Inside

Effective Governance Processes for Managing Interest Rate Risk

Developing the Key Assumptions for Analysis of Interest Rate Risk

Developing an In-House Independent Review of Interest Rate Risk Management Systems

What to Expect During an Interest Rate Risk Review
Supervisory Insights is published by the Division of Risk Management Supervision of the Federal Deposit Insurance Corporation to promote sound principles and practices for bank supervision.

Martin J. Gruenberg
Chairman, FDIC

Doreen R. Eberley
Director, Division of Risk Management Supervision

Journal Executive Board

Division of Risk Management Supervision
George E. French, Deputy Director and Executive Editor
James C. Watkins, Senior Deputy Director
Robert L. Burns, Deputy Director
Melinda West, Deputy Director

Division of Depositor and Consumer Protection
Sylvia H. Plunkett, Senior Deputy Director
Jonathan N. Miller, Deputy Director

Regional Directors
Michael J. Dean, Acting Regional Director, Atlanta Region
Kristie K. Elmquist, Dallas Region
Stan R. Ivey, San Francisco Region
James D. LaPierre, Kansas City Region
M. Anthony Lowe, Chicago Region
John F. Vogel, New York Region

Journal Staff
Kim E. Lowry
Managing Editor
Daniel P. Bergman
Financial Writer
Jeffrey A. Fahrmann
Financial Writer

Supervisory Insights is available on-line by visiting the FDIC’s Web site at www.fdic.gov. To provide comments or suggestions for future articles, request permission to reprint individual articles, or request print copies, send an e-mail to SupervisoryJournal@fdic.gov.

The views expressed in Supervisory Insights are those of the authors and do not necessarily reflect official positions of the Federal Deposit Insurance Corporation. In particular, articles should not be construed as definitive regulatory or supervisory guidance. Some of the information used in the preparation of this publication was obtained from publicly available sources that are considered reliable. However, the use of this information does not constitute an endorsement of its accuracy by the Federal Deposit Insurance Corporation.
Effective Governance Processes for Managing Interest Rate Risk

The foundation of an effective interest rate risk (IRR) management process is the establishment of board-approved policies that measure, monitor, and control IRR. As discussed in this article, a successful governance framework is grounded in an informed and involved board of directors that provides senior management with clear policy guidance, sufficient internal resources, and risk mitigation strategies to guide an institution’s IRR position well in advance of market shifts.

Developing the Key Assumptions for Analysis of Interest Rate Risk

Effective IRR measurement and monitoring requires accurate information; therefore, bank management should develop assumptions that are readily understood, well supported, and updated periodically. This article describes the process for developing key assumptions necessary to analyze interest rate sensitivity in the current environment.

Developing an In-House Independent Review of Interest Rate Risk Management Systems

An annual independent review of its IRR measurement system is an important part of any bank’s internal control framework. The scope and formality of such a review should be appropriate for the size and complexity of the bank. This article describes common-sense approaches that non-complex institutions may use to effectively and economically perform an IRR independent review in-house.

What to Expect During an Interest Rate Risk Review

This article is intended to help bankers prepare for regulatory reviews of IRR by describing what examiners focus on, supervisory expectations with respect to IRR, and communication with the FDIC during an examination. Resources for bankers regarding IRR also are provided.

Regular Features

Regulatory and Supervisory Roundup

This feature provides an overview of recently released regulations and supervisory guidance.
Letter from the Director

This edition of Supervisory Insights presents an examiner’s perspective on one of the most important issues facing community banks—managing interest rate risk (IRR). This edition features articles authored by FDIC field examiners that specialize in IRR reviews at community institutions. We believe these articles can help your bank enhance its IRR management processes and be better prepared for a period of higher and more volatile interest rates.

Effective governance over IRR is a critical component of a bank’s internal control framework. This includes strong asset-liability management policies, reasonable investment and exposure limits, assignment of accountability for risk measurement and controls, and appropriate management information systems that help inform strategic decisions of senior management and the board of directors. “Effective Governance Processes for Managing Interest Rate Risk” discusses supervisory expectations for a community bank’s IRR governance process and presents ideas for mitigating on- and off-balance sheet risk.

The usefulness of an IRR measurement system depends on the reasonableness of the assumptions that are used as inputs. “Developing the Key Assumptions for Analysis of Interest Rate Risk” discusses approaches that bank staff can use to arrive at reasonable assumptions for use as inputs to the IRR measurement system.

Bankers inquire about supervisory expectations for independent testing and, in particular, who, when, and what should be tested. In “Developing an In-House Independent Review of Interest Rate Risk Management Systems,” we explore expectations for independent testing as set forth in the 1996 interagency directive on IRR management and present a concept for performing this function effectively with capable bank employees.

And finally, this edition provides an examiner’s perspective on how bankers can better prepare for their next IRR examination. “What to Expect During an Interest Rate Risk Review” explains how examiners plan reviews and provides insights on communicating with the examination team regarding IRR findings.

We hope that you find this edition timely and useful as your institution works to refine and strengthen its internal policies and systems for managing rate sensitivity. We welcome your feedback on the articles as well as any topic suggestions for future issues. Please e-mail your comments and suggestions to SupervisoryJournal@fdic.gov.

Doreen R. Eberley
Director
Division of Risk Management Supervision
Managing interest rate risk (IRR) is one of the most important jobs of a banker. IRR can be a technical subject, but it deals with some of the most significant strategic and operational questions that banks face. When the economy or interest rates shift direction, how will that affect the bank’s deposit base, loan customers, and investments? Will revenue growth keep pace with rising deposit costs? Will there be sufficient deposit funding to meet increasing loan demand, or will potentially depreciated securities need to be sold for liquidity? Most importantly, does the bank need to change its strategy now to be better prepared for the future? While technical experts and IRR software can help answer such questions, senior management and the board of directors need to be actively engaged in IRR oversight to ensure that key strategic issues are carefully considered and addressed on a regular basis.

In the years since the financial crisis, some banks have extended their asset maturities to generate income in response to low market interest rates and a challenging earnings environment. As a result, these institutions’ earnings, equity capital, and liquidity could be adversely affected by a sustained and substantial increase in interest rates. Managing IRR is a central aspect of prudent banking, and in recent years the FDIC has re-emphasized the importance of effective policies, strong internal monitoring and control procedures, and appropriate risk mitigation strategies to appropriately manage rate sensitivity. Good planning now can help minimize the potential for negative impacts.

This article highlights the elements of a successful IRR management process through a discussion of supervisory expectations and observed practices at well-rated institutions. An overview of risk mitigation strategies is presented to illustrate that IRR can be appropriately managed through various prudential methods.

**Governance and the Board of Directors**

The 1996 Joint Agency Policy Statement on Interest Rate Risk (“the 1996 Policy Statement”) and the 2010 Advisory on Interest Rate Risk Management (“the 2010 Advisory”)2 state that the board of directors is ultimately responsible for the degree of IRR taken by an institution and should understand and monitor exposures that may potentially affect the institution’s financial condition. This does not mean that directors need to be well versed in the technical aspects of IRR mechanics and modeling, but a basic understanding of IRR commensurate with the institution’s activities is essential. Frequently, the recorded minutes of board and asset-liability management committee

---


(ALCO) meetings at well-rated institutions include director comments or questions on matters that go beyond the current and prospective interest rate environment and include pricing strategies, product mix, and most notably, the rationale behind policy deviations and underlying causes of changes in the bank’s risk profile. IRR management from a director’s perspective is not about projecting how and when rates will change; instead, it is about understanding how the bank will be affected by a range of outcomes and ensuring that assumed risks are reasonable and properly compensated for. Such notations in the minutes portray an engaged and informed directorate that ensures its strategies are executed within established policy. Senior management’s primary objectives should be administering board-approved policies, including day-to-day oversight of risk taking; maintaining an effective IRR measurement system; and collecting and interpreting meaningful data to inform the directorate of exposure levels.

A clearly articulated asset-liability management policy with appropriate IRR guidelines ensures that IRR exposure is measured, reported, and maintained within tolerable parameters. The policy should establish clear lines of authority and responsibility; define allowable products, services, and activities; and include risk mitigation strategies. To prudently control rate sensitivity, written policies should require regular IRR measurement and meaningful risk limits.

According to the 1996 Policy Statement, senior management and the board or board committee should review reports on the bank’s IRR profile at least quarterly. More frequent reporting is often warranted.
Examiners are sometimes asked, “What limits are reasonable for changes in net interest income (NII) or economic value of equity (EVE)?” Rules of thumb exist in the industry, but each bank is unique, and it is difficult to apply a uniform set of limits. In establishing limits, the board and senior management should focus on the potential impact of interest rate scenarios on net income and EVE, taking into consideration the effect on the value of the investment portfolio, the ability of the bank’s existing borrowers to repay their loans, and depositor behavior. The bank’s financial condition and risk profile should be the guiding factors that influence the level of tolerance the board mandates in setting limits. Limits should not be so low as to frequently require exception approval or refinement, and they should not be set so high as to allow for an unacceptable level of IRR. If established limits have been or are about to be breached, management should take mitigating steps to ensure that IRR is maintained within board-approved limits.

It is important for directors to consider what the limit is based on (for example, a 20 percent change in NII is different from a 20 percent change in ROAA). In the graph shown below, we can observe the impact to net income (vertical axis) if net interest income (horizontal axis) were to decline by as much as 20 percent. In this case, pre-tax ROAA would decline more than 60 percent through what may have been considered only a moderate and acceptable degree of NII exposure at 20 percent. In evaluating the appropriateness of 20 percent as a policy limit, the bank’s board should consider how it would address the potential for a pronounced decline in net income and weigh the impact and feasibility of those actions against the impact of lower policy limits. For example, one approach may be to adjust asset growth expectations or raise additional capital given lower forecast earnings. Another approach might be to assess whether reductions could be made to overhead expenses. If these actions would not be feasible, or would be feasible but not desirable in light of the bank’s overall strategic plan, then the board should consider tightening the policy limits, which may require formal risk mitigation strategies (e.g., initiating changes in the maturity and re-pricing characteristics of assets or liabilities) as discussed in further detail later in this article. This example highlights the benefit of expanding policy limit considerations into a broader financial context.
The Role of the ALCO

Most financial institutions form an ALCO to coordinate balance sheet strategies, manage liquidity, and monitor IRR exposures. The 2010 Advisory describes an optimal ALCO structure, which includes representation from major operational functions (e.g., lending, deposit gathering, investing). The advantage of this structure is that each member has an extensive knowledge of product, market, and competitive dynamics in relation to IRR. Members are typically senior or mid-level managers who can convene quickly during evolving or challenging market environments to evaluate, analyze, and recommend mitigating action to the board.

In addition to asset-liability management oversight, one important function the ALCO can fulfill is the formulation and periodic review of the key assumptions the bank uses when analyzing its exposure to changes in interest rates. Examiners have observed instances where the assumptions are formulated by a member of management, commonly a Chief Financial Officer (CFO), and are presented for review and approval by the ALCO. This process is acceptable and can achieve desired results. The ALCO sometimes plays a more active role by providing and reviewing the underlying information and supporting rationale as the basis for assumption formulation. ALCO members at well-rated institutions are readily familiar with deposit and loan pricing and customer behavior in the bank’s local market, which provides the foundation for the critical assumptions requiring sound judgment, such as non-maturity deposit sensitivity and loan prepayment activity. This is not to say, for example, that an ALCO member from the lending function will know exact historical prepayment metrics on residential mortgages, but the member should have sufficient experience to be able to reasonably question an assumption under consideration.

Internal Controls and Independent Review

As with any well-governed banking function, an adequate system of internal controls promotes the integrity of the IRR management process. Clear lines of responsibility and authority should be communicated and exercised to ensure consistent monitoring, transparent reporting, and data integrity. For institutions that conduct in-house analysis with purchased software, strong controls over the IRR measurement process are important to ensure the accuracy and integrity of reports presented to the board and senior management. Institutions with strong controls generally have, at minimum, software access restrictions, data and assumption input review procedures, board reports that include changes to assumptions, and identified staff to serve in a backup role when needed. Backup personnel

---

4 Examiners also have observed ALCO membership that includes directors, which provides the board with practical insight into the bank’s risk-taking practices and mitigation strategies.

