Fact Sheet

NCUA Revised Interest Rate Supervision

Why is NCUA updating its approach to supervising interest rate risk?

Interest rate risk has been a supervisory priority for NCUA since 2012. It also has been the subject of periodic updates and guidance for more than two decades.[1,2] While a number of guidance letters to credit unions have been issued on the subject of balance sheet risk management, it has been more than ten years since we have made a substantive change to our examiner guidance regarding NCUA's risk tolerances for interest rate risk.

During the past ten years, the credit union system has experienced significant growth in size and complexity. Credit unions have consolidated into fewer and larger institutions; their total assets have nearly tripled, and the number of institutions with more than a billion dollars in assets has risen more than 500percent.

These facts warranted NCUA's review of existing standards and led us to reassess the interest rate risk supervision process and make necessary changes to the procedures field staff use to monitor, scope, and rate interest rate risk.

Along with the growth and complexity of the system's assets, advances have been made in risk-management techniques—namely, the widespread use of income simulations and net economic value, providing greater capabilities for credit unions to generate, evaluate, and maintain a greater amount of interest rate risk data.

As part of the supervision update, NCUA will collect and centralize key information as part of a continuous quality improvement process, allowing us to achieve several specific goals:

- Address new rule requirements,[3]
- Enhance examiner guidance,
- Reduce inconsistency, and
- Identify outlier risk.

What are the key changes to the supervision of interest rate risk?

NCUA is making four key changes to the supervision of interest rate risk. They are outlined at a high level below.

1. The ***Interest Rate Risk Workbook*** has been reorganized and provides streamlined procedures for interest rate risk reviews.

---

[1] See NCUA's Letters to Credit Unions 16-CU-01, Supervisory Priorities for 2016, 15-CU-01, *Supervisory Priorities for 2015*, 14-CU-02, *Supervisory Focus for 2014*, 13-CU-01, Supervisory Focus for 2013, and 12-CU-01, Supervisory Focus for 2012.

[2] See the interest rate risk resource center of NCUA's public website.

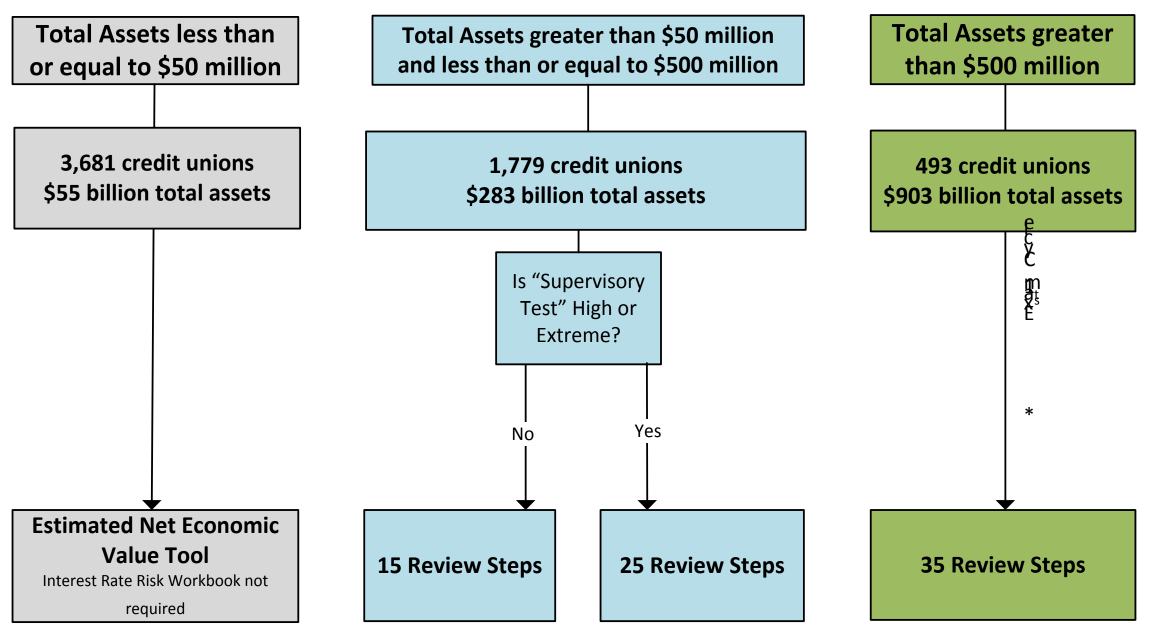
[3] See 12 CFR Part 741; Interest Rate Risk Policy and Program, published on February 2, 2012, and 12 CFR Parts 703, 715 and 741; Derivatives, published March 3, 2014.

