7535-01-U

NATIONAL CREDIT UNION ADMINISTRATION

12 CFR Part 741

RIN 3133-AD66

Interest Rate Risk

AGENCY: National Credit Union Administration (NCUA).

ACTION: Proposed Rule and Guidance.

SUMMARY: NCUA proposes to amend its regulations to require federally insured credit unions to have a written policy addressing interest rate risk (IRR) management and an effective IRR program as part of their asset liability management. NCUA also is proposing draft guidance in the form of an appendix to its regulations to assist credit unions in meeting the proposed regulatory requirement. NCUA believes a written IRR policy and an effective IRR program is key to maintaining safe and sound operations. NCUA believes credit unions will find the guidance helpful in addressing this important area of their operations.

DATES: Comments must be received on or before [60 days after publication in the FEDERAL REGISTER].

ADDRESSES: You may submit comments by any of the following methods (**Please send comments by one method only**):

- Federal Rulemaking Portal: **http://www.regulations.gov**. Follow the instructions for submitting comments.
- NCUA Web Site: **http://www.ncua.gov/RegulationsOpinionsLaws/proposed_regs/proposed_regs.html**. Follow the instructions for submitting comments.
- E-mail: Address to **regcomments@ncua.gov.** Include "[Your name] – Comments on Proposed Rulemaking for Part 741 in the e-mail subject line.
- Fax: (703) 518-6319. Use the subject line described above for e-mail.
- Mail: Address to Mary Rupp, Secretary of the Board, National Credit Union Administration, 1775 Duke Street, Alexandria, Virginia 22314-3428.
- Hand Delivery/Courier: Same as mail address.

PUBLIC INSPECTION: All public comments are available on the agency's website at http://www.ncua.gov/RegulationsOpinionsLaws/comments as submitted, except as may not be possible for technical reasons. Public comments will not be edited to remove any identifying or contact information. Paper copies of comments may be inspected in NCUA's law library at 1775 Duke Street, Alexandria, Virginia 22314, by appointment weekdays between 9:00 a.m.

and 3:00 p.m. To make an appointment, call (703) 518-6546 or send an e-mail to OGCMail@ncua.gov.

FOR FURTHER INFORMATION CONTACT:

Jeremy Taylor, Senior Capital Markets Specialist, Office of Capital Markets and Planning, National Credit Union Administration, 1775 Duke Street, Alexandria, Virginia 22314, or telephone: (703) 518-6620.

SUPPLEMENTARY INFORMATION:

A. Discussion

NCUA proposes to amend its regulations to require federally insured credit unions (FICUs) to have a written policy and an effective program addressing interest rate risk (IRR) as part of their asset liability management (ALM). NCUA believes FICUs need a written policy to explicitly state the credit union's IRR tolerance. An effective IRR program that identifies, measures, monitors, and controls IRR is an essential component of safe and sound credit union operations. In the past, NCUA issued guidance on ALM and IRR management in Letters to Credit Unions and believes FICUs generally are managing IRR adequately.[1] NCUA's IRR questionnaire is also available at the following location

[1] Letters to Credit Unions: 99-CU-12 Real Estate Lending and Balance Sheet Management; 00-CU-10 Asset Liability Management Procedures; 00-CU-13, Liquidity and Balance Sheet Management; 01-CU-08, Liability Management - Rate-Sensitive and Volatile Funding Sources; 01-CU-19 Managing Share Inflows in Uncertain Times; 03-CU-11, Non-maturity Shares and Balance Sheet Risk; 03-CU-15 Real Estate Concentrations and Interest Rate Risk Management for Credit Unions with Large Positions in Fixed Rate Mortgages; 06-CU-16 Inter-Agency Guidance on Non-traditional Mortgage Product Risk. Interagency Advisory on Interest Rate Risk Management, January 6, 2010.

http://www.ncua.gov/Resources/ALManagementInvest/Review Procedures.aspx. However, IRR has risen at credit unions due to changes in balance sheet compositions and increased uncertainty in the financial markets. The Board therefore believes it is appropriate to create a regulatory requirement addressing the policy and practice of interest rate risk management at FICUs supported by clear and comprehensive guidance. The Board believes the proposed regulatory requirement and guidance will assist FICUs in understanding and meeting NCUA's expectations regarding IRR policy and implementing an effective program. NCUA anticipates that it would set a compliance date of three months after the rule becomes effective.

The term "interest rate risk" refers to the vulnerability of a credit union's financial condition to adverse movements in market interest rates. Although some IRR is a normal part of financial intermediation, IRR may negatively affect a credit union's earnings, or net economic value, which is the difference between the market value of assets and the market value of liabilities. Changes in interest rates influence a credit union's earnings by altering interest-sensitive income and expenses (e.g. loan income and share dividends). Changes in interest rates also affect the economic value of a credit union's assets and liabilities, because the present value of future cash flows and, in some cases, the cash flows themselves may change when interest rates change.[2]

[2] Credit unions confront IRR from several sources. These include repricing risk, yield curve risk, spread risk, basis risk, and options risk. See the glossary of terms in Appendix A for definitions of these risks.

An effective IRR program allows a credit union to serve member needs without incurring unreasonable levels of risk and make informed decisions about balance sheet composition, growth and product mix, while remaining within its defined tolerance level. An IRR program enables credit unions to meet their liquidity needs and implement flexible pricing strategies in response to changes in market interest rates while maintaining adequate earnings and net economic value.

NCUA recognizes it is impossible to establish specific, regulatory requirements for IRR that would be appropriate for all FICUs. IRR management involves judgment by a FICU based on its own individual mission, structure, and circumstances. Any rule must take into account the diversity of FICUs and avoid a one-size-fits-all approach. Accordingly, FICUs should devise a policy and risk management program appropriate to their own situation.