5 The 1996 Policy Statement recommends, as part of the independent review, the identification of critical assumptions, an analysis of the assumption process, and an assessment of the impact of chosen assumptions. However, fulfilling this requirement should not preclude the ALCO from conducting periodic reviews, which can reasonably assure the model generates exposures based on current and relevant assumptions. The 2010 Advisory states that proper measurement of IRR requires regularly assessing the reasonableness of assumptions that underlie an institution’s IRR exposure estimates. At well-rated institutions, examiners have generally observed that assumption reviews are conducted quarterly before each model run.
should have a basic understanding of IRR including the bank’s policies and limits, and the ability to use the bank’s particular IRR measurement tools so as to ensure IRR measurement and reporting processes continue without interruption.

The 1996 Policy Statement states that banks should conduct an independent review of IRR measurement and control systems along with an annual report to the board that summarizes its findings. The board or ALCO should consider two critical questions when discussing independent review findings:

1. Does the IRR management process function according to policy guidelines and prudent risk management standards?

2. Does the IRR measurement system reasonably estimate exposures to earnings and capital based on a logical and supported set of assumptions?

The 1996 Policy Statement also states that the scope and formality of an independent review should be scaled to the complexity of a bank’s activities. Additional perspectives regarding the independent review process are presented in “Developing an In-House Independent Review of Interest Rate Risk Management Systems” in this edition of Supervisory Insights.

A more advanced facet of the IRR independent review involves methodological and mathematical testing of vendor-designed IRR models. The FDIC does not require state nonmember institutions to conduct this type of test, as vendors typically engage a credible third party to validate the integrity and reliability of their modeling software. Most model vendors have a sufficiently large client base to justify the expense of a third-party validation; therefore, it should be readily available at the client institution’s request. If not, the board should seek other alternatives to validate the model or reconsider whether the vendor is suitable for its institution.

Although most community banks are not required to validate purchased IRR software, bank management is responsible for ensuring that the key assumptions entered into the software are reasonable, forward-looking, and appropriate to the bank’s operations. For example, in one case, bank management observed that its IRR software was forecasting interest expense from non-maturity deposits in a rising-rate environment at a level that was materially lower than the bank’s prior experience. Upon recognition of this difference, bank management determined that deposit pricing had increased at a greater rate than projected due to its decision to match a competitor’s aggressive marketing campaign to attract new depositors when short-term rates began to increase. Based on the likelihood of the competitor continuing the marketing strategy, the bank altered its non-maturity deposit rate sensitivity assumptions to better reflect its plan to retain valuable core depositors.

According to the 2010 Advisory, large and complex institutions may need to conduct in-depth analysis of a model’s underlying mathematics. Such analysis could take the form of constructing an identical model to test assumptions and outcomes or using an existing, well-validated “benchmark” model, which is typically a less costly alternative. Underpinning methodologies in a benchmark model should be closely aligned to those of the model being validated.
Risk Mitigation Strategies

Risk mitigation is an ongoing process to maintain exposures within board-approved limits to ensure that earnings and capital are sufficient to allow the bank to withstand adverse interest rate changes. There are a range of strategies available should current exposures be outside comfort levels. Risk mitigation can be as simple as reducing the maturities of future purchases of investment securities or extending the duration of liabilities. Well-rated institutions use several methods to reduce IRR exposure, including repositioning the balance sheet and hedging. Strong capital levels or a new capital offering also can be a very effective tool for mitigating outsized IRR exposure.

The most common risk mitigation strategy is slowly repositioning the balance sheet over time to more consistently align an institution’s overall re-pricing, maturity, and duration profile.\(^7\) When prudently conducted, this approach can help provide a “natural hedge,” whereby an institution that was previously mismatched with respect to cash-flow timing or valuation returns to a more neutral rate sensitivity position. For example, an institution exposed to rising interest rates may need to shorten the duration of assets or extend the duration of liabilities.

Before engaging in a balance sheet repositioning program, institutions should analyze the impact on prospective earnings and capital. Generally, the rapid sale of illiquid long-duration securities could result in significant losses and may not be an optimal method to reduce risk. When banks find they possess a higher level of IRR than desired, an appropriate action may be to purchase shorter-dated securities as funding becomes available or increase the duration of funding.

Reducing extension risk in the bond portfolio often involves accepting a lower level of current earnings. Accepting additional risk is typically rewarded through a higher return, and IRR is no different in this context. Therefore, some level of IRR can be beneficial, in moderation. However, banks that are working to reduce their IRR exposure will also likely see a reduction in their interest income as a result. The FDIC strongly supports banks’ efforts to control outsized exposure to interest rate volatility and will not criticize an institution for temporary adverse consequences to earnings resulting from a prudent rebalancing strategy.

A secondary, though more complex, IRR mitigation technique is off-balance sheet hedging. Hedging strategies for IRR typically involve the use of derivative instruments (e.g., forwards, swaps, caps, floors, swaptions, and collars)\(^8\) and can be effective in curtailing undue IRR if used in a safe and sound manner. As discussed in the 2010 Advisory, the primary caveat to consider before entering into a derivatives-based hedging strategy is determining whether the board and senior management can develop an appropriate understanding of the proposed hedging strategy.

\(^7\) Duration is a measure of a financial instrument’s value sensitivity to changes in interest rates. Variations of this approach are common to the measurement of EVE in many IRR models.

\(^8\) As described in the 2010 Advisory, hedging with derivative instruments to mitigate IRR may be appropriate for institutions with the requisite knowledge and expertise, as it is a potentially complex activity that can have unintended consequences, including compounding losses.
and consider its relevant risks and benefits based on a comprehensive, reliable analysis. If derivatives hedging is determined to be an appropriate tool for a given institution, the board and senior management should develop a thorough set of policies and procedures covering allowable derivatives contracts, risk and maximum loss limitations in terms of capital, pre-purchase analysis (including modeling) and ongoing monitoring procedures, authorized transactional parties, and accounting standards.

Importantly, hedging with derivatives involves a new set of IRR measurement considerations before and after entering into such a contract, as well as assumptions that would require sufficient modeling capabilities. As a general matter, community banks should carefully consider their ability to identify and manage the associated risks before embarking on a derivatives hedging program.

**Consequences of Unexpected Market Volatility on IRR Sensitivity**

Implementing the elements of a strong IRR governance and risk management framework enables banks to effectively manage exposures and prepare their business for the future. Nonetheless, even when risk is well managed, an institution could be negatively impacted by unexpected interest rate volatility or other adverse circumstances.

An institution that has extended the duration of its fixed-rate assets to generate additional income, for example, may experience a negative impact to earnings in a higher-interest rate environment as funding costs increase. While a strong retail deposit base can generally help mitigate the impact of such a situation, it is important to recognize that depositors may be more aggressive in seeking higher-yielding products than previous experience. Of particular note, traditionally stable deposits could behave with greater rate sensitivity as a result of structural, technological, and preferential changes that were not present the last time rates increased after a sustained low-rate environment. Furthermore, to the extent an institution has experienced significant deposit growth over the last several years, some deposit balances may be withdrawn from the institution altogether and need to be replaced with higher-cost deposits or wholesale funding.

Institutions that have lengthened the duration of their investment portfolios could experience liquidity constraints if rapidly rising interest rates cause significant depreciation in the value of those securities. For example, liquidity could be severely constrained if an institution relies on marketable securities as a primary or secondary source of funding. Moreover, existing secured borrowings may require a pledge of additional collateral to address the reduction in the securities’ value. An institution could likely borrow against unencumbered depreciated securities at an increased

---

9 Risk limitations commonly include, at a minimum, position limits, maturity parameters and counterparty credit guidelines. Counterparty credit guidance becomes more critical for those institutions with over-the-counter contracts given the increased credit risk associated with these instruments.

10 Accounting standards for derivatives and hedging are set forth in Accounting Standards Codification Topic 815 – “Derivatives and Hedging.”
Effective Governance Processes for Managing IRR
continued from pg. 9

margin, but only if lenders are willing to extend credit on reasonable terms. This liquidity stress could accelerate if deposit balances were to leave the institution altogether or creditors were to reduce or eliminate lines of credit.

While regulatory capital measures (for Prompt Corrective Action purposes) for most community banks will generally be unaffected by securities depreciation,¹¹ equity capital under U.S. generally accepted accounting principles (GAAP) can be compromised. Low or negative equity capital can produce negative perceptions of an institution’s financial strength in the eyes of depositors, shareholders, correspondents, and the general public, which could ultimately affect the bank in many areas. If significant depreciation in securities portfolios diminished equity capital to low or negative levels, correspondents and other counterparties could resist requests for credit or require onerous terms. Furthermore, depositors, deposit listing services, and deposit brokers would need to decide how the bank’s GAAP equity position should affect their willingness to continue placing deposits. Accordingly, contingency funding plans should fully and realistically address the potential for reduced borrowing capacity that may be caused by depreciation in long-duration securities and present strategies which ensure prudent levels of liquidity. To avoid the consequences of rising interest rates on long-duration securities portfolios, it may be advisable for certain institutions to rebalance their holdings to a more appropriate position before rate volatility occurs.

Banks should understand these and other implications when establishing their desired level of IRR and have plans for dealing with unexpected market volatility and funding issues that can arise.

Conclusion

An effective governance process for IRR is a fundamental aspect of a strong risk management framework. A board and senior management team that administer effective policies and are well informed can better position their bank to sustain profitability and preserve capital as the interest rate environment changes.

Lucas McKibben
Senior Financial Institution Examiner
Lexington, KY Field Office
Division of Risk Management Supervision
lmckibben@fdic.gov

The author thanks Frank Hughes, Senior Examination Specialist, for his contributions to this article.

¹¹ Under the current general risk-based capital rules, most components of accumulated other comprehensive income (AOCI) are not reflected in a banking organization’s regulatory capital. Under the Basel III capital rules, all banking organizations must recognize in regulatory capital all components of AOCI, excluding accumulated net gains and losses on cash-flow hedges that relate to the hedging of items that are not recognized at fair value on the balance sheet. Banking organizations, other than advanced approaches banking organizations, will be able to make a one-time election to opt out of this treatment and continue to neutralize changes in AOCI, as is done under the current capital rules. Institutions are reminded that the one-time election provided to non-advanced approaches banking organizations must be made with the filing of the March 31, 2015 Call Report. Recognition of changes to AOCI within capital calculations will start in 2015 for non-advanced approaches banking organizations that did not opt out of the Basel III treatment.
Developing the Key Assumptions for Analysis of Interest Rate Risk

Systems for measuring and managing interest rate risk (IRR) are key analytical tools for helping banks position themselves for potential changes in interest rates. Using IRR measurement tools effectively, however, requires banks to make reasonable assumptions about how the rates and volumes of its key product lines would change as interest rates change. After six years of historically low interest rates, including notably little volatility in the federal funds rate, developing these key assumptions is both challenging and important.

This article describes the importance of appropriate assumptions for the analysis of IRR. Additionally, the article describes the process to develop some of the key assumptions necessary to evaluate interest rate sensitivity in the current environment. The development of deposit and asset assumptions will be explored in particular as these inputs can have the largest impact on the results of an IRR analysis. As described in this article, it is generally possible for such assumptions to be developed by bank staff.

Importance of Assumptions

An effective risk management framework consistent with outstanding supervisory guidance can help banks position themselves for changes in the interest rate environment. IRR analysis is not intended to dictate how management should react to changes in interest rates, but should be used as a tool to understand how current actions may affect future earnings.

