasonably be expected to increase an institution's Interest Rate Sensitivity Measure by more than 25 bps are required to conduct an analysis to show the impact on NPV.
 - While the OCC has no such requirement based on the size of institution, it fully expects all institutions to evaluate the potential impact on IRR exposures resulting from new financial products or future business plans.

- **Emphasis on qualitative factors when assessing overall IRR.**
 - TB 13a suggests that more complex institutions require qualitative risk measures to determine an overall level of market risk; however, the primary reliance is on the NPV model.
 - OCC guidance places equal weight on qualitative measures and quantitative measures.



OTS IRR Measurement / Model

- TB 13a currently governs IRR supervision and partially contradicts interagency guidance:
 - Should establish limits with regard to NPV; not required to establish limits or analyze earnings sensitivity, but considered a good management practice
 - Generally, thrifts under \$1 billion in assets may rely on quarterly NPV estimates by OTS; over \$1 billion should measure their own interest rate sensitivity
 - IRR data is collected through schedule CMR of the Thrift Financial Report
 - IRR levels are primarily based on a post-shock NPV ratio and a interest rate sensitivity measure
- Through the 12/31/11 reporting period, the NPV model will continue to provide IRR estimates to thrifts that submit schedule CMR



OTS IRR Measurement / Model

- New Rule (CEO memo #391, July 7, 2011) eliminates schedule CMR as thrifts move to the call report as of 3/31/12. The last reporting period for this schedule is 12/31/11.
- As stated in the CEO memo and Federal Register Notice:
 - All savings associations will be expected to have their own resources to measure and monitor IRR. This measurement should address earnings at risk as well as capital at risk to interest rate movements, as described in the agencies' 2010 Advisory on Interest Rate Risk Management.
- OCC expects institutions to be able to measure IRR without the OTS IRR model after 12/31/11. Accordingly, thrifts should be making progress toward implementing an independent IRR measurement process by that date. The regulatory evaluation of each thrift's process will take into account its risk profile, capital support, and governance.



OTS IRR Measurement / Model

- OTS Asset & Liability Price Tables will no longer be published after the 12/31/11 reporting cycle.
- This information was meant to provide transparency to the OTS NPV model process. Not meant to serve as an industry benchmark.
- Most of this information is available from public websites, subscription services, or model vendors.
- Non-maturity deposit values are derived from proprietary OTS models and dated historical studies. Institutions should work closely with internal subject matter experts, model vendors, and other industry sources to find the best modeling approach and assumption set for their non-maturity deposit products.



OTS IRR Measurement / Model

- The 2010 Interagency Advisory should be the guiding document for IRR management practices. Risk management principles in TB 13a that align with the Advisory, and highlight key considerations given the inherent risk profiles of thrifts, can be used to assist in establishing or revising IRR management processes. However, references to the NPV model or its output should not be used after the final CMR reporting period, 12/31/11.
- Additional OCC handbooks and bulletins that address IRR management practices and regulatory risk assessment processes are included at the end of this presentation.
- Questions during this transition period should be directed to your assigned supervisory office.



- OCC uses the Uniform Financial Institutions Rating System (CAMELS) and a Risk Assessment System (RAS) to assess the quantity of risk and quality of risk management.

- Both of these evaluation methods provide information about an institution's:
 - Overall soundness
 - Financial and operational weaknesses or adverse trends
 - Problems or deteriorating conditions
 - Risk management practices

- The major distinction between the RAS and CAMELS is the prospective nature of the RAS. CAMELS provide a point-in-time assessment of current performance. The RAS reflects both current (aggregate risk) and a prospective (direction of risk) view of the institution's risk profile.



- **CAMELS “S” Rating – Sensitivity to Market Risk**
 - 1 rating indicates well controlled and strong risk management

- Market risk is rated based upon, but not limited to, an assessment of the following evaluation factors:
 - The sensitivity of the financial institution's earnings or the economic value of its capital to adverse changes in interest rates, foreign exchanges rates, commodity prices, or equity prices.
 - The ability of management to identify, measure, monitor, and control exposure to market risk given the institution's size, complexity, and risk profile.
 - The nature and complexity of interest rate risk exposure arising from non-trading positions.
 - Where appropriate, the nature and complexity of market risk exposure arising from trading and foreign operations.



- **Risk Assessment System (RAS) – IRR**
 - Quantity of IRR (low, moderate, or high)
 - Quality of IRR Management (weak, satisfactory, strong)
- **Examiners consider both the quantity of risk and quality of IRR management to derive the following conclusions:**
 - Aggregate IRR (low, moderate, or high)
 - Direction of IRR expected over the next 12 months (decreasing, stable, increasing)
- **Quantity of risk and quality of risk management should be assessed independently**
 - Assessment of the quantity of risk should not be affected by the quality of risk management, no matter how strong or weak.
 - Strong capital support or financial performance should not mitigate an inadequate risk management system.