The guidance in the Appendix does not identify specific metrics because NCUA recognizes IRR programs will differ among credit unions. There are, nevertheless, fundamental elements applicable to all credit unions, as explained in the appendix. Developing a sound IRR program is the responsibility of the board of directors, involving all relevant phases of operation, and NCUA believes the proposed guidance provides a helpful framework for directors. NCUA is presenting guidance in the form of an appendix to the rule to assist FICUs in

establishing a written policy and effective program as part of asset liability management.

B. Proposed Rule

Section 741.3 generally addresses the criteria NCUA will consider in determining and continuing the insurability of a credit union and paragraph (b) lists various factors and requirements for a credit union's financial condition and its policies. Currently, §741.3(b) includes requirements, among others, of written lending and investment policies, 12 CFR 741.3(b) (2) and (3), and, therefore, placement of the proposed amendment within this provision is appropriate. The Board proposes to amend §741.3(b) to add the requirement of a written policy on IRR and an effective program. This is an additional factor to be considered in determining whether a credit union's financial condition and policies are safe and sound. 12 CFR 741.3(b).

C. Regulatory Procedures

Regulatory Flexibility Act

The Regulatory Flexibility Act requires NCUA to prepare an analysis to describe any significant economic impact a rule may have on a substantial number of small entities, those credit unions with less than ten million dollars in assets. The

proposed rule does not apply to credit unions with less than ten million dollars in assets. Accordingly, the Board determines that this proposed rule will not have a significant economic impact on a substantial number of small credit unions and that a Regulatory Flexibility Analysis is not required.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (PRA) applies to rulemakings in which an agency by rule creates a new paperwork burden on regulated entities or modifies an existing burden. 44 U.S.C. 3507(d). For purposes of the PRA, a paperwork burden may take the form of a either a reporting or a recordkeeping requirement, both referred to as information collections. NCUA has determined that the requirement to have a written interest rate policy creates a new information collection requirement. NCUA is applying to the Office of Management and Budget (OMB) for approval of the proposed information collection requirement.

As required by the PRA, NCUA is submitting a copy of this proposed regulation to the OMB for its review and approval. Persons interested in submitting comments with respect to the information collection aspects of the proposed rule should submit them to the OMB at the address noted below.

Written policy requirements.

The proposed rule would require a written interest rate policy and would apply to all federally insured credit unions (FICUs) as follows. FICUs with assets over

$50 million must meet the requirement for a written policy. FICUs with assets $10 million or over and less than or equal to $50 million must meet the requirement for a written policy if the total of first mortgage loans held plus total investments with maturities greater than five years is equal to or greater than 100% of its net worth. FICUs with assets $10 million or over and less than or equal to $50 million are not required to have a written policy if the total of first mortgage loans held plus total investments with maturities greater than five years is less than 100% of its net worth. FICUs less than $10 million in assets are not required by the rule to have a written policy even if the total of first mortgage loans held plus total investments with maturities greater than five years is greater than 100% of its net worth.

A FICU is considered to hold a first mortgage loan for its own portfolio when it has not demonstrated the intent and ability to sell the loan to an independent third party within 120 days. Investments with maturities greater than five years are defined as those reported by the FICU to have maturities of 5-10 years and greater than 10 years in the statement of financial condition of its most recent call report.

For example, Credit Union A has assets of $51 million. The percentage of first mortgage loans held by Credit Union A plus its investments with maturities greater than five years is 75% of its net worth. It is required by the rule to have a written interest rate policy because of its asset size. Credit Union B has $45

million in assets. The percentage of first mortgage loans held by Credit Union B plus its investments with maturities greater than five years is 75% of its net worth. Credit Union B is therefore not required by the rule to have a written interest rate policy since this percentage is less that 100%. Credit Union C has assets of $10 million and the percentage of first mortgage loans held by Credit Union C plus its investments with maturities greater than five years is 125% of its net worth. It is required to have a written interest rate policy because it has assets $10 million or over and less than or equal to $50 million, and the percentage of first mortgage loans held by Credit Union C plus its investments with maturities greater than five years is greater than 100% of its net worth. Credit Union D has assets of $9 million and the percentage of first mortgage loans held by Credit Union D plus its investments with maturities greater than five years is 125% of its net worth. Credit Union D is not required by the rule to have a written interest rate policy because its asset size is below $10 million, even though the percentage of first mortgage loans held by Credit Union D plus its investments with maturities greater than five years is greater than 100% its net worth.

As of December 31, 2010, there were 7339 FICUs, of which 3184 had assets over $50 million, or had assets $10 million or over and less than or equal to $50 million, and total first mortgage loans plus total investments with maturities greater than five years were equal to or greater than 100% of net worth. NCUA estimates, however, that approximately 75% of these credit unions already have interest rate risk policies in place as part of their lending and asset management

policies. Therefore, they will not have to undertake any significant additional burden as a result of this rulemaking. NCUA estimates that those credit unions with existing policies will only need to undertake a review of those policies to determine if they are in line with the guidance accompanying this rule change. While minor adjustments to existing policies may be appropriate, NCUA estimates that approximately only 25% of the credit unions will need to prepare a written policy. Therefore, NCUA estimates that approximately 800 credit unions will need to develop a written interest rate risk policy to meet the requirement for a written policy; NCUA notes that periodic review of the policy, while included as part of the guidance, may require no additional paperwork burden or engender very limited additional paperwork.

The proposed rule requiring a written interest rate risk policy is accompanied by guidance on how to establish this policy and the guidance essentially provides a template or list of the eight points the written policy should address. As provided in the guidance, the points to be covered are:

- Identify committees, persons or other parties responsible for review of the credit union's IRR exposure;
- Direct appropriate actions to ensure management takes steps to manage IRR so that IRR exposures are identified, measured, monitored, and controlled;
- State the frequency with which management will report on measurement results to the board to ensure routine review of information that is timely

(e.g. current and at least quarterly) and in sufficient detail to assess the credit union's IRR profile;

- Set risk limits for IRR exposures based on selected measures (e.g. limits for changes in repricing or duration gaps, income simulation, asset valuation, or net economic value);
- Choose tests, such as interest rate shocks, that the credit union will perform using the selected measures;
- Provide for periodic review of material changes in IRR exposures and compliance with board approved policy and risk limits;
- Provide for assessment of the IRR impact of any new business activities prior to implementation (e.g. evaluate the IRR profile of introducing a new product or service) ; and
- Provide for annual evaluation of policy to determine whether it is still commensurate with the size, complexity, and risk profile of the credit union.