In this respect, a systematic approach to developing common-sense assumptions for use in IRR measurement systems is an important part of a bank’s strategic planning. Conversely, using unrealistic or overly optimistic assumptions in IRR systems can result in an inaccurate picture of a bank’s risk exposure, potentially resulting in flawed asset-liability management strategies.

FDIC examiners review key assumptions as a part of the Sensitivity to Market Risk review at each examination. The use of unsupported or stale assumptions is one of the most common IRR issues identified by FDIC examiners. Common weaknesses found during the review of assumptions are:

- Use of peer averages without consideration of bank-specific factors
- Lack of differentiation between rising- and falling-rate scenarios
- Over-simplification of balance sheet categories leading to potentially faulty analysis
- Lack of qualitative adjustment factors to historic data (e.g., not considering a higher run off factor for surge deposits)

Another issue that examiners observe is that some institutions do not attempt to evaluate how the results of their IRR measurements would change in response to a change in assumptions (i.e., sensitivity testing). If results would change significantly in response to change in a critical assumption, prudence suggests planning for a range of values for that assumption.
Developing the Key Assumptions for Analysis of IRR

In certain cases, banks have engaged outside vendors or consultants to formulate assumptions because of a lack of resources. In such cases, management needs to satisfy itself that assumptions reflect the specifics of the institution’s assets and liabilities and local markets, and should not categorically rely on universal assumptions provided by vendors or consultants. FDIC examination reports sometimes cite overreliance on generic vendor-provided assumptions as a weakness in IRR management.

While many banks use consultants to help develop assumptions, it is not a requirement to do so, and most banks can reduce expenses by generating assumptions internally. This article focuses on ways banks can develop and support their assumptions with existing staff. It is important that management employ assumptions that are based on an evaluation of key characteristics, such as loan prepayment speeds, non-maturity deposit decay rates, surge deposit run off, and the likely extent of deposit re-pricing.

General Considerations for Developing Appropriate Assumptions

Expectations for the development of assumptions used to measure IRR are commensurate with an institution’s complexity and sophistication. A bank with a simple balance sheet employing conservative, common-sense assumptions that are readily understood by senior management and the board of directors will typically not be criticized by the examiners. Conversely, a bank that uses more complex mathematical analyses to support aggressive assumptions may be subject to greater scrutiny.

The IRR measurement process depends heavily on certain critical assumptions to generate reasonably reliable results. At a minimum, management should give particular consideration to non-maturity deposit price sensitivity (or betas)\(^1\) and decay rates, the reasonableness of asset prepayment assumptions,

<table>
<thead>
<tr>
<th>Common Key Assumptions for IRR Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asset Prepayment</strong> – represents the change in cash flows from an asset’s contractual repayment schedule. The severity of prepayments fluctuates with various interest rate scenarios. Mortgage loans are a prime example of assets subject to prepayment fluctuations.</td>
</tr>
<tr>
<td><strong>Non-maturity Deposits</strong></td>
</tr>
<tr>
<td>• Sensitivity or Beta Factor – describes the magnitude of change in deposit rates compared to a driver rate.</td>
</tr>
<tr>
<td>• Decay Rate – estimates the amount of existing non-maturity deposits that will run off over time.</td>
</tr>
<tr>
<td>• Weighted Average Life – estimates the average effective maturity of the deposits.</td>
</tr>
<tr>
<td><strong>Driver Rate</strong> – represents the rate, or rates, which drive the re-pricing characteristics of assets and liabilities. Examples include Fed funds rate, LIBOR, U.S. Treasury yields, and the WSJ Prime rate.</td>
</tr>
</tbody>
</table>

\(^1\) In this context “re-pricing betas” refers to how changes in deposit rates compare to driver rates, such as the Fed funds rate.
and key driver rates for each interest rate shock scenario. Non-maturity deposit assumptions are especially relevant in today’s environment as these deposits represent a historically large volume of bank funding, and customer behavior may not reflect past behavior when market rates change in the future. Furthermore, institutions with significant investments in longer-duration securities should place additional emphasis on developing assumptions for rising-rate scenarios where bond depreciation may pose outsized or unintended risk to earnings and capital.

Generally, key assumptions used in an IRR measurement system should be reviewed at least annually. Management can employ a variety of techniques to develop key assumptions; however, all such techniques involve obtaining and analyzing relevant data, and making judgment-based adjustments to reflect the possibility that assumptions based on past data may not reflect future trends. Generally, the most representative data source for deposit assumptions is the institution’s own historical information. Prepayment assumptions can be sourced from national averages, data vendors, internally generated analyses, or a blend of these approaches.² Generally, asset prepayment would slow down in a rising-rate scenario, so for purposes of simple and conservative estimates of the effect of rising interest rates it may be sufficient simply to assume only a minimal level of prepayments.

Management should also ensure it measures the IRR of the current balance sheet. Optimistic assumptions about the growth of loans or other income can potentially mask the degree of IRR. Accordingly, banks using growth assumptions as part of their measurement of IRR should also generate “no growth,” or static analysis, to evaluate exposures if no balance sheet growth occurs.

Qualitative Adjustments for Key Assumptions

Bank management may want to explore qualitative adjustments for some assumptions. Qualitative adjustments are applied to historically based analysis to account for unique bank-specific or environmental characteristics (such as a historically low- or high-interest rate environment or changes in competition). In light of a surge in deposits despite very low deposit interest rates, management could consider the following qualitative factors in determining whether to adjust assumptions:

- Flight to quality, seeking insured investments over alternatives
- Rate differentials between time deposits, non-maturity deposits or non-bank investments
- Customer decisions to park funds in non-maturity deposits until rates rise
- Diminished impact of early withdrawal penalties on time deposits
- Changes in technology, demographics, and competition

² Typically, community banks that collect prepayment estimates from external sources obtain this information from a model vendor or an external vendor.
Deposit Assumptions

Deposit assumption development typically addresses two factors:

1. **Beta Factor**, which represents the magnitude of deposit re-pricing for a given market rate change. This assumption is a critical component in income simulations.

2. **Decay Rate**, which relates to the runoff or cash outflow over the life of the non-maturity deposit. Commonly associated with the economic value of equity analysis.

Expectations about customer behavior, specifically non-maturity depositor assumptions, can be the most difficult and challenging to develop. Non-maturity products do not have contractual cash flows or maturity dates and have experienced pronounced growth in the post-crisis low-interest rate environment.

Chart 1 reflects how demand, negotiable order of withdrawal (NOW), money market deposit accounts (MMDA), and other savings accounts have increased during the past several years to represent 56 percent of total assets at institutions with total assets less than $10 billion as of June 30, 2014, up from 38 percent at the end of 2008. The increase is attributable to the minimal rate differential between non-maturity products and term certificates of deposits, bank and non-bank investments, flight to quality spurred by the financial crisis, and depositors’ uncertainty about future interest rates. Consequently, non-maturity deposit volumes may experience significant declines as “surge deposits,” as they are commonly known, could rapidly migrate in a rising-rate environment to higher-yielding deposit products or non-bank investments. Certificates of deposit (CDs) that have migrated to savings or other non-maturity account types in recent years should be included in considering surge deposit fluctuations, as these funds are more likely to

---

**Chart 1: Deposit Composition as a Percentage of Total Assets for Banks Less than $10 Billion**

[Chart showing deposit composition percentage over time]
migrate back to CDs as rates rise. In a rising-rate environment, the bank’s ability to maintain pricing power over savings accounts may diminish as the traditional CD funds residing in non-maturity deposits flow back into CDs.

Deposit Beta Assumptions

Although there are a range of tools available for estimating deposit betas, community banks’ analyses need not be highly complex to provide sufficient insight on deposit re-pricing tendencies. It also is important for banks to remember that the various assumptions used in an IRR analysis are for analytical purposes and do not constrain the bank’s future flexibility to respond to developments, including competitive pressures, liquidity needs, etc. Simple approaches for estimating beta, weighted average life and decay rate deposit assumptions are discussed below. A more involved example of estimating deposit re-pricing betas is presented in the following graphic, “Enhanced Analytics for Estimating Deposit Betas.” This approach is broadly illustrative of the types of analysis some larger institutions and IRR software vendors may undertake when they develop deposit re-pricing assumptions; however, the underlying principles are similar to the following example.

A basic assumption for deposit betas can be obtained by looking at how the bank’s deposit costs changed during a period of changing market interest rates. For example, if a bank’s non-maturity deposit costs increased 40 basis points in response to a 100 basis point increase in market interest rates, this suggests an initial assumed beta of 40 percent, or 40 basis points for each 100 basis point increase in interest rates. Effects on deposit pricing can differ significantly depending on whether interest rates are rising or falling and, as such, banks should consider their deposit pricing experience in both types of environments. For example, in the current low-interest rate environment some banks view their current cost of non-maturity deposits as unlikely to decline further even if the Treasury yield curve were to move downward.

Historical data on deposit pricing provide a starting point and some perspective for developing assumptions, but banks should consider qualitative adjustments to deposit betas to reflect the possibility that surge deposits will be strongly rate-sensitive once interest rates start increasing. For example, assumed deposit betas based on historical re-pricing experience should probably be adjusted upwards for banks that garnered significant volumes of deposits during the low-interest rate environment of the last several years.

---

This example is not intended as a prescribed format or methodology for determining deposit assumptions. It illustrates a straightforward approach for determining deposit assumptions. The appropriateness of an individual institution’s methodology should be based on the institution’s structure, products, and complexity.
**Enhanced Analytics for Estimating Deposit Betas**

The following example is broadly illustrative of the types of analysis some large institutions and IRR software vendors undertake to estimate deposit betas. Community banks are unlikely to develop such analysis themselves and are not required to do so. Nevertheless, for banks that use purchased IRR software or other vendor analytics, similar types of analysis may have been used to develop assumed deposit betas.

Such analysis may often involve tracking deposit costs over a certain period, plotting the information and completing regression analyses to determine the “line of best fit,” and possibly varying the analyses to incorporate a range of time lags and key rate indices. The output of the analysis would typically identify the interest rate index that is the most relevant driver of pricing fluctuations, the spread to this key index, and re-pricing beta. Additionally, the analysis may generate estimates of the lag with which deposit costs may respond to changes in the driver interest rate.

Figure 1 reflects management’s average cost on NOW transaction accounts, and savings and money market deposit accounts along with the periodic Fed funds rate and yield on the 3-month U.S. Treasury Bill for each period during a rising-rate period.

**Figure 1 – Example Rate Data**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NOW</td>
<td>Q4 0.62%</td>
<td>Q1 0.61%</td>
<td>Q2 0.61%</td>
<td>Q3 0.67%</td>
<td>Q4 0.75%</td>
<td>Q1 0.87%</td>
<td>Q2 1.00%</td>
<td>Q3 1.16%</td>
<td>Q4 1.32%</td>
<td>Q1 1.47%</td>
<td>Q2 1.61%</td>
</tr>
<tr>
<td>Savings/MMDA Cost of Funds</td>
<td>1.53%</td>
<td>1.50%</td>
<td>1.48%</td>
<td>1.49%</td>
<td>1.49%</td>
<td>1.50%</td>
<td>2.00%</td>
<td>2.33%</td>
<td>2.55%</td>
<td>2.68%</td>
<td>3.10%</td>
</tr>
</tbody>
</table>

**Periodic Market Rate Indexes**

| Federal Funds Rate | 0.94% | 1.05% | 1.38% | 1.94% | 1.97% | 2.96% | 3.35% | 3.93% | 4.09% | 5.00% | 5.05% | 5.34% |
| 3-Month US Treasury Bill Yield        | 0.92% | 0.94% | 1.27% | 1.71% | 2.22% | 2.77% | 3.06% | 3.53% | 4.20% | 4.62% | 5.02% | 4.95% |

Analysis of the data in Figure 1 might produce results such as those displayed in Figure 2. In this example, the results indicate that interest rates on the bank’s NOW and Savings/MMDA accounts are driven by changes in the federal funds rate and 3-month Treasury bill rate, with deposit betas in the range of 25 percent to 42 percent.