- **An institution has a high level of IRR exposure if its current or potential change in economic value, if recognized, would result in the capital ratios falling below the “adequately capitalized” level for PCA purposes.**
 - This situation may require additional supervisory attention.
 - At a minimum, management should have plans for reducing the institution’s exposures, raising additional capital, or both.

- **One should not conclude that high risk levels are bad and low risk levels are good. The quantity of risk simply reflects the level of risk the institution assumes in the course of doing business.**
 - Whether this quantity is good or bad depends on whether the institution is capable of identifying, measuring, monitoring, and controlling that amount of risk.



▪ **Indicators of a high quantity of IRR:**

- Repricing mismatches are longer-term and may be significant, complex, or difficult to hedge.
- Potential exposure to earnings and capital is significant when measured against a set of stress scenarios.
- Potential exposure to changes in the level and shape of the yield curve is significant. Positions may be complex.
- Potential exposure to assets and/or liabilities with embedded options is material. Positions may be complex and the impact of exercising options may adversely affect earnings and capital.
- Support provided by low-cost, stable non-maturity deposits is not significant or sufficient to offset risk from longer-term repricing mismatches or options risk.



■ **Indicators of weak IRR management:**

- Board approved policies are inadequate in communicating guidelines for management of IRR, functional responsibilities, and risk tolerance.
- Risk limit structures to control risk to earnings and economic value may be absent, ineffective, unreasonable, or inconsistent with risk tolerance of the board.
- Management does not anticipate or respond appropriately to adverse conditions or changes in economic conditions. Management does not or inadequately identifies and manages the risks involved in new products, services, and systems.
- Risk measurement processes are deficient given the size and complexity of on and off-balance sheet exposures. Material weaknesses may exist in data input and interest rate scenario measurement processes. Assumptions may not be realistic or supported. Deficiencies may be material.



- An effective limit system should permit management to identify IRR exposures, initiate discussions about risk, and take appropriate action as identified in IRR policies and procedures.
- Limit controls should be in place to ensure that both earnings at risk and economic capital sensitivity exposures that exceed certain predetermined levels receive prompt management attention.
- For institutions with few holdings of complex instruments and low risk profiles, simple limits on permissible holdings or allowable repricing mismatches in intermediate- and long-term instruments may be adequate.
 - Note: At more complex institutions, extensive limit structures may be necessary.



- Well managed institutions will find a balance between establishing limits that are neither so high that they are never breached nor so low that exceeding the limits is considered routine and not worthy of action.
- Example: An institution consistently reporting modest EVE sensitivity exposures (e.g., 2-5% decline for a +/- 200 bps change in rates) while maintaining a policy limit for this shock scenario that limits EVE sensitivity exposure to 20% is probably inappropriate and not consistent with sound IRR risk management practices. The difference between the actual historical exposure and the risk limit suggests that management's risk appetite is much less than the established limit. This limit would not provide a useful trigger for management review or action should there be incremental increases in risk.



IRR Survey Information

- **As of 2Q11, IRR information (recorded in examiner view) from community bank examinations regarding short-term and long-term exposures and limits indicate the following:**
 - NII-at-risk and EVE are the primary tools for measuring short- and long-term exposures, respectively
 - Alternative NII-at risk scenarios employed where the yield curve steepens/flattens, or for EVE sensitivity rates are shocked 400 bps
 - 12-month exposures for NII-at-risk (+200 bps shock) in the -10% to -20% range with corresponding risk limits of -10% to -20%
 - EVE sensitivity exposures (+200 bps shock) in the -5% to -25% range with corresponding risk limits of -10% to -30%



- OCC expects institutions to have an adequate system of internal controls to ensure the integrity of all elements of their IRR management process, including the adequacy of corporate governance and the compliance with policies and procedures.
- Since the OCC does not prescribe a specific model or risk measurement process to an institution, it is management's responsibility to ensure that an appropriate risk measurement system is in place.
- Although institutions may rely on third party IRR models, they are expected to fully understand the assumptions and methodologies employed by the vendor.
 - They must ensure such systems and processes are incorporated appropriately in the short-term and long-term management of IRR exposures.



- **Stress testing, which includes both scenario and sensitivity analysis, is an integral component of IRR management.**
 - Institutions should assess IRR exposures beyond typical industry conventions, including changes in rates of greater magnitude (e.g., up and down 300 and 400 basis points) across different tenors to reflect changing slopes and twists of the yield curve.

- **Non-complex institutions (e.g., institutions with limited embedded options or structured products on their balance sheet) may be able to run fewer or less intricate scenarios, depending on their IRR profile.**
 - Interest rate shocks of sufficient magnitude should be run, regardless of the institution's size or complexity.