The actual length of a policy may vary significantly depending on the complexity of the credit union's activities. For example, a credit union that offers basic share accounts, only short-term loans, i.e., no mortgage loans, and makes relatively simple investments should be able to establish a written policy in one to two hours. The policy could establish maturity limits for loans, establish the minimum amount of short-term funds, and basically restrict the types of permissible investments (e.g. Treasuries). More complex balance sheets,

especially those containing mortgage loans and complex investments, may warrant a comprehensive IRR policy due to the uncertainty of cash flows.

Burden calculation.

While the burden will vary depending on the complexity of credit union activities, for purposes of providing an estimated average, NCUA estimates each of the eight segments of policy will have a burden of an equal weight of two hours. The maximum time for all segments of the policy is therefore sixteen hours. NCUA estimates the burden associated with this collection as follows: 800 x 16 hours = 12,800 hours.

Organizations and individuals that wish to submit comments on this information collection requirement should direct them to the Office of Information and Regulatory Affairs, OMB, Attn: Shagufta Ahmed, Room 10226, New Executive Office Building, Washington, DC 20503, with a copy to Mary Rupp, Secretary of the Board, National Credit Union Administration, 1775 Duke Street, Alexandria, Virginia 22314-3428.

The NCUA considers comments by the public on this proposed collection of information in:

- Evaluating whether the proposed collection of information is necessary for the proper performance of the functions of the NCUA, including whether the information will have a practical use;

- Evaluating the accuracy of the NCUA's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

- Enhancing the quality, usefulness, and clarity of the information to be collected; and

- Minimizing the burden of collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology; *e.g.*, permitting electronic submission of responses.

The Paperwork Reduction Act requires OMB to make a decision concerning the collection of information contained in the proposed regulation between 30 and 60 days after publication of this document in the Federal Register. Therefore, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication. This does not affect the deadline for the public to comment to the NCUA on the proposed regulation.

Executive Order 13132

Executive Order 13132 encourages independent regulatory agencies to consider the impact of their actions on state and local interests. In adherence to fundamental federalism principles, NCUA, an independent regulatory agency as defined in 44 U.S.C. 3502(5), voluntarily complies with the executive order. This rule will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. NCUA has determined that this rule does not constitute a policy that has federalism implications for purposes of the executive order.

The Treasury and General Government Appropriations Act, 1999--Assessment of Federal Regulations and Policies on Families

The NCUA has determined that this rule will not affect family well-being within the meaning of the Treasury and General Government Appropriations Act, 1999, Pub. L. 105-277, 112 Stat. 2681 (1998).

Agency Regulatory Goal

NCUA's goal is to promulgate clear and understandable regulations that impose minimal regulatory burden. We request your comments on whether the proposed rule is understandable and minimally intrusive.

List of Subjects in 12 CFR part 741

Credit unions, Requirements for insurance.

By the National Credit Union Administration Board on March 17, 2011.

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Mary F. Rupp

Secretary of the Board

For the reasons set forth above, NCUA proposes to amend 12 CFR part 741 as follows:

PART 741—REQUIREMENTS FOR INSURANCE

1. The authority citation for part 741 continues to read:

Authority: 12 U.S.C. 1757, 1766(a), 1781-1790, and 1790d; 31 U.S.C, 3717.

2. Amend §741.3(b) by adding a new paragraph (5) to read as follows:

§741.3 Criteria

* * * * *

(b) * * *

(5) The existence of a written interest rate risk policy and an effective interest rate risk management program as part of asset liability management in all federally insured credit unions (FICUs) as follows. FICUs with assets over $50 million must meet the requirement for a written policy and an effective interest rate risk management program. FICUs with assets $10 million or over and less than or equal to $50 million must meet the requirement for a written policy and an effective interest rate risk management program if the total of first mortgage loans held plus total investments with maturities greater than five years is equal to or greater than 100% of its net worth. FICUs with assets $10 million or over and less than or equal to $50 million are not required to have a written policy and an effective interest rate risk management program if the total of first mortgage loans held plus total investments with maturities greater than five years is less than 100% of its net worth. FICUs less than $10 million in assets are not required by the rule to have a written policy and an effective interest rate risk management program even if the total of first mortgage loans held plus total investments with maturities greater than five years is greater than 100% of its net worth.

A FICU is considered to hold a first mortgage loan for its own portfolio when it has not demonstrated the intent and ability to sell the loan to an independent third party within 120 days. Investments with maturities greater than five years are defined as those reported by the FICU to have maturities of 5-10 years and greater than 10 years in the statement of financial condition of its most recent call report.

For example, Credit Union A has assets of $51 million. The percentage of first mortgage loans held by Credit Union A plus its investments with maturities greater than five years is 75% of its net worth. It is required by the rule to have a written interest rate policy and an effective interest rate risk management program because of its asset size. Credit Union B has $45 million in assets. The percentage of first mortgage loans held by Credit Union B plus its investments with maturities greater than five years is 75% of its net worth. Credit Union B is therefore not required by the rule to have a written interest rate policy and an effective interest rate risk management program since this percentage is less that 100%. Credit Union C has assets of $10 million and the percentage of first mortgage loans held by Credit Union C plus its investments with maturities greater than five years is 125% of its net worth. It is required to have a written interest rate policy and an effective interest rate risk management program because it has assets $10 million or over and less than or equal to $50 million, and the percentage of first mortgage loans held by Credit Union C plus its investments with maturities greater than five years is greater than 100% of its net

worth. Credit Union D has assets of $9 million and the percentage of first mortgage loans held by Credit Union D plus its investments with maturities greater than five years is 125% of its net worth. Credit Union D is not required by the rule to have a written interest rate policy and an effective interest rate risk management program because its asset size is below $10 million, even though the percentage of first mortgage loans held by Credit Union D plus its investments with maturities greater than five years is greater than 100% its net worth.