2. Development of the ***Net Economic Value Supervisory Test***, a capital-at-risk measurement that uses standardized values for non-maturity shares to assess the level of interest rate risk. The test uses redefined risk classification levels to categorize the supervisory risk level.
3. Development of the ***Estimated Net Economic Value Tool***, an automated measurement of the Net Economic Value Supervisory Test and final interest rate risk category rating for credit unions of $50 million total assets or less.
4. The ***Examiner's Guide*** has been revised to consolidate and unify extensive NCUA-issued interest rate risk material and provide enhanced navigational utility.

Metrics such as the net long-term asset ratio, supervisory interest rate risk threshold, and the 17/4 test will no longer be considered in the assessment of interest rate risk.

How will the exam scope change with the revised interest rate risk supervision?

The diagram below illustrates how total assets, in conjunction with the results of the Net Economic Value Supervisory Test, determine the number of review steps in the Interest Rate Risk Workbook. For credit unions with assets of $50 million or less, the Interest Rate Risk Workbook is not required and the Estimated Net Economic Value Tool can be used.



* Examination Scope to be reassessed after one full exam cycle

Data from March 2016

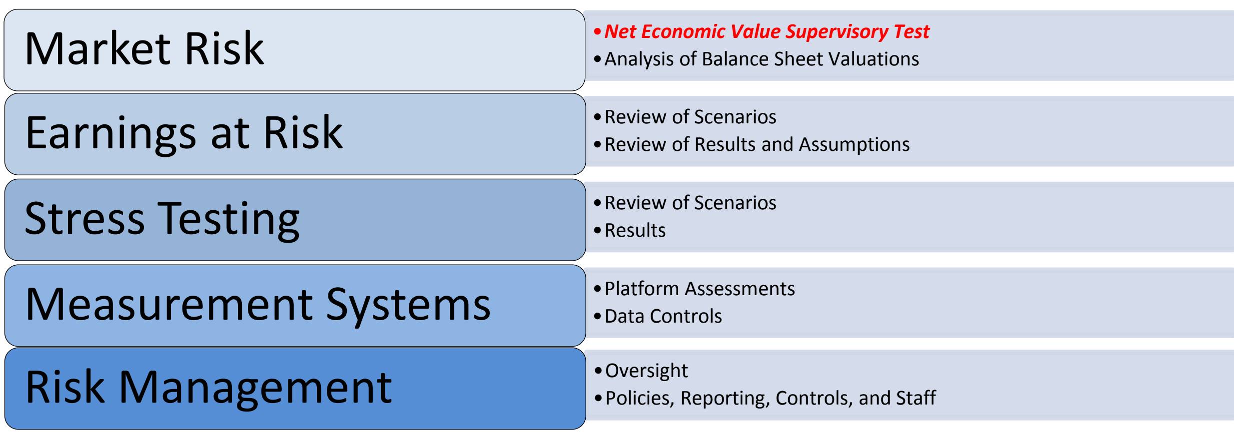
What is the Estimated Net Economic Value Tool?

The Estimated Net Economic Value Tool calculates a credit union's Net Economic Value for base case and +300 basis point scenarios based on Call Report data and predefined sensitivities for assets and contractual-maturity liabilities. It includes standardized values for non-maturity shares of 1 percent in the base case (book to base) and 4 percent in a +300 basis point shock scenario (base to shock).

Consistent with the risk-level rating classifications from NCUA's Net Economic Value Supervisory Test, the Estimated Net Economic Value Tool also assigns a risk classification of low, moderate, high, or extreme for both the post-shock net economic value ratio and post-shock net economic value sensitivity. The Estimated Net Economic Value Tool results can be used as the final interest rate risk category rating.