- **Institutions should ensure their stress scenarios are plausible in light of the existing level of rates and the interest rate cycle.**
 - For example, in low rate environments, scenarios involving significant declines in market rates can be de-emphasized in favor of increasing the number and size of alternative rising rate scenarios.



- Management should ensure an independent review of the soundness of the modeling process. This includes assessing the reasonableness of assumptions and the process used to determine assumptions and performing ongoing monitoring and back-testing of assumptions and results.
- Smaller institutions that do not have the resources to staff an independent review function should have processes in place to ensure the integrity of the various elements of their IRR management processes.
- Institutions should conduct at least an annual review of their IRR model to determine if it is working as intended and if the existing validation activities are sufficient.
- Institutions that use a third party model are not required to test the mechanics and mathematics of the measurement model. However, the vendor should provide documentation showing a credible independent third party has performed such a function. And the institution should ensure the model is appropriate for its IRR profile through monitoring and back-testing activities.
- The depth and extent of the validation process should be consistent with the materiality and complexity of the risk being managed.



- **The ability to reasonably model the institution's current and planned on-balance sheet and off-balance sheet product types (on both income and capital valuation bases).**
 - Significant positions in highly structured instruments or institution-specific products are key considerations.
 - Model can support the level of data aggregation and stratification needed given each category's unique behaviors and attributes.

- **The ability to automate processes compared with manual work-arounds.**
 - Consider whether model has automated interfaces with institution source systems.
 - Consider cost, hardware requirements, staff levels, and expertise needed to run the model and integrate any add-ons.



- **The ability to measure embedded option-related risk present in the balance sheet**
 - Rate dependent cash flow behaviors driven by embedded options
 - Examples include mortgage prepayments, call features in many investments, convertible wholesale funding products and repricing limits (caps and floors).
 - Option adjusted spread (OAS)** is the best method for measuring IRR for instruments that contain options.
 - Callable bonds and mortgages are often quoted in terms of OAS because the spread removes the risk of prepayments from the yield calculation.
 - **OAS is the spread of a bond relative to a risk-free benchmark, exclusive of any optionality embedded in the bond.



- **Allows the user the flexibility to choose alternative rate scenarios when measuring IRR**
 - Models should be able to capture all IRR from various rate scenarios, including the risk resulting from changes in the shape and level of the yield curve.
 - Scenarios should cover multiple time horizons and go beyond the standard 200 basis point shock to include changes in rates of greater magnitude, like a ramp or shock of +/- 300 or 400 basis point rate shifts.
 - Models should also be able to measure non-parallel shifts under various interest rate shocks (e.g., flattener scenarios when yield curve is steep).



- **Allows the user to select the appropriate key driver rate or yield curve for discounting cash flows.**
 - Models should allow the user to choose driver rates and change their relationship to other market rates when necessary (e.g., relationship between Fed Funds rate and 3-month Libor).
 - Some vendor models restrict users to only one type of yield curve (US Treasury).

- **Includes a high level of model transparency and appropriate and comprehensive vendor model validations and internal control reviews.**

- **Ensures a comprehensive level of vendor implementation and ongoing support is received, including available training from the vendor.**



- Model is unsuitable for institution's risk profile; cannot adequately capture risks (inadequate due diligence)
- Key assumptions are incorrect or not well supported and documented; not available for review (by ALCO or regulators)
- Model inputs and assumptions are not updated regularly; need to ensure they are reasonable and support business functions (and new business)
- Absence of formal procedures for the ALM model; should cover inputs, user guides, training materials, reporting, contingencies
- Absence of back-testing model to actual results; determine root cause and make adjustments



- Challenging operating environment given regulatory, market, and economic uncertainty
- Sustained period of low interest rates and margins is a perfect set up for interest rate risk
- Now is the time to evaluate IRR management systems and controls in light of the institution's business model, risk profile, financial condition, and strategic plans
- Technological advances have made third party models a cost effective alternative for institutions of all sizes and levels of complexity
- Additional OCC guidance on IRR management practices is available through our internet site and any questions can be directed to your assigned supervisory office



- **Comptroller’s Handbook Booklets:**
 - Interest Rate Risk (June 1997, March 1998)
 - Risk Management of Financial Derivatives (1997)
 - Bank Supervision Process (September 2007)
 - Community Bank Supervision (January 2010)
 - Large Bank Supervision (January 2010)
- **OCC Bulletins:**
 - 2010-1, “IRR: Interagency Advisory on IRR Management”
 - 2011-12, “Sound Practices for Model Risk Management”
 - 2009-15, “Investment Securities: Risk Management and Lessons Learned”
 - 2004-29, “Embedded Options and Long-Term IRR”
 - 98-20, “Investment Securities – Policy Statement”



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Questions ?