The guidance of this rule describes widely accepted best practices in the management of interest rate risk and it may therefore be helpful to all FICUs.

Appendix A to this part provides guidance on how to establish an interest rate risk policy and effective program.

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3. Part 741 is amended by adding at the end of the part a new Appendix A to read as follows:

APPENDIX A to Part 741 – Guidance for an Interest Rate Risk Policy and an Effective Program

Table of Contents

I. Introduction

This appendix gives guidance to FICUs in the implementation of an interest rate risk (IRR) policy and program as aspects to overall asset liability management. An effective IRR management program identifies, measures, monitors, and controls IRR and is central to safe and sound credit union operations. Given the

differences among credit unions, each credit union should formulate its own practices, metrics and benchmarks appropriate to its operations.

These practices should be established in light of the nature of the credit union's operations and business, as well as its complexity, risk exposure, and size. As these elements increase, NCUA believes the IRR practices should be implemented with increasing degrees of rigor and diligence to maintain safe and sound operations in the area of IRR management. In particular, rigor and diligence are required to manage complexity and risk exposure. Complexity relates to the intricacy of financial instrument structure, and to the composition of assets and liabilities on the balance sheet. In the case of financial instruments, the structure can have numerous characteristics that act simultaneously to affect the behavior of the instrument. In the case of the balance sheet, which contains multiple instruments, assets and liabilities can act in ways that are compounding or can be offsetting because their impact on the IRR level may act in the same or opposite directions. High degrees of risk exposure require a credit union to be diligently aware of the potential earnings and net worth exposures under various interest rate and business environments because the margin for error is low.

A. Complexity

In influencing the behavior of instruments and balance sheet composition, complexity is a function of the predictability of the cash flows. As cash flows become less predictable, the uncertainty of both instrument and balance sheet

behavior increases. For example, a residential mortgage is subject to prepayments which will change at the option of the borrower. Mortgage borrowers may pay off their mortgage loans due to geographical relocation, or may increase the amount of their monthly payment above the minimum contractual schedule due to other changes in the borrower's circumstances. This cash flow unpredictability is also found in investments, such as collateralized mortgage obligations because these are comprised of mortgage loans. Additionally, cash flow unpredictability affects liabilities. For example, nonmaturity share balances vary at the discretion of the depositor making deposits and withdrawals, and this may be influenced by a credit union's pricing of its share accounts.

B. IRR Exposure

Exposure to IRR is the vulnerability of a credit union's financial condition to adverse movements in market interest rates. Although some IRR exposure is a normal part of financial intermediation, a high degree of this exposure may negatively affect a credit union's earnings and net economic value. Changes in interest rates influence a credit union's earnings by altering interest-sensitive income and expenses (e.g. loan income and share dividends). Changes in interest rates also affect the economic value of a credit union's assets and liabilities, because the present value of future cash flows and, in some cases, the cash flows themselves may change when interest rates change. Consequently,

the management of a credit union's pricing strategy is critical to the control of IRR exposure.

All FICUs over $50 million, and all FICUs with assets $10 million or over and less than or equal to $50 million if the total of first mortgage loans held plus total investments with maturities greater than five years is equal to or greater than 100% of its net worth, should incorporate the following five elements into their IRR program:

1. Board-approved IRR policy;
2. Oversight by the board of directors and implementation by management;
3. Risk measurement systems assessing the IRR sensitivity of either or both:
    a. Earnings;
    b. Asset and liability values;
4. Internal controls to monitor adherence to IRR limits;
5. Decision making that is informed and guided by IRR measures.

II. IRR Policy

The board of directors is responsible for ensuring the adequacy of an IRR policy and its limits. The policy should be consistent with the credit union's business strategies and should reflect the board's risk tolerance, taking into account the credit union's financial condition and risk measurement systems and methods

commensurate with the balance sheet structure. The policy should state actions and authorities required for exceptions to policy, limits, and authorizations.

Credit unions have the option of either creating a separate IRR policy or incorporating it into investment, ALM, funds management, liquidity or other policies. Regardless of form, credit unions must clearly document their IRR policy in writing.

The scope of the policy will vary depending on the complexity of the credit union's balance sheet. For example, a credit union that offers short-term loans, invests in non-complex or short-term bullet investments (i.e. a debt security that returns 100 percent of principal on the maturity date), and offers basic share products may not need to create an elaborate policy. The policy for these credit unions may limit the loan portfolio maturity, require a minimum amount of short-term funds, and restrict the types of permissible investments (e.g. Treasuries, bullet investments). More complex balance sheets, especially those containing mortgage loans and complex investments, may warrant a comprehensive IRR policy due to the uncertainty of cash flows.

The policy should establish responsibilities and procedures for identifying, measuring, monitoring, controlling, and reporting IRR, and establish risk limits. A written policy should:

- Identify committees, persons or other parties responsible for review of the credit union's IRR exposure;
- Direct appropriate actions to ensure management takes steps to manage IRR so that IRR exposures are identified, measured, monitored, and controlled;
- State the frequency with which management will report on measurement results to the board to ensure routine review of information that is timely (e.g. current and at least quarterly) and in sufficient detail to assess the credit union's IRR profile;
- Set risk limits for IRR exposures based on selected measures (e.g. limits for changes in repricing or duration gaps, income simulation, asset valuation, or net economic value);
- Choose tests, such as interest rate shocks, that the credit union will perform using the selected measures;
- Provide for periodic review of material changes in IRR exposures and compliance with board approved policy and risk limits;
- Provide for assessment of the IRR impact of any new business activities prior to implementation (e.g. evaluate the IRR profile of introducing a new product or service); and
- Provide for annual evaluation of policy to determine whether it is still commensurate with the size, complexity, and risk profile of the credit union.