**Figure 2 – Example Estimates of Deposit Betas**

<table>
<thead>
<tr>
<th>Regression Analysis</th>
<th>Federal Funds Rate</th>
<th>3-Month US T-Bill</th>
<th>Average Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>R-squared</td>
<td>Beta</td>
<td>R-squared</td>
</tr>
<tr>
<td>NOW</td>
<td>0.251</td>
<td>95.04%</td>
<td>0.264</td>
</tr>
<tr>
<td>Savings/MMDA</td>
<td>0.396</td>
<td>86.47%</td>
<td>0.415</td>
</tr>
</tbody>
</table>

It is important to remember that such analysis essentially assumes that historical deposit pricing relationships will hold up in the future. As noted throughout this article, it is important for banks to consider adjustments to deposit beta assumptions generated by purchased software or analytics, to reflect the possibility that deposits may re-price faster than historical experience would suggest.
Deposit Decay Rate Assumptions

In a rising-interest rate environment, the rates at which deposits run off will directly affect a bank’s cash flows and the effective maturity of its liabilities. Deposit decay rates are, accordingly, critical inputs to a bank’s IRR measurement system. Non-maturity deposit balances do not all “mature” in unison, but decay over time. Typically the non-maturity deposit base is relatively stable with a longer average life characterized by a slow decay; however, the surge of funds into non-maturity deposits in recent years poses a new challenge in determining decay rate assumptions. Given the increased likelihood of surge deposits to experience rapid runoff in a rising-interest rate environment, management could segregate its surge deposits as appropriate from its more stable non-maturity balances. Although decay rates are always an essential assumption for any IRR measurement system, particularly in the longer-term analysis of economic value of equity, the assumptions related to surge deposit decay may prove to have a larger impact on IRR in a scenario in which market interest rates increase in the near term.

The basic methods of estimating decay rates begin similarly to beta assumption development, with the collection or tracking of sufficient deposit data over one or more relevant periods. Most institutions should have the ability to track how balances in their deposit products have changed over time as economic conditions and interest rates have changed. Such information can be used to develop an initial baseline estimate of potential deposit runoff. After the historic decay rate has been calculated, banks should consider adjustments for qualitative factors to reflect current-period market conditions and anticipated customer behavior in response to interest rate fluctuations, for example by adjusting upwards the assumed runoff of surge deposits as discussed above.

Other considerations should also affect assumptions regarding the decay rates of time deposit balances. Banks may assume that time deposits will not re-price until their maturity date because of early withdrawal penalties. Depending on the specifics, however, customers may benefit from incurring the penalty and reinvesting (at the bank or elsewhere) at a higher market rate. The likelihood that this will occur would be greater, the more pronounced is the increase in market interest rates.

Asset Assumptions

In addition to deposit assumptions, expectations related to loan prepayment and re-pricing can have a significant effect on the results of IRR measurement systems. The precise timing of cash flows that determine the value of the assets are uncertain and can fluctuate with market rates, shifting underwriting standards, loan seasoning, and competition. Prepayment estimates are critical as cash flows may be received more quickly or slowly than projected. In a hypothetical rising-rate scenario, loan prepayments may slow significantly and result in an overall extension in the duration of the loan portfolio and
Developing the Key Assumptions for Analysis of IRR

continued from pg. 17

mortgage-backed securities investments. Also, rising market rates may curtail refinancing activity and early loan pay-offs, reducing asset re-pricing opportunities. In light of these considerations, for purposes of analyzing the effects of a rising-interest rate scenario, a simple, conservative and defensible approach could be to simply assume only a minimal level of prepayments.

Variable Rate Loans, Caps and Floors

Banks should evaluate the impact changing rates may have on variable-rate loans. It is important to consider the impact rate caps or floors may have on the actual re-pricing characteristics of the portfolio as it may improve or exacerbate exposures. For example, if an institution has established contractual rate floors well above prevailing market rates, the impact of rising interest rates will not be immediately reflected in earnings. The gap between the prevailing rates and the contractual rate floor could potentially be several hundred basis points, negating potential improvement in loan yields until substantial increases in index or market rates occur. This delay effectively increases a bank’s liability sensitivity because deposit rates will likely increase while some asset yields remain level. In a rising-rate environment this would adversely impact net interest income.

Investment Portfolio

Bank investment portfolios have recently grown as a percentage of balance sheet assets and, in turn, so has the importance of understanding how market values are influenced by interest rate changes. An understanding of how rate changes may affect the value of current securities holdings, as well as prospective purchases, is essential. Longer-maturity fixed-income securities with the relatively low coupons that have prevailed in recent years are likely to experience significant price depreciation in a rising-interest rate environment. When considering the effects of increasing interest rates, banks should guard against assuming more than a baseline level of prepayments on mortgage-backed securities and typically should not assume that callable bonds they own will be called. Analysis should at a minimum encompass a spectrum of rate-change scenarios to determine the overall portfolio sensitivity and the potential magnitude of depreciation relative to capital. An unanticipated extension of asset cash flows or elevated securities depreciation could adversely affect management’s ability to use investments for liquidity needs or take advantage of profitable reinvestment opportunities.

In response to the inherent risks of investment securities in the rising-rate scenarios, banks should consider incorporating the results of portfolio depreciation analyses into initiatives for future investment portfolio purchases, risk reduction strategies, and liquidity forecasting.
Credit Risk

Although traditionally not a part of IRR analysis, management could consider increased credit risk posed by loan re-pricing opportunities in a rising-rate scenario. If interest rates were to rise, there may be a potential for increased losses related to marginal borrowers as they struggle to meet higher debt service requirements. The lending function could proactively identify credit relationships where borrowers have marginal cash flow for debt service to identify credits that are at higher risk of default if rates increased.

Sensitivity Testing

Assumptions which have the most influence on the results of the IRR system should be identified and analyzed to determine the impact of changes to those assumptions. Generally, results are most sensitive to deposit betas, weighted average life, and decay rates. However, prepayment speeds and asset re-pricing factors also should be evaluated to determine the extent to which they may affect the IRR system’s results.

The objective of sensitivity analysis is to isolate the impact a single assumption may have on the results of the IRR measurement system. This is accomplished by changing one assumption (e.g., increasing the decay rate or the beta factor by X percent) and re-running the analysis to compare results. (Table 1 reflects a hypothetical sensitivity analysis of the non-maturity deposit beta assumption comparing the results of a 20 percent beta against that of a 30 percent beta.)

The data in Table 1 reflect that net interest income would decline by significantly more using a 30 percent beta than the 20 percent beta in an up-200 basis point scenario. The example highlights the importance of testing the sensitivity of results to changes in assumptions. In this example, a relatively small and plausible change in assumptions about deposit pricing resulted in a materially more negative picture of the effects of rising interest rates. Varying assumptions in this way can heighten management’s awareness of the potential risks to the institution should assumptions prove overly optimistic, and thereby inform the development of prudent strategies to mitigate risk.

Table 1 – Sensitivity analysis of two non-maturity deposit betas

<table>
<thead>
<tr>
<th>Scenario</th>
<th>20% Beta</th>
<th>30% Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up 200 bps</td>
<td>$85</td>
<td>(15%)</td>
</tr>
<tr>
<td>Base Case</td>
<td>$100</td>
<td>-%</td>
</tr>
</tbody>
</table>
Conclusion

The current economic and interest rate environment presents unique challenges for the IRR analysis process. Although assumption development can appear highly technical, a sharp focus on a few key assumptions can significantly improve the reliability of results and a bank’s understanding of the potential implications of changes in interest rates. Further, the variety of tools and range of sophistication in determining assumptions are scalable to all financial institutions. The key to effective interest rate risk analysis has been and remains the development of assumptions that reasonably reflect the characteristics of the bank’s assets, liabilities, and off-balance sheet items. Adoption of an appropriate assumption development framework can ensure the effective use of IRR measurement tools to benefit decision making, risk management, and the bank’s overall performance.

Ryan R. Thompson
Financial Institution Examiner
Minneapolis, MN Field Office
Division of Risk Management Supervision
rythompson@fdic.gov
The FDIC and the other federal banking agencies have long emphasized the importance of an annual independent review of interest rate risk (IRR) management systems. An independent review can help boards ensure that their IRR systems adequately portray how changes in interest rates could affect their financial condition, information that is needed both for risk assessment and strategic planning. This article describes common-sense approaches that non-complex institutions may use to effectively and economically perform an IRR independent review in-house.

Elements of an Effective Independent IRR Review Process

IRR can have a significant impact on a bank’s earnings and capital, and a bank’s system for identifying and managing IRR is a key part of its internal control framework. Banks are expected to monitor the effectiveness of their key internal controls either as part of the internal audit process or by means of an appropriate independent review, and the framework for managing IRR is no exception. Many community banks rely on purchased asset-liability management (ALM) software to measure IRR. Any tool for measuring IRR, however, is only as good as the assumptions and data that are used as inputs. Unduly optimistic assumptions or incorrect data used in any IRR measurement tool can result in an inaccurate picture of an institution’s risk exposure. To mitigate this risk, the FDIC and the other federal banking supervisors expect banks to regularly and appropriately review the effectiveness of their approaches for measuring IRR and report the findings annually to the board of directors. This process can be completed internally or by an independent third party. However, because independent reviews can be costly when performed by external parties, many community banks find it is more practical and economical to complete this function internally.

Developing an In-House Independent Review of Interest Rate Risk Management Systems

Common Examination Findings Related to the Independent Review Process

- Independent review of the IRR management process is not performed annually.
- Assumptions (regarding prepayments, non-maturity deposits, driver rates, etc.) used in the income simulation or economic value of equity (EVE) calculations were not tested by the reviewer.
- Third-party validation of the vendor’s model was not obtained.
- Independent review was not sufficiently comprehensive (e.g., reviewer only evaluated one specific area).
- Independent review is not formalized in the ALM policy.
- Independent review scope did not include back-testing or the reconciliation of back-testing results.
- Results of the independent review are not adequately reported to the board of directors.
- Independent reviewer lacks adequate training.

The scope of the independent review of the IRR management system depends on the nature and complexity of the institution’s activities. Moreover, there is no one right way to conduct such an independent review. Community banks have conducted these reviews by relying on internal audit staff, bank employees independent of the IRR management process, or third-party consultants. Importantly, there is no requirement or expectation for a bank to hire a consultant, and most community banks should be able to identify an existing qualified employee or board member to periodically conduct this review. Any
Developing an In-House Independent Review of IRR Management Systems
continued from pg. 21

bank personnel with sufficient training and expertise can perform the review, provided they are not directly involved in the IRR measurement process and are otherwise independent of supervisory personnel responsible for IRR oversight.

The following graphic outlines the five elements of an independent IRR review process as described in the 1996 Policy Statement. These elements broadly define the goals of an IRR independent review and are the basis of supervisory expectations.

The “Five Elements” of an Independent IRR review in the 1996 Joint Agency Policy Statement on Interest Rate Risk

<table>
<thead>
<tr>
<th>The Five Elements</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The adequacy of, and personnel’s compliance with, the bank’s internal control system</td>
<td>Determining whether board-approved policies for interest rate risk have been established, responsibilities to implement the policies have been assigned, and the policies are being followed, with exceptions subject to board approval.</td>
</tr>
<tr>
<td>2. The appropriateness of the bank’s risk measurement system given the nature, scope, and complexity of the bank’s activities</td>
<td>Determining whether the IRR measurement approach has the capability to address the specific interest rate-related risks facing the bank, such as the effects of interest-rate caps or floors, liabilities with call features or prepayment/extension risk in the investment portfolio.</td>
</tr>
<tr>
<td>3. The accuracy and completeness of the data inputs into the bank’s risk measurement system</td>
<td>Determining whether the data input into the IRR measurement system is accurate and critical assumptions are reasonable.</td>
</tr>
<tr>
<td>4. The reasonableness and validity of scenarios used in the risk measurement system</td>
<td>Determining whether the scenarios analyzed by the bank are sufficient to identify risks to earnings and capital under severe but plausible adverse interest rate environments, and include the types of scenarios specified in supervisory guidance.</td>
</tr>
<tr>
<td>5. The validity of the risk measurement calculations</td>
<td>Determining whether the measurement tool’s calculations are accurate, for example by obtaining a copy of third-party model validation results from the bank’s IRR software provider, if applicable, and performing some level of back-testing to compare actual results with the forecasts generated by the measurement tool.</td>
</tr>
</tbody>
</table>
An independent review is more than testing a few key assumptions; rather it includes a broad review that addresses the five elements in the 1996 Policy Statement. This periodic review is intended to provide the board with an overall assessment as to whether its policies and controls over IRR are being followed, and that exposures are reliably portrayed and clearly understood.