How will the interest rate risk review change?

The *Interest Rate Risk Workbook* (illustrated below) is designed to assess the essential elements of an effective interest rate risk management program. The questions and supervisory expectations outlined in the interest rate risk workbook are entirely consistent with longstanding interagency guidance. While we reorganized the review areas, the majority of review questions have been streamlined, rather than changed.



The market risk section of the *Interest Rate Risk Workbook* includes the Net Economic Value Supervisory Test results and review procedures of asset-liability composition, valuations and assumptions.

The earnings at risk section delves into the credit union's income simulation analyses and provides insights into the actual structure and timing of cash flows for assets and liabilities. Earnings at risk is an important complement to net economic value because it allows the user to get behind what the net economic value number conveys and understand *when* interest rate risk impacts the credit union through its earnings stream. Taken together, net economic value and earnings-based measures provide a comprehensive set of information about a credit union's exposure to interest rate risk. However, NCUA does not specify explicit share insurance fund risk classifications for net interest income sensitivity.

The stress testing, measurement systems, and risk management sections round out the overall assessment of interest rate risk. These cover a credit union's risk scenarios, its analytical platform, and the people and processes that collectively establish the major pillars of an effective interest rate risk management program.

The *Interest Rate Risk Procedures Guide* establishes clear expectations and is structured to ensure more consistent interpretation and application of the new interest rate risk review procedures.

What is the Net Economic Value Supervisory Test?

Net economic value is a capital-at-risk measure that aligns well with the risk management objectives of the National Credit Union Share Insurance Fund to help identify long-term potential threats that could adversely impact a credit union's net worth. Net economic value is a measure that includes both sides of the balance sheet (including off-balance-sheet items such as derivatives) and therefore includes potentially mitigating benefits from offsetting exposures.

While a static net economic value shock has some limitations, it does capture the long-term risk of embedded options that are more commonly found in mortgage-related assets. As a risk measurement construct, net economic value has a long history in NCUA's regulatory framework, and is an integral part of interagency guidance and Basel principles. Net economic value is widely used by credit unions, and it has become a standard risk measurement used by credit unions and banks.

The *Net Economic Value Supervisory Test* calculates a credit union's Net Economic Value ratio and sensitivity for base-case and +300 basis point stressed scenarios. The results of the Net Economic Value Supervisory test will be the basis of the market risk section of the interest rate risk workbook and serve as the Overall Interest Rate Risk Supervisory Rating floor. NCUA stratified the levels of post-shock net economic value ratios and net economic value sensitivities into four risk classifications (low, moderate, high, and extreme).

Risk Level	Post-shock Net Economic Value Ratio	Base to Shock Net Economic Value Ratio Sensitivity (%)
Low	Above 7%	Below 40%
Moderate	4% up to 7%	40% to 65%
High	2% up to 4%	65% to 85%
Extreme	Below 2%	Above 85%

The *Net Economic Value Supervisory Test* uses standardized non-maturity share values of 1 percent in the base case (book to base) and 4 percent in a +300 basis point parallel shock scenario (base to shock). The test then calculates the base case and +300 basis point net economic value ratio and the percentage change in net economic value between the base case and the shock scenarios.

With the exception of non-maturity shares, field staff will use a credit union's internal net economic value information as the values (inputs) for assets and liabilities in the *Net Economic Value Supervisory Test*. (The market risk section of the interest rate risk procedures directs the examiner to verify the reasonableness of the credit union's net economic value data.) For non-maturity shares, field staff will use standardized values for both the base case and shocked scenarios.

The new "extreme" risk level category represents an interest rate risk level that is categorically unsafe and unsound. A credit union with an "extreme" interest rate risk level is considered unacceptable and would need to take appropriate de-risking actions.

What will be NCUA's process to periodically evaluate the Net Economic Value Supervisory Test parameters, validate the underlying assumptions and calculations, ensure the test is reasonable and effective, and review the new risk classifications?