IRR policy limits should maintain risk exposures within prudent levels. Examples of limits are as follows.

GAP: less than +/- 10 percent change in any given period, or cumulatively over 12 months.

Income Simulation: net interest income after shock change less than 20 percent over any 12 month period.

Asset Valuation or Net Economic Value: after shock change in book value net worth less than 25 percent or after shock value of net worth greater than 6 percent.

NCUA emphasizes these are only for illustrative purposes, and management should establish its own limits that are reasonably supported. Where appropriate, management may also set IRR limits for individual portfolios, activities, and lines of business.

III. IRR Oversight and Management

A. Board of Directors Oversight

The board of directors is responsible for oversight of their credit union and for approving policy, major strategies, and prudent limits regarding IRR. To meet this responsibility, understanding the level and nature of IRR taken by the credit union is essential. Accordingly, the board should ensure management executes an effective IRR program.

Additionally, the board should annually assess if the IRR program sufficiently identifies, measures, monitors, and controls the IRR exposure of the credit union. Where necessary, the board may consider obtaining professional advice and training to enhance its understanding of IRR oversight.

B. Management Responsibilities

Management is responsible for the daily management of activities and operations. In order to implement the board's IRR policy, management should:

- Develop and maintain adequate IRR measurement systems;
- Evaluate and understand IRR risk exposures;
- Establish an appropriate system of internal controls (e.g. separation between the risk taker and IRR measurement staff);
- Allocate sufficient resources for an effective IRR program. For example, a complex credit union with an elevated IRR risk profile will likely necessitate a greater allocation of resources to identify and focus on IRR exposures.
- Develop and support competent staff with technical expertise commensurate with their IRR program;
- Identify the procedures and assumptions involved in implementing the IRR measurement systems; and
- Establish clear lines of authority and responsibility for managing IRR; and

- Provide a sufficient set of reports to ensure compliance with board approved policies.

Where delegation of management authority by the board occurs, this may be to designated committees such as an asset liability committee or other equivalent. In credit unions with limited staff, these responsibilities may reside with the board or management. Significant changes in assumptions, measurement methods, tests performed, or other aspects involved in the IRR process, should be documented and brought to the attention of those responsible.

IV. IRR Measurement and Monitoring

A. IRR Measurement Systems

Generally, credit unions should have IRR measurement systems that capture and measure all material and identified sources of IRR. An IRR measurement system quantifies the risk contained in the credit union's balance sheet and integrates the important sources of IRR faced by a credit union in order to facilitate management of its risk exposures. The selection and assessment of appropriate IRR measurement systems is the responsibility of credit union boards and management.

Management should:

- Rely on assumptions that are reasonable and supportable;

- Document any changes to assumptions that should be based on observed information;
- Ensure calculation techniques are appropriate in rigor and use accepted financial concepts;
- Monitor positions with uncertain maturities, rates and cash flows, such as nonmaturity shares, fixed rate mortgages where prepayments may vary, adjustable rate mortgages, and instruments with embedded options, such as calls; and
- Require any interest rate measures and tests to be sufficiently rigorous to capture risk.

B. IRR Measurement Methods

The following discussion is intended only as a general guide and should not be used by credit unions as a checklist. An IRR measurement system may rely on a variety of different methods. Common examples of methods available to credit unions are GAP analysis, income simulation, asset valuation, and net economic value. Any measurement method(s) used by a credit union to analyze IRR exposure should correspond with the complexity of the credit union's balance sheet and display any material sources of IRR.

GAP Analysis

GAP analysis is a simple IRR measurement method that reports the mismatch between rate sensitive assets and rate sensitive liabilities over a given time

period. GAP can suffice for simple balance sheets that primarily consist of short-term bullet type investments and non mortgage-related assets. GAP analysis can be static, behavioral, or based on duration.

Income Simulation

Income simulation is an IRR measurement method used to estimate earnings exposure to changes in interest rates. An income simulation analysis projects interest cash flows of all assets, liabilities, and off-balance sheet instruments in a credit union's portfolio to estimate future net interest income over a chosen timeframe. Generally, income simulations focus on short-term time horizons (e.g. one to three years). Forecasting income is assumption sensitive and more uncertain the longer the forecast period. Simulations typically include evaluations under a base-case scenario, and instantaneous parallel rate shocks, and may include alternate interest-rate scenarios. The alternate rate scenarios may involve ramped changes in rates, twisting of the yield curve, and/or stressed rate environments devised by the user or provided by the vendor.

NCUA Asset Valuation Tables

For credit unions lacking advanced IRR methods that seek simple valuation measures, the NCUA Asset Valuation Tables are available and prepared quarterly by the NCUA Office of Capital Markets (OCM). These are located at http://www.ncua.gov/Resources/ALManagementInvest/Review Procedures.aspx.

These measures provide an indication of a credit union's potential interest rate risk, based on the risk associated with the asset categories of greatest concern – (e.g., mortgage loans and investment securities).

The tables provide a simple measure of the potential devaluation of a credit union's mortgage loans and investment securities that occur during +/- 300 basis point parallel rate shocks, and report the resulting impact on net worth.

Net Economic Value (NEV)

NEV measures the effect of interest rates on the market value of net worth by calculating the present value of assets minus the present value of liabilities. This calculation measures the credit union's balance sheet long-term IRR at a fixed point in time. By capturing the impact of interest rate changes on the value of all future cash flows, NEV provides a comprehensive measurement of IRR. Generally, NEV computations demonstrate the economic value of net worth under current interest rates and shocked interest rate scenarios.