A significant component of the independent review of a bank’s IRR measurement tool is reviewing the integrity of data inputs, the appropriateness of assumptions, and the reasonableness of scenarios. To appropriately reflect a bank’s specific asset and liability information, any IRR measurement tool is likely to require data from various sources, and the process of acquiring this data, whether performed manually or electronically, creates a potential for errors. Accordingly, part of the independent review should be devoted to checking the data entered into the IRR measurement tool against source documents. Assumptions, typically about how the prices and volumes of key bank products will respond to changes in interest rates, also are fundamental to the validity and usefulness of any IRR measurement tool. The independent review should both identify the assumptions that have a significant impact on results, and review the support or rationale for those assumptions. The validity of these key assumptions could be further assessed by reviewing the sensitivity testing performed by management and determining how the measured IRR results differ under different values of the assumptions.

Finally, the independent review should ascertain whether an appropriate range of scenarios has been considered to develop an informed view of risks under reasonably plausible and stressed financial conditions.

The 2010 Advisory recognizes that most community banks use largely standardized vendor-provided software; accordingly, validations provided by vendors can support the software mechanics and mathematical calculations. For IRR measurement tools that are customized to an individual bank, or in situations where the vendors do not provide appropriate certifications or validations, the bank should validate the tool to ensure it works properly. If applicable, management should document any validation work it has performed. If vendors provide input data or assumptions, management and the independent reviewer(s) should evaluate the relevance of the data and assumptions to the financial institution.

Although back-testing is sometimes thought of as a complex function, it can be performed in a straightforward manner at most community banks. Back-testing of an IRR measurement tool’s results and assumptions simply entails comparing forecasts with actual results. It can also include a review of key assumptions (e.g., non-maturity deposit re-pricing assumptions and betas versus actual rate changes) to determine whether actual outcomes were consistent with projections. Material variances should be researched and reconciled; this reconciliation can reveal data entry errors, flaws in assumptions or issues.
with the mechanics of the measurement tool. Back-testing should generally be conducted annually. While it is particularly useful to compare predicted and actual outcomes after a significant movement in rates or product pricing, an effective back-test should consider the scenario that most closely resembles the present economic condition. The back-test should cover a 12-month period, as a shorter period will not appropriately capture any errors in the model.

Independent review findings should be presented annually to the board or one of its committees for discussion and approval. Written independent review reports should include a brief summary of the bank’s IRR measurement techniques, assumptions, caveats or limitations of the analysis, policy compliance, and overall findings. Any exceptions or recommendations should be clearly addressed, and the board should require appropriate follow-up and corrective action as necessary. Finally, independent review findings should be available for examiner review.

One Approach to Conducting an In-House IRR Independent Review

A step-by-step framework is presented here as an example that community banks can consider when developing or enhancing their IRR independent review process. While there is no one right way to conduct an independent review of a bank’s IRR systems, the example described here addresses supervisory expectations based on the 1996 Policy Statement and is geared to completing the review economically with existing independent bank staff. The entire page can be removed from this edition of Supervisory Insights as an example for reference in developing an in-house independent review.
### Step-by-Step Process for Performing an In-House Independent Review of an IRR Management System:

**An Example for a Community Bank**

1. **Reviewer:** Identify a member of the bank’s staff (or a board member) with appropriate competence and independence to perform the review. Provide him/her with access to relevant policies, the bank’s IRR measurement tool, a description of its assumptions and inputs, and any model validation documentation provided by the vendor.

2. **Data Integrity:** The reviewer should verify that asset and liability amounts that have been entered into the IRR measurement tool as inputs are accurate and complete. For data gathered from internal sources, the reviewer should ensure that such data reconciles with the general ledger, terms of outstanding contracts, etc.

3. **Earnings Analysis Time Horizons:** The reviewer should verify that the earnings analysis is performed over an acceptable time horizon considering the complexity of the balance sheet. Generally, the earnings analysis should cover at least a two-year period, and be complemented with an economic value of equity analysis or other extended earnings simulations.

4. **Static Analysis:** Verify that a “no growth” or static balance sheet analysis is included as part of the IRR analysis, to ensure risk exposure is not being masked by growth assumptions.

5. **Prepayment Assumptions:** Evaluate whether prepayment assumptions are reasonable in light of the bank’s experience with its loan customers and the interest rate scenario being considered. For example, under a rising-interest rate scenario, loans would be expected to prepay less often.

6. **Non-Maturity Deposit Assumptions:** Evaluate whether deposit price-sensitivity and runoff assumptions are reasonable. Key deposit assumptions ideally should be based on actual customer behavior during various rate cycles, and should consider the possibility that decay rates or the extent of re-pricing could be more pronounced than historical experience would suggest.

7. **Driver rates:** Verify that assumed interest rates on bank products appropriately reflect changes in driver rates. The driver rate (Fed funds rate, Prime, LIBOR, etc.) is the rate that “drives” the pricing on the bank’s asset or liability in the model and should be consistent with actual pricing.

8. **Appropriate Scenarios:** Identify the scenarios used, verify that they include the types of scenarios described in supervisory guidance, and evaluate whether they adequately reflect the stresses that changes in interest rates could cause given the bank’s mix of assets and liabilities.

9. **Back-testing:** Perform a simple back-test to compare actual or historical results to the results assumed or predicted by the measurement tool. Determine whether key assumptions may need to be adjusted based on back-testing results.

10. **Compliance with Policy:** Verify that the bank has board-approved policies for IRR that delineate risk exposure limits; that specific individuals have responsibility for implementing the key aspects of the IRR policy; that IRR is measured and reported to the board at least quarterly; and that results are within policy limits or if not, were approved by the board as an exception to policy.

11. **Documentation and Report to Board:** Once the review is completed, the reviewer should document the scope, findings, and any recommendations. The review should be presented to the board of directors and any follow-up action documented in its minutes.
Conclusion

A bank’s IRR management program should include a periodic independent review. That said, for most community banks the review process need not be an expensive exercise. Many banks have existing qualified staff whose role could be expanded to include periodical IRR reviews. This not only addresses independent review needs in a cost-effective manner, but also potentially facilitates training and development across disciplines. Most importantly, an effective independent review provides the board with assurance that the IRR measurement system produces results that are reliable and relevant for strategic business decisions. Independent review procedures discussed in this article can help identify potentially significant IRR management issues and provide the institution with confidence in its IRR monitoring reports.

Syed Islam, MA
Senior Examiner
New York, NY Field Office
Division of Risk Management
Supervision
sislam@fdic.gov
Given the potential impact of changing interest rates on banks’ earnings and capital, bank examinations include a comprehensive review of interest rate risk (IRR) oversight and measurement as well as management’s planned strategies for responding to potential changes in market interest rates and the yield curve. Sensitivity to market risk, primarily IRR at most community banks, is inherent to the business of banking and one of the six components of the regulators’ Uniform Financial Institutions Rating System. The Sensitivity to Market Risk component rating is assigned at each regular safety-and-soundness examination and is considered by the examiner-in-charge when assigning the overall composite rating, as it can potentially affect all measurable areas of performance.

Throughout the current low-interest rate environment, banks’ net interest margins have been squeezed by reduced yields and low loan demand. In response, some banks have extended asset durations in an effort to maximize yields and enhance profitability. Such a strategy can increase earnings as long as the interest rate environment remains fairly stable, but a sustained increase in market interest rates could place these banks in a challenging position. As such, IRR exposure and management oversight remain important aspects of the supervisors’ examination and risk assessment processes. Examiners expect banks to have effective IRR policies and measurement procedures in place so boards of directors can make informed decisions about balance sheet management, budgeting, and capital adequacy. This expectation has become increasingly important as the potential for a period of increasing interest rates continues to be identified by the regulators and industry observers as a primary risk facing the industry.

This article helps bankers prepare for regulatory reviews of IRR, better understand supervisory expectations, and achieve conformance with outstanding guidance.

Supervisory Expectations

All banks should have an effective asset-liability risk management framework that identifies and monitors the institution’s IRR position and its potential impact on earnings and capital. This framework should be incorporated in overall risk management efforts and be commensurate with the institution’s complexity, activities, and condition. Supervisory expectations related to IRR management are contained primarily in two documents – the 1996 Joint Agency Policy Statement on Interest Rate Risk and the 2010 Interagency Advisory on Interest Rate Risk Management (see below for links to these two documents as well as additional supporting guidance). As described in these issuances, the cornerstone of an effective IRR management process is an informed directorate, capable management, and appropriate internal resources. The board and senior management should have asset-liability management policies that detail responsibilities, risk limits, and strategies related to the
What to Expect During an IRR Review

continued from pg. 27

management of IRR. In addition, all banks should have a reliable system in place that measures its IRR position and regularly reports this position to senior management and the board.

Bankers should be prepared to discuss the results of their IRR measurement system and potential risks with examiners, as well as key strategies to mitigate these potential risks. Senior management also should be able to describe key assumptions, including the assumption development process, the frequency of internal reporting, and the extent of its independent review. For its part, the board should understand the risks facing the institution, including the potential impact of interest rate changes on earnings and capital, as well as management’s plans to prudently address those risks. Finally, management and the board should be proactive in addressing prior examination and independent review recommendations. Well-documented board and asset-liability management committee (ALCO) meeting minutes will help examiners understand the bank’s IRR philosophy, risk management practices, and efforts to control IRR exposure.

Guidance on Prudent Interest Rate Risk Management
Issued by the FDIC

Joint Agency Policy Statement on Interest Rate Risk (1996) – Issued in conjunction with the introduction of the Sensitivity to Market Risk, or “S” component to the UFIRS, the policy statement discusses important components of an effective interest rate risk management program and regulatory expectations.


Interagency Advisory on Interest Rate Risk Management (2010) – Issued to remind institutions of supervisory expectations regarding sound practices for managing interest rate risk. The advisory re-emphasizes and clarifies much of the information in the 1996 Policy Statement.

Interagency Advisory on Interest Rate Risk Management (2012) – Frequently Asked Questions – Issued to provide the industry more detailed guidance related to interest risk management and supervisory expectations. Questions and responses cover topics such as governance, measurement methodologies, stress testing, independent review and assumptions.

What Do Examiners Focus on During an IRR Review?

Although examiners request and review a number of items as part of the examination process, one of the most informative and beneficial exchanges of information can be an initial discussion with bank management. We often begin by meeting with senior management to discuss their perspective on how the balance sheet is positioned, potential risks, and any current or potential mitigating strategies. In addition, a general discussion of balance sheet composition, deposit stability, new products, and any planned changes in strategic direction can be very informative. Finally, a high-level dialogue about the results of the institution’s IRR measurement system and key assumptions can help facilitate the IRR review.

From there, examiners will start with a review of applicable minutes and the board-approved ALCO policy, with a focus on roles and responsibilities, limits, measurement systems, strategies, and controls. Examiners will follow-up on IRR-related policy exceptions, so they should be well documented in applicable minutes. Management may be asked to describe policy exceptions and related strategies to address the rationale behind a particular deviation from established policies. Further, examiners will review prior examination recommendations and independent review conclusions to determine how management addressed those matters. Management will have an opportunity to explain how it handled previous recommendations and related remedial action; however, this information should be evident in committee minutes, correspondence, or other materials.