The *Net Economic Value Supervisory Test* aligns our supervision capabilities with emerging risk exposures and ensures we remain abreast of changes in credit union portfolios and the market conditions. We expect to review the *Net Economic Value Supervisory Test* and Estimated Net Economic Value Tool parameters over time to address changes in market conditions and potential shifts in credit union risk profiles.

NCUA will also periodically assess the risk classifications for low, moderate, high, and extreme interest rate risk (as expressed by post-shock net economic value ratios and base-to-shock sensitivity changes) to ensure appropriate measurement values.

What if a credit union's interest rate risk data is unreliable?

Data integrity is essential to the review process. Our interest rate risk review procedures require field staff to verify the reasonableness of a credit union's asset and contractual-maturity liability values for both the base case and +300 basis point scenarios. If this data is deemed unreliable or is unavailable, field staff will use the Estimated Net Economic Value Tool as the data source for the *Net Economic Value Supervisory Test*. Furthermore, instances where the information is available but deemed unreliable by field staff will be a primary focus and likely require timely remediation and impact the overall interest rate risk category rating.

How did NCUA establish the non-maturity share premiums applied in the Net Economic Value Supervisory Test?

NCUA standardized the treatment of non-maturity shares because of the significant underlying uncertainties about future deposit behavior and to generate comparable interest rate risk measures. The current lack of market consensus for valuation levels and the significant percentage of total funding that non-maturity shares represent also led us to standardize the treatment of these shares. This standardization allows us to compare measurements across the credit union system, and to use net economic value as a standard and uniform gauge of market risk within the credit union system.

By definition, non-maturity shares have no contractual maturity; a member can withdraw them at any time and receive their full face value. Credit unions often use a historical regression analysis to derive an average life for non-maturity shares accounts, as well as an interest rate sensitivity factor that explains the behavior (dollar amount) of the account in response to its pricing relative to market interest rates. In this way, credit unions use *past behavior* to predict the *future behavior* of these accounts. This results in a significant amount of uncertainty surrounding valuation methods.

First, there is the risk that the past may not accurately predict future behavior as a result of new factors outside a model's parameters. For example, rates have generally gone down over a long period of time, and the regression approach may be an ineffective predictor. The 2008 financial crisis caused unprecedented disruptions in funds markets and precipitated large-scale flights to quality. During the crisis, credit unions experienced a surge in the inflow of shares that have remained on deposit, with rates remaining at low levels; these funds may exhibit substantial sensitivity to subsequent market events and turn out to be volatile in nature. Technology developments that make it easier than ever to shift money from one financial institution to another are an additional factor that contributes to uncertainty with regression approaches, as technically savvy consumers are a growing percentage of credit unions' membership.

Non-maturity shares currently represent more than 70 percent of credit unions' funding. These shares are a key driver of risk in most credit union balance sheets and income statements, and the materiality of the underlying model-risk associated with assigning values to non-maturity shares is significant. Together, these factors suggest NCUA must use a constrained approach to value non-maturity shares, regardless of how credit union assumptions treat them.

After studying hundreds of credit unions' deposit assumptions and reviewing research, we changed the treatment of non-maturity shares by standardizing values for the base case and +300 basis point shock scenarios. We assigned a single value-benefit of 1 percent to the base-case scenario. The standardized value acknowledges a "core deposit intangible" intrinsic in many of these accounts. While we took the data set mean and midpoint values into consideration when establishing the 1 percent base-case value limit, the NCUA level is not indexed from either because of the high standard deviations that accompany those results. The *shocked value* is derived from that 1 percent base-case level, which translates into a 4 percent value for a rate shock of +300 basis points.

To adequately address interest rate risk, it is critical that credit unions be aware of member deposit behavior and have an informed view about how share values may be impacted by changes in interest rates. While the *Net Economic Value Supervisory Test* uses a single set of standardized premiums, NCUA does not make assumptions about share behaviors with respect to earnings-at-risk measures. Each credit union needs to conduct its own meaningful sensitivity analysis to manage its own risk relative to the credit union's risk tolerances and policy limits.