One NEV method is to discount cash flows by a single interest rate path. Credit unions with a significant exposure to assets or liabilities with embedded options should consider alternative measurement methods such as discounting along a yield curve (e.g. the U.S. Treasury curve, LIBOR curve) or using multiple interest rate paths. Credit unions should apply and document appropriate methods,

based on available data (e.g. utilizing observed market values), when valuing individual or groups of assets and liabilities.

C. Components of IRR Measurement Methods

In the initial setup of IRR measurement, critical decisions are made regarding numerous variables in the method. These variables include but are not limited to the following.

1. Chart of Accounts

Credit unions using an IRR measurement method should define a sufficient number of accounts to capture key IRR characteristics inherent within their product lines. For example, credit unions with significant holdings of adjustable-rate mortgages should differentiate balances by periodic and lifetime caps and floors, the reset frequency, and the rate index used for rate resets. Similarly, credit unions with significant holdings of fixed-rate mortgages should differentiate at least by original term, e.g., 30 or 15-year, and coupon level to reflect differences in prepayment behaviors.

2. Aggregation of Data Input

As the credit union's complexity, risk exposure, and size increases, the degree of detail should be based on data that is increasingly disaggregated. Because imprecision in the measurement process can materially misstate risk levels,

management should evaluate the potential loss of precision from aggregation and simplification used in its measurement of IRR.

3. Account Attributes

Account attributes define a product, including: principal type, rate type, rate index, repricing interval, new volume maturity distribution, accounting accrual basis, prepayment driver, discount rate.

4. Assumptions

IRR measurement methods rely on assumptions made by management in order to identify IRR. The simplest example is of future interest rate scenarios. The management of IRR will require other assumptions such as: projected balance sheet volumes; prepayment rates for loans and investment securities; repricing sensitivity, and decay rates of nonmaturity shares. Examples of these assumptions follow.

Example 1. Credit unions should consider evaluating the balance sheet under flat (i.e. static) and/or planned growth scenarios to capture IRR exposures. Under a flat scenario, runoff amounts are reinvested in their respective asset or liability account. Conducting planned growth scenarios allows management to assess the IRR impact of the projected change in volume and/or composition of the balance sheet.

Example 2. Loans and mortgage related securities contain prepayment options that enable the borrower to prepay the obligation prior to maturity. This prepayment option makes it difficult to project the value and earnings stream from these assets because the future outstanding principal balance at any given time is unknown. A number of factors affect prepayments, including the refinancing incentive, seasonality (the particular time of year), seasoning (the age of the loan), member mobility, curtailments (additional principal payments), and burnout (borrowers who don't respond to changes in the level of rates, and pay as scheduled). Prepayment speeds may be estimated or derived from numerous national or vendor data sources.

Example 3. In the process of IRR measurement, the credit union must estimate how each account will reprice in response to market rate fluctuations. For example, when rates rise 300 basis points, the credit union may raise its asset or liability rates in a like amount or not, and may choose to lag the timing of its pricing change.

Example 4. Nonmaturity shares include those accounts with no defined maturity such as share drafts, regular shares, and money market accounts. Measuring the IRR associated with these accounts is difficult because the risk measurement calculations require the user to define the principal cash flows and maturity. Credit unions may assume that there is no value when measuring the associated

IRR and carry these values at book value or par. Many credit unions adopt this approach because it keeps the measurement method simple.

Alternatively, a credit union may attribute value to these shares (i.e. premium) on the basis that these shares tend to be lower cost funds that are core balances by virtue of being relatively insensitive to interest rates. This method generally results in nonmaturity shares priced/valued in a way that will produce an increased net economic value. Therefore, the underlying assumptions of the shares require scrutiny.

Credit unions that forecast share behavior and incorporate those assumptions into their risk identification and measurement process should perform sensitivity analysis. Guidance on the evaluation of nonmaturity shares is available in NCUA's Letter to Credit Unions 03-CU-11.

V. Internal Controls

Internal controls are an essential part of a safe and sound IRR program. If possible, separation of those responsible for the risk taking and risk measuring functions should occur at the credit union.

Staff responsible for maintaining controls should periodically assess the overall IRR program as well as compliance with policy. Internal audit staff would normally assume this role; however, if there is no internal auditor, management,

or a supervisory committee that is independent of the IRR process, may perform this role. Where appropriate, management may also supplement the internal audit with outside expertise to assess the IRR program. This review should include policy compliance, timeliness, and accuracy of reports given to management and the board.

Audit findings should be reported to the board or supervisory committee with recommended corrective actions and timeframes. The individuals responsible for maintaining internal controls should periodically examine adherence to the policy related to the IRR program.

VI. Decision-making Informed by IRR Measurement Systems

Management should utilize the results of the credit union's IRR measurement systems in making operational decisions such as changing balance sheet structure, funding, pricing strategies, and business planning. This is particularly the case when measures show a high level of IRR or when measurement results approach board-approved limits.

NCUA recognizes each credit union has its own individual risk profile and tolerance levels. However, when measures of fair value indicate net worth is low, declining, or even negative, or income simulations indicate reduced earnings, management should be prepared to identify steps, if necessary, to bring risk within acceptable levels. In any case, management should understand and use

their IRR measurement results, whether generated internally or externally, in the normal course of business. Management should also use the results proactively as a tool to adjust asset liability management for changes in interest rate environments.

VII. Standards for Assessment of IRR Policy and Effectiveness of Program

The following standards will assist credit unions in determining the adequacy of their IRR policy and assess the effectiveness of their program to manage IRR. This section provides examples of adequate and inadequate elements of IRR policies and programs based on the preceding sections. Specific instances of inadequate policies and programs are in some cases identified for purposes of illustration.