Commonly Requested Items for an IRR Review

- Asset-Liability or Funds Management Policies
- Most recent asset-liability management committee (ALCO) package
- Minutes of ALCO meetings since the previous examination
- Results of gap, simulation, economic value of equity (EVE), and any other IRR analysis, as well as assumption details
- List of material changes to key assumptions in the last 12 months
- Deposit Study – if one has been completed
- Sensitivity testing results of key assumptions
- Most recent independent review (including results of validation and back-testing of the IRR measurement system)
After reviewing the ALCO policies and governance structure, examiners will analyze results from the institution’s IRR measurement system to assess how various interest rate scenarios could affect earnings and capital. With few exceptions, financial institutions should have IRR systems that measure short-term (i.e., 1-2 years) and long-term exposure (i.e., beyond 2 years) to changing interest rates, and this should be detailed in the applicable policy. Typically, banks use a combination of basic gap, income simulation, and economic value of equity analysis to measure short- and long-term exposure to changing interest rates. Depending on the magnitude of a bank’s rate sensitivity, the examiner likely will have follow-up questions about portfolio management philosophy and depositor behavior. The examiner may inquire about the data and key assumptions (prepayment rates, deposit decay and beta estimates, and driver rates) that are used as inputs to the IRR measurement system, and the frequency of changes to any material assumptions. Management should be prepared to discuss the development and support of key assumptions. In addition, examiners will assess whether the bank has considered an appropriate range of interest rate scenarios including non-parallel rate shocks, and parallel rate shocks ranging from 100 to 400 basis points.

The examiners also will compare asset-liability management policies with actual practices and the bank’s level of exposure to determine conformance with the bank’s governance framework and risk limits. They will observe and discuss how IRR measurement results are reviewed and acted on by management and the directorate. Board and senior management decisions pertaining to interest rate sensitivity should be sufficiently documented within applicable minutes. Effective risk management practices often include analyzing a range of plausible scenarios such as interest rate shocks and ramps, and changes in the yield curve, depositor behavior, and asset prepayment speeds. There is no hard and fast rule regarding acceptable or excessive exposure because each institution is unique. However, it is clear that the greater the level of IRR to which a bank is exposed, the greater is the need for strong capital and effective risk management practices.

Another area of review involves internal controls and validation of the IRR management process. All banks are expected to regularly review the effectiveness of key internal controls, including the IRR management system, either as part of their internal audit process or by means of an independent review. Examiners will evaluate the scope and results of the independent review, which should include an assessment of the adequacy of internal controls, the appropriateness of the risk measurement system, the accuracy of data inputs (including the reasonableness of key assumptions), the reasonableness of the interest rate scenarios measured, and the validity of the risk measurement calculations. As described in “Developing an In-House Independent Review of Interest Rate Risk Management Systems” in this edition of Supervisory Insights, there is no requirement to use a third party to complete independent reviews; knowledgeable and capable bank employees sufficiently removed from the primary IRR function can perform this work. Also, most IRR software vendors provide validations related to the integrity of the software’s underlying calculations and workings. For banks that use purchased IRR software, examiners will review such validation certifications as part of the independent review assessment, and
may request a discussion and documentation of back-testing results and any significant variances between projected and actual performance.

Policies and minutes, the results of the IRR measurement system, and internal controls are not the only areas we review, but having a robust and well-developed process with respect to these items will help streamline the examination assessment of your community bank's IRR position.

**Communication with the FDIC During and After the IRR Review**

The bank examination process is designed to evaluate an institution’s performance on a number of levels, but it is also an opportunity to seek guidance from the FDIC to improve internal practices, including IRR management. Although we cannot provide a perspective on future rate movements or advice on strategies to change balance sheet composition, FDIC examiners review many banks and risk management processes during a given year and will readily share observations and possible enhancements evidenced across the industry. Therefore, communication is a key element in the success of our examinations, and we encourage an active dialogue with financial institutions, especially concerning timely topics such as IRR.

In many cases, examiners’ IRR recommendations largely relate to the tenets of the banking agencies’ 1996 and 2010 IRR issuances. The agencies provided these guidelines to help banks prudently manage their IRR position and better prepare for potential rate volatility. As a result of our examinations, we may have findings and recommendations involving IRR and will discuss these items with management. Bank management should take this opportunity to clarify issues that are raised, provide other information that may be relevant, and develop a better understanding of the FDIC's expectations.

**Frequent Examination Recommendations Concerning Interest Rate Risk**

- Establish appropriate risk limits
- Perform 300bp to 400bp interest rate shock scenarios
- Enhance/support key assumptions used to analyze IRR, especially deposit and prepayment assumptions
- Refine sensitivity testing of key assumptions
- Strengthen the independent review process
If a banker does not understand a particular examination issue or disagrees with a finding, he/she should ask the examiner to provide additional explanation. The examiner will listen to the banker’s concerns, provide facts that support the examination team’s conclusions, and offer an opportunity for a response. In most cases, disagreements or misunderstandings can be addressed with the examiner-in-charge. If those efforts are not successful, bankers should contact the appropriate Field Supervisor to help resolve the matter. The FDIC is strongly committed to open communication with community banks, and we have the shared goal of safe and sound, profitable banking operations. IRR can be a complex topic and, given the potential impact of changing interest rates on insured institutions, we will take the time needed to fully explain our conclusions and work with bank management teams as they strive to better manage rate sensitivity.

In addition to on-site examination guidance, the FDIC also has field, regional, and national-level subject matter experts available between examinations to provide regulatory guidance and other technical information. Moreover, the FDIC has developed several IRR videos and outreach programs, such as our Directors’ Colleges, to help community bankers learn more about IRR and regulatory expectations. We encourage bankers to take advantage of these resources to enhance their IRR management process and understanding of supervisory guidelines.

Conclusion
Exposure to changing interest rates is a fundamental risk every community bank faces. Prudent IRR management and an accurate assessment of a bank’s IRR position will contribute to sustainable earnings and capital protection, provide bankers with better information to proactively identify potential risks and opportunities, and help ensure a more efficient examination process.

Frank R. Hughes, CFA
Senior Examination Specialist
Kansas City Regional Office
Division of Risk Management Supervision
fHughes@FDIC.gov

Community Banker Resources

Directors’ Resource Center (Virtual Directors’ College and Video Library):
http://www.fdic.gov/regulations/resources/director/video.html

FDIC Manual of Examination Policies – Sensitivity to Market Risk Section:
http://www.fdic.gov/regulations/safety/manual/section7-1.html

Directors’ Colleges (Events and Presentation Material):
http://www.fdic.gov/regulations/resources/director/college.html

Community Bank Calendar:
http://www.fdic.gov/regulations/resources/cbi/calendar.html

What to Expect During an IRR Review
continued from pg. 31
Overview of Selected Regulations and Supervisory Guidance

This section provides an overview of recently released regulations and supervisory guidance, arranged in reverse chronological order. Press Release (PR) and Financial Institution Letter (FIL) designations are included so the reader can obtain more information.

<table>
<thead>
<tr>
<th>ACRONYMS and DEFINITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFPB</td>
</tr>
<tr>
<td>FDIC</td>
</tr>
<tr>
<td>FFIEC</td>
</tr>
<tr>
<td>FRB</td>
</tr>
<tr>
<td>NCUA</td>
</tr>
<tr>
<td>OCC</td>
</tr>
</tbody>
</table>

Federal bank regulatory agencies: FDIC, FRB, and OCC

Federal financial institution regulatory agencies: CFPB, FDIC, FRB, NCUA, and OCC

<table>
<thead>
<tr>
<th>Subject</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDIC Issues Rule Implementing Revisions to Annual Stress Test Requirements (Federal Register, Vol. 79, No. 225, p. 69365, November 21, 2014)</td>
<td>The FDIC issued a final rule that implements proposed revisions to its Annual Stress Test rule for state nonmember banks and state savings associations with total consolidated assets of more than $10 billion. The regulations, which implement Section 165(i)(2) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), require covered banks to conduct annual stress tests, report the results to the FDIC and FRB, and publicly disclose a summary of the results. The final rule revises stress test cycles for 2016 and thereafter to begin on January 1, rather than October 1; modifies dates for financial data, reporting, and public disclosure; and is consistent with rules issued by the OCC and FRB. The final rule is effective January 1, 2015. See <a href="http://www.gpo.gov/fdsys/pkg/FR-2014-11-21/pdf/2014-27610.pdf">http://www.gpo.gov/fdsys/pkg/FR-2014-11-21/pdf/2014-27610.pdf</a>.</td>
</tr>
</tbody>
</table>
### Regulatory and Supervisory Roundup

continued from pg. 33

<table>
<thead>
<tr>
<th>Subject</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agencies Issue Final Risk Retention Rule (FIL-55-2014, November 19, 2014; PR-86-2014, October 22, 2014)</td>
<td>The federal bank regulatory agencies, the Department of Housing and Urban Development, the Federal Housing Finance Agency (FHFA), and the U.S. Securities and Exchange Commission (SEC) approved a final rule requiring sponsors of securitization transactions to retain risk in those transactions. The final rule implements the risk retention requirements in the Dodd-Frank Act. The rule generally requires sponsors of asset-backed securities (ABS) to retain not less than five percent of the credit risk of the assets collateralizing the ABS issuance and sets forth prohibitions on transferring or hedging the retained risk. Securitizations of “qualified residential mortgages,” as defined in the rule, as well as commercial loans, commercial mortgages, and automobile loans meeting specific high-quality underwriting standards are exempt. The final rule will be effective one year after publication in the Federal Register for residential mortgage-backed securitizations and two years after publication for all other ABS types. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14055.html">https://www.fdic.gov/news/news/financial/2014/fil14055.html</a>.</td>
</tr>
<tr>
<td>FDIC Releases Technical Assistance Video on CFPB Mortgage Rules (PR-100-2014, November 19, 2014)</td>
<td>The FDIC announced the release of the first in a series of three technical assistance videos developed to assist bank employees in meeting regulatory requirements. These videos will address compliance with certain mortgage rules issued by the CFPB. The first covers the Ability-to-Repay and Qualified Mortgage Rule. Two additional videos in this series will focus on the rules concerning mortgage servicing and loan originator compensation. See <a href="https://www.fdic.gov/news/news/press/2014/pr14100.html">https://www.fdic.gov/news/news/press/2014/pr14100.html</a>.</td>
</tr>
<tr>
<td>FDIC Issues Filing and Documentation Procedures for State Banks Engaging in Activities Permissible for National Banks (FIL-54-2014, November 19, 2014)</td>
<td>The FDIC issued filing and documentation procedures for state banks engaging, directly or indirectly, in activities or investments (activities) that are permissible for national banks. A state bank (or its subsidiary) engaging in such activities should establish and maintain files documenting that those activities are permissible for a national bank (or its subsidiary). A state bank is not required to file an application or notice pursuant to Part 362 of the FDIC Rules and Regulations to engage in such activities if it maintains certain documentation. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14054.html">https://www.fdic.gov/news/news/financial/2014/fil14054.html</a>.</td>
</tr>
<tr>
<td>Federal Bank Regulatory Agencies Propose Technical Corrections and Clarifications to Capital Rule Applicable to Advanced Approaches Banking Organizations (PR-98-2014, November 18, 2014)</td>
<td>The federal bank regulatory agencies issued a joint Notice of Proposed Rulemaking (NPR) that would make technical corrections and clarify certain aspects of the agencies’ regulatory capital rule applicable to banking organizations subject to the advanced approaches risk-based capital rule. The proposed changes involve quantification criteria and calculation requirements for risk-weighted assets and only apply to large internationally active banking organizations (generally those with at least $250 billion in total consolidated assets or at least $10 billion in total on-balance sheet foreign exposures). Comments are due within 60 days of publication in the Federal Register. See <a href="https://www.fdic.gov/news/news/press/2014/pr14098.html">https://www.fdic.gov/news/news/press/2014/pr14098.html</a>.</td>
</tr>
</tbody>
</table>


FDIC Releases National Survey of Unbanked and Underbanked (PR-91-2014, October 29, 2014)

The FDIC released results of the 2013 FDIC National Survey of Unbanked and Underbanked Households. The survey indicates the proportion of unbanked households declined, while the share of underbanked households remained essentially unchanged. The unbanked decrease can be explained by improving economic conditions and the changing demographic composition of households. The survey, conducted every two years by the FDIC in partnership with the U.S. Bureau of the Census, provides the banking industry and policy makers with insights and guidance on the demographics and needs of the unbanked and underbanked. See https://www.fdic.gov/news/news/press/2014/pr14091.html.