How will a credit union's own non-maturity shares assumptions and internal net economic value results influence its interest rate risk rating under the new procedures?

Field staff will evaluate a credit union's non-maturity shares assumptions in conjunction with various components of the interest rate risk review. Because non-maturity shares assumptions are regarded as a key driver of risk in a credit union's balance sheet, credit unions have an incumbent responsibility to formulate their model assumptions with appropriate diligence. A credit union's analysis of its non-maturity shares behaviors, including its assumptions, makes up a significant component of its interest rate risk measures; both for net economic value and earnings at risk.

Independent of NCUA's treatment for non-maturity shares value assumptions within the *Net Economic Value Supervisory Test*, a credit union needs to formulate reasonable and supportable estimates of how these accounts will reprice and be retained over time. NCUA will look to how assumptions are developed and whether an appropriate range of potential behaviors are modeled under the credit union's sensitivity analysis. We may assess a credit union's process for establishing non-maturity shares assumptions under all, or as part of, the earnings at risk, risk measurement, sensitivity testing, and risk management sections.

Should credit unions adopt the Net Economic Value Supervisory Test risk classifications as their internal policy limits?

No. The supervisory risk classifications should not be adopted as the credit union's net economic value internal policy limits. NCUA developed the *Net Economic Value Supervisory Test* based on its own interest rate risk tolerance thresholds for the Share Insurance Fund.

Sound interest rate risk management at an individual credit union involves operating within sensible risk parameters, evaluating anticipated financial performance, and assessing alternatives for further earnings opportunities with consideration to the present and prospective associated risks to achieve business objectives. Field staff will take exception to credit unions that convert policy limits to the agency's *Net Economic Value Supervisory Test* classifications and categorize such practices as imprudent.

How will the interest rate risk category assessment be reflected in the 'L' component rating of CAMEL?

Field staff will continue to assign "L" component ratings in accordance with the criteria established in Letter to Credit Unions 07-CU-12, *CAMEL Rating System*. NCUA assigns a rating to interest rate risk as one of seven discreet supervisory risks we evaluate.[4] These risk areas are then collectively reviewed before field staff assign ratings to each risk. Field staff combines a credit union's interest rate risk assessment, along with other liquidity, asset-liability management, and balance sheet considerations, into a single "L" rating.

What stakeholder engagement was conducted during the interest rate risk project?

NCUA regularly solicited feedback on the proposed changes over the course of the project. Stakeholder groups included a credit union manager group, state regulators, field staff, asset-liability management vendors, and financial consultants.

As part of an extended training program, NCUA Capital Markets Specialists conducted beta testing of the *Interest Rate Risk Workbook* procedures during the first quarter of 2016 with the goal of collecting feedback on the procedures to further refine their effectiveness. Additional training for all examiners was conducted over the course of the third quarter of 2016.

On August 18, 2016, NCUA conducted a public webinar, *Interest Rate Risk Supervision and Adding "S" to CAMEL*. Participants submitted numerous questions that NCUA considered as part of this fact sheet and before finalizing the interest rate risk review procedures.

Does NCUA plan to add a rating component for Sensitivity to Market Risk ("S") like other banking supervisors?

NCUA conducted an analysis in 2015 to identify how adopting an "S" component would impact agency operations, as well as credit unions. The study determined that, while adopting the "S" component is expected to be an improvement to the supervision program and will have a negligible impact on credit unions, it will take the agency some time to obtain public comments and reprogram our examination and supervision platform to fully implement the change. The timetable for adoption of the "S" rating is still under review.

Removing interest rate risk from the "L" component rating and moving it to a standalone "S" component would:

- Increase the clarity and transparency surrounding how interest rate risk and "sensitivity to market risk" are judged by separating them entirely from the liquidity factors;

[4] For more information about these risk areas, see NCUA's Letter to Credit Unions, 02-FCU-09, *Risk Focused Examination Program*.

- Enhance trend analysis and identification of both liquidity- and interest rate risk-related threats;
- Improve the allocation of specialized resources toward market risk outliers;
- Impose a negligible regulatory burden on credit unions; and
- Align NCUA’s regulatory approach more closely with peer supervisors.