Policy	Adequate	Inadequate
Board oversight	Policy is consistent with credit union strategy, and the board states actions required to address policy exceptions.	Policy is not consistent with credit union complexity. Board has not reviewed limits specified in policy and does not require management to take corrective action when policy limitations are exceeded.
Responsible parties identified	A committee or management is designated to review and monitor IRR.	No committee or individual specified to review credit union's IRR exposure.
Direct appropriate action to measure, monitor, control IRR	Policy states all actions that are sufficient to manage IRR.	Omissions in policy cause material deficiency in controlling risk (e.g. method of measuring IRR is not identified or risk measurement not required with stated frequency).
Reporting frequency specified	Reporting of results is required with sufficient frequency to alert management to emerging IRR.	Reporting is infrequent and does not provide adequate detail to control IRR (e.g. semi-annual reporting on an aggregate balance sheet).
Risk limits stated with appropriate measures	Risk limits are established and are appropriate for the size and complexity of the credit union.	Key risk limit omitted from policy (e.g. NEV ratio or volatility post shock, NII post shock, or sensitivity gap at stated period), or limit is not reasonable (e.g. limits allow IRR measures to approach dangerously low levels under plausible interest rate scenarios).
Tests for limits	Tests substantially display the level and range of credit union IRR.	Tests do not indicate level or source of risk (e.g. NEV @ only +/-100 bps, or repricing gap only at one month).
Review of material IRR changes	Any changes beyond a stated level are reported to management and, where appropriate, the Board.	Review is required, but need for compliance with policy limits and corrective action are unclear.

Impact of new business	IRR impact of all business initiatives is required where these will affect future IRR.	The credit union does not evaluate the impact of new business on its IRR profile and is at risk from new business booked.
Periodic policy review	Review by Board required annually to ensure continued relevance and applicability of policy to management of IRR.	Policy review is required only if risks are unchanged, at the Board's discretion.
IRR Oversight & Management	**Adequate**	**Inadequate**
Oversight	Board approves policy and strategies and understands IRR faced by its own credit union.	Board is aware of the types of IRR present to credit unions in general, but does not have knowledge of the IRR risks associated with the credit union.
Oversight assessment of program effectiveness	Board periodically evaluates program effectiveness by monitoring management's IRR knowledge, using professional advice.	Board substantially relies on annual third party review to determine the adequacy of oversight and governance.
Choice of IRR measurement systems	Management selects and maintains systems which are able to capture the complexity of IRR risks.	Systems used by the credit union do not capture IRR (e.g. balance sheet contains material options in investments, mortgage loans or core deposits, which the system cannot capture - calls, prepayments, or administered rates).
Evaluation of IRR risk exposures	Credit union understands all material IRR exposures and evaluates these accordingly relative to credit union strategy.	Management relies on outside parties to evaluate credit union's IRR and cannot effectively explain the IRR measurement method or the results.
System of internal controls	Internal controls encompass and effectively evaluate programs that manage elements of IRR at the credit union.	Internal audit has not identified or addressed the correction of IRR deficiencies (e.g. processes for tracking changes in measurement assumptions, such as gap repricing of core deposits).
IRR resource management	Credit union has allocated initial or additional qualified staff resources sufficient to manage IRR by means that address sources of risk.	Credit union IRR exposure has materially increased without allocating additional, qualified staff, consequently IRR exposures are not identified or properly measured.
Expertise of IRR program staff	Staff responsible correctly identifies sources of IRR and can quantify these risks.	Credit union relies on staff who do not understand or are not familiar with IRR at the credit union (e.g. management cannot explain the impact on IRR of overstating core deposit premiums).
Procedures and assumptions of IRR measurement systems	Credit union identifies reasonable procedures and supportable assumptions.	Management delegates assumptions to a third party and has no procedure to review the reasonableness of the assumptions.
Accountability of IRR management	Responsibility for managing IRR is specific and clearly delineated.	Responsibility for managing IRR is too broad, or unclear, or not recognized by management
Transparency of changes in assumptions, methods and IRR tests.	Management requires clear disclosure of relevant changes in all material assumptions and methods.	Changes in assumptions are not tracked, or monitored or transparent to those evaluating efficacy of IRR system.
IRR Measurement and Monitoring	**Adequate**	**Inadequate**
Reasonable and supportable assumptions	Credit union carefully evaluates all assumptions and assesses the sensitivity of results relative to each key assumption.	Results are highly dependent on key assumptions that have not been researched or demonstrated to be supportable (e.g. mortgage prepayments do not reflect extension risk and core deposit premiums overstate or do not indicate reasonable maturities).
Assumption changes from observed information	All material changes in assumptions are based on tested internal data or reliable industry sources.	Assumptions are not tested and changes are not supported by any associated data on which the credit union relies.
Rigor of calculations and conformity of concepts	Techniques used appropriately capture complexity of balance sheet instruments.	Methods to attribute cash flows, and rate sensitivities are based on incorrect techniques (e.g. misuse of statistical correlations).
Positions with uncertain maturities, rates and cash flows	Activity is monitored on a regular basis in order to validate reasonableness of modeling assumptions.	Actual behavior is not monitored or compared to projected behavior.
Rigor of interest rate	Measures and tests employed capture the	Measures and tests employed do not