FDIC Advisory Committee on Economic Inclusion Discusses Unbanked/Underbanked Survey, Safe Banking Products, and “Bank On 2.0” (PR-90-2014, October 27, 2014; Federal Register, Vol. 79, No. 198, p. 61641, October 14, 2014)

The FDIC Advisory Committee on Economic Inclusion met on October 29, 2014, to discuss results from the 2013 National Survey of Unbanked and Underbanked Households, low-cost transaction accounts and affordable small-dollar loans, and related “Bank On 2.0” initiatives to expand access to the banking sector by non-profit and public sector organizations. See https://www.fdic.gov/news/news/press/2014/pr14090.html.


The federal bank regulatory agencies, Farm Credit Administration (FCA), and NCUA approved a joint NPR to implement provisions of the Homeowner Flood Insurance Affordability Act of 2014 (HFIAA). The proposed rule amends the escrow provisions of the Biggert-Waters Flood Insurance Reform Act of 2012 by requiring regulated lending institutions to escrow flood insurance premiums and fees for loans secured by residential improved real estate or mobile homes made, increased, extended or renewed on or after January 1, 2016, unless the institution or loan qualifies for a statutory exception. The proposal would also require institutions to provide borrowers of residential loans outstanding on January 1, 2016, the option to escrow flood insurance premiums and fees and includes new and revised sample notice forms and clauses. The proposal eliminates flood insurance requirements for a structure detached from the primary residential structure that does not also serve as a residence. Comments are due by December 29, 2014. See https://www.fdic.gov/news/news/press/2014/pr14088.html.
<table>
<thead>
<tr>
<th>Subject</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDIC Requests Comment on Proposed Records Retention Requirements (<em>Federal Register</em>, Vol. 79, No. 206, p. 63595, October 24, 2014)</td>
<td>The FDIC issued a NPR to implement Section 210(a)(16)(D) of the Dodd-Frank Act, which requires establishment of schedules for the retention by the FDIC of records of a covered financial company (i.e., a financial company for which the FDIC has been appointed receiver pursuant to Title II of the Dodd-Frank Act) and the records generated by the FDIC in the exercise of its Title II orderly liquidation authority with respect to such covered financial company. Comments are due by December 23, 2014. See <a href="http://www.gpo.gov/fdsys/pkg/FR-2014-10-24/pdf/2014-25338.pdf">http://www.gpo.gov/fdsys/pkg/FR-2014-10-24/pdf/2014-25338.pdf</a>.</td>
</tr>
<tr>
<td>FDIC Requests Comment on Proposed Amendment to Regulations Regarding Restrictions on Sale of Assets by the Agency (<em>Federal Register</em>, Vol. 79, No. 206, p. 63580, October 24, 2014)</td>
<td>The FDIC issued a NPR to amend Part 340 of the FDIC Rules and Regulations, under which individuals or entities whose acts have, or may have, contributed to the failure of an insured depository institution (IDI) cannot buy assets of that failed IDI from the FDIC. The proposed revisions will help clarify the purpose, scope, and applicability of the regulation and make it more consistent with the provision of the FDIC’s Orderly Liquidation Authority regulation that implements Section 210(r) of the Dodd-Frank Act. Comments are due by December 23, 2014. See <a href="http://www.gpo.gov/fdsys/pkg/FR-2014-10-24/pdf/2014-25337.pdf">http://www.gpo.gov/fdsys/pkg/FR-2014-10-24/pdf/2014-25337.pdf</a>.</td>
</tr>
<tr>
<td>FDIC Releases Economic Scenarios for 2015 Stress Testing (PR-87-2014, October 23, 2014)</td>
<td>The FDIC released economic scenarios that will be used by certain financial institutions with total consolidated assets of more than $10 billion for stress tests required under the Dodd-Frank Act. The baseline, adverse, and severely adverse scenarios include key variables that reflect economic activity, including unemployment, exchange rates, prices, income, interest rates, and other salient aspects of the economy and financial markets. The FDIC coordinated with the FRB and OCC in developing and distributing these scenarios. See <a href="https://www.fdic.gov/news/news/press/2014/pr14087.html">https://www.fdic.gov/news/news/press/2014/pr14087.html</a>.</td>
</tr>
<tr>
<td>Subject</td>
<td>Summary</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Agencies Welcome ISDA Resolution Stay Protocol Announcement (PR-83-2014, October 11, 2014)</strong></td>
<td>The FRB and FDIC welcomed the announcement by the International Swaps and Derivatives Association (ISDA) of the agreement of a new resolution stay protocol. The protocol provides for temporary stays on certain default and early termination rights within standard ISDA derivatives contracts in the event one of the large banking organizations is subject to an insolvency or resolution proceeding in its home jurisdiction. The resolution stay amendments of the protocol are intended to facilitate an orderly resolution of a major global banking firm and reduce the potential negative impact on financial stability. See <a href="https://www.fdic.gov/news/news/press/2014/pr14083.html">https://www.fdic.gov/news/news/press/2014/pr14083.html</a>.</td>
</tr>
<tr>
<td><strong>Federal Bank Regulatory Agencies Issue Guidance on Consolidated Reports of Condition and Income (FIL-50-2014, October 2, 2014; FIL-51-2014, October 6, 2014)</strong></td>
<td>The federal bank regulatory agencies informed financial institutions that no new or revised data items were effective with the September 2014 Call Report. Additional guidance was provided within the September 2014 Supplemental Instructions on certain reporting issues, including permissible use of the private company accounting alternative for goodwill for Call Report purposes and circumstances in which a subsequent restructuring of a loan that is a troubled debt restructuring (TDR) need no longer be treated as a TDR. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14051.html">https://www.fdic.gov/news/news/financial/2014/fil14051.html</a>.</td>
</tr>
<tr>
<td><strong>FDIC Issues Technology Alert: GNU Bourne-Again Shell (Bash) Vulnerability (FIL-49-2014, September 29, 2014)</strong></td>
<td>The FDIC issued an alert advising financial institutions of a material security vulnerability with Linux and Unix operating systems that could allow an attacker to gain control of a bank’s servers remotely. The vulnerability is known as the GNU Bourne-Again Shell (Bash) or “Shellshock” vulnerability. Exploiting this vulnerability may allow attackers to potentially eavesdrop on encrypted communication, steal login credentials or other sensitive data, impersonate financial institution services or users, access sensitive email, or gain access to internal networks. The FDIC expects financial institutions to assess whether this software is used within their institutions, implement patches and upgrades following appropriate patch management practices, and monitor risk mitigation efforts by third-party service providers and vendors. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14049.html">https://www.fdic.gov/news/news/financial/2014/fil14049.html</a>.</td>
</tr>
</tbody>
</table>
## Subject


The federal bank regulatory agencies, FCA, and FHFA issued a NPR to implement Sections 731 and 764 of the Dodd-Frank Act. These sections require the agencies to adopt rules jointly to establish capital requirements, and initial and variation margin requirements for all non-cleared swaps and non-cleared security-based swaps of dealers and major participants. The proposed rule applies to the largest and most active participants in the over-the-counter derivatives market that have been designated by the U.S. Commodity Futures Trading Commission or the SEC as covered swap entities. Most community bank swaps activities are in amounts too small to be affected by the proposed rule. Only new trades entered into after the proposed effective dates would be subject to the proposed requirements. Comments were due by November 24, 2014.


The federal bank regulatory agencies adopted a final rule implementing a quantitative liquidity requirement consistent with the liquidity coverage ratio (LCR) standard established by the Basel Committee on Banking Supervision. The rule is designed to create a standardized minimum liquidity requirement for large and internationally active banking organizations. The final rule establishes a liquidity buffer that covered companies must hold to meet a defined level of liquidity stress; provides a method to measure liquidity stress; requires at least 60 percent of the liquidity buffer to consist of the most liquid assets (Level 1 liquid assets); provides enhanced information about liquidity risk to managers and supervisors; requires notification of the primary federal regulator when the LCR drops below 100 percent and a remediation plan if the shortfall persists; and establishes a phase-in period for the minimum LCR with full compliance by January 1, 2017.