measures and tests	material risks embedded in the credit union's balance sheet.	capture material risks embedded in the balance sheet (e.g. rate shocks do not trigger the embedded options in some products).
Components of IRR Measurement Methods	**Adequate**	**Inadequate**
Chart of accounts	A sufficient number of accounts have been defined to capture key IRR characteristics inherent within each product.	Accounts/products with different IRR characteristics are modeled as one account/product (e.g. 15- and 30-year fixed-rate mortgages, with various coupons and prepayment behaviors).
Data aggregation	The level of data disaggregation is sufficient given the credit union's complexity and risk exposure (e.g. instrument level processing).	Data is combined for similar products with a wide range of variables, producing misleading weighted average terms (e.g. combining fixed-rate mortgages with coupons ranging from 4% to 8%, and modeling as a 6% mortgage).
Account attributes	Account set-up is appropriate to allow for the capture of key IRR characteristics.	Account set-up fails to identify key IRR characteristic (e.g. adjustable-rate mortgages are modeled without periodic and lifetime caps and floors).
Discounting methodology	Methodology used properly calculates the value of the asset or liability being modeled.	Methodology used does not accurately value assets or liabilities (e.g. discount rates or maturities or cash flows are incorrect in discounting calculations).
Assumptions	Credit union carefully evaluates all assumptions and assesses the sensitivity of results relative to each key assumption.	Results are highly dependent on key assumptions that have not been researched or demonstrated to be supportable (e.g. mortgage prepayments do not reflect extension risk and core deposit premiums overstate or do not indicate reasonable maturities).
Internal Controls	**Adequate**	**Inadequate**
Internal assessment of IRR program	Staff are identified and have annually assessed policy and program to correct any weaknesses.	There is no specified review action for requiring periodic evaluation of IRR program effectiveness.
Compliance with policy	IRR program is evaluated semi-annually for any policy exceptions, including compliance with approved limits.	Exceptions to policy occur occasionally and these are not noted by the internal control process.
Timeliness and accuracy of reports	Reports that are routinely provided to management and the Board successfully communicate material IRR exposure of the credit union.	Reports fail to specify some material risks, and some scheduled reports are not produced.
Audit findings reported to board or supervisory committee	IRR program deficiencies and policy exceptions are reported to the Board in accordance with the policy.	IRR program effectiveness is not part of audit review. No findings occur.
Decision-making and IRR	**Adequate**	**Inadequate**
Use of IRR measurement results in operational decisions	Measured IRR results form part of the credit union's ongoing business decisions and are substantive considerations routinely included in the business decision process.	IRR exposure discussion occurs only as deemed relevant in the annual strategic process.
Escalated use of results when IRR exposure is raised or approaching limits	Procedure specifies review escalation at specific levels with increasing contingency triggers close to limits.	IRR results are secondary in addressing IRR contingencies. Credit union relies on ad hoc response driven by market and customer perceptions.
Application to reduce elevated levels of IRR	Credit union utilizes IRR results to clearly define and formulate response to increased IRR levels.	IRR system results are not used to address balance structure, funding or pricing strategies.

NCUA acknowledges both the range of IRR exposures at credit unions, and the diverse means that they may use to accomplish an effective program to manage

this risk. NCUA therefore does not stipulate specific quantitative standards or limits for the management of IRR applicable to all credit unions, and does not rely solely on the results of quantitative approaches to evaluate the effectiveness of IRR programs. Assumptions, measures and methods used by a credit union in light of its size, complexity and risk exposure determine the specific appropriate standard. However, NCUA strongly affirms the need for adequate practices for a program to effectively manage IRR. For example, policy limits on IRR exposure are not adequate if they allow a credit union to operate with an exposure that is unsafe or unsound, which means that the credit union may suffer material or significant losses under adverse circumstances as a result of this exposure. Credit unions that do not have a written IRR policy or that do not have an effective IRR program are out of compliance with §741.3 of NCUA's regulation.

VIII. Additional Guidance for Large Credit Unions with Complex or High Risk Balance Sheets

FICUs with assets of $500 million or greater must obtain an annual audit of their financial statements performed in accordance with generally accepted accounting standards. 12 CFR 715.5, 715.6, 741.202. For purposes of data collection, NCUA also uses $500 million and above as its largest credit union asset range. In order to gather information and to monitor IRR exposure at larger credit unions as it relates to the NCUA insurance fund, NCUA will use this as the criterion for definition of large credit unions for purposes of the guidance. Given

the increased exposure to the share insurance fund, NCUA encourages the following standards at large credit unions.

Responsible officials at large credit unions that are complex or high risk should fully understand all aspects of interest rate risk, including but not limited to the credit union's IRR assessment and potential directional changes in IRR exposures. For example, the credit union should consider the following:

- Policy which provides for the use of outside parties to validate the tests and limits commensurate with the risk exposure and complexity of the credit union;
- IRR measurements that provide compliance with policy limits as shown both by risks to earnings and net economic value of equity under a variety of defined and reasonable interest rate scenarios;
- The effect of changes in assumptions on IRR exposure results (e.g. the impact of slower or faster prepayments on earnings and economic value); or,
- Enhanced levels of separation between risk taking and risk assessment (e.g. assignment of resources to separate the investments function from IRR measurement, and IRR monitoring and oversight).

IX. Definitions

Glossary of terms

Basis risk: The risk to earnings and/or value due to a financial institution's holdings of multiple instruments, based on different indices that are imperfectly correlated.

Interest rate risk: The risk that changes in market rates will adversely affect a credit union's net economic value and/or earnings. Interest rate risk generally arises from a mismatch between the timing of cash flows from fixed rate instruments, and interest rate resets of variable rate instruments, on either side of the balance sheet. Thus, as interest rates change, earnings or net economic value may decline.

Option risk: The risk to earnings and/or value due to the effect on financial instruments of options associated with these instruments. Options are embedded when they are contractual within, or directly associated with, the instrument. An example of a contractual embedded option is a call option on an agency bond. An example of a behavioral embedded option is the right of a residential mortgage holder to vary prepayments on the mortgage through time, either by making additional premium payments, or by paying off the mortgage prior to maturity.

Repricing risk: The repricing of assets or liabilities following market changes can occur in different amounts and/or at different times. This risk can cause returns to vary.

Spread risk: The risk to earnings and/or value resulting from variations through time of the spread between assets or liabilities to an underlying index such as the Treasury curve.

Yield curve risk: The risk to earnings and/or value due to changes in the level or slope of underlying yield curves. Financial instruments can be sensitive to different points on the curve. This can cause returns to vary as yield curves change.