The federal bank regulatory agencies issued a joint final rule that revises the denominator of the supplementary leverage ratio (SLR) (total leverage exposure) under the revised regulatory capital rule adopted by the agencies in July 2013. The final rule aligns the agencies’ rules on the calculation of the denominator with international leverage ratio standards; incorporates in total leverage exposure the effective notional amount of credit derivatives and other similar instruments under which credit protection is provided, modifies the calculation of total leverage exposure for derivatives and repo-style transactions, and revises the credit conversion factors applied to certain off-balance sheet exposures; changes the methodology for calculating the SLR and public disclosure requirements; and establishes public disclosure requirements that are effective in March 2015. The rule applies to banking organizations subject to the agencies’ advanced approaches risk-based capital rules. SLR capital requirements incorporating the revised denominator are effective January 1, 2018.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Bank Regulatory Agencies Request Comment on Proposed Revisions to the Interagency Questions and Answers Regarding Community Reinvestment (PR-78-2014, September 8, 2014; Federal Register, Vol. 79, No. 175, p. 53838, September 10, 2014)</td>
<td>The federal bank regulatory agencies requested comment on proposed revisions to the <em>Interagency Questions and Answers Regarding Community Reinvestment</em>. The Questions and Answers document provides additional guidance to financial institutions and the public on the agencies’ Community Reinvestment Act (CRA) regulations. The proposed revisions address alternative systems for delivering retail banking services, add examples of innovative or flexible lending practices, address community development-related issues, and offer guidance on how examiners evaluate the responsiveness and innovativeness of an institution’s loans, qualified investments, and community development services. Comments were due by November 10, 2014. See <a href="https://www.fdic.gov/news/news/press/2014/pr14078.html">https://www.fdic.gov/news/news/press/2014/pr14078.html</a>.</td>
</tr>
<tr>
<td>Agencies Issue Guidance Regarding Unfair or Deceptive Credit Practices (FIL-44-2014, August 22, 2014)</td>
<td>The federal financial institution regulatory agencies issued guidance to clarify that the repeal of credit practices rules applicable to banks, savings associations, and federal credit unions, as a consequence of the Dodd-Frank Act, should not be construed as a determination by the agencies that the credit practices described in these former regulations are permissible. The agencies believe that, depending on the facts and circumstances, if banks, savings associations, and federal credit unions engage in the unfair or deceptive practices described in these former credit practices rules, such conduct may violate the prohibition against unfair or deceptive practices in Section 5 of the Financial Trade Commission Act and Sections 1031 and 1036 of the Dodd-Frank Act. The agencies may determine that statutory violations exist even in the absence of a specific regulation governing the conduct. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14044.html">https://www.fdic.gov/news/news/financial/2014/fil14044.html</a>.</td>
</tr>
<tr>
<td>Agencies Provide Feedback on Resolution Plans (PR-67-2014, August 5, 2014; PR-68-2014, August 15, 2014)</td>
<td>The FRB and FDIC announced completion of reviews of the second round of resolution plans submitted by 11 large, complex banking organizations in 2013. Letters to each of these firms detail specific shortcomings and expectations for the 2015 submission. The agencies also provided guidance to the 117 firms that filed initial resolution plans in December 2013. Second plans for these firms are due by year-end 2014. The Dodd-Frank Act requires that certain banking organizations with total consolidated assets of $50 billion or more and nonbank financial companies designated by the Financial Stability Oversight Council as systemically important periodically submit “living wills” for rapid and orderly resolution in the event of a material financial distress or failure. See <a href="https://www.fdic.gov/news/news/press/2014/pr14067.html">https://www.fdic.gov/news/news/press/2014/pr14067.html</a> and <a href="https://www.fdic.gov/news/news/press/2014/pr14068.html">https://www.fdic.gov/news/news/press/2014/pr14068.html</a>.</td>
</tr>
<tr>
<td>FDIC Announces Youth Savings Pilot Program (FIL-43-2014, August 4, 2014; PR-66-2014, August 4, 2014)</td>
<td>The FDIC announced its Youth Savings Pilot Program, which seeks to identify and highlight approaches to offering financial education tied to the opening of safe, low-cost savings accounts for school-age children. Upon completion of the pilot, the FDIC intends to publish a report to provide best practices on how financial institutions can work with schools or other organizations in this regard. Information on this pilot program can be found at <a href="http://www.fdic.gov/youthsavingspilot">http://www.fdic.gov/youthsavingspilot</a>. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14043.html">https://www.fdic.gov/news/news/financial/2014/fil14043.html</a>.</td>
</tr>
<tr>
<td>Subject</td>
<td>Summary</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>FDIC Clarifies Supervisory Approach to Institutions Establishing Account Relationships with Third-Party Payment Processors (FIL-41-2014, July 28, 2014)</td>
<td>The FDIC clarified its supervisory approach to institutions establishing account relationships with third-party payment processors. FDIC guidance and an informational article contained lists of examples of merchant categories that had been associated by the payments industry with higher-risk activity. The lists created the misperception that the listed merchant categories were prohibited or discouraged, although it is the FDIC’s policy that insured institutions that properly manage customer relationships are neither prohibited nor discouraged from providing services to any customer operating in compliance with applicable federal and state law. Accordingly, the FDIC clarified its guidance to reinforce this approach and, as part of this clarification, removed the lists of examples of merchant categories from its official guidance and informational article. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14041a.html">https://www.fdic.gov/news/news/financial/2014/fil14041a.html</a>.</td>
</tr>
<tr>
<td>FDIC Issues Guidance to S-Corporation Banks Regarding Basel III Capital Conservation Buffer (FIL-40-2014, July 21, 2014; PR-60-2014, July 21, 2014)</td>
<td>The FDIC issued guidance describing how it will consider requests from S-corporation banks or savings associations to pay dividends to shareholders to cover taxes on their pass-through share of the bank’s earnings, when these dividends would otherwise not be permitted under the capital conservation buffer requirements in the Basel III rule. Absent significant safety-and-soundness concerns, the FDIC generally expects to approve exception requests by well-rated S-corporation banks that are limited to the payment of dividends to cover shareholders’ taxes on their portion of the S-corporation’s earnings. The FDIC will consider all requests on a case-by-case basis. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14040.html">https://www.fdic.gov/news/news/financial/2014/fil14040.html</a>.</td>
</tr>
<tr>
<td>Subject</td>
<td>Summary</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>FDIC Updates Guidance on Prudent Management of Agricultural Credits Through Economic Cycles (FIL-39-2014, July 16, 2014)</strong></td>
<td>The FDIC issued guidance on agricultural lending, noting the U.S. Department of Agriculture projects a slowdown in the growth of various financial indicators for U.S. farming and livestock sectors, and the sector remains susceptible to shocks, such as weather-related events, market volatility, and declining land values. Financial institutions engaged in agricultural lending are reminded to remain diligent in enforcing sound underwriting principles and establishing effective risk management procedures to help mitigate risks. Where agricultural borrowers are struggling to make payments, the FDIC recognizes that constructively working with borrowers often benefits the financial institution and the borrower. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14039.html">https://www.fdic.gov/news/news/financial/2014/fil14039.html</a>.</td>
</tr>
<tr>
<td><strong>Agencies Finalize Technical Correction of Eligible Guarantee Definition in Risk-Based Capital Rules (PR-57-2014, July 16, 2014; Federal Register, Vol. 79, No. 146, p. 44120, July 30, 2014)</strong></td>
<td>The federal bank regulatory agencies announced the finalization of a technical correction of the definition of “eligible guarantee” in the agencies’ risk-based capital rules. In April, the agencies proposed a rule to correct the definition of eligible guarantee by clarifying the types of guarantees that can be recognized for purposes of calculating a banking organization’s regulatory capital. The correction impacts banking organizations that determine their regulatory capital ratios under the advanced approaches framework, which applies to large internationally active banking organizations. The final rule is substantially similar to the proposed rule and adopts the definition of eligible guarantee without change. To ensure consistent public disclosure of capital ratios, the agencies allowed advanced approaches banking organizations to adopt the final rule before the effective date of October 1, 2014. See <a href="https://www.fdic.gov/news/news/press/2014/pr14057.html">https://www.fdic.gov/news/news/press/2014/pr14057.html</a>.</td>
</tr>
<tr>
<td><strong>FDIC Issues Notice of Proposed Rulemaking Revising the Deposit Insurance Assessment System to Reflect Regulatory Capital Rules Changes (FIL-37-2014, July 15, 2014; Federal Register, Vol. 79, No. 141, p. 42698, July 23, 2014)</strong></td>
<td>The FDIC issued a NPR that would revise its risk-based deposit insurance assessment system to reflect changes in the regulatory capital rules that go into effect in 2015 and 2018. For deposit insurance assessment purposes, the NPR would (1) revise the ratios and ratio thresholds relating to capital evaluations, (2) revise the assessment base calculation for custodial banks, and (3) require that all highly complex institutions measure counterparty exposure for assessment purposes using the standardized approach in the regulatory capital rules. Comments on the proposed rule were due by September 22, 2014. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14037.html">https://www.fdic.gov/news/news/financial/2014/fil14037.html</a>.</td>
</tr>
<tr>
<td><strong>Federal Bank Regulatory Agencies Issue Guidance on Consolidated Reports of Condition and Income (FIL-36-2014, July 14, 2014; FIL-38-2014, July 16, 2014)</strong></td>
<td>The federal bank regulatory agencies reminded financial institutions that the amount of information to be reported on international remittance transfer activity and the reporting frequency for these data have been reduced beginning with the June 2014 Call Report as planned. Data on international remittance transfer activity, which were collected initially in Schedule RC-M, Memoranda, in the March 2014 Call Report, will now be reported semiannually in June and December, beginning this quarter (see FIL-3-2014, dated January 22, 2014). Questions in the March 2014 Call Report about international remittance transfer activity during 2012 have been deleted. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14036.html">https://www.fdic.gov/news/news/financial/2014/fil14036.html</a>.</td>
</tr>
</tbody>
</table>
FDIC Hosts Community Affairs Webinar: Model Approaches to Community Bank/Community Development Financial Institution (CDFI) Partnerships (FIL-35-2014, July 8, 2014)


FDIC Hosts Community Reinvestment Webinar (FIL-34-2014, July 7, 2014)


The federal bank regulatory agencies, together with the NCUA and Conference of State Bank Supervisors, issued interagency guidance recognizing that some institutions and borrowers may face challenges as home equity lines of credit (HELOCs) near their end-of-draw period. The guidance provides a framework for communicating and working with HELOC borrowers experiencing financial difficulties to avoid unnecessary defaults, describes components of an effective risk management approach, and addresses appropriate accounting and reporting. The guidance states that the level of monitoring and assessment should be commensurate with the size and risk characteristics of a financial institution’s HELOC portfolio. See https://www.fdic.gov/news/news/financial/2014/fil14033.html.


The federal bank regulatory agencies announced the availability of the 2014 list of distressed or underserved nonmetropolitan middle-income geographies, where revitalization or stabilization activities will receive CRA consideration as “community development.” “Distressed nonmetropolitan middle-income geographies” and “underserved nonmetropolitan middle-income geographies” are designated by the agencies in accordance with their CRA regulations. See https://www.fdic.gov/news/news/press/2014/pr14051.html.


The federal bank regulatory agencies requested comment on proposed revisions to the risk-weighted assets portion of Schedule RC-R, Regulatory Capital, in the Call Report. The revisions would incorporate the standardized approach for calculating risk-weighted assets under the revised regulatory capital rules approved by the agencies in July 2013 (see FIL-41-2013, dated September 24, 2013, and FIL-3-2014, dated January 22, 2014). The agencies also proposed to revise the reporting of securities borrowed in Call Report Schedule RC-L, Derivatives and Off-Balance Sheet Items. These proposed changes would take effect as of the March 31, 2015, report date. The agencies conducted a teleconference to explain the proposed changes on June 27, 2014. Comments were due by August 22, 2014. See https://www.fdic.gov/news/news/financial/2014/fil14031.html.
<table>
<thead>
<tr>
<th>Subject</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDIC Releases Annual Summary of Deposits Survey Instructions (FIL-29-2014, June 5, 2014)</td>
<td>The FDIC released instructions for the Summary of Deposits, which is the annual survey of branch office deposits as of June 30 for all FDIC-insured institutions, including insured U.S. branches of foreign banks. All institutions with branch offices are required to submit the survey; institutions with only a main office are exempt. All survey responses were required by July 31, 2014. See <a href="https://www.fdic.gov/news/news/financial/2014/fil14029.html">https://www.fdic.gov/news/news/financial/2014/fil14029.html</a>.</td>
</tr>
<tr>
<td>Federal Bank Regulatory Agencies Seek Comment on Interagency Effort to Reduce Regulatory Burden (PR-43-2014, June 4, 2014; Federal Register, Vol. 79, No. 107, p. 32172, June 4, 2014; PR-95-2014, November 5, 2014)</td>
<td>The federal bank regulatory agencies published the first of a series of requests for comment to identify outdated, unnecessary, or unduly burdensome regulations imposed on insured depository institutions. The EGRPRA requires the agencies to review at least every 10 years and publish for comment the regulations they have issued, report to Congress on any significant issues raised by the comments, and identify areas that are outdated, unnecessary, or unduly burdensome. At regular intervals during the next two years, the agencies will jointly publish three additional notices for public comment. The first notice sought comment on regulations from three categories: Applications and Reporting; Powers and Activities, and International Operations. Comments on this first set of categories were due by September 2, 2014. The agencies subsequently hosted the first of a series of outreach meetings on December 2, 2014, which featured presentations by industry participants and consumer and community groups and gave interested persons an opportunity to present their views on any of the 12 categories of regulations listed in the June Federal Register notice. See <a href="https://www.fdic.gov/news/news/press/2014/pr14043.html">https://www.fdic.gov/news/news/press/2014/pr14043.html</a> and <a href="https://www.fdic.gov/news/news/press/2014/pr14095.html">https://www.fdic.gov/news/news/press/2014/pr14095.html</a>.</td>
</tr>
</tbody>
</table>
The federal bank regulatory agencies, together with the NCUA and FCA, issued an interagency statement regarding the new National Flood Insurance Program (NFIP) maximum limit of flood insurance coverage for non-condominium residential buildings designed for use for five or more families (classified by the NFIP as “Other Residential Buildings”). The guidance discusses the agencies’ expectations and a financial institution’s responsibilities when, as a result of the increase in the maximum limit of building coverage for such properties, a financial institution determines that a building securing a designated loan is covered by flood insurance in an amount less than the amount required under federal flood insurance law.

Subscription Form

To obtain a subscription to *Supervisory Insights*, please print or type the following information:

Institution Name

Contact Person

Telephone

Street Address

City, State, Zip Code

Please fax or mail this order form to: FDIC Public Information Center
3501 North Fairfax Drive, Room E-1022
Arlington, VA 22226
Fax Number (703) 562-2296

Subscription requests also may be placed by calling 1-877-ASK-FDIC or 1-877-275-3342
or go to https://service.govdelivery.com/service/multi_subscribe.html?code=USFDIC